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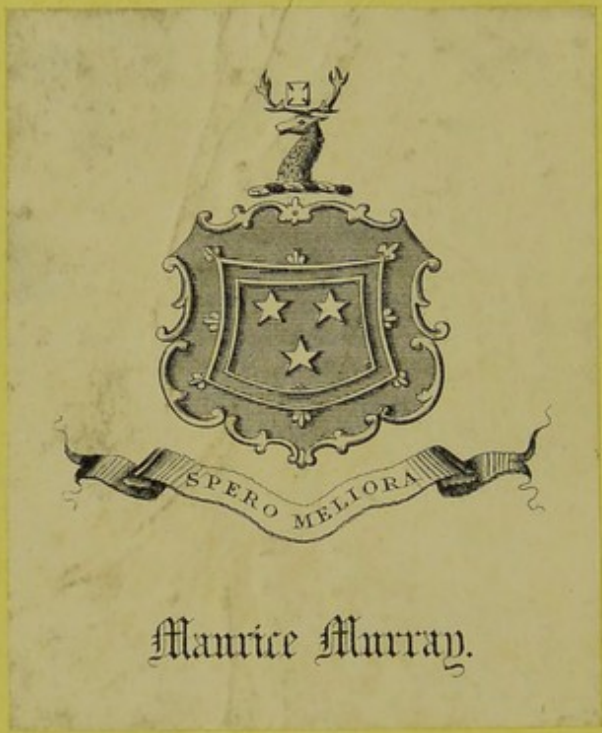

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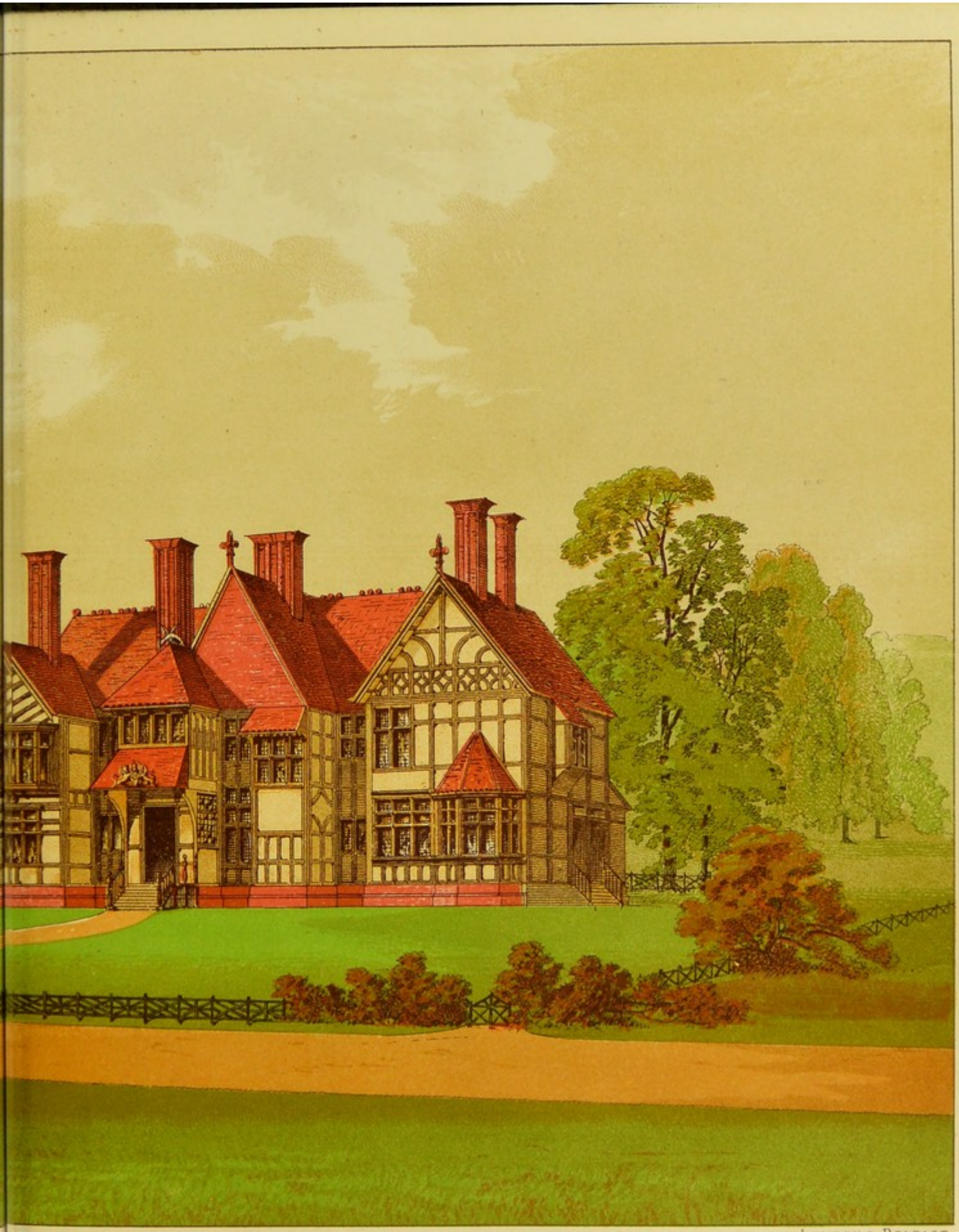

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Councillor of State Beilsky, *Special Official Department of Commerce and Manufactures, Commissioner-General.*
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Don Enrique Brotons.
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Don Miguel Gonzalez, *Attaché.*
Don José Fonrodona, *Attaché.*

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Fock, Baron A. H. E., *Chief of Board of Controlls,*	Stockholm.
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GENERAL REGULATIONS FOR EXHIBITORS, ISSUED BY THE UNITED STATES CENTENNIAL COMMISSION.

I. The Exhibition will be held in Fairmount Park, Philadelphia. It will be opened on the 10th May 1876 and closed on the 10th November of the same year.

II. Full diagrams of the buildings and grounds will be furnished to the Executive Commissioner.

III. Applications for space and negotiations relating to British Exhibits must be conducted with the Executive Commissioner.

IV. The Executive Commissioner will notify to the Director-General, not later than 1st May 1875, whether an increase of space is required by British Exhibitors.

V. Before 1st December 1875, the Executive Commissioner must forward to the Director-General approximate plans of allotment of space assigned, and lists of Exhibitors for Official Catalogue.

VI. Exhibits brought into the United States, at the ports of New York; Boston; Portland, Maine; Burlington, Vermont; Suspension Bridge, New York; Detroit, Port Huron, Michigan; Chicago, Philadelphia, Baltimore, Norfolk, New Orleans, and San Francisco, will be allowed to go forward to the Exhibition Buildings, under proper supervision of Customs Officers without examination at port of entry, and at the close of the Exhibition will be allowed to go forward to the port from which they are to be exported. No duties will be levied upon such goods unless entered for consumption in the United States.

VII. The transportation, receiving, unpacking, and arranging of the Exhibits to be at the expense of Exhibitor.

VIII. The installation of heavy articles requiring special foundations or adjustment should, by special arrangement, begin as soon as the progress of the work upon the buildings will permit. The general reception of articles will commence on 1st January 1876, and no articles will be admitted after 31st March 1876.

XI. Space assigned and not occupied on the 1st April 1876 will revert to the Director-General for re-assignment.

XII. If exhibits are not intended for competition, it must be so stated by the Exhibitor, and they will be placed *hors concours* by the International Juries.

XIII. An official Catalogue will be published in four distinct versions; viz., English, French, German, and Spanish. The sale of these catalogues is reserved to the Centennial Commission.

XIV. All exhibits, except in such Collective Exhibitions as may receive special sanction, will be arranged under some one group of the 10 following departments:—

i. Raw Materials—Mineral, Vegetable, and Animal.
ii. Materials and Manufactures used for Food or in the Arts, the result of Extracting or Combining Processes.
iii. Textile and Felted Fabrics; Apparel, Costumes, and Ornaments for the person.
iv. Furniture and Manufactures of general use in Construction and in Dwellings.
v. Tools, Implements, Machines, and Processes.
vi. Motors and Transportation.
vii. Apparatus and Methods for the Increase and Diffusion of Knowledge.
viii. Engineering, Public Works, Architecture, &c.
ix. Plastic and Graphic Arts.
x. Objects illustrating Efforts for the Improvement of the Physical, Intellectual, and Moral Condition of Man.

XV. Foreign Commissions may publish catalogues of their own sections.

XVI. Exhibitors will not be charged for space. A limited supply of steam and water power will be supplied gratuitously. The quantity of each will be settled definitively at the time of the allotment of space. Any power required in excess of that allowed will be furnished by the Centennial Commission at a fixed rate. Demands for such excess of power to be settled at the time of the allotment of space.

XVII. Exhibitors must provide at their own cost, all show cases, shelving, counters, fittings, &c., which they may require; and all countershafts, with their pulleys, belting, &c. for the transmission of power from the main shaft in Machinery Hall.

All arrangements of articles and decorations must be in conformity with the general plan adopted by the Director-General.

XVIII. Special constructions of any kind, whether in the buildings or grounds can only be made on the written approval of the Director-General.

The Centennial Commission will take precautions for the safe preservation of all objects in the Exhibition; but it will in no way be responsible for damage or loss of any kind, or for accidents by fire or otherwise, however originating.

XIX. Favourable facilities will be arranged by which Exhibitors or Foreign Commissions may insure their own goods.

Foreign Commissions may employ watchmen of their own choice to guard their goods during the hours the Exhibition is open to the public. Such appointments to be subject to the approval of the Director-General.

XX. Foreign Commissions, or such agents as they may designate, shall be responsible for the receiving unpacking and arrangement of Exhibits, as well as for their removal at the close of the Exhibition; but no person shall be permitted to act as such agent until he can give to the Director-General written evidence of his having been approved by the proper Commission.

XXI. Each package must be addressed :—"To the Commission for [name of country] at the International Exhibition of 1876, Philadelphia, United States of America," and should have at least two labels affixed to different but not opposite sides of each case, and giving the following information :—

(1.) The country from which it comes;
(2.) Name or firm of the Exhibitor;
(3.) Residence of the Exhibitor;
(4.) Department to which exhibits belong;
(5.) Total number of packages sent by the Exhibitor;
(6.) Serial number of that particular package.

Within each package should be a list of all objects it contains.

XXII. If no authorised person is at hand to receive goods on their arrival at the Exhibition building, they will be removed without delay, and stored at the cost and risk of whomsoever it may concern.

XXIII. Articles that are in any way dangerous or offensive, also patent medicines, nostrums, and empirical preparations, whose ingredients are concealed, will not be admitted to the Exhibition.

XXIV. The removal of goods will not be permitted till the close of the Exhibition.

XXV. Sketches, drawings, photographs, or other reproductions of articles exhibited will only be allowed upon the joint assent of the Exhibitor and Director-General, but views of portions of the building may be made upon the Director-General's sanction.

XXVI. Immediately after the close of theExhibition, Exhibitors shall remove their effects, and complete such removal before 31st December 1876. Goods then remaining will be removed by the Director-General and sold for expenses, or otherwise disposed of under the direction of the Centennial Commission.

XXVII. Each person who becomes an Exhibitor thereby acknowledges and undertakes to keep the rules and regulations established for the government of the Exhibition.

XXVIII. Special regulations will be issued concerning the exhibition of Fine Arts, the organisation of International Juries, awards of prizes, and sales of special articles within the buildings, and on other points not touched upon in these preliminary instructions.

XXIX. The Centennial Commission reserves the right to explain or amend these regulations whenever it may be deemed necessary for the interests of the Exhibition.

DIGEST OF REGULATIONS FOR FOREIGN EXHIBITORS AND COMMISSIONS, ISSUED BY UNITED STATES CENTENNIAL COMMISSION, GOVERNING THE FREE IMPORTATION OF GOODS.

First.—No duty, customs fees or charges are required on any importation of exhibits, and a new form of entry will be employed in all cases, at the port where such goods are received.

Second.—The sole ports of entry at which importations for exhibition can be made free of duty are:—New York; Boston; Portland, Maine; Burlington, Vermont; Suspension Bridge, New York; Detroit, Port Huron, Michigan; Chicago; Philadelphia; Baltimore; Norfolk; New Orleans; and San Francisco.

Third.—All articles assigned for exhibition must be accompanied by an invoice or schedule of the numbers, character, and commercial value of each shipment, which statement must have been previously attested before either a consul of the United States or a civil magistrate of the country in which such articles have been produced, or from which they are shipped to the United States. Such verified bill of contents and values must be in triplicate, one copy for the collector of customs at the port of entry; one for the duly authorised agent of Exhibitor, or for the British Executive, and one for the collector of the port of Philadelphia; the agent, in all cases, must be recognised by the Director-General of the Exhibition, and who will, by virtue of his authority, verify the goods and make entry; and all packages and enclosures containing goods for such Exhibition must be conspicuously marked accordingly.

Fourth.—All goods arriving so marked and represented,. either at the time of the arrival or at any time while remaining in the custody of the collector of customs at the port of arrival, will on general order, when entered at said port, be delivered without examination to such recognised agent or agents of the Exhibitor, to be by him or them forwarded by bonded line of transportation to Philadelphia, there to be delivered to the custody of the collector of that port.

Fifth.—Entry for warehouse will be made for all such transported packages on arrival at the port of Philadelphia, and original entry of all goods for exhibition coming direct to Philadelphia. This entry having been made, the goods will be retained in the custody of the collector until the Exhibition building, or some building suitable for safe custody, erected by the Executive of the Exhibition, be ready to receive them.

Sixth.—Separate records of all packages received by the collector at Philadelphia will be made by the store keeper at that port, to contain the owner's name, the agents, the country from which shipped, the date of shipping, the name of vessel, the date of arrival, the description and value of goods, and the specific marks and numbers of packages. [Blank forms prepared to contain these particulars will be forwarded to Exhibitors in due course.]

Seventh.—When the Exhibition building or warehouse for secure custody shall be ready, descriptive permits in duplicate will be issued by the collector to the storekeeper of port; one copy to be preserved by storekeeper the other to be delivered with goods to a proper officer of customs stationed at Exhibition building or warehouse, and all packages shall be opened in presence of an officer of customs, who will verify contents from such descriptive permit.

Eighth.—In case of receipt of packages by the collector of Philadelphia, imperfectly described or verified, or in regard to which information shall have been received questioning the good faith of the persons forwarding the same, the collector may direct an examination, and if in conference with the Director-General the goods are found not to have been forwarded in good faith for exhibition, they will be charged with duty according to their value and classification, and held by collector, subject to appeal to the Secretary of the Treasury, to await proper claim and payment of duty by the owners.

Ninth.—All charges for transportation, cartage, an freight accruing on goods arriving for exhibition will be required to be paid by owner or his agent at the time of their delivery to the custody of the collector of customs at Philadelphia, before the permit is issued for their delivery to the Exhibition building. No fee for entry, permit, or other official act, and no duties will be charged against any such goods until after their withdrawal from Exhibition for sale at its close or during its continuance.

TENTH.—All articles received and entered at Exhibition may be withdrawn for sale or delivery at any time, consistently with the regulations of the Exhibition, on payment of the duties in force at the time of importation and on verification by an officer of the Appraiser's Department of the port of Philadelphia. On payment of said duty, without any other fee or expense, the owner or agent shall receive a permit for removal from the Exhibition.

ELEVENTH.—All goods to be returned to Great Britain will be verified by the customs officer in charge of Exhibition, re-enclosed, duly marked and forwarded, under permit of collector, to any port desired; or they may be exported direct from Philadelphia.

PHILADELPHIA EXHIBITION.—SYSTEM OF AWARDS.

First.—Awards shall be based upon written reports attested by the signatures of their authors.

Second.—Two hundred judges shall be appointed to make such reports, one half of whom shall be foreigners and one half citizens of the United States. They will be selected for their known qualifications and character, and will be experts in departments to which they will be respectively assigned. The foreign members of this body will be appointed by the Commission of each country and in conformity with the distribution and allotment to each, which will be hereafter announced. The Judges from the United States will be appointed by the Centennial Commission.

Third.—The sum of one thousand dollars will be paid to each commissioned Judge for personal expenses.

Fourth.—Reports and awards shall be based upon inherent and comparative merit. The elements of merit shall be held to include consideration relating to originality, invention, discovery, utility, quality, skill, work manship, fitness for the purposes intended, adaptation to public wants, economy and cost.

Fifth.—Each report will be delivered to the Centennial Commission as soon as completed, for final award and publication.

Sixth.—Awards will be finally decreed by the United States Centennial Commission, in compliance with the Act of Congress, and will consist of a diploma with a uniform Bronze Medal and a special report of the Judges on the subject of the award.

Seventh.—Each Exhibitor will have the right to reproduce and publish the report awarded to him, but the U.S. Centennial Commission reserves the right to publish and dispose of all reports in the manner it thinks best for public information, and also to embody and distribute the reports as records of the Exhibition.

THE SELECTION AND APPOINTMENT OF JUDGES.

Report of Hon. N. M. Beckwith, Commissioner from New York.

At a regular meeting of the Executive Committee of the United States Centennial Commission, held at Philadelphia, October 13th, 1875, Mr. Beckwith, Commissioner from New York, (United States Commissioner-General at the International Exhibition at Paris, 1867,) presented the following report upon the selection and appointment of judges. It was carefully considered and unanimously approved.

REPORT.

Honourable D. J. Morrell,

Chairman of the Executive Committee.

Sir,

In compliance with the request of the Executive Committee, I beg leave to present for consideration the following suggestions relating to the selection and appointment of judges, in conformity with the method of awards decreed by the Centennial Commission.

This method, in many respects, differs radically from the systems hitherto tried in International Exhibitions, and although the subject is familiar to you, I shall be pardoned, I hope, for briefly indicating the broad differences.

Awards have heretofore been generally made by an International Jury of about 600 members.

The appointment of jurors to countries has been tried on various bases, but was usually made on the basis of the relative space occupied by the products of each country respectively, in the Exhibition.

The Great Jury was divided into numerous small juries, who examined the products and prepared lists of the names of persons whom they proposed for awards, and the proposals thus made were confirmed or rejected by higher juries.

The awards consisted chiefly of medals of different values, gold, silver, &c.

This system brought together a numerous and incongruous assembly, including unavoidably many individuals unqualified for the work.

The basis of representation was apparently fair, but its results were delusive.

A few countries nearest the Exhibition, whose products could be collected and exposed at the smallest proportional expense, occupied large spaces; the numerous remote countries filled smaller spaces.

The number of jurors allotted to the smaller spaces, when distributed, left them without jurors on most classes, and in the remainder with only a minority, which, in voting on awards, had no weight, and the awards were thus in effect decreed by the few contiguous countries whose products filled the largest spaces. Written reports on the products were not usually made by juries, and if made were not generally published, consequently no person outside of the jury was informed on what ground awards were made.

The medals, when distributed, were as silent as the verdicts; moral responsibility for the decisions attached to no one, and the awards thus made conveyed as little useful information, and carried as little weight as anonymous work usually carries.

Medals, at best, are enigmas. They express nothing exactly and definitely relative to the products exhibited; their allegorical designs doubtless have a meaning in the mind of the artist who makes them, but allegorical designs are primitive and feeble language, and the medal of to-day is no more than its predecessor, a school-boy token,—verdicts upon products determined by majority votes of juries in which the producing countries are often represented by useless minorities,—awards based upon anonymous reports, or reports never published, and final decisions announced and recorded in the vague and mystic language of medals, have not proved satisfactory to producers nor to the public. As regards the diffusion of reliable and useful information, International Exhibitions have not come fully up to expectations and to the promise implied in the great labour and great expenses which they involved, and the wide-spread dissatisfaction which has uniformly followed the close of jury-work, affords in itself strong evidence that the system is not well adapted to the purposes of International Exhibitions.

The method of awards adopted by the Centennial Commission differs from preceding systems. It dispenses with the International Jury and substitutes a body of 200 judges, one-half foreign, chosen individually for their high qualifications.

It dispenses, also, with the system of awards by graduated medals, and requires of the judges written reports on the inherent and comparative merits of each product thought worthy of an award, setting forth the properties and qualities, presenting the considerations forming the ground of the award, and avouching each report by the signature of their authors.

The professional judgment and moral responsibility of the judges being thus involved, assures the integrity of their reports. As awards to exhibitors, such reports will be more valuable than medals, in proportion to the greater amount of reliable information which they convey to the public. Their collected re-publication, as hand-books, will form valuable guides for all classes to the most advanced products of every country, and, *last and least*, the sales of them can hardly fail to return to the Commission a good portion of their cost.

The success of this method obviously depends on the judicious selection of the judges, and to this point I desire to call particular attention.

In this connection it may be remarked that the best judges of products are not usually found among their producers, but among their consumers.

To select a wine, for example, of particular character, one would not apply to wine-growers, but to dealers and consumers. On the merits of an engine you would prefer the opinion of the engineer who uses it, to that of the engineer who invented or made it. The sugars and coffees of Brazil, Cuba, Java, &c., are best judged in the great markets of consumption. In brief, the food products of the world find their most accurate appreciations, as regards their inherent qualities and comparative merits, in the great consuming markets, where similar products from all regions are gathered, and the practical judgment of the using and consuming public is pronounced, from which there is no appeal.

The principle in this applies not only to raw products, but in a general sense to manufacturers and to industrial products of all kinds in general use.

In this view of the subject, the method of awards adopted by the Centennial Commission presents the great advantage that it is *judicial* rather than *representative*, and the Commission is perfect free to select judges from the best sources, regardless of localities.

The men to seek for are those who, by their ability, education, character, and experience are fittest for the work, and they will be less difficult to find than to obtain, being generally employed, and frequently connected with large industries, important works, and the higher institutions to which their superior qualifications have led them.

Freedom to choose our judges from the best sources, cannot fail to produce good results if the selection be made upon proper investigation, with suitable care and without favour.

The announcements of this method of awards has been received in foreign countries, as far as heard from, with expressions of distinct approbation, and there can be no doubt that they will select and bring to us their hundred judges, who will be distinguished by their reliable and solid qualifications, and it is incumbent on us to select a body of men of character, able and expert in their respective callings, and equal in attainments and experience to our foreign co-operatives, with whom our own will be intimately associated.

I need hardly add that the useful results and success of our Exhibition and the public satisfaction which it should produce, as well as the reputation of this Commission, as practical and sensible men, depend largely on the selection of our judges, and finally upon their organisation and work.

* * * * * *

Respectfully submitted,

N. M. Beckwith.

New York, October 9th, 1875.

A suitable Committee was thereupon appointed to propose the method of proceeding to select the judges.

Copy of Letter from Mr. Goshorn addressed to Colonel H. B. Sandford, R.A., as to the Number of Judges for Great Britain.

United States Centennial Commission,

February 9th, 1876.

Sir,

I have the honour to advise you that in accordance with the terms of the system of awards adopted for the International Exhibition of 1876, the United States Centennial Commission has allotted to the United Kingdom and Colonies (exclusive of Canada) eighteen (18) Judges.

They should be citizens of the United Kingdom, possessing a diversity of qualifications, and especially fitted, by knowledge and experience, to judge of and report on the several subjects in the Departments to which they will be assigned.

The Judges will assemble on the 24th day of May 1876, at 12 o'clock noon, in the Hall of the Judges, and remain in continuous session until the important duties confided to them have been discharged.

You are requested to appoint and accredit persons as Judges in the following Groups of the classification, and subjects of a kindred nature.

GROUPS.

Department I.	Minerals	1
Department II.	Chemistry and its Applications	1
	Ceramics, Pottery, and Glass	1
	Yarns and Woven Goods of Vegetable or Mineral Materials	1
	Woollen Goods	1
	Weapons	1
	Hardware and Edged Tools	1
Department III.	Education	1
	Philosophical Apparatus	1
Department IV.	Sculpture and Painting	1
	Industrial Design	1

Department V.—Metal and Wood Machinery	-	1
Spinning and Weaving Machinery	-	1
Sewing and Clothing Machinery	-	1
Motors	-	1
Railway Plant	-	1
Pneumatic and Water Transportation	-	1
Department VI.—Agricultural Machines	-	1
Total	-	18

I beg further to request that you will furnish me, as soon as possible, with the address of the persons you select, with such information as you may be able to give relative to their special qualifications for the duties that will be imposed upon them.

I am, with great consideration, yours very respectfully,

(Signed) A. I. Goshorn,
Director General.

Enclosed—Form 92. System of Awards.
„ 112. „ Classification.
„ 137. Report on Selection of Judges.

EXHIBITIONS—THEIR ORIGIN AND PROGRESS.

EXHIBITIONS—THEIR ORIGIN AND PROGRESS.

Progress is the law of life, and Exhibitions, at once the outcome and the forebears of that very progress, have experienced its influence and in turn have reäcted on it. The noble conception of the Prince Consort, so daring in its originality, and so comprehensive in its detail, was yet found capable of extension. Breaking down as it did old barriers of exclusiveness, and calling the nations into a common bond of brotherhood, it was in the very nature of the design to extend its borders, and the experiences of 1851 were utilised by its lamented author for the realisation of 1862.

True it is that the dreams of a universal kindred have not been realised, and that the kindly words of Jules Janin, "Battle-plains are behind us; "there remain before us but the fields of labour," have not been fulfilled. Equally true is it that the Arts of War have marched *pari passu* with those of Peace, have been tested by other standards than the adjudication of juries, and been subjected to ruder strains than the competition of rival manufacturers.

But all this would have arrived without a Congress of the Nations, and is beside the great question of Art progress, a progress so marked in its development, and so rapid in its strides that it would seem as if a century and not five lustres had passed away since a stone was thrown by a strong and brave hand into the ocean of time, the circles enlarging till they have embraced every branch of human industry, every scheme of modern thought, and have drawn within their span every nation upon the earth that lays claim to rank above the savage.

Prior to 1851, of local exhibitions there had been many; it is not our purpose, however, to refer their origin, as has been ingeniously done, to "the days of Ahasuerus" and the Book of Esther, when "in the third year of his reign "... he showed the riches of his glorious kingdom and the honour of his "excellent majesty many days, even an hundred and fourscore days," the normal six months, it may be noted, of all International Exhibitions.

At this display in "Shushan, the palace," some five hundred and twenty-one years before the birth of Our Lord, were shown "white, green, and blue hangings, "fastened with cords of fine linen and purple to silver rings and pillars of "marble; the beds were of gold and silver, upon a pavement of red and blue, "and white and black marble, and . . . . the vessels of gold, the "vessels being diverse one from another." This diversity in "the vessels of gold" is not only a proof of the perfection to which the Industrial Arts had attained, but also lends a colour to the idea that this collection to a large extent was International, for Ahasuerus (said by some to be identical with Artaxerxes), as we are told, "reigned, from India even unto Ethiopia, over "an hundred and seven and twenty provinces," and the gold and silver work would point to India, as the purple would suggest the Tyrian dye, and the "fine linen" the Egyptian "byssus." Later on, when Tyre, Sidon, and Carthage became the marts of the world and the foci of Commerce, an everchanging series of industrial marvels must, in commercial phrase, have been constantly "on view," for Tyre, says the prophet Isaiah, "is a mart "of nations . . . . . whose merchants are princes, whose traffickers are the "honourable of the earth," and the prophet Ezekiel bears witness to the extent of her commerce, in the words "Fine linen with broidered works from Egypt, was that which thou spreadest forth to be thy sail." When the last of her rivals had disappeared, and Carthage had been blotted out, Imperial Rome, the centre of civilization and the repository of art, held her public Exhibitions, in which were garnered together the spoils of war and the triumphs of peace, trophies of art borne by the conqueror from their Grecian homes, and luxuries ingathered from every clime where the Roman Legions had set foot or the Standard S.P.Q.R. had been planted,—

> Fine webs like woven mist, wrought in the dawn,
> Long ere the dew had left the sunniest lawn,
> Gold cloth so wrought that nought of gold seemed there,
> But rather sunlight over blossoms fair;
> Gems too they showed wrought by the hidden fire
> That eats the world; and from the unquiet sea
> Pearls worth the ransom of an argosy—

Apelles and Protogenes, Lysippus and Endius, Pheidias and Praxiteles, were beyond doubt present in their works at these displays, for we are told by Suetonius that Caligula proposed to substitute his head for that of the Olympic Zeus by Pheidias, whilst Pliny states that Claudius actually cut out the head of Alexander from a picture by Apelles, giving in exchange his image.

The very dress of the Consuls, to say nothing of the Cæsars, tells of the luxurious tendencies of the age, the cloak (*toga picta*) richly embroidered, the tunic striped with purple (*trabea*), the shoes of cloth of gold (*calcei aurati*), all products of various nations. The old Republican simplicity was no more, Carthage with her armies had sent her luxuries, (Attalus, King of Pergamus, who died B.C. 133, left the bequest of tapestries,) the vanquished had conquered the conquerors, Greece by art, Antioch by pleasure, Alexandria by refinement; the "Serpent of Old Nile" though dead, had not forgotten its sting. What Rome borrowed from Egypt, or rather what Egypt had of which to be despoiled, is told in the words of Shakespeare, anent the progress of Cleopatra:

> The barge she sat in, like a burnished throne
> Burned on the water;
> Purple the sails, and so perfumēd, that
> The winds were love-sick with them; she did lie
> In her pavilion, cloth of gold, of tissue.

So when Augustus reigned, monarch of the world, the once brave Romans were "feeble vassals of wine and anger and lust;" the sword was still there, but its edge was blunted, the hands that once wielded it were nerveless, the steel had rusted in its golden scabbard. But as the barbarians, the *forestieri* of the day, had not yet learned their own power, so the older civilizations had felt the prowess of their common masters, and thus all alike contributed of their substance to the glory of their conquerors. Britain, famous for its cloth even in those days, furnished the woollens whose tints were the envy of strangers; from the Egyptians, skilful "in combing and weaving fine linen," came the "byssus" cloth; Cos supplied gauzes like to the "wovenwind" of India, of which Seneca spoke, saying, "I behold silken garments, if "garments they can be called, which are a protection neither for the body "nor for shame." Pliny, touching on cloth of gold, states, "Gold may be "spun or woven like wool, without any wool being mixed with it." Pope ridicules the "charming chintz and Brussels lace" that "wrapped the cold "limbs and framed the lifeless face;" the Imperial Romans were, however, much more luxurious, they not only flaunted in golden robes when living, but even in death were wrapped in golden shrouds. Sometimes even martyrs as well as masters had their golden death robes—instance St. Cecily, martyred A.D. 230—whose shroud when discovered in the ninth century was found drenched in her life's blood, in the language of heraldry *gules* and *or;* and the robe of the wife of the Emperor Honorius, untouched even by the hand of all-devouring Time, for dead in the first year of the fifth century, her grave

remained unopened till 1544, and her poor bones were found weighted with no less than thirty-six pounds of golden dross for upwards of 1,100 years; nor was all this the climax of golden splendour, for recent excavations in the catacombs of Rome prove that the goldsmiths of Tarentum had revived in their jewellery the buried treasures of dead Etruria. *Bref*, each display was doubtless a compendium of all that could manifest the resources or set forth the wealth of the Empire of the World.

But invasion followed division, and the Empires of the East and West alike went down before Hun, Goth, and Moslem, and dark days came when the sword was Lord.

For many subsequent centuries such an idea as a collective display of articles of either art or industry would have seemed a chimera beyond even the wildest dream of the most visionary enthusiast, for though the process of collection might and doubtless would have been tedious and uncertain, that of distribution would have been as rapid and effective as a high-handed process of annexation by some robber band or neighbouring potentate could make it. Nor could even a strong body of troops have been depended on to guard such treasures, for the greatest difficulty of all would have been "to guard the guards themselves."

It is not, therefore, till the year 1268 that any trace can be found of the barest attempt to illustrate the industries of any country by means of mutual association. In that year, however, Lorenzo Tiepolo being Doge, a strange blending of pageantry and utility was presented in Venice, then in truth Queen City of the Seas. The display was threefold, comprehending a water fête, a procession of the trades, and an Industrial Exhibition.

Da Canale, the historian of the scene, describes at length the parade of the navy, destined for the defence of the Venetian commerce in the Mediterranean, through the silent highways of the city, gay with flags, and reinforced by the galleys and gondolas of nobles and wealthy citizens, and as "old and young thronged her three hundred bridges," the splendid pageant moved on in procession through the canals until all were massed in front of the Ducal Palace, when choruses were sung in honour of the new Doge. The first act of the drama brought to an end, the second opened with an array of the various guilds, who defiled through narrow streets and narrower lanes to concentrate in force on the Piazza San Marco. Tanners and Tailors, the professors of the sartorial art magnificent in white mantles trimmed with fur, passed on, to be followed by Smiths and Skinners, the latter clad in taffeta,

lined with their most costly specimens, to be again succeeded by the Hosiers, Mercers, Weavers, and Drapers, these last for some occult reason bearing olive branches; then came the Glass-Blowers, Workers in Gold Cloth, habited in the choicest products of their skill, Fishmongers, Butchers, and Victuallers; and a brave show they must have made in blue and white, crimson and gold, green, scarlet and yellow, as, preceded by banners and the trophies of their respective callings, the artisans of Venice wound their devious way through street and lane, by bridge and postern, till they attained their goal. Here the low comedy element came into force in an episode recalling Don Quixote de la Mancha, the Knight of the Rueful Countenance and the Helmet of Mambrino, as the delegates of the Barbers, two in number, and attired as Knights Errant, caracolled into the ducal presence on, what must have appeared the greatest marvel of the day to the Venetian populace, two real *destriers*.

These valiant knights were accompanied by four damsels, as fancifully apparelled as their protectors, and as they took their places they told, in magniloquent phrases and truest language of chivalry, a heart-rending story of manly devotion and womanly weakness; how by perilous adventure they had rescued the maidens from unheard-of dangers, and how, true to their knighthood, they were prepared, in place of drawing the blood of their customers, to shed the last drop of their own in the defence of the ladies. To all this the Doge fittingly replied, praying them rather to live and devote their manhood to the defence of the commonweal. At this shouts of "Long live Our Prince Lorenzo Tiepolo, the noble Doge of Venice!" were raised, as the masters of the guilds stepped forward and requested the Dogaressa to inspect the exhibition of their various works set out in the apartments of the Palace.

No catalogue exists, and the historian is silent on the subject of the collection; but as he tells us that the Dogaressa expressed her delight at all she saw, and in token of her pleasure thereat graciously partook of sweetmeats and other refreshments, we may consider that, judging by what we know of Venetian taste in the past and present, the gathering amply represented the skill of the day, and so ended this most original of exhibitions, a success doubtless, but a display which, looking at it with our lights, must, we fear, be regarded rather as a "private view" than a "World's Fair."

Thus much for this first and most unique of Exhibitions, though we opine that the true germ of International gatherings, whether known as Exhibitions, Expositions, or Weltausstellungs, must be looked for in the great International Fairs of the middle ages. The enterprise of travel begotten by the

Crusades had permeated from the soldier to the trader, and as security was found in society, the merchants of those days made commercial pilgrimages and interchanged merchandise at certain times and given places of resort. Some of these fairs survive to our days, the most notable being those of Leipzig and Nijni-Novgorod.

The former of these traces back its origin to the 12th century, when license was granted by the Kaisers to hold biennial fairs at Easter and Michaelmas. A third annual fair was first inaugurated with the new year of 1458, and the right to hold three fairs annually was confirmed by an edict of Maximilian the First in 1508. Leipzig is thus linked with trade, poetry, education, and history: with trade in its well-known fairs, with poetry in Goëthe's "Faust" and Gounod's music, with education in its world-known University, and with history in the names of Napoléon and Poniatowski; and even to those travellers who may ignore all these, the claims of the Auerbach Keller will assert themselves through its wines and suppers; the former famous as in the days when—

> Doctor Faustus, on that tyde,
> From Auerbach's cellar away ryde
> Upon a wine-cask speedilie,
> As many a mother's son did see.

In France a great impetus was given to trade in the fifteenth century, when silk manufactories were first established in Lyons in the year 1450, nor did individual enterprise remain idle, for to the Marquis de Fulvy is due the inception of the great porcelain factory of Sèvres, his speculation at Vincennes being the parent of that sold to the *Fermiers Généraux*, to be removed to Sèvres, and destined eventually to become, under King, Republic, Consul, Emperor, or President, one of the national glories of France. The great Colbert, too, has not only left his mark in the "Gobelins" (taking its name from the Flemish Brothers Gobelin, whose dyeing house was in the Rue Mouffetard)—and the taste which prompted him to appoint Lebrun as the first designer yet survives in its masterpieces of tapestry—but to him is also due the "Académie Royale de Peinture, d'Architecture et de Sculpture," founded in 1664, into the inner circle of which not only painters, architects, and sculptors, but also designers of woodwork, ornament or furniture were admissible.

The doctrine of the survival of the fittest is manifested in the annually recurring fair of Nijni-Novgorod, extending over nearly two months. This dates back to the year 1648, when at Makarieff a fair was instituted lasting

but five days. The facilities for foreign trade were increased, however, in 1691, and in a little more than half a century the concourse of visitors had so increased in number that in 1750 a wooden edifice capable of containing 800 booths was erected. This in turn proved so inadequate that in 1809 another building, also of wood, but holding 1,400 shops, was built, to be further supplemented round the main bazaar by 1,800 sheds. When, however, this latest erection was burnt down, the locale of the fair was removed by an Imperial Ukase to Nijni-Novgorod, where at present an iron structure (with open galleries carried on iron columns forming ways of communication), and having 48 blocks, comprising in all 2,500 shops, affords accommodation for the motley mixture of merchants drawn not only from the realm of "All the Russias," but even from China, Thibet, and Persia, to all of whom it serves as an annual magnet of attraction.

There is another fair as noteworthy, though not so noted, as Leipzig, as respectable too in its antiquity, for it can trace its origin back to the fifth Crusade, the thirteenth century, the defeat of the Crusaders, and the capture of Louis, Saint and King, and this is the great Egyptian Fair of Tantah. Held at Midsummer and lasting for a week, more picturesque in its surroundings than either Leipzig or Nijni-Novgorod, it is to the full as International in its concourse and commerce. Seated in the heart of the Delta, on the direct railway route from Alexandria to Cairo, at the junction of the branch line to Mansourah and Damietta (the former the place where the Cross went down before the Crescent), and inhabited mostly by "fellahs," Tantah has neither houses to receive travellers nor bazaars to display goods, so the vast plain on either side of the railway is, in fair-time, studded by thousands of tents. During the day a motley multitude surges through the canvas streets, some to buy, some to sell, Levantines in their baggy Breton-like pantaloons, Albanians in "fustanellas" of myriad plaits and snowy whiteness, their greaves and jackets gay with gold embroidery, bearing an armoury of yataghans and silver-mounted pistols in their belts, keen-eyed Armenians in showy satin vests and frock-like coats with bright silk-lined hanging sleeves, Persians in black Astrachan "kalpacs," Greek merchants in fezes, and wealthy "Fellahs" in snow-white turbans jostle against Bedawins in bournous with guns slung over their shoulders, Turkish ladies, with their gay silk costumes, covered by the black "habbáras," Turks in quaker-collared coats, their swarthy necks unrelieved by even a glimpse of white, Syrians clad in costly "abbayáhs," Polish Jews in greasy gaberdines,

and with those still greasier curls also affected by the Easterns of London Hebrews of Algiers and Morocco, black-bearded and bronzed, stately descendants of the once "chosen people," in their handsome robes and rich turbans, "Fellahines," in "yasmaks," most of them having, like a lieutenant in the Royal Navy of byegone days, an epaulet on one shoulder, only in their case it takes the guise of a little black child scantily clad as Hans Breitman's mermaid, and, needless to say, the ubiquitous Englishmen in puggaree.

Consider this crowd, set before them booths for the sale of cutlery from Birmingham or Germany; arms from Damascus; silks from Syria; woollens and embroidery from Persia, glassware from Austria; Arab, Turkish, and Syrian jewellery, nacre work from Bethlehem, gold and silver embroidery, toys, clothes, pipe-stems, leather, shoes, sweets, "Rahat-Lakoum," "Raki;" add to all this cafés, gaming booths, and rows of houses where "Almées" dance to the music of tambourine, "darabouka" or drum, and "el-oud" or lute, light up this scene at sundown with thousands of vari-coloured lamps till it seems an Egyptian Feast of Lanterns—take it by day or night, and few will say that Tantah as an International Fair is not the worthy peer of either Nijni-Novgorod or Leipzig.

We, must, however look, after a long interval, from the pageant at Venice to the Exhibition at Leyden in 1699, held in the theatre of that city. If we are to judge by the catalogue, the collection must have itself commended strongly to the curious, not to say the morbid. Mr. John Hollingshead notes amongst the marvels, "a Norway house, built of beams, without mortar or stone; the hand "of a mermaid; a crocodile; and several thunderbolts." From whence the last-mentioned were obtained, or where they had fallen, is not stated. There were also the bifurcated garments of a Laplander, called in the catalogue by a briefer name; the chair of a Mrs. Gamp of the period, also, set down in choice Anglo-Saxon, and what we must esteem a calumny as the model only was shown, "a murdering knive, found in England," whereon was written the highly Christian sentiment, "Kil the males, rost the females, and burn the "whelps," the distinction between the two latter processes being rather confused. A Roman lamp, "which burns always under ground," found itself in the congenial society of a Persian tobacco pipe, whilst anatomy asserted its right to be present, in the "stomach of a man," "the skin of a woman, prepared like leather," and "the ears and tongue of a thief," sex unnamed, "who had been hanged." Then as we have the "snout of a sawfish," "a mushroom," which denied its title, being "100 years old," "Arabian

jewels, East Indian corals, Egyptian linen, Chinese songs and Chinese beer," (whether the *jodeling* and the drinking were for manifest reasons named together is unhappily not chronicled,) there can remain no doubt that in respect of variety and selection of countries, this Leyden Exhibition must, in one sense at least, claim the title of International. As to the question of taste, that must remain an open one, though whether the generation that paid to see Julia Pastrana alive, and even patronized the exhibition of her embalmed remains and those of her little child can afford to carp at the refinement shown in those days by the worthy Leydeners, is, to say the least, doubtful.

To pass on from this Exhibition, which might more properly be termed a museum, or rather a drag-net of things, in themselves neither rich nor rare, relying on the contrast more than on the merit, artistic or historic, of the exhibits, we come to the year 1756, when the Society of Arts first inaugurated its series of Fine Art Exhibitions, by offering prizes for improvements in the manufacture of tapestry, carpets, and porcelain, the articles exhibited being ranged in competition. ¦This was followed in the year 1761 by an Exhibition of agricultural and other machinery, in the rooms of the Society, for which prizes were offered, and a gentleman engaged to explain the merits of the various objects, this individual combining in himself the powers of a Board of Commissioners and the attributes of a showman, and with this ended any attempt on our part for many years to create a National Exhibition.

It is indeed to the year 1797 (the year V. of the French Republic,) that we must look for the true initiation of National Exhibitions. In that year the Marquis d'Avèze conceived the idea of a collective display of the industries, originated by the Kings, and protected, when so much went down, by the People of France. His conception was to mass together the products of the art factories of Sèvres, the Gobelins, and the Savonnerie; his exhibition palace was ready to hand in the Château of St. Cloud, then as now dismantled and uninhabited, but still a palace; the Minister of the Interior, M. de Neufchâteau, was propitious, and all seemed favourable to the project.

So d'Avèze went to work with a will, the bare walls were hidden by priceless tapestries from the Gobelins, the floors covered with the carpets of the Savonnerie, the "Chambre de Mars" set apart for the picked porcelain of Sèvres, and this was the beginning of Fructidor. Everything promised well.; in this same Chamber of Mars a Wheel of Fortune was to be set up; the prizes were contained in the Exhibition itself; daily the courtyard of the château was crowded with the carriages of the nobility that still remained

faithful to their darling Lutetia, and the day of opening was named, the 18th Fructidor.

Alas for the vanity of all earthly things! The previous day saw the gates of Paris placarded with the bills of the Directory, ordering all the nobility by name,—it was, indeed, easy to count their numbers, for exile, conscription, and the tumbril had thinned their ranks,—"to withdraw within twenty-four "hours to, at least, thirty leagues from Paris," and on this damnatory list was the name of d'Avèze.

Was ever projector so unfortunate? The success of his scheme assured; most marvellous of all, an Exhibition ready *before* the day of opening, an accident which has never happened since; he had sown well, and on good soil, the crop had ripened through the aid of his friends, now scattered as far and fast as postchaises and relays of horses could carry them; the artisans, who had gleaned something welcome from the purchases already made (doubly welcome in those days when bread was scarce and *assignats* still scarcer,) were looking forward to an abundant harvest, when the vexed question of a double danger was presented to him.

To remain was to court death; to fly was to cut off the possibility of return; for he and he alone was responsible for the contents of the château. But d'Avèze was a man of expedients; he sought out the Marshal d'Augereau, and obtaining from him a troop of dragoons, he forthwith placed them in charge of the château and its contents, and handing up the keys to the custodian, Maréchan, the Marquis placed himself with all dispatch outside the circle of conscription. In the next year, 1798 (the year VI. of the Republic), in the Maison d'Orsay, No. 667, Rue de Varennes, he realized the scheme, previously abortive, and the success of the display was so pronounced that the Minister Neufchâteau carried out another Exposition in the three last days of the same year. This first official Exhibition, with a total number of 110 exhibitors, was held in a temporary building in the Champs de Mars; in it not only the State industries, but the manufacturers of France, that is to say Paris, were represented. Thus Sèvres was set out side by side with Angoulème. Leroy displayed his watches, Boule and Gonthière their furniture, and de Thou and Grolier their typographical specimens; Vincent and David were sponsors for the sham classicism which in those days took the name of art, as lay figures, velvets, and bric-a-brac usurp the title in our times; and to propitiate the populace, Napoléon, flushed with his Italian conquests, added what may be termed a vagabond parade, the procession being marshalled in three divisions.

It was headed by a succession of emblematic chariots, the first devoted to minerals, with the motto "Every day Science discovers new products herein." The second contained petrifactions from Verona, representing the works of the World's antiquity; then followed cars allotted to seeds, plants of the tropics, and animals of various climes, where, if the lion did not precisely lie down with the lamb, a Swiss bear was shown in juxta-position to two dromedaries, and a couple of lions were led captive by the side of two chamois. Agriculture was represented by an array of agricultural implements from Italy, with the inscription "Ceres smiles at our trophies," which is probably more than might have been said of the original proprietors, and thus was Industry honoured.

Then Literature received due recognition in allegorical *tableaux*, in which old Greece and modern France received their full share, or perhaps rather more, of blazon; and, did the procession end here, the two first divisions at this distance of time would not deserve to be chronicled, but the third section stands out as unique as the fame of the man to whom they all owed their presence.

Well might these twenty-nine chariots be preceded by a banner bearing the line "Flock hither, Artists, your Masters are here," for when and where was Art so fully represented. From St. Mark at Venice came the famous Bronze Gilt Horses; the Laocoön, the Belvidere Apollo and Mercury, the Nine Muses, the Dying Gladiator, the Antinoüs and the Venus of the Capitol met together in captivity; the masterpieces of Domenichino, of Titian, and Paul Veronese were flaunted before the faces of a Parisian mob, and last and greatest of all followed the most glorious and last work of Raffaelle, that deemed worthy of the post of honour at the head of his bier, his superb "Transfiguration." Such was the first Art Exhibition of Napoléon.

The Directorate had merged into the Consulate and the times were unquiet, but the master mind of the First Consul had fully realized the great advantages likely to accrue, not merely to manufacturers but to the country at large from comparison and competition, and the Minister of the Interior was therefore instructed to issue circulars inviting contributions for a second exhibition; and special committees of experts were formed in each department to select exhibits and to examine into the merits of inventions. The appeal was so far successful, that 229 exhibitors (more than double the number in 1798) answered to the call, and the Second Official Exhibition was held in 1801 in the Grand Court of the Louvre. The report of the jury, composed exclusively

of practical men, contains one sentence almost prophetic in its truth, and fully confirmed by the experience of all subsequent exhibitions. "There is not an "artist or inventor who, once obtaining thus a public recognition of his "ability, has not found his reputation and business largely increased." In proportioning the awards, the jurors paid likewise special attention to the cost of each article, and to the best means of diminishing that cost, to the advantage alike of consumer and producer.

A further proof of the advantages Napoléon discerned in securing the coöperation of the industrial section of the country is manifest in the fact that the recipients of the "gold medal" were invited by him to dinner in his capacity of First Consul; and this, trivial as it may appear, and though it may recall to some minds the jest of witty Canon Smith anent ourselves, "that "were an earthquake to engulph England, the survivors would celebrate the "occasion by a banquet," was in reality the first recognition in France of the great bone and sinew of every country—the middle class.

The Third Exhibition was also held in temporary buildings in the court-yard of the Louvre, and so great had been the success of the second in stimulating trade and alleviating the distress of the artisans, that only the short breathing space of one year was allowed to elapse, the time selected being the Fructidor of the next year 1802 (the year X. of the Republic).

The catalogue, in 48 small pages, styled this display "Exposition Publique des Produits de l'Industrie Française," and shows the number of exhibitors to have increased to 540, amongst whom are to be noted the names of Montgolfier, the proto-aëronaut; Vaucanson, the inventor of the mechanical Duck and the Flute Player (those Wandering Jews of Continental fairs); and Jacquard; and it was from a machine exhibited by the great mechanician at this very Exhibition that Jacquard drew the first inspiration for his famous loom.

Four years passed away, Napoléon had become Emperor, before the Fourth Exhibition (the first and last duing the Empire) was held on the Esplanade of the Hôtel des Invalides, with a total number of 1,422 exhibitors. Then the toga gave way to the sword, then came Moscow, Leipzig, Fontainebleau, Elba, Saint Jean, and Saint Helena, and the Bourbons reigned, but not till 1819 was the idea resuscitated in the courtyard of the Louvre, the bede roll of exhibitors, 1,662, showing in 13 years for the Fifth Exhibition but a meagre increase of 240; it has been said, however, though the quantity of the exhibitors stood comparatively still, the quality of the exhibits had rapidly progressed.

1823 and 1827 completed the series of Quadrennial Expositions (taking 1814 as the basis, and allowing for the interval of "The Hundred Days"), both held as before in the Louvre, the first showing 1,648 (a slight decrease) and the latter within five of 1,800 exhibitors.

The Fourth Quadrennial never saw the light, but in 1827, the year of the Seventh French Exposition, the Royal Dublin Society inaugurated the series of Triennial Exhibitions in their grounds—better known to Dubliners as the Duke of Leinster's Lawn—which worked so well and did so much to promote and encourage Irish industries, and which were presented in regular succession until the last, in 1850, served as the forerunner, and was fused into the mass of International Exhibitions.

To continue the series of French Expositions, the eighth changing the *venue*, was held in four pavilions in the Place de la Concorde in 1834, counting no less than 2,447 exhibitors, with a still more marked progress amongst the articles displayed. 3,281 exhibitors were massed together in 1839 at the Ninth Exposition; and in 1844, the Tenth, 3,960 (of whom no less than 3,253 received awards) in temporary buildings in the Carré de Marigny off the Champs Elysées, the site subsequently of the Exposition Universelle of 1855 The Eleventh and last purely French gathering took place in the year 1849 in the Champs Elysées, with a splendid collection of machinery, and a total of 4,500 (within six) exponents. It may also be stated here that throughout France, in her cities and towns, no fewer than 53 provincial and special exhibitions have been held between the years 1803, the year subsequent to the third purely French display, and the year 1866, the year prior to the second and for the present, the last French International Exposition.

Before entering into the long detail of the National Exhibitions, held in every Capital in Europe, and in almost every Arch-Duchy, Duchy, Principality, Electorate, Margravate, Landgravate, and Hans Town of the Fatherland, it is worth harking back to the year 1828, and "The National Repository for the "Exhibition of Specimens of New and Improved Productions of the Artisans "and Manufacturers of the United Kingdom, Royal Mews, Charing Cross."

Opened on Monday the 23rd of June 1828, the "National Repository," as it was speedily called, the original name being too lengthy for a business people to whom time is an object, ranged itself into three grand divisions: First, "Entirely new and ingenious constructions where a new principle is "discovered, or one before known, but never practically adopted, is brought "into operation;"—this, in other words, embraces inventions, or such clever

contrivances as the machine for separating postage stamps, "a principle known" to every schoolboy that ever pin-holed his primer, but never put into practice till utilized by the decidedly clever man who in doing so reaped a harvest of 4,000*l*. Secondly, "any new adaptation of some known principle, but in a manner essentially different from all that has been done before in that line of manufacture or mechanical workmanship,"—this might possibly include all the manifold varieties of sewing machine based on the invention of Howe. Thirdly, "all improvements upon a discovery already made by which "the preparation of any article is facilitated, or its utility increased;"—this would seem to take in such productions as Autotypes owing their existence to the previous discovery of photography. In this third class were included all articles highly finished, "distinguished by exquisite taste, or which, though "manifesting art tendencies," could not fit into the narrow boundaries that marked the art (?) of those days; in fact here one finds the ancestor of "The Good Taste Medal" of the Vienna Exhibition.

The rules governing the selection of articles were admirable, and as complete as the administrative machinery of the times allowed, the Presidents, Vice-Presidents, and Secretaries of the various Mechanics Institutes throughout the Kingdom being invited to form a Committee of Inspection, with Dr. Birkbeck, the founder of these same Mechanics Institutions, for the Chairman of the Committee.

Space was not to be charged for, and no objects were to be removed till the close of the Exhibition, when they were to be returned to the owners, "unless "sold by request, in which case the exhibitor received his money in place of "his goods." The building was opened on the appointed day and crowds of people of every rank thronged to the King's Mews, whilst that "those who ran might read," descriptive labels were attached to the various exhibits. From Mr. Hollingshead's able analysis of the contents we learn the variety of the display, how there were "models of looms and bridges," "the model of a "chapel and of a new number of weavers in the act of weaving a piece of *Gros* "*de Naples*," "beautifully executed works in chasing and cutlery," "weaving of "silks in remarkable patterns," "models of engines and machinery for many purposes," "little known manufactures," and "a multitude of curiosities," in fact all that goes to make up an Industrial Exhibition of the present day. But the National Repository was before its time. Nothing is so easy as ridicule, yet "ridicule kills." It was called "a toy-shop," visitors grew scarce, exhibitors waxed languid, and it lingered out its existence till on the demolition of the

King's Mews in 1833, it was removed for a brief space to Leicester Square, where it soon died of inanition. All this was not the fault of the poor Repository; the blame rests with an age incapable of comprehending its merits, or understanding its future results; and, indeed, what more could be expected from a time whose fashions were absurdities, whose manners were affectations, and whose buildings were architectural abortions.

Turning now to the Continent, we find ourselves in a vortex of Exhibitions and a mass of figures, some displays purely local, others more catholic and comprehensive, but all strictly national.

Austria, in the year 1820, started a series of local Exhibitions; at Prague, Brünn, Gratz, Klagenfurt, Laibach, and other places, but it was not till 1835 that the first National Exhibition for the whole Empire was held in Vienna with 594 exhibitors, to be repeated in 1839 with 732 exponents; and again in 1845 with no less than 1,865. Prussia called together a meeting of her exhibitors at Berlin in 1822 and 1827, to which, in the first instance 176, and the next 208 responded; from that date up to 1844 migratory parades of industry were held at Königsberg, Görlitz, Breslau, Magdeburg, Herschberg, Coblentz, Düsseldorf, Halberstadt, Cologne, Aix-la-Chapelle or Aächen, Liegnitz, Grüneberg, Erfurt, Bunzlau, Oëls, Warmbrunn, and other places until they culminated at Berlin in 1844 in the great Teuton display, a pageant in which all the Fatherland took part, 3,040 exhibitors assisting, 1,932 being from Prussia, and 75 from Austria. Saxony started her Exhibitions in 1824, continuing them in 1831, with 169; 1834, with 786; 1837, with 364; 1840, 323; and finally 1845, with 683 exhibitors.

The Exhibition at the Easter Fair in Leipzig in 1850, counting 1,494 Exhibitors, though held on Saxon territory was a German gathering, and thus a sequel to the Berlin Exhibition of some six years previously.

Hanover exhibited once whilst under British rule in 1835, having 381 exhibitors, her four subsequent Exhibitions taking place in 1837, 1840, 1844, and 1850, the total of Exhibitors in each instance being, 385, 258, 348, and 255. Such up to 1851 (subsequent Exhibitions shall be dealt with subsequently) was the industrial contingent of the Kingdom of the White Horse.

Bavaria early followed the example of France, by Exhibitions at Munich in 1818 and 1819, but the results were not encouraging as neither were the displays of 1821, '22, '23, and '27. One would not, however, have to look far for the cause of failure; annual Exhibitions never have and possibly never

will be successes; "the funeral baked meats" of one Exhibition ever "coldly furnish forth the marriage table" of the other; 1834, however, showed the wisdom of waiting as 779 Exhibitors were represented, the success continuing, strange to say, the next year with 944, whilst "the quaint old town of toil and traffic, quaint old town of art and song," Nürnberg, counted 1,000 Exhibitors plus one, within her walls in 1840, and Munich in 1845 under the presidency of King Ludwig, also had an Exhlbition of industrial products of the kingdom.

The Electorate of Hesse had its first Exhibition in 1817 at Cassel, and the Grand Duchy of Hesse Darmstadt scored a success in September 1842, with seven hundred and fifteen Exhibitors—222 being natives of the Grand Duchy, the rest, nearly five hundred, being drawn from twenty other German States.

At the risk of being tedious, and the better to show by comparison, the only true test, the magnitude of 1851 and its offspring, some more figures and dates must be waded through, for all these Exhibitions were, so to speak, fords; the time then had not come, as it has now, when it requires a strong swimmer to breast the current of opposition, and after all perhaps it is as well that the weakest should go to the bank.

Helvetia held her heydays of industry—at Lausanne in 1839; at Berne, 1843, 1846, and 1848; at St. Gall in 1843, and at Zurich in 1847.

The Netherlands at Ghent in 1820; at Tournay in 1824; at Haarlem in 1825; and at Brussels in 1830 massed together her Batavian products, whilst Brussels, after the Independence of Belgium was proclaimed, garnered together Flemish products in 1835, '41, '47, and '48, the locality being changed to Ghent in 1849. Sweden has not been so successful at home in her National Gatherings as she has been abroad in International Contests. At Stockholm, in 1823, there were but 62 exhibitors; eleven years later, 1834, 290; again, in 1860, 200 all told, being a decrease of nearly a third, whilst four years nearer to us brought but a poor increase of ten on the last number.

But there have been other and successful Exhibitions since 1851, notably that at Stockholm in 1866, in which all Scandinavia (Norway, Denmark, and Finland) was linked, the total being 4,175 exhibitors; but the purpose now is only to show the smallness of numbers *before* the "World's Fair," and their increment afterwards. St. Petersburgh saw an Exhibition for the entire Russian Empire in 1829 with 324 exhibitors, the subsequent dates being 1833, 1839, and 1849. Moscow held hers in the historic Kremlin in 1831 and 1835, whilst Warsaw

collected all that remained of Polish Industries in 1841 and 1845. In Italy, the most noteworthy gatherings were in 1829, 1832, 1838, 1844, and 1850 for the kingdom of Sardinia at Turin, and for the Grand Duchy of Tuscany at Florence in 1844 and 1850. Madrid, representing all the Spains, takes the dates of 1827, 1828, 1831, 1841, 1845, and 1850; whilst Portugal convened her displays at Lisbon in 1844 and 1849.

Such are the blazons on the Industrial banner of the Continent, tedious to recite and possibly still more tedious to read, but necessary still to the student of history of Art Industry as is the alphahet to the incipient reader or the gamut to the embryo composer.

The list, home and foreign, is, however, in commercial phrase nearly "totted;" there are but a few who do not know how truly the Society of Arts have upheld their motto, "Arts and Commerce promoted," and from the days of the King's Mews *fiasco*, frequent collections of raw materials, previously unknown or only heard of through books, of noteworthy manufactures, and new inventions were shown in the "old room" that has witnessed so many meetings. At various local centres of industry Exhibitions were intermittently carried out, regularly and triennially as before stated at Dublin from 1827; and now we arrive at the Free Trade Bazaar and the concomitant Exhibition of Manufactures held at Old Covent Garden in 1845.

In 1846 the Prince Consort was elected President of the Society of Arts, and almost his first advice was to "encourage the application of Fine Arts to our Manufactures." This was the seed sown on no barren soil which has produced such good fruit in our generation, and the Society, wisely adopting the suggestion of their Royal President, instituted a Special Prize Fund, the object being to substitute shapeliness for deformity, colour for garishness, not merely in articles of luxury but in objects of every day use and moderate price.

The latest date for receiving designs for competition was the 15th of May 1846, and amongst the objects sent in on that date was a tea service in one colour, the manufacture of Messrs. Minton, to which the Special Prize was awarded. "Great events from trifling causes spring," and so it may be said that indirectly our Great Exhibition owes its institution to a tea-cup. It was then proposed that objects having gained a prize in 1846 should be displayed again in 1847, at a first Exhibition of "Select Specimens of "British Manufactures and Decorative Art;" this was opened in March, and despite the supineness of manufacturers was a success, 20,000 being the number of visitors. Next March, the March of a troublous year, 1848, saw the

third real, though the second nominal, Exhibition, and by this time manufacturers had discovered their mistake and pressed exhibits on the Society, nor was the public apathetic, as the returns show that the number of visitors in this year was upwards of 70,000.

Then came the "Mulready Exhibition," in June; in the spring of 1849 the third Exhibition of Manufacturers, to be followed again in June by the sequence of the "Etty Exhibition," and embarrassed with industrial riches the Society were in doubts how to carry out their scheme of a Great *National* Exhibition of British Industry. How to carry out not only it but a far vaster scheme was shown by the princely President, and the Gordian knot of Internationai prejudice was, let us hope, severed for ever.

All previous spectacles were, so to speak, parochial, the competition was in every instance limited to the family circle; reproductions all, though doubtless improvements one on the other; no one had the courage to depart from the beaten track, to suggest a comparison with other countries, till the Prince Consort struck the key note by his first suggession of an *International* Jubilee which, to use his own almost prophetic words, was "To form a new starting point from which all Nations were to direct their further exertions."

Ours is an Era of Exhibitions, and its Hegira dates from that 30th of June 1849, when the Prince Consort, at a meeting of the Society of Arts held in Buckingham Palace, explained the outlines of that great scheme which owed so much of its subsequent success to the rare administrative ability of its author and founder. At this meeting Prince Albert not only suggested the grouping of the Exhibits into Four Main Heads, Raw Material, Machinery and Mechanical Inventions, Manufactures, and Sculpture and Plastic Art, but he also suggested the world-known site, on the wisdom of which it would seem unnecessary to enlarge, were it not for the fact that even so good a judge of men and cities as the late Lord Carlisle, in his capacity of First Lord of the Woods and Forests, had dreamt of no better a location than the square of Somerset House; and the questions of prizes, of a Royal Commission, and of the organisation of a popular subscription having been decided on, the Exhibition of 1851 started forth from that meeting, ready armed like Minerva, on her mission of peaceful contest. From that day no time was lost by distracting counsels or futile delays, the 3rd of January of the following year saw a Royal Commission appointed, on the 13th of March architects of all nations were invited to compete, the 8th of April witnessed 233 plans submitted, on the 10th of June they were on exhibition at the Institute of

Civil Engineers in Great George Street, Westminster, only to be rejected "as "no single plan was so accordant with the peculiar objects in view, either in "the principle or detail of its arrangement as to warrant them (the Building Committee) "in recommending it for adoption." On the 18th of June Sir Joseph, then Mr. Paxton, submitted to Mr. Robert Stephenson the rough sketch on *the* blotting-pad of what was to be the Faërie Palace by the Serpentine; in 10 days the elevations, sections, working details, and specifications were carried out; on the 6th July they appeared in the *Illustrated London News*, and the suffrages of the masses secured, on the 16th they were accepted; on the 26th the tender of Messrs. Fox and Henderson was ratified; on the 30th the contractors took possession of the ground; on the 15th August the charter of incorporation was issued; and on the 26th September the first column was in its place.

It is worthy of note that France contributed the greatest number of architectural competitors amongst foreign nations, her total number of designs being 27 against the 11 forming the combined total of Belgium, Holland, Hanover, Hamburgh, Naples, Switzerland, and Rhenish Prussia. London architects were naturally in great force, 128 coming from the realm of Cockayne, whilst the provinces furnished 51, and Scotland and Ireland respectively 6 and 3. Of all these but two designs accompanied by models were specially noticed by the Committee, those of Monsieur Horeau of Paris, and Messrs. Turner of Dublin, "as evincing most daring and ingenious "disposition and construction." The pet design of the Building Committee possessed but one notable feature, a dome of iron 200 feet in diameter. This idea was regarded as preposterous, and theorists aired their objections both by pamphlet and letter. It was proved to demonstration that such a dome could not be erected in the time specified, or, if erected, that the walls of brickwork would not bear the strain; they would collapse inwardly, the outward thrust would involve walls and dome in a common ruin, and whilst the denunciators all disagreed one from the other, "their unanimity was wonderful" in condemnation. The absurdity of all these objections has been since proved, and Mr. Scott Russell had the satisfaction of verifying his theories at Vienna by the erection of a dome no less than 354 feet in diameter his original design aiming at a Cyclopean Cupola of 800 feet. All this hostility had, however, one good result, for it nerved Sir Joseph Paxton to submit his views to the Committee, and as he had proved their practicability at Chatsworth, the Committee were only too glad to secure their retreat from a position they found untenable.

Once the Committee had confirmed the verdict of the public, Sir Joseph found loyal coöperation amongst those whose advice was most valuable; the rival friends Brunel and Stephenson, Sir Charles Barry, Sir William Cubitt, and Sir Digby Wyatt all furnished suggestions, but still the battle of the Exhibition had not been fought out. Lord Brougham was only too happy to embrace an opportunity for some of his philippics, the theme being "closing one of the lungs of London," whilst the Bayard of crotchets, Colonel Sibthorp, stood up in defence of the hamadryads of Hyde Park. It is a thrice told tale to say how the elms were spared, and that to their preservation was due the glorious transept (the building as originally planned resembled nothing so much as three orange boxes, decreasing in size, piled one on the other) that recalled the mot of the late King of Saxony on Chatsworth, "a tropical scene with a glass sky." Events march rapidly in our times; the quarter of a century has removed many of the actors from this mundane scene, the Princely Founder, the eminent engineers, the able architect, the eloquent critics, all have passed away since that May Day, when as if by

> A wizard's rod,
> A blazing roof of lucid glass
> Leaped like a fountain from the grass
> To meet the sun.

But their work survives, '51 was the Adam of Exhibitions, and the Crystal Palace the Eve of a numerous posterity.

Without dwelling too long on details, it may be well before passing on to halt for a few moments and let facts and figures tell their own story of success. The building covered over 20 acres, its length in feet corresponded with the year of its erection, being 1,851, it cost 193,168*l.* 10*s.* 2*d.*,—the twopence is a triumph of financing,—it was open five months and fifteen days, it produced 506,100*l.* 6*s.* 11*d.*, the surplus, an Exhibition aloe that never has flowered since, was about 186,000*l.*; the total number of visitors was 6,039,195, and the total receipts, both at the door and from season tickets, amounted to no less than 423,792*l.* 4*s.* 7*d.*

The aggregate number of exhibitors was 13,937, of whom Great Britain contributed 6,861, the Colonies 520, and the rest of the World 6,556. Persia furnished 12, China 30, Greece 36, and Denmark 39, to this array, a remarkable contrast to their muster-roll in subsequent Exhibitions. The estimated value of the contents was 1,781,929*l.* 11*s.* 4*d.*, of which the proportion set down to Great Britain and her Colonies amounted to no less than

1,111,508*l.* 19*s.* 9*d.*, exclusive of the priceless spoil of the "old Lion of the Punjaub," the historic and matchless Koh-i-noor.

The awards consisted of the Council Medal, ranking with a Diploma of Honour, the Prize Medal, and a Certificate of Honourable Mention, distributed as follows: Council Medals, 171; Prize Medals, 2,954; and Honourable Mentions, 2,123.

The glass and iron mode of construction has since made the circuit of the globe; New York in 1853, the "second edition," revised and improved, at Sydenham in '54, the miniature copy at Melbourne, and the Glas Palast at Munich in the same year, the Dublin Exhibition of '65, the Paleis Van Volksvlÿt at Amsterdam in '69, were all modifications of the great example of 1851, whilst the experience of a quarter of a century has suggested no more fitting materials than iron and glass for the Industrial Building of 1876.

But the Great Exhibition did not alone endure in its prototypes or in a series of World's Fairs; all these are but a means to an end, its truest monument is to be found in its offspring, South Kensington Museum and its compeers; by their means the blossoms of one display have become the fruits of the next; the taste for the beautiful, by their example, has been spread broadcast all over the earth, and Art has become the ally and not the antagonist of Industry.

Not this alone, but in the words of the Princely Founder, we begin at length to realise how much the world is a gainer "by peace, love, and ready "assistance, not only between individuals, but between the nations of the "earth," and slowly but surely draw near to "that great end to which all "history points, *the realisation of the unity of mankind.* Not a unity which "breaks down the limits, and levels the peculiar characteristics of the different "nations of the earth, but rather a unity, the *result* and *product* of those very "national varieties and antagonistic qualities."

South Kensington Museum may be regarded as an A B C of Art (the number of visitors from its beginning show at the present day an aggregate of nearly 15,000,000), barely tolerated at first, laughed at by those who regard every innovation with the same eyes as Hollanders look on an incipient fissure in a dyke, and possibly for a similar reason, as the tide of popular feeling has gradually opened up the chink it had made in the dam of ignorance, and now the waves of art-culture have spread over and fertilised the land. It was said, look at your buildings, is that your boasted taste? and indeed the

"Brompton Boilers" were but a rude husk for so sweet a kernel, but, as the proverb says, "Rome was not built in a day," so it required time for the truth to triumph; now the casket is worthy of the gems, and of no institution in our land are Englishmen more proud than of our great Art Museum. It was the schoolmaster *at home*, it taught the masses through their eyes, its nucleus consisting of gifts and purchases to the extent of 9000*l.* from the Exhibition of '51, bit by bit it was built up, treasure by treasure it was added to, no large sums were voted for it; here was a purchase, there a gift or a bequest, until in this present day it recalls in many features the Green Vaults of Dresden or the Imperial Treasury of Vienna. It was the first to realise the fact that for women there were other occupations than the needle, whether that of the little steel stiletto, the sewing machine, or the telegraph, and the results are everywhere apparent, in the porcelain of Minton, in the black and white designs of the illustrated papers, in the "Roll Call" and the "Quatre Bras" of Miss Thompson.

Every age has had its collectors, but also its dispersers, the hammer of the auctioneer has been as fatal in its effects as that of the iconoclast, the sale of a week has dispersed the accumulation of a lifetime, or under every favourable circumstance the besom of the housemaid has been frequently as destructive as the playful gambols of "the domestic cat" or the fire caused by the melting pot of the plumber. All that is now, humanly speaking, a thing of the past; treasures of bygone art are massed together, not to be separated again until an invader finds London "a pleasant city to sack," whilst still more has been effected, the fact that the millions appreciate their property has moved the possessors of stored-up artistic wealth liberally to contribute of their abundance, and thus make the beggar wealthy as the King, for both can but enjoy.

Loan collections have become an institution, that of 1862 was a rival even to its mighty neighbour, with such relics as the distaff of Marie Stuart, the mitre of à Beckett, and the cap of good, brave Sir Thomas More. Since then history has been taught more effectively by the Loan Collection of Historical Portraits in 1866, '67, and '68 than by a course of Hume and Smollett washed down by Macaulay. In the first year were shown portraits from the earliest periods to 1688, many as apocryphal as the Gallery of Kings at Holyrood, but including such genuine works as the Chandos and Lumley Shakespeares, and illustrating thoroughly the great (great in its literature) Elizabethan age. A minor poet has chronicled this Exhibition well in some verses, two of which run thus—

Great Eliza had a fancy for being painted very often,
With her silk brocaded dresses, stuffs and jewels passing rare,
But though Spenser praised her beauty, not all Holbein's skill could soften
The dark frown upon her features, and her concentrated stare.

Then there's winsome Marie Stuart, and though some say stain of sinning
Cast its shadow on the fairest flow'ret that the White Rose gave to earth,
I would hold my youth's allegiance and believe that one so winning
Was as pure as she was noble, and as gentle as her birth.

The second carried one on from our Revolution through "the tea-cup days of hood and hoop, and, when the patch was worn," through bespattered Bolingbroke, gentle Dickey Steele, Pope, that note of interrogation, crooked in mind as in body, kindly Addison, lazy Thomson, burly Johnson, gossiping Boswell, "Pamela" Richardson, the great Dean, witty Sterne, Oliver Goldsmith, (*he* needs no pet epithet,) Burke who roused the nations and sent the Commons to sleep, Sheridan, wit, statesman, orator, and dramatist, Burns, ploughman, poet, and patriot, Chatham, Charles James Fox, "the divine William" of his friends and "bottomless Pitt" of his enemies," Curran, Grattan, Wilberforce, whose fame survived through his gifted son, William Hogarth, Gainsborough, Sir Joshua, Watts, all of whom, children of the eighteenth century, serve to relieve the monotonous mediocrity of a stupid and inglorious era. The third exhibition, in 1868, took up "the story of our island song" to the previous year, and *certes*, though we may laugh with "gentle Goldy," and say with him anent great Twalmy and his patent iron, "no age so great and no times so important as ours," there is little doubt that this our nineteenth century will come forth triumphantly from the unimpassioned criticism of future times, Who so bold as to deny that Byron, Coleridge (whose name yet survives in writs as well as writings, and whose successors go far to disprove the old theory that brains do not descend), Brougham, Canning, noble sire of noble son, Scott, Keats, Southey, Tom Moore, Shelley, Hood, Campbell, Macaulay, Rogers; the pen-Hogarth of our day, Charles Dickens; Thackeray; the kindly-hearted satirist, Jerrold; Turner, Wilkie, Wellington, Nelson, the Napiers, the Lawrences, Havelock, who "dead still *keeps* the realm he *saved*," Outram the Bayard of India, the engineers Brunel, father and son, the Stephensons, Wedgwood, and others who, in diverse ways and by different means, have all striven to exalt our age, will survive as names of power, whose fame the English-speaking world will not willingly forget. Nor was this allowed to be the mere sensation of a season, but, calling the attention of the nation to a national want, lent considerable aid to the permanent Valhalla of our worthies, the National Portrait Gallery.

Later on the public, both travelled and untravelled, have learned as much from the Meyrick Collection, as it could have from the Zwinger at Dresden, or the Ambras Gallery in the Lower Belvedere. 1872 saw three notable collections; the varied and cosmopolitan treasures of the Duke of Edinburgh, where the modern gold and silver work of Australia, the bronzes and lacquers of Japan, the "Kooftgàri" work of India, the "Kahilis" or Royal Standards of the Sandwich Islands, and the porcelain of the Flowery Land, egg-shell, crackle, turquoise, *sang-de-bœuf* and *clair de lune* all were massed together; the collection of musical instruments which ranged from the organ-tiger of Tippoo Saib to the spinet of Queen Elizabeth, and the monster bass-viol of the Duke of Leinster; and finally the superb accumulation of jewellery.

In this last the art-student could trace personal adornment down from the jewels of Queen Aahhept, the mother of King Aahmés, who founded the 18th dynasty eighteen hundred centuries before Christ, and was not only coeval with Abram and Sarai, but was the identical Pharaoh who was "plagued with great "plagues because of Sarai, Abram's wife," and who was contemporary with the expulsion of the Shepherd-Kings. On went the list through the cunning handicraft of the Greek and Etruscan periods, to the massive forms of old Rome and the delicate art of the gold workers of Tarentum, till it passed into the Cinque Cento, and on to the revival of Benvenuto Cellini and the tasteless garishness of the age of Rococco. Here too were historical tokens, such as the Darnley jewel, made about 1576 for the Lady Mary Douglas in memory of her husband, Regent of Scotland; a reliquary of Catherine of Braganza; a pendant of another Queen and Catherine yclept Parr; the sapphire ring thrown from the window by Lady Scrope, that was borne northward by relays of horses as fast as the beacon flash that told of the coming of the Armada, and that welcomed the first of the Stuarts to the throne of the last of the Tudors; the gift to his Queen from the lion-hearted Drake, and the missal cover of Henrietta Maria, unhappy daughter of an unhappy sire, Henri Quatre, a more unhappy mother, Marie de' Medicis, and wife and widow of a most unhappy King.

1873 saw a collection of needlework, rich in art and historical interest; copes, chasubles, stoles, and maniples, the pall of Sir William Walworth, the baby-linen basket wrought by his mother for James the First, and the baby-linen, never needed, worked by Elizabeth for her sister Mary. Then later the offshoot of South Kensington, Bethnal Green, laid open to the teeming masses of London an art academy for the million in the unrivalled cloisonnerie, the bronzes, and the masterpieces of Rembrandt, Van Dyck, Greuze, and Meissonier lent by the liberal-minded Sir Richard Wallace. But South Kensington has done still more; at home not only has it put life into the dry bones of fossil Art Schools,

and established flourishing Schools of Design in all our centres of industry, but abroad it has set the example followed in every country that pretends to civilization, and thus is in truth the ancestor of all the Art Industry Museums of the World. To sum them up briefly, it is sufficient to name the Conservatory of Arts and Trades at Paris, the Museum of Industry at Brussels, the Museum of Art and Industry on the Stuben Ring at Vienna, with its treasury of the King of Hanover, the Magyar Ipar Museum at Buda-Pest, the Art and Industry School of Carlsbad, the Museum of the Minister of Commerce for Schools of Art in Austria, the Brünn, Lemberg, Cracow, and Reichenburg Museums, for Moravia, Galicia, Poland, and Bohemia respectively.

Then come the Museums of Berlin, Königsberg, Nürnberg, Munich, Carlsruhe Cassel, Hanover, Hanau, Hamburg, Leipzig, Stuttgart, Darmstadt, and that of quaint old Lübeck, whose merchants once made the proud boast,

> You can want no more I'll swear
> Than the honour of a Lübecker.

Running through the list we find "Auld Reekie" with its Museum, rich in Icelandic art-lore, Keltic, Danish, and Gothic relics, Stockholm, Milan, Turin and Florence, St. Petersburgh, Moscow, and Helsingfors, and, across the Atlantic, the Massachusetts Museum of Fine Arts in appreciative Boston, Even Turkey has its School of Industry at Constantinople, whilst Yedo has inaugurated a Museum which only needs that Japanese works of bygone days should be gathered together to make it an art bourne for the art-workmen of the West. South Kensington is the parent acorn of all these oaks, it set the primal example and to the World's Fair of '51 it owes existence. To it and to its founder the world owes a debt beyond all monument. As for the benefits that the art-industry of every country has derived from these several Museums they are patent, and manufacturers everywhere agree that for the future in the marts of the world commerce must go hand in hand with taste.

In 1852 came a lull after a tempest of success, and as "when a well-graced actor leaves the scene, the eye but idly follows him that enters next," so the Cork Exhibition held in the Corn Exchange by "the pleasant waters of the River Lee," did not receive the full meed of merit it undoubtedly deserved. Still, as the daily admissions marked the number of 74,095 in the total, and the admissions by season tickets numbered no less than 54,936, for a provincial display it must be pronounced a success.

1853 witnessed two International Exhibitions, one at New York, the other at Dublin. The Exhibition at Gotham owed its origin to the enterprise of Mr. John Jay Smith of Philadelphia, who conceived the idea of transporting *en bloc* the contents of the palace of Hyde Park to New York, and exhibiting them in a building of somewhat similar construction. Modelled in the form of a Greek cross, with a central dome for occasions of ceremony, and, following its prototype of '51, constructed of glass and iron, the building itself was almost perfect both in design and execution; but the originator fell ill, and as all Napoléon's Marshals could not make the man, so when the idea passed into the hands of a joint stock company, it succumbed to circumstances, for divided counsels brought delays, and its history may be briefly written as failure and its end fire.

The International Exhibition at Dublin owed its initiative to the public spirit of William Dargan, whom his countrymen delighted in calling, from his favourite attitude, "the man with his hand in his pocket," as the local rhymes ran:

> Hard work filled his coffers with gold,
> For the good of mankind he'll unlock it,
> For science and art, thousands freely are told
> By the man with his hand in his pocket.

What William Dargan did through his long, laborious, and honourable life, forms a prominent chapter in the history of men who have risen; born in the Barony of Forth, in the county of Wexford, a spot selected by the invader, Kelt, Norman, or Cromwellian, from the days of the Milesians downwards, he, with his congeners of Wexford, stands forth as a true type of the energy begotten by the mixture of races.

A very young and also a very poor man, but God-gifted with sterling brains, indomitable pluck, and untiring industry, he carried out the contract for the construction of the first railway in Ireland, that running between Old Dunleary (now Kingstown) and Dublin, and towards the close of his career, he devoted his wealth to the truest patriotism a man can show, not the raising up of fences across which the right hand of fellowship cannot extend, but the development of the natural resources, brains, and industry of the land of his birth.

William Dargan proposed to spend 20,000*l.* on a building at Dublin to receive the industries of the Nations, but as the idea grew so grew his gifts, until his contributions reached the total, unequalled for any individual for a similar purpose, of 80,000*l.*

The Exhibition of '53, unlike that of '51, was built mainly of wood, its site was the lawn of the Royal Dublin Society, and the general idea it gave was of five Brobdingnagian vegetable marrows laid side by side, the front presenting five ovals in roof and walls. The main hall was 425 feet in length by 100 in width, and 105 in height ; and the side aisles ran in lesser proportions, there being no transept. Naturally the Exhibition as an International display could not compete with the superb congeries of '51, but in some respects it proved in advance of its time.

Thus, in its Picture Gallery, which the *Art Journal* described as "something astonishing," comprising as it did, not only the canvases of living artists, but the masterpieces of the old masters, it anticipated 1855. In Sculpture, it could boast of one of the two works known to have been executed by Raffaelle, an exquisite boy and dolphin in marble ; the cast of this had been preserved for years with religious care in the Gallery at Dresden, the original having been supposed to be lost.

But still more was carried out in this quiet, little Exhibition in old Eblana, for in it was first instituted that "roll call" of the "History of Labour" that formed a prominent feature at Paris in 1867. The Age of Stone, illustrated by relics got together from caves, grottoes, graves, and dolmens, was shown in flint arrow-heads, kelts, and hammers ; the Age of Bronze, of spear-hilts, daggers, hatchets and spears found in bogs or in the excavated remains of lacustrine dwellings, was displayed through the changing types of warring tribes until one reached a period that in the outcome of its labours would reflect credit on even the much vaunted civilisation of our times. The Gallery of Paintings must be passed over with but scant courtesy ; however, as Van Dyck with his portraits of the Ormondes, Lely, Reynolds, and Hogarth, the latter in the Charlemont Gallery, including his "Gate of Calais," were present, the series cannot be deemed uninteresting, even in our days of salons, institutes, and academies.

The apartment, for it was no more, consecrated to ancient Irish Art, furnished as complete a series as was possible of its remains. Not only did the Royal Irish Academy contribute its collection, second only in value, but not inferior in interest, to that of the Royal Museum at Copenhagen, but also through the good offices of Lord Talbot de Malahide, a kindred collection of Keltic remains was brought together from the greater sister, and thus England and Scotland was represented, in kindred examples, the Queen contributing the gold torques found in Sherwood Forest, puzzles to anti-

quarians, and possibly "loots" of bold Robin Hood from some passage of pilgrims.

This Museum of Irish Antiquities was still further enriched by the collection exhibited at the meeting of the British Association at Belfast, whilst Oriental art-industry was fully exemplified by the East Indian Collection contributed by "John Company," reinforced by that of the Asiatic Society, the private museum of Field Marshal Lord Gough, and a unique selection of Japanese antiquities from the museum at the Hague lent by the Dutch Government.

The hall in which these were displayed was in itself an architectural study, being divided into a nave and chancel by casts from the six-times recessed arch of Tuam Cathedral with its strange Egyptian carvings, and the east end was lighted by three large circular headed windows copied from the same edifice. The entrances were formed of carved and inscribed doorways copied from ruins in various parts of the country, and the west door by the large circular window of the eighth century taken from Rahan Cathedral. All this gave a sense of unity to the contents, comprising in addition to thevarious specimens of art work, casts from the two large crosses of Monasteraboice and four smaller originals, one from Tuam. In the cases were to be seen torques, fibulæ, bracelets, rings, bullæ, boxes, and discs, including some of the rare double-disced objects peculiar to Ireland, the use of which is not known. The mere money value of all these was immense, one of the torques weighing no less than 27½ ounces, and a bracelet not less than 17, both of the purest gold. There were other objects that recalled—

> Old legends of the monkish page,
> Traditions of the saint and sage,
> Tales which have the rime of age,
> And chronicles of eld.

Cumhdachs, or silver and jewelled cases of quaint workmanship, containing illuminated manuscripts of the Gospels, the Book of Armagh, date 807, Psalms attributed to St. Columba, and the Domnach Airgid set in an exquisite silver shrine. This portion of the Exhibition was most noteworthy, as it afforded an opportunity for the expert to compare the various changes in style from the handbell of St. Patrick to the golden bell of St. Senan, whose Malthusian propensities have been commemorated by Moore. This latter was peculiarly interesting, its covers dating from the earliest historic period to the beginning of the fourteenth century. Further specimens of the goldsmith's art were shown in the various reliquaries, such as the shrine of St. Manchan, the bosses of which were enriched with most intricate work,

that of St. Lachtin, in the shape of an arm, the chasing being peculiarly delicate, whilst such examples as the Tara brooch and the well-known knob brooches, the knobs formed like arbutus berries, recalled the Etruscan specimens that have taxed the ingenuity of even Signor Castellani to reproduce. All these, with ancient croziers, antique harps, like that of Brian Boroimhe, and the Regina Cithararum, or Queen of Harps, brought the past as vividly before the mind of the spectator as the Pompeïan Museum at Naples, or the collection of old Greek and Genoese antiquities at Kertch. The Roman period was illustrated by some waxed tablets with Latin inscriptions found in the bog of Maghera, county Derry, and probably once the property of some Roman legionary who relieved the tedium of his "rota" in Britain by some elk stalking in the sister island. Such were some of the lessons taught by the Dublin Exhibition of 1853; and if its contents have been dilated on somewhat at length it is solely because it first set an example which has been so largely followed, and with such beneficial results; for to the study of ancient examples, we owe much of our modern art progress. The duration of the Exhibition was from the 12th of May to the 31st October, Her Majesty, accompanied by the Prince Consort and the Prince of Wales, then a lad of twelve, visiting it in state on the 29th of August.

Munich in 1854, with her 7,005 exhibitors drawn from every part of Germany, presented a total unsurpassed until the World's gathering at Vienna in '73. The building, which still survives, designed by Herr Voit, was constructed of glass and iron, and recalls in many features the exemplar of '51, the main difference between them being the substitution of a square-towered transept for the well-known circular roof. For a building devoted purely to national display its extent was considerable, being no less than 850 feet in length by 85 in height. In this same year a Norwegian Exhibition was held at Christiania, whilst the Latin races competed amongst themselves, the Italians at Turin and Florence, and the Spaniards at Madrid.

During all this time the French had been busily planning the details of their first International gathering. The decree appointing Commissioners for an *Exposition Universelle* to be held at Paris in 1855, with Prince Napoléon as President, was signed by the Emperor on the 24th December 1853. This was not to be merely an industrial congress, but an International display of arts; this "crowning of the edifice" originating with the Empress Eugénie. The main building, as all know, was the *Palais de l'Industrie* in the Carré Marigny, which has since witnessed so many changes, at one time welcoming the

Royalties of Europe, at another devoted to the service of contemporary art and then again desecrated to be a receptacle for a show of dogs or horses. The building, with its façade of stone, is undoubtedly an ornament to the Champs Elysées, but the builder's bill was a heavy one, amounting to no less than half a million. There were many modifications to the original design, including a rotunda, styled the panorama, set apart for the display of the jewels of the Empress and those of the Queen of Portugal, and choice specimens from the looms of the Gobelins and the ceramics of Sèvres. This building formed the bond of union between the main structure and the *annexe* devoted to raw produce and machinery, which extended for three-quarters of a mile along the Quai de la Conference from the Place de la Concorde to the Pont de l'Alma, abutting on the Avenue Montaigne, in which was situated the Palais des Beaux Arts.

The financial history of 1855 was an unpleasant memory, the expenses amounting to not less than a million, whilst the receipts, all told, came to but 128,099*l.* 8*s.* A portion of this deficit must be set down to unreadiness, the opening taking place on the 15th of May in lieu of the 1st, and even then the several departments were inaugurated in detail, the agricultural on the 5th June, the *annexe* on the 10th, and the panorama no sooner than the 30th. But once fully opened, it was an undoubted success, and the smallness of the receipts may be partly attributed to the kindness of the Emperor, who set down the sums for admission on so low a basis that the poorest of his subjects could enter, there being 20 centime days, whilst on the 27th May the doors were opened gratuitously to all comers. The duration of the Exhibition was from the 15th May to the 30th November, a total of 200 days, Sundays included; the number of exhibitors was 20,839, being an increase of half on the London total of 1851, whilst the visitors attained the maximum of 5,162,330, against 6,039,195 in 1851, scoring, however, on Sunday the 9th of September, 123,017 as the greatest number, against the 109,915 registered on Tuesday, October 7th, 1851. The Fine Art Gallery was, however, the feature of the Exhibition, it being the first contemporary International display of any magnitude. Visitors to it will doubtless remember the statue of Minerva, formed of ivory, gold, and gems, and evolved from records of the marvellous work of Pheidias in the Parthenon. The original was, so say historians, 40 feet in height, this reproduction executed by M. Simart, for the Duc de Luynes, being, needless to say, of much more humble proportions. Each country had its separate salle, an honour conceded also to Ingrès

and Horace Vernet, and as many Englishmen at Paris for the first time came face to face with the canvases of Rosa Bonheur, Corot, Daubigny, Millet, Delacroix, Gustave Doré, Edouard Frère, Gérôme, Meissonier, Robert Fleury, Troyon, Knaus, Tidemand, Madrazo, Verboeckhoven, Baron Leys, and many others whose names are now "household words;" so the English gallery was a revelation to Frenchmen, extorting from one of their greatest critics, Théophile Gautier, the admission, "The English School is original, original as the people that produced it."

Before proceeding further it may be well to note that in 1854 Victoria held its first Exhibition at Melbourne, in a palace of glass erected on the site of the present Mint, a subsequent Exhibition being held in the same building in '61; the Intercolonial display of '66–'67 taking place in a building intended to serve as a Public Library, which has been added to at the succeeding Exhibitions of '72–'73, preparatory to the Vienna Exhibition, and that of the past year, Intercolonial also, the Colonial rehearsal of the coming drama.

Passing on through the local industrial celebrations at Brussels in '56, Lausanne in '57, with 2,050 exhibitors, Turin in '58, and Hanover in '59, it is well to halt for a brief while at '57 and recall the unequalled Fine Art Exhibition at Manchester. Never before or since has such a mass of artistic wealth, both of old masters and the modern school, been congregated together; art indeed was everywhere prominent, even in the arrangement of the great hall with its statues and groups of armour, separated and set in little islands of greenery. Heirlooms were contributed from all parts of the kingdom; the Royal Academy sent its diploma pictures, and to the zeal and industry of Peter Cunningham is due the germ of a British Portrait Gallery, running through our British worthies from Henry IV. to Keats, and enriched with the works of Holbein, Van Dyck, Zucchero, Sir Peter Lely, Sir Joshua Reynolds, and Sir Thomas Lawrence. Not only artistically but financially was it a success, and Manchester may well be proud of the fact that the admissions reached a total of no less than 1,336,715, the total receipts being 83,520*l.*; the figures tell their own tale.

Greece in '59 not only revived the Olympic games—"We have the Pyrrhic dance as yet, where is the Pyrrhic phalanx gone,"—but also inaugurated her first Exhibition at Athens with the creditable number of 947 exhibitors. 1860 was a very remarkable year, for nowhere, even in the realms of Prester John, the principality of Monaco, or the kingdom of the Grand Lama of Thibet, can

the smallest trace of an Exhibition be found. Yet not so; even the consolation of proving the rule by the exception is denied to the searcher after truth. Stockholm in this year had its Exhibition, the number of exhibitors being 200.

1861, however, made amends; Dublin had its Art Exhibition, Edinburgh its Exhibition of Art Treasures, and Italy its first National Italian display at Florence. This last demonstration had its locale in a building skilfully adapted for the purpose; formerly a railway station built from the designs of the younger Brunel, assisted by Mr. T. H. Wyatt, it was so contrived that the industrial section occupied the ground floor, whilst the upper story was set apart for the Art Exposition; machinery, agriculture, and zoology having each its separate edifice.

Overshadowed by the loss the nation sustained on the sad 14th of December '61, the Great International Exhibition at London in 1862 had to struggle against the absence of Court ceremonials, and to rely for success solely on intrinsic merits. The building of brick, unornate, not to say plain, was externally distinguished by two domes, one on the axis of each transept. These domes, composed of iron and glass, rose to a height of 200 feet, were crowned by ornamental finials 55 feet high, and had each a diameter of 160 feet. The main building was a parallelogram, about 1,150 feet long by 560 wide, and the total area roofed in was 988,000 square feet, the total space covered and uncovered amounting to no less than 1,231,000, and the total cost some 460,000*l*. The domes and the Picture Galleries were the great successes of the designer, Captain Fowke, and the erection of the former by Messrs. Kelk and Lucas was a triumph of engineering skill.

In the industrial and machinery sections the progress was marked in every branch, but it was in the department of Fine Arts that the '62 Exhibition stood preëminent. Here not only was Continental Art fully displayed, but here may the glories of English Art be said to have culminated, that unrivalled collection being almost exhaustive, giving us works well known from engravings, but many of which as paintings had, up to that time, been sealed books, kept under the guardianship of lock and key in Royal and Ducal galleries, and here for the first time thrown open to the world's gaze. Here were Hogarth, Gainsborough, Reynolds, Wilkie, and a goodly company of those great masters of British Art who had passed away, with those giants of the palette, Maclise, Mulready, Clarkson Stanfield, Sir Edwin Landseer, and David Roberts, who have since been taken from us. 30,000 people assisted at the opening by the Duke of Cambridge; 2,000 choristers and 400 musicians

gave effect to the setting by Sir Sterndale Bennett of the Poet Laureate's ode, and the effect, both of sight and sound, was one of unsurpassed magnificence. Other Exhibitions had been noted for the absence of those slaves to the "leaden messengers, that ride upon the violent speed of fire," but here, in Tennyson's words—

> Were trophies brought from every main,
> And mixt as life is mixt with pain,
> The arts of peace with those of war,

and it would seem impossible to say whether the doors of the Temple of Janus would open wide or remain for ever closed. The Exhibition opened on the 1st of May, a notable feature on that day being the presence of the Japanese Ambassadors, and closed on the 15th November, being a total of 171 days. The amount received was 408,530*l.* 1*s.* 8*d.*, and the number of visitors 6,211,103, the maximum being attained on Thursday, October 30th, with 67,891. 1863 can count but two Exhibitions, one for the Duchy of Nassau at Wiesbaden, the number of exhibitors being no less than 1,317, and Constantinople with its exposition, comprising the natural and industrial resources of the empire.

In 1864 the "Merseburg" Industrial Exposition was held, taking in Saxony, Hanover, Weimar, and Eisenach, Gotha, Anhalt, Meiningen, Schwarzburg, Sonderhausen, and Rudolphstadt, and thus constituting itself a German Exhibition.

1865 saw many varied gatherings, all International, that of Amsterdam being devoted to flowers, at which, strange to say, neither black tulip, blue dahlia, or green rose, put in a claim for the Grand Medal of Honour, Paris, calling a cheese conference, at which Stilton, Cheddar, Glo'ster, Gruyère, Brie, Roquefort, Bondon, evil-smelling Limberger, Liptauer, Schapziger, Parmesan, Gorgonzola, Ementhaler, and Gouda stood forth as the representatives of casein; whilst the displays of Dublin, Oporto (3,911 exhibitors), and Stettin (1,451 exhibitors) appealed to the general mass of industries.

The Dublin Exhibition of 1865, like that of '53, owed much to the liberality of a citizen, the munificent donor on this occasion being the late Sir Benjamin Lee Guinness. The building, a gossamer-like structure of iron and glass, was opened on the 9th of May by the Prince of Wales in the presence of some 10,000 spectators, and was closed on that day six months, having been open 159 days and 51 evenings, the total number of admissions, exceeding 900,000, being an average of 5,000 by day and 3,000 by night.

The Dublin Exhibition of '65 did not belie the reputation it had gained in

'53, and many of the works of art then exhibited, both paintings and statues, were retained to adorn this country. The Sculpture Gallery will, like the Roman Court in '62, long remain a pleasant memory for those fortunate enough to have seen them. Philadelphia, it may be also noted in '65, convened manufacturers from all parts of the United States. The Scandinavian Exhibition of '66 has been already spoken of, and it may be here mentioned that the Empire of the Brazils had in this year an exhibition of raw products at Rio Janeiro, comprehending 2,374 exhibitors.

Between the Avenue de la Bourdonnaye and the Avenue Suffren, on an historic site, stood in 1867 the edifice denominated by the Emperor Napoleon as a "magnificent gasometer." To Prince Napoleon is due the conception of the idea, and the words of the Imperial Commission fully describe it "An "area with two main entrances, manufactures, and products of cognate natures, "to be arranged in concentric bands, with a garden in the middle. The "different nationalties to intersect the bands by transepts or avenues "radiating from the centre." Admirable in theory, you passed down one of the spokes of this monster wheel, and you saw all that the country had to show; you went round an ellipse, and the relative qualities of similar productions in various lands were all presented. But as all "nations need what other lands produce" so the displays were irregular, and the theory fell to the ground. The external ring of the building was devoted to machinery, the internal to the "History of Labour," beginning with Gaul before the use of metals, and ranging through the first and second epochs of caves, the age of stone, the age of transition and of lacustrine dwellings, free Gaul, and Gaul under the Romans, the days of Charlemagne and of the Carlovingian Kings, the Moyen-Age, the Renaissance, and all the changing fashions at home and abroad down to the commencement of the last century—a magnificent idea in truth, and superbly carried out. Indeed in every sense was the Exhibition of '67 a marvellous spectacle, with its park studded with mosques, Russian "slobodas," Swiss châlets, Tunisian kiosks, Swedish cottages, English lighthouses, Egyptian palaces, (with a Museum of Egyptiology arranged by Mariette Bey,) stables for dromedaries, a temple, and an "okel" or caravanserai, all massed in picturesque confusion.

One feature of the Exhibition was the engineering triumph of the age and of M. Ferdinand de Lesseps, the model of the Suez Canal, with its navy of dredges, steamers, and boats. All this shown to the wondering eyes of Kings, Kaisers, and canaille sustained the historic reputation of the scene. For

here on this Champs de Mars did noble, abbé, proletarian, great lady, and grisette work at the mounds that were to circumscribe the theatre of the Fête de la Fédération; here did Louis XVI. on a new altar swear to a newer constitution, here, in the words of Lamartine, had the "Red flag, streaming with a nation's blood, made its sanguinary circle"; here had the first Exhibition of manufactures been held in 1798, and here, during the Hundred Days had the First Napoléon, on this same Champs de Mars, (re-christened Champs de Mai,) at another altar taken oaths to another code. Few spots have condensed more history in a brief space of time, nor was the present event unworthy of the past memories. To speak now of the practical, the Exhibition opened on the 1st April and closed on the 3rd November, a total of 117 days, Sundays included; the total number of visitors was 6,805,969; that of exhibitors, 42,217, and the amount received, 420,735*l.* 7*s.* 2*d.* The greatest number of visitors on any one day being 173,923, on October 27th. Leeds in 1868 linked Art with Charity in an Exhibition rivalling the Manchester gathering of '57, her display of last year stopping short at the prosaic and practical. In '69, Amsterdam, and in '68, Roumania, at Bucharest, had their Exhibitions, whilst Altona and Cassel in '70 repeated the oft-told tale; Russia, in the same year, renewing her expositions of the Empire at St. Petersburgh. At Moscow, in 1872, the Polytechnic Exhibition, held in the historic Kremlin, marked an era in Russian industrial history; the Dublin Exhibition of the same year of arts, industries, and manufactures, with its museum and national portrait gallery, attracting 420,000 visitors during the 154 days and 58 evenings it remained open.

The Weltausstellung in the Prater of Vienna made memorable a year otherwise unnoteworthy, but the splendid pageant of '73 is so much a thing of to-day, that there seems little reason to again describe the main building with its rotunda (within which all the domes of the world could be enclosed), surmounted by the monster model of the Imperial crown, its jewels winking in the sunlight, "polished perturbation, golden care," its hall with marvels of machinery, its Palace of Fine Arts, its Museum of Amateurs, its Agricultural Halls, and the four hundred buildings set in its splendid park, the Persian palace with its mirror mosaics glistening in the sun Turkish, Egyptian, Japanese, Roumanian, Styrian, Swiss, Russian, Kirgish, Samwede, Sclav, Moorish, German, Bohemian, Hungarian, Italian, Polish, French, and English dwellings all scattered amidst woodland scenery; and as Paris in 1867 placed on view the triumph of her engineer, so Italy put

in evidence the latest result of human skill in a monster model of the mouth of the Mont Cenis Tunnel, railway, signals, and train complete. People then the scene with all the nationalities of the world, recount all the personages in the Almanac de Gotha, guests of Franz Josef and the beautiful Empress, and one can somewhat realise the events, facts, fêtes, and faces of 1873. 186 days was it open, Sundays included; its visitors were 6,740,500, and its receipts 206,477,13*l.*

So from the five Great International Exhibitions (London, 1851, 1862; Paris, 1855, 1867; Vienna, 1873) we get a total of 32,959,097 visitors, and a cash aggregate of 1,588,164*l.* 10*s.* 10*d.*

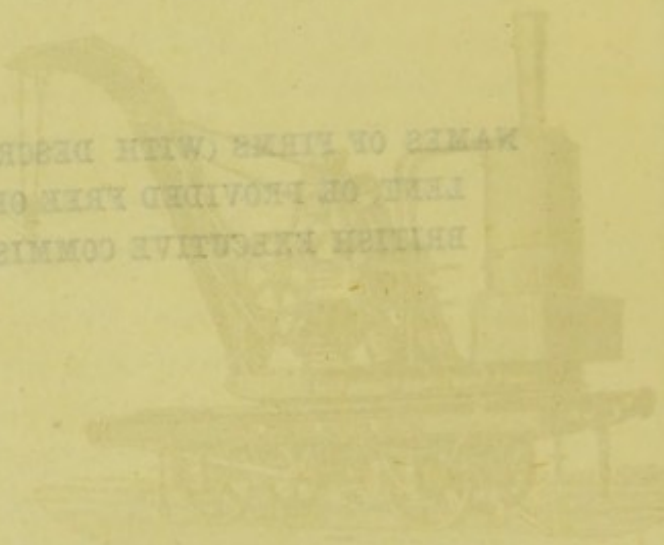
The Annual International Exhibitions at South Kensington in 1871, 1872, 1873, and 1874 did not realize the expectations of their promoters, for though the first year yielded a large profit, the public interest rapidly died out, till the scheme was abandoned before half the proposed term had expired.

It is only necessary, in conclusion, to say that the tally of Exhibitions is completed up to the present time with the mention of the International Exhibition of Maritime and River Industries at Paris and the International Exhibition of Chili held at Santiago, both in the past year. Two omissions, however, have been made, one being the International Cattle Shows held in connexion with the Exhibitions of '62, '67, and '73, respectively at Battersea, Billancourt, and the Prater; the other, a still more important one, the first Exhibition of the Japanese Empire held at Kiôto of the objects destined for the Vienna show. This, opened on the 17th of April 1872, was so successful that the original limit of fifty days was extended, and the Exhibition did not close until the end of July. The next year the Mikado decreed an exposition on a much wider basis, presenting a comparison between the past and present, and even affording a glimpse into the future of Japan. Exhibition buildings were found ready to hand in the Buddhist temples of Chiônin, Kenninji, and Nishi Honguanji, the latter being two miles distant from the two former; and as Old Niphon was represented in ancient armour, and dresses, bronzes, gold and silver work of Kiôto and Osaka, rare vessels of "Sahari," formed of an amalgam of silver, pewter, and copper, relics such as the "Yeboshi" or cap, worn by the Great Taiko Sama, silver coins aged 1000 years, old porcelain from the factories of Banshu, Owari, Bizen, and Karadzu (the latter most esteemed of all), so New Japan contributed her lacquers, papers, and silks, the porcelain of the day comprising the wares of Seto, Kiôto, Awata, Kaga, Sampei, Saga, Nagasaki, and Satsuma.

This year (to say nothing of the Finnish gathering at Helsingfors,) will witness two expositions of more than usual importance, America's grand gathering in the pleasant park of Fairmount by the Schuylkill River, and the Exhibition at Brussels to lessen human suffering, save human life, and put into practice the teachings of the Founder of all our creeds. Thus will the Centennium be worthily celebrated by "peace and good will to all men;" it is for England and America to set an example to the nations, for this Hundredth Birthday of Young America is not only merely a holiday on one side of the Atlantic, it appeals to all who speak the mother tongue; it is a bell that rings for "the unity of the English-speaking world;" it tells us how we muster in our strength seventy-six millions of freemen speaking the tongue of Shakespeare, of Byron, of Washington Irving, and of Longfellow, and as the cable joins the lands, so it should join the hands, and with them the hearts; once unite those who speak the old language, whether from the Old Country, from the States, from the Dominion, or from Australasia, and the peace of the world is secured; once agree that "blood is thicker than water" and nothing can ever again separate England and America save the Atlantic.

HUGH WILLOUGHBY SWENY.

NAMES OF FIRMS (WITH DESCRIPTION OF THEIR EXHIBITS) WHO HAVE LENT, OR PROVIDED FREE OF CHARGE, OBJECTS FOR THE USE OF THE BRITISH EXECUTIVE COMMISSION.



OBJECTS LENT OR PROVIDED FREE OF CHARGE TO THE BRITISH EXECUTIVE COMMISSION.

Appleby Brothers, Emerson Street, S.E., London.

THREE PORTABLE STEAM CRANES.—One crane similar to the accompanying engraving. Fig. 1 is designed to work loads up to three tons, and is specially constructed for use on Railways. It is mounted on a wrought-iron carriage fitted with axle boxes, bearing springs, buffers, and draw springs the same as on an ordinary railway truck or carriage, so that it may be coupled up behind a locomotive, and rapidly taken wherever required; this renders the crane a far more useful tool to Railway Companies than if it were mounted on axles running in *rigid* bearings. It is claimed by the manufacturers that much saving of time and money might be effected by the employment of a few cranes of this type in place of the many fixed cranes now employed at Railway Stations, some of which are not required for service perhaps once a month, and it must be evident to anyone that it is far more convenient to be able to bring the lifting machine to the load to be dealt with, than to have to take the load to the crane. The framework of the crane carriage is built up of wrought iron, and a strong cast-iron plate is fixed on the centre of carriage into which the crane post is keyed, and on which the turned roller path is situated. The crane performs four distinct operations by steam, namely, lifting the load, travelling along the lines, altering the radius, and revolving round the post. The cylinders through which the power to perform these various operations is obtained, are fitted with link reversing motion, and are fixed at a slight angle outside the side-frames. These side-frames are strong A-shaped castings on which are carried all the bosses and bearings required for the various motion shafts, &c. There are four speeds of lifting for loads of varying weight, and the loads may either be lowered by steam, or by means of a powerful brake provided on the barrel shaft, which is actuated in the usual manner by a strap and foot lever. The brake lever is furnished with a pawl to hold it down, so that the heaviest loads dealt with may safely be left hanging for a short time. The travelling motion is obtained by a shaft passing through the centre of the crane post, this shaft giving motion to a horizontal one under the crane carriage; from this latter shaft the power is conveyed to the axles by pitch chains, which allows for the

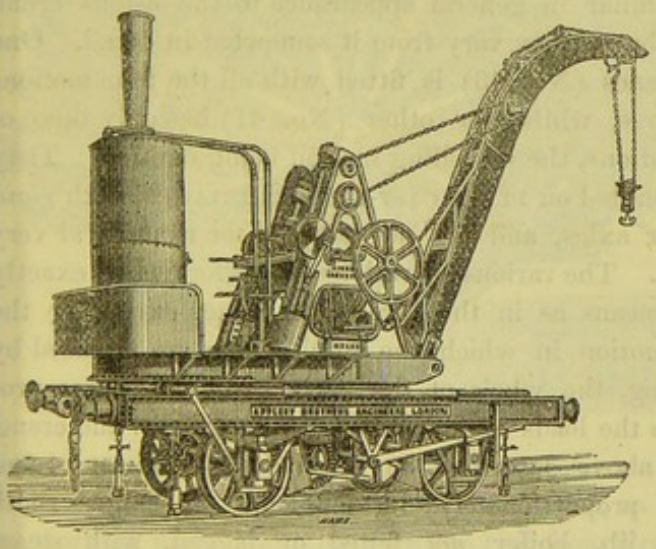


FIG. 1.

deflection of the bearing springs. When the crane is coupled up behind a locomotive the motion just described is thrown out of gear. The jib is a STRAIGHT wrought-iron lattice jib, combining the requisite amount of stiffness with the minimum weight compatible with safety. The radius of the jib is altered by means of a double chain and worm, and tangent wheel; this arrangement not only forms an easy plan of obtaining the large power necessary, but the worm locks the jib in any required position. The turning or slewing motion is obtained through a set of bevil wheels and friction clutches on the crank shaft; and can be worked in either direction simultaneously with any of the three other motions. The friction clutches drive a vertical shaft which in its turn through a train of gear drives a turned roller running on the roller path, and situated at the foot of the jib. This motion being obtained entirely by the friction of surfaces and not through the medium of toothed gear on the base-plate, the risk of breakage due to careless driving is entirely avoided. The price of the crane Fig. 1 as above described, to lift three-ton loads at 14 feet radius, and proportionately lighter loads at longer radii with steam travelling motion, with iron jib, and boiler felted and lagged,

Packed and delivered at Liverpool - - - -	£615	0	0
Set of duplicate parts for ditto, ditto, ditto - - -	£15	0	0

Two other cranes exhibited by the same firm are each capable of dealing with loads up to FIVE TONS; they are illustrated by engraving Fig. 2, and, although very similar in general appearance to the 3-tons crane described above, they vary from it somewhat in detail. One of these cranes (No. 43) is fitted with all the four motions detailed above, whilst the other (No. 41) has only three of the four motions, the travelling motion being omitted. They are both mounted on PLAIN CAST-IRON CARRIAGES, with *rigid* bearings for axles, and are not adapted for running at very high speeds. The various operations are performed by exactly the same means as in the three-tons crane, excepting the travelling motion in which the pitch chains are replaced by bevel gearing, the whole of the parts being of course proportioned to the loads to be handled. The price of the crane, Fig. 2, as above described, to lift five-tons loads at 14 feet radius and proportionately lighter loads at longer radii, with wood jib, boiler *not* felted or lagged, with steam travelling motion (No. 43),

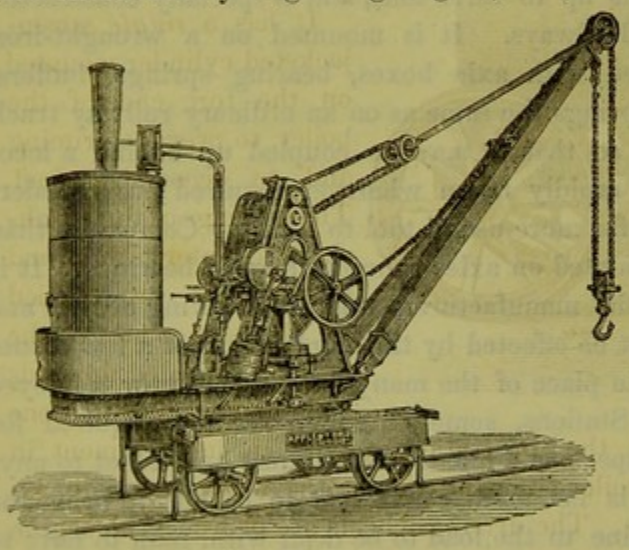


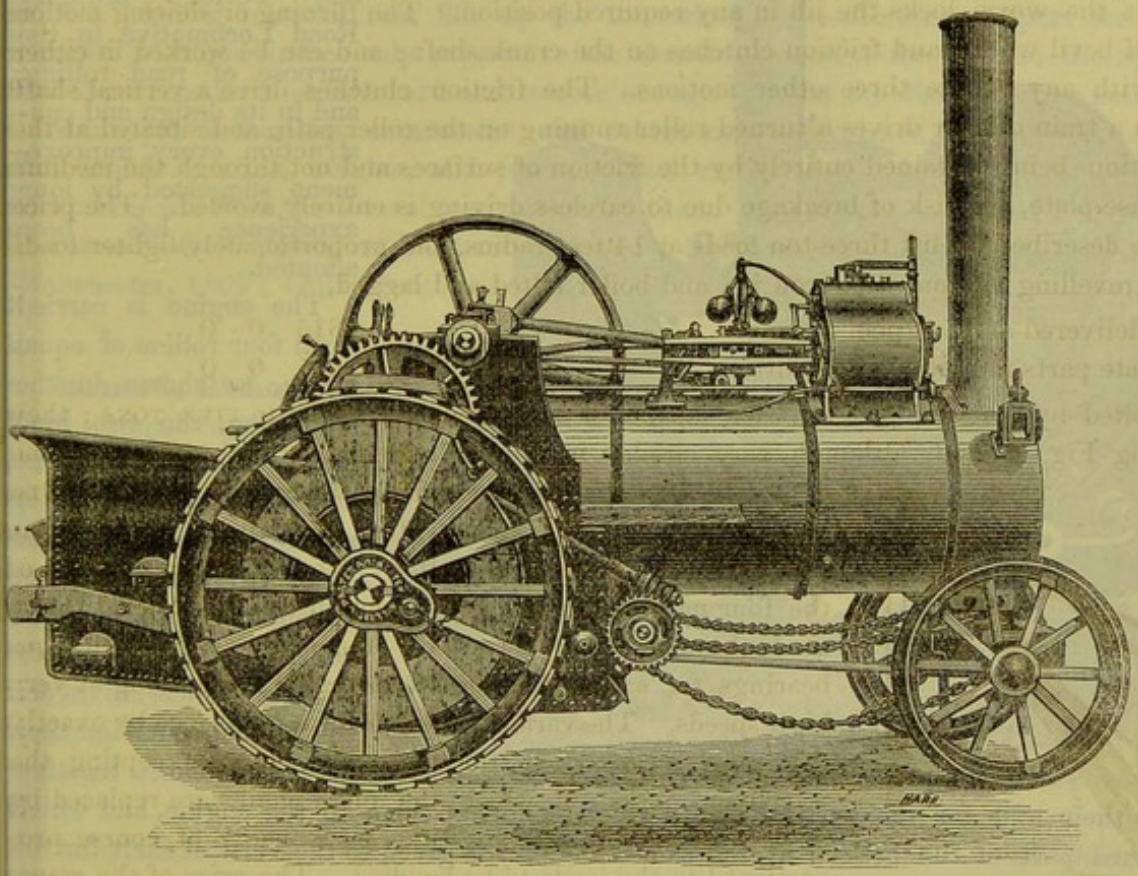
FIG. 2.

Packed and delivered at Liverpool - - - -	£610	0	0
Set of duplicate wearing parts for ditto, ditto, ditto - -	£15	0	0

Price of the crane, Fig. 2, to lift five tons as above described, but *not* to travel by steam (No. 41) is 25*l*. less. Cranes exactly similar to those exhibited have been mounted on gantries of sufficient height to allow of the free circulation of locomotives and rolling stock beneath them; many such may now be seen at work at Middlesborough Docks in England; at Callao Harbour in Peru; at the new Amsterdam Docks in Holland, and in other parts of the world. Information may be obtained of Mr. John t'Hoen, at the Office of the Royal British Commission, Exhibition Building, Philadelphia.

Aveling and Porter, Rochester, England; 72, Cannon Street, London; 43, Exchange Place, New York; 9, Avenue Montaigne, Paris.

AVELING AND PORTER'S ROYAL AGRICULTURAL SOCIETY'S FIRST PRIZE AGRICULTURAL LOCOMOTIVE ENGINE, FITTED WITH THEIR PATENT SIDE-PLATE BRACKETS.



These engines have been designed expressly for Steam Cultivation, Thrashing, Sawing, Pumping, and removing Agricultural produce. The boiler is unusually large, made of best quality plates, and tested up to 200 lbs. on the square inch; the fire-box is of Lowmoor iron.

It has a *single* steam-jacketed cylinder mounted on the fore end of the boiler, to prevent priming and to economise fuel. The bearings of the crank-shaft, counter-shaft, and driving-axle are carried by the side plates of the fire-box extended upwards and backwarks in one piece for this purpose. This patented arrangement is shown in the illustration, and is an improvement in the construction of engines of very great value, as it saves the boiler from the strain otherwise put upon it by the working parts, and minimises the risk from strained bolt holes. The driving-wheels are of iron; the engine is steered from the foot-plate, and in short the general characteristics of the Agricultural Locomotives are the same as those belonging to Aveling and Porter's Road Locomotives.

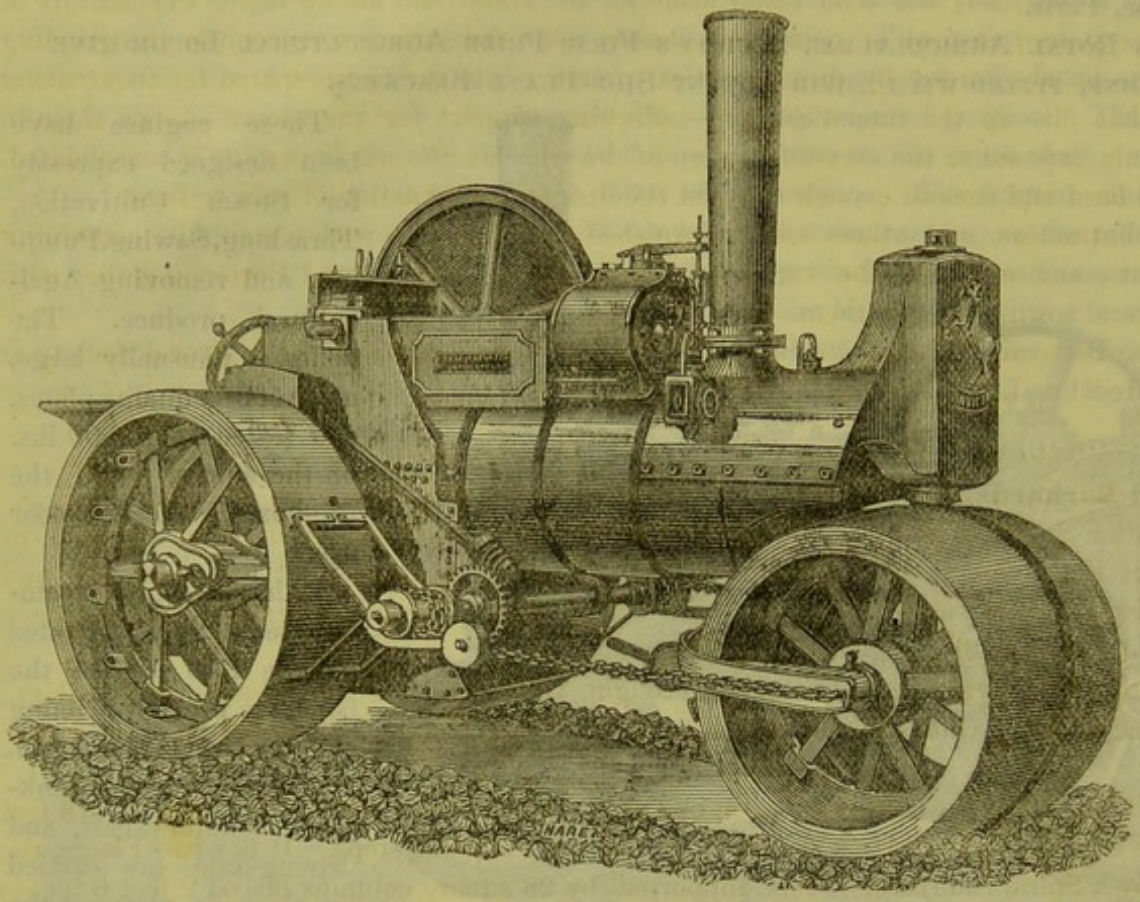
Each engine is provided with flywheel, governors, and powerful brake; a complete set of wrenches, screw-hammer, firing tools, oil can, spare gauge glasses, studs for driving-wheels, extra safety valve, and steam pressure gauge are also supplied, free of additional charge.

Two of these engines, fitted with cranes, have been employed by the Commissioners of the Philadelphia Exhibition in removing and lifting heavy material.

The engine to which the Royal Agricultural Society's First Prize was awarded was one of Aveling and Porter's 10-horse power Locomotives, fitted with a single slide and ordinary link motion, and it indicated 15-horse power, with a consumption of *three and one-fifth* pounds of coal per horse power per hour, nine other engines competing.

Not only was the First Prize for Road Locomotive Engines awarded to Aveling and Porter at the Royal Agricultural Society's Meeting, at Wolverhampton in 1871, but the Society's First Prize for the best waggon suitable for Traction Engines was also given to them, after a very complete series of competitive dynamometrical trials with waggons of all classes.

Aveling and Porter's Steam Road Roller, fitted with their Patent Side-Plate Brackets.



This machine is a special adaptation of Aveling and Porter's ordinary Road Locomotive to the purpose of road rolling, and in its design and construction every improvement suggested by long experience has been adopted.

The engine is carried upon four rollers of equal width, as shown in the engraving, the two hind ones acting as drivers, and the two in front as steering-rollers. These latter cover the space between the two driving-rollers, and are made slightly conical in order that on the ground line they may run close together while leaving room above their axle for the vertical shaft which connects them to the engine, and which serves to support the forward part of the boiler; at the same time play is given to the vertical shaft for the rollers to accommodate themselves to the curved surface of the road. The machine can be turned round in little more than its own length, thus enabling it to roll steep hills without injury to the fire-box, while retaining the manifold practical advantages of the horizontal over the vertical boiler for locomotive purposes; amongst which may be enumerated absence of priming, economy in fuel, wear and tear, and much lower centre of gravity. It may be also noted as important features of these rollers that they are adapted for driving stone-breakers or other fixed machinery most economically when not required for rolling and for use as traction engines. They are managed by one person.

With each Roller the following free extras are supplied: feed oil can, box spanner and set of spanners, screw-hammer, two gauge glasses and washers, set of firing irons, and tube brush and rod.

Aveling and Porter introduced the Steam Road Roller in the year 1868 and have since then manufactured a great number of them. Among other places they are now working in London, Edinburgh, Liverpool, Manchester, Birmingham, Leeds, Sheffield, Bradford, Hull, Huddersfield, Newcastle-on-Tyne, Brighton, Darlington, Middlesbro', Blackpool, Kidderminster, Walsall. New York, Philadelphia, Chicago, Washington, Newhaven, Auburn, Hartford, Newark, Richmond, Bridgeport, St. Louis, Pittsburgh, Wilmington, Rochester. Berlin. Vienna. Pesth. Milan. Christiania. Stockholm. India. Canada. South America. Australia. West Indies.

The utility of road rolling is now generally appreciated, and when it is affirmed that a saving of 40 or 50 per cent. in the cost of road repairs results from the employment of steam rollers, there seems little need for

prefacing the description of the rollers themselves with observations upon the economy of using them. The reason of the great saving is obvious; the road being made *for* the traffic and not *by* it, the expenditure of material is diminished; the stones, instead of being left loosely upon the surface to encounter the grinding lateral pressure of the wheels, are forced by direct vertical pressure into the bed prepared for them, along with a binding material that fills up the interstices and—affording support for the stones—keeps them in position with one surface only exposed to the abrading action of the wheels; the whole coating is consolidated, and there remains a surface hard and smooth enough to resist the disintegrating action of rain or frost.

Municipal authorities, contractors, and others can be furnished on application with a pamphlet containing full details of sizes, weights, and prices of the various rollers made by Aveling and Porter, together with official reports from the several towns working them.

Prizes:—Gold Medal at Beauvais (France), 1869; Silver Medal from the Royal Agricultural Society at Manchester, 1869; Gold Medal at Lille (France), 1870.

Barnard, Bishop, and Barnards, Norfolk Iron Works, Norwich, England.

Registered Slow Combustion Stoves, Fire Baskets with Andirons, patterns of Andirons, Sun Flowers in wrought iron and wrought brass, supplied to the British Staff Quarters. Garden Chairs, Lounges, and Tables of wrought and cast iron, in various designs, some of the lounges and chairs having canopies; supplied for the gardens and grounds adjoining the Staff Quarters.

DESCRIPTION of an ORNAMENTAL PAVILION in Cast and Wrought Iron, designed by Thomas Jeckyll, Esq., 5, St. George's Terrace, Queen's Gate, London, manufactured by this firm, and exhibited by them in the main Building.

This Pavilion, which is intended for use upon a Lawn, or Ornamental Grounds, is 35 feet long by 18 feet wide, by 35 feet high to the extreme ridge. It is mounted upon a Dais of four steps. It has two Floors, the upper of which is reached by a Spiral Staircase. It is supported by 28 square columns placed 2 feet 6 inches apart.

The Ornament in the shafts of these columns is of a very rich and varied character. At a height of 7 feet 6 inches from the ground, a Transom Bar connects the columns. The lower Verandah is supported by cast-iron Brackets, firmly secured to the columns.

The outlines of these Brackets are in all cases alike, but the enrichment of their spandrils is varied by bas-reliefs, the subjects of which are studies from the "Apple Blossom, with flying Birds," "Whitethorn with Pheasants," "Scotch Fir with Jays," "Sunflower," "Chrysanthemum, Narcissus, Daisy and Grass, with a Crane and rising Lark," &c., &c. These brackets further support the Gutter and Cresting of the lower roof. The Cresting forms a wavy line which is surmounted at intervals by Fans richly carved, having for their subjects studies from the Rose, Honeysuckle, Chrysanthemum, Hydrangia, &c. Between each Column, beneath the Transom Bar is a richly-carved pendent ornament forming an arch. Above the Transom Bar, and between it and the Gutter, are richly-carved open-work key pattern Panels, in which are numerous medallions of various designs, being studies from Butterflies, Bees, Birds, Fish, with many quaint and geometrical patterns.

The upper floor is surrounded by a wrought-iron Balcony Railing, 4 feet high, of a light and severe design, exhibiting how much grace can be produced by mere straight lines when they are properly arranged.

The upper roof is supported in its turn by 20 columns of a similar design to the lower ones. These are connected by a Transom Bar, above which is a rich open-work fish-scale Panel supporting the upper Gutter, with Cresting and Fans of a like character to the lower ones. The Brackets, however, upon these Columns are of a different outline to the lower ones, and the spandrils are filled with many designs of a bolder character.

Between each Bracket, both upper and lower, is a richly ornamented Ceiling of a combined floral and geometrical pattern, the Chrysanthemum being taken as the type of its ornament.

The Roof, (the rafters of which are of wrought Tee iron,) is covered with zinc, in curved tiles, and is surmounted by an elaborately carved Cresting. The Fascia and pendent ornament beneath the Balcony, and overhanging the lower roof, is of a quaint and effective design.

One of the most important and novel features of this work is the Railing which surrounds the entire building. This is 4 feet 6 inches high, and is entirely of wrought iron. The Sunflower has been taken as the type of its ornament. The Railing is divided into 72 panels, each of which is occupied by a Sunflower 3 feet 6 inches high, the flower itself being 11 inches in diameter, having carefully veined leaves, six in number to each flower.

The appearance of this Railing is of a most striking and unusual character, and as a piece of workmanship it is believed to be unrivalled of its kind.

Want of time has prevented the Pavilion being finished in its entirety, but it is intended, when completed, to have a rich ceiling to the upper and lower compartments composed of cast iron Panels in bas-relief, and the upper floor will be approached by an ornamental Staircase in cast-iron. Whilst upon exhibition at Philadelphia, the Ceilings and the upper portion of the walls of the Interior will be covered by a silken cloth having rich embroidery upon it, specially designed by Mr. Jeckyll, and executed at the Royal School of Art Needlework. In this the Horse Chestnut, Cranes, and various Birds form the elements of decoration.

Cooper & Holt, 48, 49, 50, Bunhill Row, London, E.C. The Furniture in the house of the British Commission, in Fairmount Park, comprising Sideboards, Dining and other Tables ; a Patent Reversible Oak Billiard and Dining Table and Cue Stand; Stuffed Lounges, Settees, and Chairs; the Cabinets, the Carved Oak and Walnut Mantel Pieces and fittings for the Offices and Staff Quarters have been also supplied by this Firm.

Daniell, A. B., & Son, Manufacturers of China and every description of Earthenware, by Special Appointment to Her Majesty, 46, Wigmore Street, London, W. Dinner, Dessert, Tea and Coffee Services, "Fine Art" Porcelain, Pottery, and Ornamental Vases, for decoration of the apartments, Toilette Services, &c., all supplied for the use of the Executive at British Commission House and Staff Quarters in Fairmount Park.

Eastwood & Co., Limited, Belvedere Road, Lambeth, London, S.E. Lime, Cement, and Brick Manufacturers and Merchants, Makers also of Portland Cement (from the Medway earth and grey chalk). Red and Blue Broseley Roofing Tiles, Red Terra-Cotta Chimney Shafts, *as supplied for the British Executive Staff Quarters.* Staffordshire Blue Chequered Pavements and Blue Bricks. White Glazed Bricks and Tiles. Adamantine and other Stable Clinkers. Sanitary Glazed and Drain Pipes. Red and White Suffolk Facing Bricks. Shoebury Malm Bricks. Stourbridge, Newcastle, and Welsh Fire Bricks, Lumps, and Tiles. Moulded Bricks of all Patterns. Red Yorkshire Paving and Roofing Tiles. Roofing Slates. Roman and Parian Cement. Bristol Tempered Lime, and all descriptions of Builders Goods.

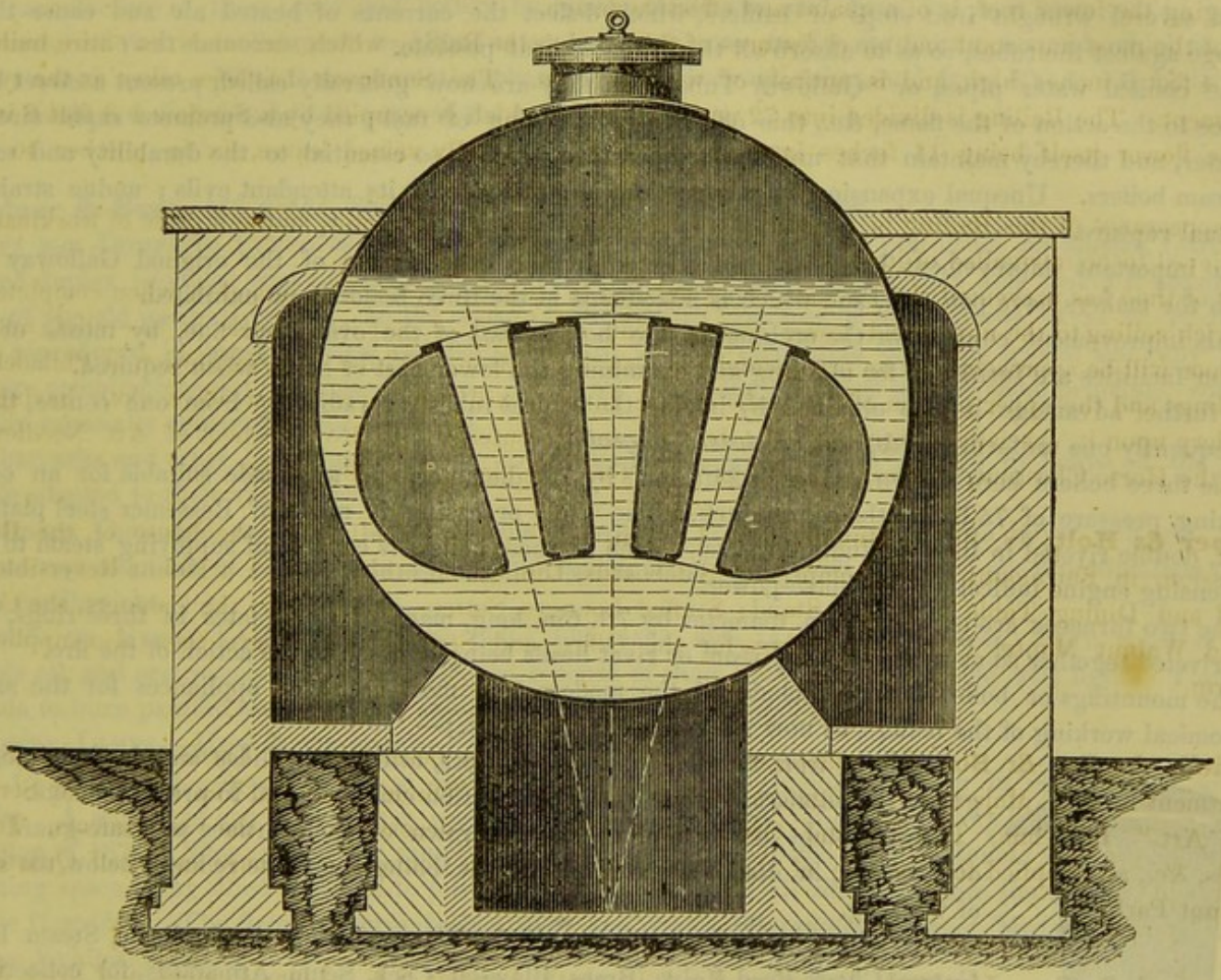
Elkington & Co., Manufacturing Silversmiths, and the Original Patentees of the Electro-Plate, 22, Regent Street, and 45, Moorgate Street, London ; 25, Church Street, Liverpool ; St. Anne's Square, Manchester ; Manufactory and Show Rooms, Newhall Street, Birmingham.

Decorative Table Plate relieved with Electro Gold and Oxydised Silver, Gold and Silver Damascened

Works of Art. Electro-type fac-simile reproductions. Contributed for use and for decorative purposes at the British Staff Quarters.

Galloway, W. & J., & Sons, Engineers, Manchester.

THREE "GALLOWAY" STEAM BOILERS.



Section of the "Galloway" Boiler Flue at back end, showing (1875) Patented Improvements.

These Boilers are contributed by the makers at the request of the Executive Commissioners for the British Section, to enable them to exhibit a type and form of Steam Boiler of acknowledged excellence, and which is extensively used in Great Britain; and at the same time to supply steam to the engines in connection with the British Section.

This form of boiler is known as the "Galloway Boiler," and has been in use in England for upwards of 25 years. It is regarded as the most economical and efficient steam generator now made, having rapidly superseded the ordinary Cornish plain cylindrical boiler, with one circular flue running from end to end, and the Lancashire boiler, which is of a similar description, but having two flues instead of one.

The construction of the "Galloway Boiler" will be readily understood by examining the model which is placed in the British boiler house. It will be seen that in the cylindrical shell is placed an internal flue consisting of two furnaces at the front end, united into one back flue of an irregular oval form.

This flue constitutes the chief feature in the "Galloway Boiler," and in it are placed 33 conical water tubes, each 10½in. diameter at the top or large end, and 5½in. diameter at the lower end, fixed in an upright position, in such a way as to support the flue, and to intercept and break up the flame and heated gases, when passing from the fire-grate or furnaces to the chimney. Along the sides of the flues there are also placed several wrought iron stops or bafflers, which deflect the currents of heated air and cause them to impinge against the tubes, so as to absorb all the available heat possible.

The conical water pipes, or "Galloway Tubes" as they are now generally called, present a *direct* heating surface to the action of the flame, &c., this effects a great saving of fuel; they also promote rapid circulation of water, and thereby maintain that uniform temperature which is so essential to the durability and safety of all steam boilers. Unequal expansion or contraction is avoided, and its attendant evils; undue strains and eventual rupture.

An important improvement has just been effected in the construction of the original Galloway boiler, which the makers have patented, and which is introduced in the three boilers now exhibited.

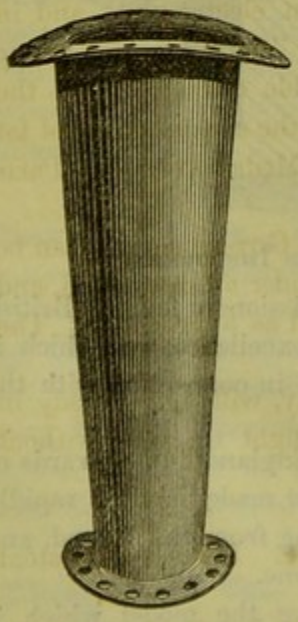
This improvement consists in the arching of the bottom part of the oval back flue, by means of which greater facilities are furnished for cleaning and examining the lower part of boiler when required.

A further advantage is also obtained by having the conical tubes all radiating from one centre, they are consequently one uniform length, and are *interchangeable.*

The three boilers here shown are each 28ft. long by 7ft. diameter, and are made suitable for an ordinary working pressure of 75 lbs. to the square inch. The shell or casing is made of Bessemer steel plates ⅜-in. thick, double riveted in the longitudinal seams. Each of these boilers is capable of supplying steam to drive a condensing engine indicating 300 horse-power.

The two furnaces are each 2ft. 9½in. diameter by 7ft. 6in. long, made of steel plates in three rings, flanged and riveted together so as to prevent any seam or rivet heads being exposed to the action of the fire.

The mountings or boiler fittings include all the modern and most approved appliances for the safe and economical working of the boilers, as now worked in England, viz.:—



"Galloway" Tube.

Wrought iron furnace-frames and doors, fitted with slides and baffle plates, to regulate the admission of air to the combustion chamber, and to prevent smoke.

Fusible plugs are also placed in the crown of each furnace as a safe-guard against overheating, in case the water within the boiler should be reduced below the safe line of working.

Wrought iron solid welded manhole, Water Gauges in duplicate, Steam Pressure Gauge, Check Feed Valve, Brass Blow-off Cock, Scum Apparatus, for collecting and discharging any impurities in the water within the boiler, Steam Junction Valve, Dead Weight Safety Valve, Lever Safety Valve, and low water and high steam Alarm Whistles, &c.

With these boilers the makers also exhibit *three "Galloway" or Cone Tubes,* similar to those fixed in the oval flues, but which are now being very largely introduced into both single and double flued boilers, a model of which is also exhibited.

These tubes are welded and flanged from one plate, and can be formed to suit any size of flue or combustion chamber.

When applied to single or double flued boilers they are generally fixed crosswise, so as to present as large and direct a heating surface as possible to the flame and heated gases passing through the boiler.

These tubes not only promote a saving of fuel ranging from 15 to 20 per cent.

but they strengthen the flue in such a manner as to render hooping with angle or tee iron unnecessary, the circulation of water is also promoted, and unequal expansion prevented.

These tubes are made by special machinery, and can be supplied whenever necessary, at two or three days notice.

The manufacture of these tubes and boilers by Messrs. Galloway and Sons has now been carried on for many years, and their establishments in Manchester bear testimony to the increasing demand which is made for this class of work. With their present appliances many thousand tubes, and from 300 to 400 boilers per year, are made and dispatched to all parts of the world.

Gardner & Sons, 453 & 454, Strand, 3 & 4, Duncannon Street, London.

Lamps for Domestic Purposes.—These lamps are all arranged to burn petroleum on Messrs. Gardner's improved duplex [doubled wick] principle, which improves their illuminating power and makes it possible to get rid of the old unsightly globe. In the offices of the British Commission are patterns based on mediæval models, reproduced in brass repoussé and polished, with twisted serpentine columns, crystal and ruby glass, which are combinations not attempted before. There are also hanging lamps on the same principle, some of which are especially constructed for office use.

The barracks and other buildings belonging to the British Commission are lighted by lamps on the same principle adapted to their various purposes.

In Messrs. Gardner's cases are lamps of this description in designs executed in silver and gilt plate, which are reproductions of classic, renaissance, and Indian styles. In these cases also are reproductions of old English candlesticks.

Reading or Study Lamps.—In electro plate, but made also in brass or bronze. Burn colza or any vegetable oil, and are especially recommended on account of their convenient form and soft light. They are also made to burn paraffin and the heavy mineral oils known as mineral sperm.

Surgical Lamps.—Used in the Franco-Prussian War.

Ship Cabin Lamps.—New designs of cabin wall lamps on the duplex principle in electro-plate and in brass, &c. A section of one of the lamps supplied to H.M.S. "Alert" and "Discovery" forming the Arctic Expedition of 1875. This is a strong lamp, riveted together, and fitted with a double case of copper, the intervening space being filled with felt to prevent the coagulation of oil and to permit the consumption of fat or tallow if needed. The flame is three inches high and equals 26 candles. Silver Medal awarded, Paris Maritime Exhibition, 1875.

The Soldiers Lamp.—Designed for and exhibited by permission of H.M.'s Indian Government. Can be used as a hand lantern, or suspended or fastened to a tent pole. Will burn steadily under a heavy wind, and the ventilation is not liable to become clogged as in out-door lamps where gauze is used as a protector. The glazing is common window glass, which in case of breakage can be easily replaced.

The Travelling Lamp.—Burns mineral or colza oil and contains one week supply, will keep steady in any draught; is arranged as a suspending or table lamp and fits in a small and very light tin case, without packing.

Patent Stirrup Lamp.—For use by exploring parties, or on rough bridle paths.

Travelling Reading Lamp.—For use in private cabins, railway compartments, &c. Made with patent self-acting fastenings. Pocket size.

Ship or Military Band Lamp.—Adapted for the circular band stands and constructed to light two music stands at once.

Registered Travelling, Reading, Ship, or Tent Lamp.—Gives a powerful light and is extremely portable and easy to manage. Contains 18 hours' consumption.

Patent Safety Powder Magazine Lamp.—Designed by request of the Home Office to burn in gunpowder magazines and other dangerous places in perfect safety, and to exclude the powder which is found floating in magazines and stores in the form of fine dust, which in other lamps collects inside, and is sure, when much is collected, to explode. This explosion passes through the gauze, and is almost certain to convey incandescent particles of powder to the magazine store. The supply and exit air passages are under and over a series of screens, that is to say, air to support combustion enters the lamp under an inverted outer ledge and then passes through the holes made in the casing to a narrow space formed by an inner lining, so that the air must first pass up to reach the holes in the casing, then down the inner space, and finally up a narrow space between. The top part of the lamp is constructed on substantially the same principle, that is, the exit air passages are made zig-zag ; but in case they should ever become clogged with soot, two out of three parts which form the passages are hinged to the casing, and are secured by a spring lock, so that when these parts are unbolted they can be turned back on their hinges and easily cleared of any soot that may have become deposited therein. The bottom and sides of the lamp are immoveable, and the burner is dropped in through the top of the lamp, which is secured with a spring lock as already mentioned.

Every detail of the outer casing has been carefully considered, and there are no projecting parts where dust can settle and accumulate. The lamp has a bull's eye lens in front ; the side lights are glazed with glass one-eighth of an inch thick, protected by strong copper wire. The handle moves on a pivot. The burner is a $\frac{3}{4}$-inch flat wick and a reflector is added to increase the brilliancy. The lamp and lantern is made of copper, bright tin, or tin japanned. The highest temperature ever observed on the outside of the lantern has been 126°, the exploding temperature of gunpowder being 600°. Adopted by the Government, Thames Conservancy, &c. Silver Medal, Paris, 1875.

Military or Travelling Canteens.—Each canteen contains every table requisite in full size for four persons, including plates, knives, forks, spoons, cups, cruet and flask, made of nickel silver or electro-plate and packing in a small leather case.

Lewis, John, 78, Watling Street, London, has supplied all the carpets laid down in the British Staff Quarters. These have been manufactured by him at Halifax. The style of the carpets is "Illuminated Indian" intended to be rich and at the same time in retirement and in correspondence with the subdued furniture for these buildings which has been selected by the British Commission.

Mr. Lewis received the Medal for Progress at the Vienna Exhibition, in addition to which the Emperor of Austria honoured him with an Order of Knighthood. And at the Paris Maritime Exhibition, 1875, Mr. Lewis had a Gold Medal awarded for beauty of design and colouring and for excellence of manufacture.

Minton, Hollins, & Co., Patent Tile Works, Stoke-upon-Trent ; London House and Show Rooms, 50, Conduit Street, Regent Street, W. ; Manchester, Bridgewater Club Chambers, 110, King Street.

Encaustic Tiles for Hall and Verandah of British Staff Quarters.

For excellence in the production of Tiles, and for variety in design, the following Awards have been obtained, viz. :—London, 1852, Council Medal ; Paris, 1855, Gold Medal ; London, 1862, First Class Medal ; Paris, 1867, Gold Medal ; Moscow, 1872, Gold Medal ; Vienna, 1873, Medal for "Progress."

This firm was established by the late Herbert Minton and his Nephew, Michael Daintry Hollins (now sole proprietor).

The Patents for the manufacture of Encaustic, Plain, and other Tiles belonged exclusively to, and were carried out by this firm, who have the sole right to the use of the name of "Minton" and "Patent" in the manufacture of these Tiles. All Tiles made by this firm bear the impression of "Minton & Co." or "Minton, Hollins, & Co."

The general descriptions of Tiles made by Messrs. Minton, Hollins, & Co. are enumerated below. Encaustic and Tesselated Tile Pavements. Encaustic Glazed Tiles, one inch thick, of numerous and rich designs, for Hearths. Majolica and Enamelled Tiles, half-inch thick, for Grate Cheeks, Wall Linings, Flower Boxes, &c. White and Coloured Glazed Tiles, for Walls, &c. Painted Tiles, for Grate Cheeks, &c., by experienced Artists.

The following are some of the principal places in which Tiling has been carried out by Messrs. Minton, Hollins, & Co.:—The Palaces of Windsor, Osborne, Marlborough House, Sandringham, and Clarence House. The Palace of the Emperor of Germany. The Palace of the King of Belgium. The Palace and State Yachts of the Sultan of Turkey. The Residence of Prince Dhuleep Singh. The Houses of Parliament, London. The New Foreign Offices, London. The New Government Buildings in India. The South Kensington Museum, London. The Albert Hall, London. The Senior and Junior Carlton Clubs, London. The Cathedrals of Ely, Lincoln, Lichfield, Gloucester, Westminster, Wells, Glasgow, Armagh, St. Giles' (Edinburgh), Dunblane, and Sydney (New South Wales). The New Capitol at Washington. The Town Halls of Liverpool, Leeds, Rochdale, Bolton, &c. And many of the principal Ducal Mansions, Government Buildings, Churches, and Public Institutions in Great Britain, United States, &c.

Peters & Sons, Coach and Coach Harness Makers, London, to Her Majesty Queen Victoria, H.R.H. the Prince of Wales, and the Royal Family; Coachmakers also to the greater number of the Courts of Europe, and other countries.

The Landau used in Philadelphia by the British Commissioners, with the harness corresponding, has been placed by this Firm at the disposal of the Commissioners.

Messrs. Peters are also exhibitors of several carriages in the Annexe Carriage Court, Philadelphia, of which the following are descriptions.

A Park Coach or Drag, of remarkable excellence and high finish, suitable for blood horses, if preferred. Appointed with all internal luxuries, a safety hand break and safety chains, all polished steel fittings, a choicely fitted armoire for the top with countless compartments for all sorts of cut and other glass, silver, plate, china, and table linen; all the panels of the body painted blue; brilliantly varnished, the wheels and under gear Chinese vermillion, picked slightly with black lines, the interior regulation blue and morocco.

Also another Coach or what may be styled a Road Drag, from its construction being more commodious of size, and of increased strength for pace, and for carrying a full load of passengers, and their luggage; this superior example of coach making is equally well finished and only varies in the colour of the panels of the body which are chocolate or marron, this coach may be used for any hard work.

A very Handsome Landau of the so known Shelburn pattern built upon the lightest principle consistent with strength and durability; hung upon elliptic springs and fitted with Collinge's patent axles, painted in the same taste as the Queen of England's carriages, and those of the Royal Family generally, the best lamps and fittings, richly lined with imperial blue cloth lace and morocco and rich pile carpet. The head is fitted with Shank's patent rising or auxilary hinges, rendering it easy for a child to open and close it instantly and with perfect ease; the doors are also fitted with Barlow's patent lever locks, which prevent the doors being opened or windows broken without first lowering the window into its receptacle.

A Bachelor's or a Miniature Brougham of remarkable neatness and lightness, very quiet in its colours and taste generally. The paint, black panels and with tan-shaded relief colours, the interior Rembrandt or Cor-

beau with morocco squabs and cushions and all silk lace bands, carpets, and silk blinds to match ; very light of build, for a trotter or blood horse, or for a pair of very neat bred cobs of 15 hands or under ; the internal fittings are unusually neat and effective.

A Circular Fronted or what is known as a Segmental Brougham from the front part being a Segment to allow the windows to run over each other. This carriage is of unusual lightness, and with three adult persons would be found within the power of one well bred horse, the colours are in strict harmony both within and without, and are of a myrtle green hue, morocco squabs and fittings, and available also for two small or for larger horses.

A Lady's Park Phaeton was built to the order of one of Her Majesty's Judges ; is fitted with a hand brake available by the driver, and acts with perfect ease ; has a servant's skeleton seat; exceedingly light of draught, and available for one or two horses ; painted and finished a bronze green, picked carmine round the wheels and other parts.

A Gentleman's Driving Phaeton or T-cart Phaeton, with head, made moveable, and when moved the sides are finished with elbow or splash wings; open railed circular body for lightness in taste ; lamps of good design; painted black, and tinted blue pickings; lined blue, of the choicest workmanship ; for one and for two horses; steel pole end fittings and chains.

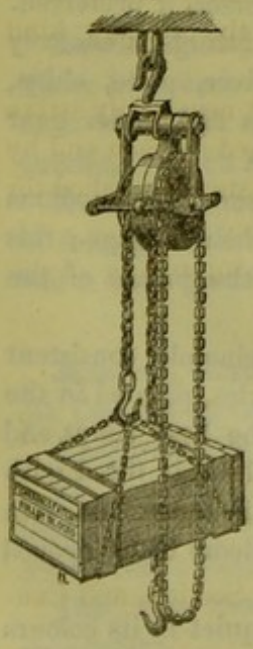
A Victoria of the most approved design, and of the highest workmanship, the hood brought well forward for protection in bad weather, and fitted with enamelled leather aprons; the box seat well down for two servants; built for one and for two horses, and fitted with steel pole end chains; painted and lined cobalt ; very highly finished in all respects.

A Two-Wheeled Whitechapel Cart for road or shooting purposes, similar to the many built and sent to different parts of the States, and which have been highly approved ; this useful carriage is painted, and cushions green.

Pickering, J., Globe Works, Stockton-on-Tees.

Pickering's Patent Differential Pulley Blocks.

This improved form of Pulley Block is composed of four wheels and the necessary bolts, hook and side frames for suspending. The four wheels are named respectively, endless chain, pinion, fixed, and lifting chain wheels. They are placed in position and worked as follows: the endless chain wheel is formed with an eccentric on which revolves the pinion, the said pinion being placed in position between the internal teeth of the lifting and fixed wheel ; the fixed wheel it will be perceived has three snugs cast on and is thereby fastened to the frame of the block ; by the working of the chain wheel the pinion is made to revolve on the eccentric and in each revolution forces the lift chain wheel one tooth by reason of the lifting wheel having one tooth more than the fixed wheel ; by this arrangement it will be seen great power is obtained.



The wheels are so placed that the working parts are internal thus being free from any liability to get choked with dust or dirt.

The lifting chain is supplied with hook at each end so that as one end ascends the other descends for a fresh load, by this means a great saving of time is effected.

The two chains being independent of each other there need be no fear of the chains getting locked neither are they so liable to get stretched.

These blocks sustain the load, it being impossible to run down because the teeth of the pinion being held by the lifting and fixed wheel teeth gripping on each side of the teeth of the pinion, thus holding the load until set in motion by the pulling of the endless hand chain.

Pickering's Patent Hoist.



This Hoist is made by simply casting two wheels of different diameters together by which means great power is obtained in proportion to the difference in size of the two wheels.

The various sizes are proportioned as follows :—3-cwt. size, power 4 to 1; 5-cwt. size, power 5 to 1 ; 10-cwt. size, power 7½ to 1 ; 20-cwt. size, power 15 to 1 ; this latter size is made with the end of the lift chain doubled and fastened on the frame and a snatch block inserted in the loop.

As an example of the power, suppose 100lbs. were slung on to the endless chain of the 5-cwt. size it would balance 500lbs. on the lift chain, thus it will be seen a man with the exertion of a little more than 50lbs. will lift to any height a weight of 250lbs.

On each size when required is placed a very effective brake by means of which the man operating the hoist can with ease and safety lower the load.

The brake consists of a strap of iron fixed on the frame round the top of the large wheel the run been made broader so as to secure the necessary friction ; the brake is brought into action by the pulling of the lever to which a cord is attached. The speed and power of these hoists being so much greater than the ordinary mode of lifting by hand renders them peculiarly adapted for the raising and lowering of loads required by farmers, millers, brewers, maltsters, storekeepers, and others.

Amongst the many advantages these hoists possess is that the lift chain is supplied with two hooks so that in raising a load a great height the other end of the lift chain will have descended ready for the next load.

Pickering's Patent Direct Acing Steam Pumps.

These pumps consist of two moving parts only, in the steam cylinder, viz., the valve and piston. The peculiar feature in these pumps is that the piston as it approaches the end of its stroke opens a portway for the admission of steam against the end of the slide valve, giving motion thereto and changing its position for a return stroke and exhausting the steam. The main passage ways of the cylinder are of the ordinary kind common to every engine.

The valve having no connection by means of crank or connecting rod with the piston must necessarily strike the ends or covers with considerable force ; to prevent any damage the slide valve is cushioned at each end by means of a steam backed piston of somewhat larger diameter than the steam chest ; the live steam supplied for this purpose remains intact and has no exhaust.

This arrangement totally prevents any liability of the ends being knocked out or otherwise injured.

This improvement is equally applicable for the main cylinder and for steam hammers.

The pump and valves are of the ordinary kind.

Stewart, Moir, & Muir, 73, Mitchell Street, Glasgow, Scotland. Manufacturers of Harness Book, Leno and Patent Gauze Curtains, Window Curtains, Plain Muslins, Lappets, and Scotch Lawn Handkerchiefs; also manufacturers of Swiss Mull, Book Muslins, Tarlatans, Grenadines, Bishop and Victoria Lawns, Spot and Sprig Muslins, and all descriptions of Plain and Fancy Muslins.

Exhibitors of Gauze Curtains, and of Curtains for Decorative purposes in the British Section, and Contributors of Curtains for the use of the British Executive.

Sutton & Sons, Seedsmen by special appointment to Her Majesty the Queen, Royal Berkshire Seed Establishment, Reading.

Sutton's Grass Seeds for all Soils were extensively used in sowing the grounds of the Vienna Universal Exhibition, where the evergreen sward was the subject of general admiration. They have been exclusively used for sowing the grounds attached to the Staff Quarters of the British Commission for the Philadelphia International Exhibition, and are also sown at the several Royal Residences in England and on the Continent of Europe.

Sutton's Flower Seeds have also been sown in the grounds attached to the British Commission.

Tangye Brothers, Cornwall Works, Soho, Birmingham.

Hydraulic Lifting Jacks.—These compound lifting jacks are offered with confidence as being the best in the market, and the lowest in price.

Each one has a fast claw which will be found safer and more convenient than a loose one. They either lift from the foot or top, are most simple in action and construction, very safe and portable ; the cylinders are made of steel and so arranged that one man can lift from 4 to 60 tons.

These jacks have been largely supplied for home and foreign railways, and also to the British and Foreign Government Dockyards.

In the form of ship jacks, with the cistern outside of the cylinder these jacks have been extensively used by ship builders, and several of them rendered good service in the launch of the Great Eastern steam ship.

Screw Lifting Jacks.—Messrs. Tangye confidently recommend their various kinds of screw jacks for lifting purposes as being quite equal to any yet manufactured for quality of workmanship, design, and wearing capabilities.

The large resources they have at their command for producing these jacks in quantities, enable them to send out large quantities for home or export trade at very short notice.

Engines.—Tangye's Patent Horizontal High-pressure Expansive Steam Engine.

In designing this engine the utmost regard has been paid to simplicity of arrangement, strength of construction, and economy in cost.

The working parts are considerably reduced in number as compared with horizontal engines generally, rendering it far more durable and compact.

One great advantage of these engines is the ease and economy with which they can be fixed.

All that is required is a foundation of brick, stone, or timber, to render them ready for use.

Governor.—Tangye's Patent, High Speed Regulating Governor.

This is exceedingly simple and compact, and being driven at a high speed, it is very sensitive, and the working of the engine is rendered uniform under varying pressures of steam, or sudden differences of load.

A regulating arrangement is also combined for speeding the engine, consisting of an internal spiral spring placed in the upper part of the governor, the power of which is increased or diminished by lifting and screwing or unscrewing the gun metal stop nut at the other end.

Lifting Gear.—Special attention is directed to the London pattern rope blocks, self sustaining rope blocks, and hoisting crabs, as being suited to the requirements of builders, contractors, engineers, shipwrights, railway carriage makers, and all requiring handy hoisting tackle.

Punching Bears, Hydraulic.—These powerful hydraulic punching bears are recommended as being much quicker and easier in operation than any other kind yet introduced, whilst they are equally portable, durable,

and compact. They can be worked in any position and the larger sizes can be adapted for steam power if required.

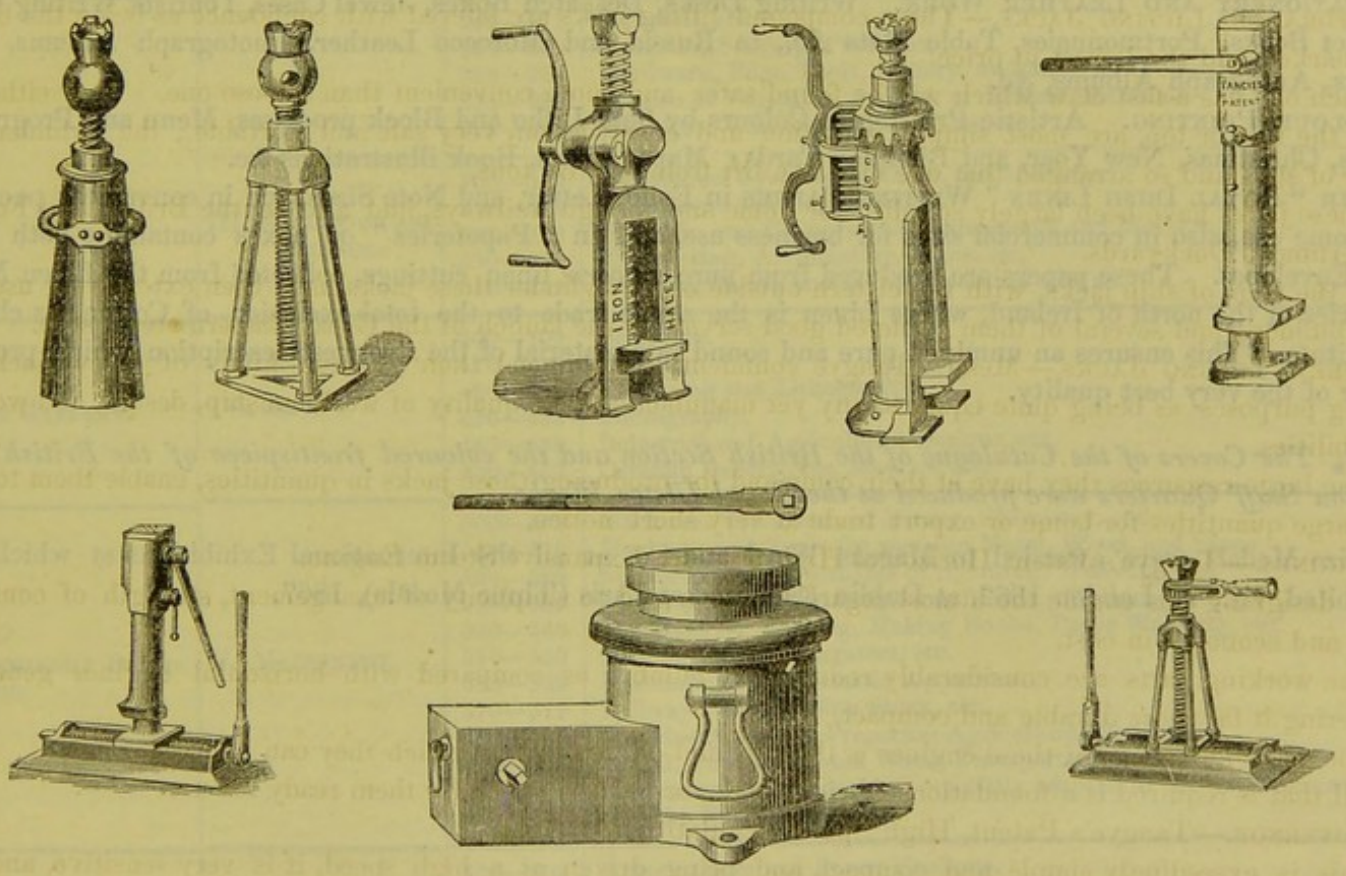
The legs can be easily detached when necessary, for use in confined situations.

Duplex Punching Bears.—These celebrated punches require no skilled labour to use them nor are they liable to break or get out of repair. They are made of the best materials, and exhibit the highest mechanical ingenuity in their design and construction.

They are so simple and their application so apparent that directions for use are quite unnecessary.

London Double Action Hand Pump is eminently suited for house, farm, and garden purposes, and is well worth the attention of merchants, shippers, and the trade.

Hydraulic Proving Pumps for testing boilers, pipes, tanks, &c. are made to test up to a pressure of 3300 lbs. per square inch, and can be well recommended as being reliable and useful proving pumps.



Turtle & Pearce, Pattern-dyed Flags Manufacturers, Window Blind Makers and Bunting Merchants, 111, Duke Street, London Bridge, London, S.E.

Pattern dyed Flags in Silk and Bunting presented to the Commissioners for use in British Section, and at Staff Quarters.

Ward, Marcus, & Co., Manufacturers to the Queen, 67 & 68, Chandos Street, Strand, London, and Royal Ulster Works, Belfast, Ireland, Sole Manufacturers of the Royal Irish Linen Writing Papers ; Publishers, Colour Printers ; Manufacturers of Albums, Pocket Books, and Stationery.

"Pure Flax" Writing Papers and Envelopes. A second quality of the "Royal Irish Linen," made entirely from Flaxen Fibre.

These papers are known by the watermark in every sheet, which may be observed by holding the paper up to the light. In the first quality the *Watermark* is "Royal Irish Linen," in the second "Pure Flax," and maker's name is in both.

Publications. Illustrated, Educational, and Juvenile Books printed, illustrated, and bound at the Royal Ulster Works. Vere Foster's Writing and Drawing Copy Books. Marcus Ward's Concise Diaries, Atlases, Sunday School Reward Cards, Almanacks, &c.

Stationery and Leather Work. Writing Desks, Despatch Boxes, Jewel Cases, Tourists' Writing Cases, Pocket Books, Portmonnaies, Table Mats &c., in Russia and Morocco Leather, Photograph Albums, Scrap Books, Autograph Albums, &c.

Colour Printing. Artistic Printing in Colours by both Litho and Block processes, Menu and Programme Cards, Christmas, New Year, and Birthday Cards; Maps, Views, Book illustrations &c.

The "Royal Irish Linen" Writing Papers in Folio, Letter, and Note Sizes, and in convenient packages for home use, also in commercial sizes for business use, and in "Papeteries" or boxes containing both Paper and Envelopes. These papers are produced from pure *unworn* linen cuttings, collected from the Linen Manufactories of the north of Ireland, where Linen is the staple trade to the total exclusion of Cotton, its cheaper substitute. This ensures an unmixed pure and sound raw material of the strongest description which produces paper of the very best quality.

*** *The Covers of the Catalogue of the British Section and the coloured frontispiece of the British Commission Staff Quarters were produced at the Royal Ulster Works.*

Prize Medals were awarded to Marcus Ward and Co. at all the International Exhibitions at which they exhibited, viz., at London 1862, at Dublin 1865, and at Paris (Three Medals), 1867.

INTERNATIONAL EXHIBITION PHILADELPHIA, 1876.

SYNOPSIS OF THE CLASSIFICATION.

Location.	Departments.	Classes.	Groups.
Main Building.	I. Mining and Metallurgy.	100—109	Minerals, Ores, Stone, Mining Products.
		110—119	Metallurgical Products.
		120—129	Mining Engineering.
	II. Manufactures.	200—205	Chemical Manufactures.
		206—216	Ceramics, Pottery, Porcelain, Glass, etc.
		217—227	Furniture, etc.
		228—234	Yarns and Woven Goods of Vegetable or Mineral Materials.
		235—241	Woven and Felted Goods of Wool, etc.
		242—249	Silk and Silk Fabrics.
		250—257	Clothing, Jewellery, etc.
		258—264	Paper, Blank Books, Stationery.
		265—271	Weapons, etc.
		272—279	Medicine, Surgery, Prothesis.
		280—284	Hardware, Edge Tools, Cutlery, and Metallic Products.
		285—291	Fabrics of Vegetable, Animal, or Mineral Materials.
		292—296	Carriages, Vehicles, and Accessories.
	III. Education and Science.	300—309	Educational Systems, Methods, and Libraries.
		310—319	Institutions and Organizations.
		320—329	Scientific and Philosophical Instruments and Methods.
		330—339	Engineering, Architecture, Maps, etc.
		340—349	Physical, Social, and Moral Condition of Man.
Art Gallery.	IV. Art.	400—409	Sculpture.
		410—419	Painting.
		420—429	Engraving and Lithography.
		430—439	Photography.
		440—449	Industrial and Agricultural Designs, etc.
		450—459	Ceramic Decorations, Mosaics, etc.
Machinery Building.	V. Machinery.	500—509	Machines, Tools, etc., of Mining, Chemistry, etc.
		510—519	Machines and Tools for working Metal, Wood, and Stone.
		520—529	Machines and Implements of Spinning, Weaving, etc.
		530—539	Machines, etc., used in Sewing, Making Clothing, etc.
		540—549	Machines for Printing, Making Books, Paper Working, etc.
		550—559	Motors, Power Generators, etc.
		560—569	Hydraulic and Pneumatic Apparatus.
		570—579	Railway Plant, Rolling Stock, etc.
		580—589	Machinery used in Preparing Agricultural Products.
		590—599	Aerial, Pneumatic, and Water Transportation.
			Machinery, and Apparatus, especially adapted to the requirements of the Exhibition.
Agricultural Building.	VI. Agriculture.	600—609	Arboriculture and Forest Products.
		610—619	Pomology.
		620—629	Agricultural Products.
		630—639	Land Animals.
		640—649	Marine Animals, Fish Culture, and Apparatus.
		650—662	Animal and Vegetable Products.
		665—669	Textile substances of Vegetable or Animal Origin.
		670—679	Machines, Implements, and Processes of Manufacture.
		680—689	Agricultural Engineering and Administration.
		690—699	Tillage and General Management.
Horticultural Building.	VII. Horticulture.	700—709	Ornamental Trees, Shrubs, and Flowers.
		710—719	Hot Houses, Conservatories, Graperies.
		720—729	Garden Tools, Accessories of Gardening.
		730—739	Garden Designing, Construction, and Management.

DEPARTMENT I.—MINING AND METALLURGY.

MINERALS, ORES, BUILDING STONES, AND MINING PRODUCTS.

CLASS 100.—Minerals, ores, etc. Metallic and non-metallic minerals, exclusive of coal and oil. Collections of minerals systematically arranged; collections of ores and associated minerals; geological collections.

CLASS 101.—Mineral combustibles. Coal, anthracite, semi-bituminous and bituminous, coal-waste and pressed coal; albertite, asphalt, and asphaltic limestone; bitumen, mineral tar, crude petroleum.

CLASS 102.—Building stones, marbles, slates, etc. Rough, hewn, sawed, or polished, for buildings, bridges, walls, or other constructions, or for interior decoration, or for furniture.

Marble—white, black, or coloured—used in building, decoration, statuary, monuments, or furniture, in blocks or slabs not manufactured.

CLASS 103.—Lime, cement, and hydraulic cement, raw and burned, accompanied by specimens of the crude rock or material used, also artificial stone, concrete, beton.

Specimens of lime mortar and mixtures, with illustrations of the processes of mixing, etc. Hydraulic and other cement.

Beton mixtures and results, with illustrations of the processes.

Artificial stone for building purposes, building blocks, cornices, etc.

Artificial stone mixtures, for pavements, walls, or ceilings.

Plasters, mastics, etc.

CLASS 104.—Clays, kaolin, silex, and other materials for the manufacture of porcelain, faïence, and of glass, bricks, terra-cotta and tiles, and fire-brick. Refractory stones for lining furnaces, sandstone, steatite, etc., and refractory furnace materials.

CLASS 105.—Graphite, crude and refined; for polishing purposes; for lubricating, electrotyping, photography, pencils, etc.

CLASS 106.—Lithographic stones, hones, whetstones, grindstones, grinding and polishing materials, sand quartz, garnet, crude topaz, diamond, corundum, emery in the rock and pulverized, and in assorted sizes and grades.

CLASS 107.—Mineral waters, artesian well water, natural brines, saline and alkaline efflorescences and solutions. Mineral fertilizing substances, gypsum, phosphate of lime, marls, shells, coprolites, etc., not manufactured.

METALLURGICAL PRODUCTS.

CLASS 110.—Precious metals.

CLASS 111.—Iron and steel in the pig, ingot, and bar, plates and sheets, with specimens of slags, fluxes, residues, and products of working.

CLASS 112.—Copper in ingots, bars, and rolled, with specimens illustrating its various stages of production.

CLASS 113.—Lead, zinc, antimony, and other metals, the result of extractive processes.

CLASS 114.—Alloys used as materials, brass, nickel, silver, solder, etc.

MINE ENGINEERING—MODELS, MAPS, AND SECTIONS.

CLASS 120.—Surface and underground surveying and plotting. Projection of underground work, location of shafts, tunnels, etc. Surveys for aqueducts, and for drainage.

Boring and drilling rocks, shafts, and tunnels, etc. Surveys for aqueducts, and for ascertaining the nature and extent of mineral deposits.

Construction. Sinking and lining shafts by various methods, driving and timbering tunnels, and the general operations of opening, stopping, and breaking down ore, timbering, lagging, and masonry.

Hoisting and delivering at the surface, rock, ore, or miners.

Pumping and draining by engines, buckets, or by adits.

Ventilation and lighting.

Subaqueous mining, blasting, etc.

Hydraulic mining, and the various processes and methods of sluicing and washing auriferous gravel, and other superficial deposits.

Quarrying.

CLASS 121.—Models of mines, of veins, etc.

DEPARTMENT II.—MANUFACTURES.

CHEMICAL.

CLASS 200.—Chemicals, pharmaceutical preparations.

Mineral acids, and the methods of manufacture. Sulphuric, nitric, and hydrochloric acids.

The common commercial alkalies, potash, soda, and ammonia, with their carbonates.

Salt and its production. Salt from deposits—native salt. Salt by solar evaporation from sea water. Salt by evaporation from water of saline springs or wells. Rock salt. Ground and table salt.

Bleaching powders and chloride of lime.

Yeast powders, baking powders.

CLASS 201.—Oils, soaps, candles, illuminating and other gases.

Oils from mineral, animal, and vegetable sources. Refined petroleum, benzine, naptha, and other products of the manufacture. Oils from various seeds, refined, and of various degrees of purity. Olive oil, cotton seed oil, palm oil. Animal oils, of various kinds, in their refined state. Oils prepared for special purposes besides lighting and for food. Lubricating oils.

Soaps and detergent preparations.

Candles, stearine, glycerine, paraffin, etc., spermaceti.

Illuminating gas and its manufacture.

Oxygen gas, and its application for heating, lighting, metallurgy, and as a remedial agent.

Chlorine and carbonic acid.

CLASS 202.—Paints, pigments, dyes, colours, turpentine, varnishes, printing inks, writing inks, blacking.

CLASS 203.—Flavouring extracts, essences, perfumery, pomades, cosmetics.

CLASS 204.—Explosive and fulminating compounds; in small quantities only, and under special regulations, shown in the building only by empty cases and cartridges. Black powder of various grades and sizes. Nitro-glycerine and the methods of using and exploding. Giant powder, dynamite, dualin, tri-nitro-glycerine.

CLASS 205.—Pyrotechnics, for display, signalling, missiles.

CERAMICS—POTTERY, PORCELAIN, ETC.

CLASS 206.—Bricks, drain tiles, terra-cotta, and architectural pottery.

CLASS 207.—Fire-clay goods, crucibles, pots, furnaces. Chemical stoneware.

CLASS 208.—Tiles, plain, enamelled, encaustic; geometric tiles and mosaics. Tiles for pavements and for roofing, etc.

CLASS 209.—Porcelain for purposes of construction. Hardware trimmings, etc.

CLASS 210.—Stone china, for chemists, druggists, etc., earthenware, stoneware, faïence, etc.

CLASS 211.—Maiolica and Palissy ware.

CLASS 212.—Biscuit-ware, parian, etc.

CLASS 213.—Porcelain for table and toilet use, and for decoration.

GLASS AND GLASS-WARE.

CLASS 214.—Glass used in construction and for mirrors. Window glass of various grades of quality and of size. Plate glass, rough, and ground or polished. Toughened glass.

CLASS 215.—Chemical and pharmaceutical glass-ware, vials, bottles.

CLASS 216.—Decorative glass-ware.

FURNITURE AND OBJECTS OF GENERAL USE IN CONSTRUCTION AND IN DWELLINGS.

CLASS 217.—Heavy furniture.—Chairs, tables, parlour and chamber suits, office and library furniture, vestibule furniture. Church furniture and decoration.

CLASS 218.—Table furniture.—Glass, china, silver, silver-plate, tea and coffee sets, urns, samovars, epergnes.

CLASS 219.—Mirrors, stained and enamelled glass, cut and engraved window-glass, and other decorative objects.

CLASS 220.—Gilt cornices, brackets, picture frames, etc.

CLASS 221.—The nursery and its accessories; children's chairs, walking chairs.

CLASS 222.—Apparatus and fixtures for heating and cooking,—stoves, ranges, heaters, etc.

CLASS 223.—Apparatus for lighting,—gas fixtures, lamps, etc.

CLASS 224.—Kitchen and pantry-utensils, tin-ware, and apparatus used in cooking, (exclusive of cutlery).

CLASS 225.—Laundry appliances, washing-machines, mangles, clothes-wringers, clothes-bars, ironing-tables.

CLASS 226.—Bath room and water-closet, shower bath, earthcloset.

CLASS 227.—Manufactured parts of buildings,—sash, blinds, mantels, metal work, etc.

YARNS AND WOVEN GOODS OF VEGETABLE OR MINERAL MATERIALS.

CLASS 228.—Woven fabrics of mineral origin.—Wire cloths, sieve cloth, wire screens, bolting cloth.

Asbestos fibre, spun and woven, with the clothing manufactured from it.

Glass thread, floss and fabrics.

CLASS 229.—Coarse fabrics, of grass, rattan, cocoa nut, and bark.

Mattings, Chinese, Japanese, palm-leaf, grass, and rushes.

Floor-cloths of rattan and cocoa nut fibre, aloe fibre, etc.

CLASS 230.—Cotton yarns and fabrics, bleached and unbleached.

Cotton sheeting and shirting, plain and twilled. Cotton canvas and duck. Awnings, tents.

CLASS 231.—Dyed cotton fabrics, exclusive of prints and calicoes.

CLASS 232.—Cotton prints and calicoes, including handkerchiefs, scarfs, etc.

CLASS 233.—Linen and other vegetable fabrics, uncoloured or dyed.

CLASS 234.—Floor oil cloths, and other painted and enamelled tissues, and imitation of leather, with a woven base.

WOVEN AND FELTED GOODS OF WOOL AND MIXTURES OF WOOL.

CLASS 235.—Card wool fabrics.—Yarns, broadcloth, doeskins, fancy cassimeres. Felted goods.

CLASS 236.—Flannels.—Plain flannels, domets, opera and fancy.

CLASS 237.—Blankets, robes, and shawls.

CLASS 238.—Combined wool fabrics.—Worsteds, yarns, dress goods for women's wear, delaines, serges, poplins, merinoes.

CLASS 239.—Carpets, rugs, etc.—Brussels, melton, tapestry, tapestry Brussels, Axminster, Venetian, ingrain, felted carpetings, druggets, rugs, etc.

CLASS 240.—Hair, alpaca, goat's hair, camel's hair, and other fabrics, mixed or unmixed with wool.

CLASS 241.—Printed and embossed woollen cloths, table covers, patent velvets.

SILK AND SILK FABRICS, AND MIXTURES IN WHICH SILK IS THE PREDOMINATING MATERIAL.

CLASS 242.—Cocoons and raw silk as reeled from the cocoon, thrown or twisted silks in the gum.

CLASS 243.—Thrown or twisted silks, boiled off or dyed, in hanks, skeins, or on spools.

CLASS 244.—Spun silk yarns and fabrics, and the materials from which they are made.

CLASS 245.—Plain woven silks, lutestrings, sarsnets, satins, serges, foulards, tissues for hat and millinery purposes, etc.

CLASS 246.—Figured silk piece goods, woven or printed. Upholstery silks, etc.

CLASS 247.—Crapes, velvets, gauzes, cravats, handkerchiefs, hosiery, knit goods, laces, scarfs, ties, veils, all descriptions of cut and made up silks,

CLASS 248.—Ribbons, plain,and fancy, velvet.

CLASS 249.—Bindings, braids, cords, galloons, ladies' dress trimmings, upholsterers', tailors', military, and miscellaneous trimmings.

CLOTHING, JEWELLERY, AND ORNAMENTS, TRAVELLING EQUIPMENTS.

CLASS 250.—Ready-made clothing, knit goods and hosiery, military clothing, church vestments, costumes, water-proof clothing, and clothing for special objects.

CLASS 251.—Hats, caps, boots and shoes, gloves, mittens, etc., straw and palm leaf hats, bonnets, and millinery.

CLASS 252.—Laces, embroideries, and trimmings for clothing, furniture, and carriages.

CLASS 253.—Jewellery and ornaments worn upon the person.

CLASS 254.—Artificial flowers, coiffures, buttons, trimmings, pins, hooks and eyes, fans, umbrellas, sun-shades, walking-canes, pipes, and small objects of dress or adornment, exclusive of jewellery. Toys and fancy articles.

CLASS 255.—Fancy leather work, pocket-books, toilet cases, travelling equipments, valises and trunks.

CLASS 256.—Furs.

CLASS 257.—Historical collections of costumes, national costumes.

PAPER, BLANK BOOKS, AND STATIONERY.

CLASS 258.—Stationery for the desk, stationers' articles, pens, pencils, inkstands, and other apparatus of writing and drawing.

CLASS 259.—Writing paper and envelopes, blank-book paper, bond paper, tracing paper, tracing linen, tissue paper, etc., etc.

CLASS 260.—Printing paper for books, newspapers, etc.

Wrapping paper of all grades, cartridge and manilla paper, paper bags.

CLASS 261.—Blank books; sets of account books, specimens of ruling and binding, including blanks, bill heads, etc., book-binding.
CLASS 262.—Cards; playing cards, card-board, binders' board, paste-board, paper or card-board boxes.
CLASS 263.—Building paper, paste-board for walls, cane fibre felt for car wheels, ornaments, etc.
CLASS 264.—Wall papers, enamelled and coloured papers, imitations of leather, wood, etc.

MILITARY AND NAVAL ARMAMENTS, ORDNANCE, FIRE-ARMS, AND HUNTING APPARATUS.

CLASS 265.—Military small-arms, muskets, pistols, and magazine-guns, with their ammunition.
CLASS 266.—Light artillery, compound guns, machine guns, mitrailleuses, etc.
CLASS 267.—Heavy ordnance and its accessories.
CLASS 268.—Knives, swords, spears, and dirks.
CLASS 269.—Fire-arms used for sporting and hunting, also other implements for the same purpose.
CLASS 270.—Traps for game, birds, vermin, etc.

MEDICINE, SURGERY, PROTHESIS.

CLASS 272.—Medicines; officinal (in any authoritative pharmacopœia), articles of the materia medica, preparations, unofficinal.
CLASS 273.—Dietetic preparations, as beef extract, and other articles intended especially for the sick.
CLASS 274.—Pharmaceutical apparatus.
CLASS 275.—Instruments for physical diagnosis, clinical thermometers, stethoscopes, ophthalmoscopes, etc., (except clinical microscopes, etc., for which see Class 324).
CLASS 276.—Surgical instruments and appliances, with dressings, apparatus for deformities, prothesis, obstetrical instruments.
CLASS 277.—Dental instruments and appliances.
CLASS 278.—Vehicles and appliances for the transportation of the sick and wounded, during peace and war, on shore or at sea.

HARDWARE, EDGE TOOLS, CUTLERY, AND METALLIC PRODUCTS.

CLASS 280.—Hand tools and instruments used by carpenters, joiners, and for wood and stone in general. Miscellaneous hand tools used in industries, such as jewellers', engravers'.
CLASS 281.—Cutlery, knives, penknives, scissors, razors, razor-straps, skates, and implements sold by cutlers.
CLASS 282.—Emery and sand paper, polishing-powders, polishing and burnishing-stones.
CLASS 283.—Metal hollow-ware, ornamental castings.
CLASS 284.—Hardware used in construction, exclusive of tools and implements. Spikes, nails, screws, tacks, bolts, locks, latches, hinges, pulleys. Plumbers' and gasfitters' hardware, furniture fittings, ships' hardware, saddlers' hardware, and harness fittings and trimmings.

FABRICS OF VEGETABLE, ANIMAL, OR MINERAL MATERIALS.

CLASS 285.—India rubber goods and manufactures.
CLASS 286.—Brushes.
CLASS 287.—Ropes, cordage.
CLASS 288.—Flags, insignia, emblems.
CLASS 289.—Wooden and basket ware, papier maché.
CLASS 290.—Undertakers' furnishing goods, caskets, coffins, etc.
CLASS 291.—Galvanized ironwork.

CARRIAGES, VEHICLES, AND ACCESSORIES.

(For farm vehicles and railway carriages see Departments of Agriculture and Machinery.)

CLASS 292.—Pleasure carriages.
CLASS 293.—Travelling carriages, coaches, stages, omnibuses, hearses. Bath chairs, velocipedes, baby carriages.
CLASS 294.—Vehicles for movement of goods and heavy objects, carts wagons, trucks.
CLASS 295.—Sleighs, sledges, sleds, etc.
CLASS 296.—Carriage and horse furniture, harness and saddlery, whips, spurs, horse blankets, carriage robes, rugs etc.

DEPARTMENT III.—EDUCATION AND SCIENCE.

EDUCATIONAL SYSTEMS, METHODS, AND LIBRARIES.

CLASS 300.—Elementary instruction. Infant schools and kindergartens, arrangements, furniture, appliances, and modes of training.

Public schools, graded schools, buildings and grounds, equipments, courses of study, methods of instruction, text books, apparatus, including maps, charts, globes, etc.; pupils' work, including drawing and penmanship; provisions for physical training.

CLASS 301.—Higher education. Academies and high schools.

Colleges and universities. Buildings and grounds; libraries, museums of zoology, botany, mineralogy, art, and archeology; apparatus for illustration and research, mathematical, physical, chemical, and astronomical courses of study; text books, catalogues, libraries, and gymnasiums.

CLASS 302.—Professional schools, theology, law, medicine and surgery, dentistry, pharmacy, mining, engineering, agriculture and mechanical arts, art and design, military schools, naval schools, normal schools, commercial schools, music.

Buildings, text books, libraries, apparatus, methods, and other accessories for professional schools.

CLASS 303.—Institutions for instruction of the blind, deaf, and dumb, and the feeble-minded.

CLASS 304.—Education reports and statistics.

National bureau of education.

State, city, and town systems.

College, university, and professional systems.

CLASS 305.—Libraries, history, reports, statistics, and catalogues.

CLASS 306.—School and text books, dictionaries, encyclopædias, gazetteers, directories, index volumes, biblographies, catalogues, almanacs, special treatises, general and miscellaneous literature, newspapers, technical and special newspapers and journals, illustrated papers, periodical literature.

INSTITUTIONS AND ORGANIZATIONS.

CLASS 310.—Institutions founded for the increase and diffusion of knowledge. Such as the Smithsonian Institution, the Royal Institution, the Institute of France, British Association for the Advancement of Science, and the American Association, etc., their organization, history, and results.

CLASS 311.—Learned and scientific associations. Geological and mineralogical societies, etc. Engineering, technical and professional associations. Artistic, biological, zoological, medical schools, astronomical observatories.

CLASS 312.—Museums, collections, art galleries, exhibitions of works of art and industry. Agricultural fairs, state and county exhibitions, national exhibitions. International exhibitions.

Scientific museums, and art museums.

Ethnological and archæological collections.

CLASS 313.—Music and the drama.

SCIENTIFIC AND PHILOSOPHICAL INSTRUMENTS AND METHODS.

CLASS 320.—Instruments of precision, and apparatus of physical research, experiment, and illustration.

Astronomical instruments, and accessories, used in observatories.

Transits, mural circles, equatorials, collimators.

Geodetic and surveying instruments. Transits, theodolites, needle compasses. Instruments for surveying underground in mines, tunnels, and excavations.

Nautical astronomical instruments. Sextants, quadrants, repeating circles, dip-sectors.

Levelling instruments and apparatus. Carpenters' and builders' levels, hand levels, water levels, engineers' levels.

Instruments for deep sea sounding and hydrographic surveying.

Meteorological instruments and apparatus.

Thermometers, pyrometers.

Barometers.

Hygrometers and rain gauges.

Maps, bulletins.

Blanks for reports, methods of recording, reducing, and reporting observations.

CLASS 321.—Indicating and registering apparatus, other than meteorological; mechanical calculation.

Viameters, pedometers, perambulators.

Gas meters.

Water meters, current meters, ships' logs, electrical logs.

Tide registers.

Apparatus for printing consecutive numbers.

Counting machines, calculating engines, arithmometers.

LASS 322.—Weights, measures, weighing and metrological apparatus.

Measures of length; graduated scales on wood, metal, ivory, tape, or ribbon; steel tapes, chains, rods, verniers, rods and graduated scales for measuring lumber, goods in packages, casks, etc., gaugers' tools and methods.

Measures of capacity for solids and liquids.

Weights. Scales and graduated beams for weighing; assay balances, chemical balances. Ordinary scales for heavy weights; weighing locomotives and trains of cars. Postal balances. Hydrometers, alcöometers, lactometers, etc.; gravimeters.

LASS 323.—Chronometric apparatus.

Chronometers. Astronomical clocks. Church and metropolitan clocks. Ordinary commercial clocks. Pendulum and spring clocks. Marine clocks. Watches. Clepsydras, hour glasses, sun dials. Chronographs, electrical clocks. Metronomes.

LASS 324.—Optical and thermotic instruments, and apparatus.

Mirrors, plane and spherical.

Lenses and prisms.

Spectacles and eye glasses, field and opera glasses, graphoscopes and stereoscopes.

Cameras and photographic apparatus.

Microscopes.

Telescopes.

Apparatus for artificial illumination, including electric, oxyhydrogen, and magnesium light.

Stereopticons.

Photometric apparatus.

Spectroscopes and accessories for spectrum analysis.

Polariscopes, etc.

Thermotic apparatus.

LASS 325.—Electrical apparatus.

Friction machines.

Condensors and miscellaneous apparatus to illustrate the discharge.

Galvanic batteries and accessories to illustrate dynamical electricity.

Electro-magnetic apparatus.

Induction machines, Rumkorff coils, etc.

Magnets and magneto-electrical apparatus.

LASS 326.—Telegraphic instruments and methods.

Batteries and forms of apparatus used in generating the electrical currents for telegraphic purposes.

Conductors and insulators, and methods of support, marine telegraph cables.

Apparatus of transmission; keys, office accessories, and apparatus.

Receiving instruments, relay magnets, local circuits.

Semaphoric and recording instruments.

Codes, signs, or signals.

Printing telegraphs for special uses.

Electrographs.

Dial or cadran systems.

Apparatus for automatic transmission.

CLASS 327.—Musical instruments and acoustic apparatus.

Percussion instruments, drums, tambourines, cymbals, triangles.

Pianos.

Stringed instruments other than pianos.

Automatic musical instruments, music boxes.

Wind instruments of metal and of wood.

Harmoniums.

Church organs and similar instruments.

Speaking machines.

Vocal music.

ENGINEERING, ARCHITECTURE, CHARTS, MAPS, AND GRAPHIC REPRESENTATIONS.

(For Agricultural Engineering, see Class 680.)
(For Mining Engineering, see Class 120.)

CLASS 330.—Civil engineering. Land surveying, public lands, etc.

River, harbour, and coast surveying. Construction and maintenance of roads, streets, pavements, etc. Surveys and location of towns and cities, with systems of water supply and drainage. Arched bridges of metal, stone, brick, or beton. Trussed girder bridges. Suspension bridges. Canals, aqueducts, reservoirs, construction of dams. Hydraulic engineering and means of arresting and controlling the flow of water.

Submarine constructions, foundations, piers, docks, etc.

CLASS 331.—Dynamic and industrial engineering. Construction and working of machines; examples of planning and construction of manufacturing and metallurgical establishments.

CLASS 332.—Railway engineering. Location of railways, and the construction and management of railways.

CLASS 333.—Military engineering.

CLASS 334.—Naval engineering.

Class 335.—Topographical maps. Marine and coast charts.

Geological maps and sections.

Botanical, agronomical, and other maps, showing the extent and distribution of men, animals, and terrestrial products. Physical maps.

Meteorological maps and bulletins. Telegraphic routes and stations. Railway and route maps. Terrestrial and celestial globes. Relief maps and models of portions of the earth's surface. Profiles of ocean beds and routes of submarine cables.

PHYSICAL, SOCIAL, AND MORAL CONDITION OF MAN.

Class 340.—Physical development and condition.

The nursery and its accesssories.

Gymnasiums, games, and manly sports. Skating, walking, climbing, ball-playing, acrobatic exercises; rowing, hunting, etc.

Class 341.—Alimentation. Markets; preparation and distribution of food.

Class 342.—The dwelling. Sanitary conditions and regulations. Domestic architecture.

Dwellings characterised by cheapness, combined with the conditions essential to health and comfort.

Fire-proof structures.

Hotels, club-houses, etc.

Public baths.

Class 343.—Commercial systems and appliances.

Mercantile forms and methods, counting-houses and offices.

Banks and banking.

Saving and trust institutions.

Insurance; fire, marine, life, etc.

Commercial organizations, boards of trade, merchants, produce, and stock exchanges.

Corporations for commercial and manufacturing purposes.

Railway and other transportation companies.

Building and loan associations.

Class 344.—Money.—Mints and coining.

Collections of current coins.

Historical collections.

Tokens, etc.

Bank notes and other paper circulating mediums.

Commercial paper, bills of exchange, etc.

Securities for payment of money, stocks, bonds, mortgages, ground rents, quit rents.

Precautions against counterfeiting and misappropriation of money.

Class 345.—Government and law.—Various systems of government.

Departments of government. Revenue and taxation, military organization, executive powers, legislative forms and authority, judicial functions and systems, police regulations, government charities.

International relations; international law; diplomatic and consular service, etc., allegiance and citizenship; naturalization.

Codes.

Municipal government.

Potection of property in inventions.

Postal system and appliances.

Punishment of crime.

Prisons and prison managment and discipline; police stations; houses of correction; reform schools; naval or marine discipline; punishment at sea.

Class 346.—Benevolence.—General hospitals.

Special hospitals for the eye and ear, for women, etc.

Hospitals for contagious and infectious diseases.

Hospitals for the insane—under State control, and private asylums.

Quarantine systems and organizations.

Sanitary regulations of cities.

Dispensaries.

Inebriate asylums.

Lying-in asylums.

Magdalen asylums.

Asylums for infants and children. Foundling and orphan asylums, children's aid societies.

Homes for the aged and infirm; homes for aged men and women; soldiers' homes; homes for the maimed and deformed; sailors' homes.

Treatment of paupers. Almshouses, feeding the poor, lodging-houses.

Emigrant aid societies.

Treatment of aborigines.

Prevention of cruelty to animals.

Class 347.—Co-operative associations.

Political societies and organizations.

Military organizations and orders.

Trade unions and associations.

Industrial organizations.

Secret orders and fraternities.

Class 348.—Religious organizations and systems.—Origin, nature, growth, and extent of various religious systems and faiths. Statistical, historical, and other facts.

Religious orders and societies, and their objects.

Societies and organizations for the propagation of systems of religion by missionary effort.

Spreading the knowledge of religious systems by publications.

Bible societies, tract societies, colportage.

Systems and methods of religious instruction and training for the young.

Sunday schools, furniture and apparatus.

Associations for religious or moral improvement.

Dispensing charities, church guilds.

CLASS 349.—Art and industrial exhibitions.—Agricultural fairs, state and county exhibitions, national exhibitions, international exhibitions, international congresses, etc.

DEPARTMENT IV.—ART.

SCULPTURE.

CLASS 400.—Figures and groups in stone, metal, clay or plaster.

CLASS 401.—Bas-reliefs, in stone or metal; electrotype copies.

CLASS 402.—Medals, pressed and engraved; electrotypes of medals.

CLASS 403.—Hammered and wrought work—*repoussé* and *rehaussé* work, embossed and engraved relief work.

CLASS 404.—Cameos, intaglios, engraved stones, dies, seals, etc.

CLASS 405.—Carvings in wood, ivory, and metal.

PAINTING.

CLASS 410.—Paintings in oil on canvas, panels, etc.

CLASS 411.—Water colour pictures; aquarelles, miniatures, etc.

CLASS 412.—Frescoes, cartoons for frescoes, etc.

CLASS 413.—Painting with vitrifiable colours. Pictures on porcelain, enamel and metal.

ENGRAVING AND LITHOGRAPHY.

CLASS 420.—Drawings with pen, pencil or crayons.

CLASS 421.—Line engravings from steel, copper or stone.

CLASS 422.—Wood engravings.

CLASS 423.—Lithographs, zincographs, etc.

CLASS 424.—Chromo-lithographs.

PHOTOGRAPHY.

CLASS 430.—Photographs on paper, metal, glass, wood, fabrics or enamel surfaces.

CLASS 431.—Prints from photo-relief plates, carbon prints, etc.

CLASS 432.—Photo-lithographs, etc.

INDUSTRIAL AND ARCHITECTURAL DESIGNS, MODELS, AND DECORATIONS.

CLASS 440.—Industrial designs.

CLASS 441.—Architectural designs; studies and fragments, representations and projects of edifices; restorations from ruins and from documents.

CLASS 442.—Decoration of interiors of buildings.

CLASS 443.—Artistic hardware and trimmings; artistic castings, forged metal-work for decoration, etc.

DECORATION WITH CERAMIC AND VITREOUS MATERIALS; MOSAIC AND INLAID WORK.

CLASS 450.—Mosaic and inlaid work in stone.

CLASS 451.—Mosaic and inlaid work in tiles, tessaræ, glass, etc.

CLASS 452.—Inlaid work in wood and metal, parquetry, inlaid floors, tables, etc.

CLASS 453.—Stained glass.

CLASS 454.—Miscellaneous objects of art.

DEPARTMENT V.—MACHINERY.

MACHINES, TOOLS, AND APPARATUS OF MINING, METALLURGY, CHEMISTRY AND THE EXTRACTIVE ARTS.

Class 500.—Rock drilling.
Class 501.—Well and shaft boring.
Class 502.—Machines, apparatus, and implements for coal cutting.
Class 503.—Hoisting machinery and accessories.
Class 504.—Pumping, draining, and ventilating.
Class 505.—Crushing, grinding, sorting, and dressing. Breakers, stamps, mills, pans, screens, sieves, jigs, concentrators.
Class 506.—Furnaces, smelting apparatus, and accessories.
Class 507.—Machinery used in Bessemer process.
Class 508.—Chemical manufacturing machinery. Electroplating.
Class 509.—Gas machinery and apparatus.

MACHINES AND TOOLS FOR WORKING METAL, WOOD, AND STONE.

Class 510.—Planing, sawing, veneering, grooving, mortising, tonguing, cutting, moulding, stamping, carving, and cask-making machines, etc., cork-cutting machines.
Class 511.—Direct acting steam sawing-machines, with gang saws.
Class 512.—Rolling mills, bloom squeezers, blowing fans.
Class 513.—Furnaces and apparatus for casting metals, with specimens of work.
Class 514.—Steam, trip, and other hammers, with specimens of work, anvils, forges.
Class 515.—Planing, drilling, slotting, turning, shaping, punching, stamping, and cutting machines. Wheel cutting and dividing machines, emery wheels, drills, taps, gauges, dies, etc.
Class 516.—Stone-sawing and planing machines, dressing, shaping, and polishing, sand blasts, Tilghman's machines, glass-grinding machines, etc.
Class 517.—Brick, pottery, and tile machines. Machines for making artificial stone.
Class 518.—Furnaces, moulds, blow-pipes, etc., for making glass and glassware.

MACHINES AND IMPLEMENTS OF SPINNING, WEAVING, FELTING, AND PAPER MAKING.

Class 520.—Machines for the manufacture of silk goods.
Class 521.—Machines for the manufacture of cotton goods.
Class 522.—Machines for the manufacture of woollen goods.
Class 523.—Machines for the manufacture of linen goods.
Class 524.—Machines for the manufacture of rope and twine, and miscellaneous fibrous materials.
Class 525.—Machines for the manufacture of paper, and felting.
Class 526.—Machines for the manufacture of india-rubber goods.
Class 527.—Machines for the manufacture of mixed fabrics.

MACHINES, APPARATUS, AND IMPLEMENTS USED IN SEWING AND MAKING CLOTHING AND ORNAMENTAL OBJECTS.

Class 530.—Machines used in the manufacture of tapestry, including carpets, lace, floor-cloth, fancy embroidery, etc.
Class 531.—Sewing and knitting machines, clothes-making machines.
Class 532.—Machines for preparing and working leather.
Class 533.—Machines for making boots and shoes.
Class 534.—Machines for ironing, drying, and scouring.
Class 535.—Machines for making clocks and watches.
Class 536.—Machines for making jewellery.
Class 537.—Machines for making buttons, pins, needles, etc.

MACHINES AND APPARATUS FOR TYPE SETTING, PRINTING, STAMPING, EMBOSSING, AND FOR MAKING BOOKS, AND PAPER WORKING.

Class 540.—Printing-presses.
Class 541.—Type-casting machines, apparatus of stereotyping.

Class 542.—Types and type-setting machines. Type-writing machines.
Class 543.—Printers' furniture.
Class 544.—Book-binding machines.
Class 545.—Paper-folding machines.
Class 546.—Paper and card-cutting machines.
Class 547.—Envelope machines.

MOTORS AND APPARATUS FOR THE GENERATION AND TRANSMISSION OF POWER.

Class 550.—Boilers and all steam or gas-generating apparatus for motive purposes.
Class 551.—Water-wheels, water-engines, hydraulic rams, wind-mills.
Class 552.—Steam, air, or gas engines, electro-magnetic engines.
Class 553.—Apparatus for the transmission of power, shafting, belting, cables, transmission of power by compressed air, etc., gearing, cables.
Class 554.—Screw propellers, wheels for the propulsion of vessels, and other motors.
Class 555.—Implements and apparatus used in connexion with motors, steam gauges, manometers, etc.

HYDRAULIC AND PNEUMATIC APPARATUS, PUMPING, HOISTING, AND LIFTING.

Class 560.—Pumps and apparatus for lifting and moving liquids.
Class 561.—Pumps and apparatus for moving and compressing air or gas.
Class 562.—Pumps and blowing engines, blowers, and ventilating apparatus.
Class 563.—Hydraulic jacks, presses, elevators, lifts, meters, cranes.
Class 564.—Fire engines, hand, steam, or chemical, and fire-extinguishing apparatus, hose, ladders, fire-escapes, etc.
Class 565.—Beer-engines, soda-water machines, bottling apparatus, corking-machines.
Class 566.—Stop valves, cocks, pipes, etc.
Class 567.—Diving apparatus and machinery.
Class 568.—Ice machines.

RAILWAY PLANT, ROLLING STOCK, AND APPARATUS.

Class 570.—Locomotives, models, drawings, plans, etc.
Class 571.—Carriages, waggons, trucks, cars, etc.
Class 572.—Brakes, buffers, couplings, and snow ploughs.
Class 573.—Wheels, tires, axles, bearings, springs, etc.
Class 574.—Permanent ways, ties, chairs, switches, etc.
Class 575.—Station arrangements, signals, water-cranes, turn-tables.
Class 576.—Miscellaneous locomotive attachments.
Class 577.—Street railways and cars.

MACHINES USED IN PREPARING AGRICULTURAL PRODUCTS.

Class 580.—Flour mills.
Class 581.—Sugar-refining machines.
Class 582.—Confectioners' machinery.
Class 583.—Oil-making machinery.
Class 584.—Tobacco-manufacturing machines.
Class 585.—Mills for spices, coffee, etc.

AERIAL, PNEUMATIC, AND WATER TRANSPORTATION.

Class 590.—Suspended-cable railways.
Class 591.—Transporting cables.
Class 592.—Balloons, flying machines, etc.
Class 593.—Pneumatic railways, pneumatic dispatch.
Class 594.—Boats and sailing vessels. Sailing vessels used in commerce. Sailing vessels used in war. Yachts and pleasure boats. Rowing boats of all kinds. Life-boats and salvage apparatus, with life rafts, belts, etc. Submarine armour, diving bells, etc. Ice-boats.
Class 595.—Steamships, steamboats, and all vessels propelled by steam.
Class 596.—Vessels for carrying telegraph cables, and railway trains, also coal barges, water-boats, and dredging-machines, screw and floating docks, and for other special purposes.
Class 597.—Steam capstans, windlass, deck-winches, and steering apparatus, fans.

MACHINERY AND APPARATUS ESPECIALLY ADAPTED TO THE REQUIREMENTS OF THE EXHIBITION.

Boilers, engines, cranes, pumps, etc.

DEPARTMENT VI.—AGRICULTURE.

ARBORICULTURE AND FOREST PRODUCTS.

Class 600.—Timber and trunks of trees, entire or in transverse or truncated sections, with specimens of barks, leaves, flowers, seed vessels, and seed.

Masts, spars, knees, longitudinal sections of trees, railway ties, ship timber, lumber roughly sawn; as planks, shingles, lath, and staves.

Timber and lumber prepared in various ways to resist decay and combustion; as by injection of salts of copper and zinc.

Class 601.—Ornamental woods used in decorating and for furniture; as veneers of mahogany, rosewood, ebony, walnut, maple, and madrona.

Class 602.—Dye-woods, barks, and galls for colouring and tanning.

Class 603.—Gums, resins, caoutchouc, gutta percha, vegetable wax.

Class 604.—Lichens, mosses, fungi, pulu, ferns.

Class 605.—Seeds, nuts, etc., for food and ornamental purposes.

Class 606.—Forestry.—Illustrations of the art of planting, managing, and protecting forests. Statistics.

POMOLOGY.

Class 610.—Fruits of temperate and semi-tropical regions; as apples, pears, quinces, peaches, nectarines, apricots, plums, grapes, cherries, strawberries, and melons.

Class 611.—Tropical fruits and nuts, oranges, bananas, plantains, lemons, pine-apples, pomegranates, figs, cocoanuts.

AGRICULTURAL PRODUCTS.

Class 620.—Cereals, grasses, and forage plants.

Class 621.—Leguminous plants and esculent vegetables.

Class 622.—Roots and tubers.

Class 623.—Tobacco, hops, tea, coffee, and spices.

Class 624.—Seeds and seed vessels.

LAND ANIMALS.

Class 630.—Horses, asses, mules.

Class 631.—Horned cattle.

Class 632.—Sheep.

Class 633.—Goats, alpaca, llama, camel.

Class 634.—Swine.

Class 635.—Poultry and birds.

Class 636.—Dogs and cats.

Class 637.—Wild animals.

Class 638.—Insects, useful and injurious. Honey bees, cochineal, silk worms.

MARINE ANIMALS, FISH CULTURE, AND APPARATUS.

Class 640.—Marine mammals.—Seals, cetaceans, etc., specimens living in aquaria, or stuffed, salted, preserved in alcohol, or otherwise.

Class 641.—Fishes, living or preserved.

Class 642.—Pickled fish, and parts of fish used for food.

Class 643.—Crustaceans, echinoderms, beche de mer.

Class 644.—Mollusks, oysters, clams, etc., used for food.

Class 645.—Shells, corals, and pearls.

Class 646.—Whalebone, shagreen, fish-glue, isinglass, sounds, fish oil.

Class 647.—Instruments and apparatus of fishing. Nets, baskets, hooks, and other apparatus used in catching fish.

Class 648.—Fish culture. Aquaria, hatching pools, vessels for transporting roe and spawn, and other apparatus used in fish breeding, culture, or preservation.

ANIMAL AND VEGETABLE PRODUCTS.

(Used as food or as materials.)

Class 650.—Sponges, sea-weed, and other growths used for food or in the arts.

Class 651.—The dairy.—Milk, cream, butter, cheese.

Class 652.—Hides, furs, and leather, tallow, oil, and lard, ivory, bone, horn, glue.

Class 653.—Eggs, feathers, down.

Class 654.—Honey and wax.

Class 655.—Animal perfumes; as musk, civet, ambergris.

Class 656.—Preserved meats, vegetables, and fruits. Dried, or in cans or jars. Meat and vegetable extracts.

Class 657.—Flour; crushed and ground cereals, decorticated grains.

CLASS 658.—Starch and similar products.
CLASS 659.—Sugar and syrups.
CLASS 660.—Wines, alcohol, and malt liquors.
CLASS 661.—Bread, biscuits, crackers, and cakes.
CLASS 662.—Vegetable oils.

TEXTILE SUBSTANCES OF VEGETABLE OR ANIMAL ORIGIN.

CLASS 665.—Cotton on the stem, in the boll, ginned, and baled.
CLASS 666.—Hemp, flax, jute, ramie, etc., in primitive forms and in all stages of preparation for spinning.
CLASS 667.—Wool in the fleece, carded and in bales.
CLASS 668.—Silk in the cocoon and reeled.
CLASS 669.—Hair, bristles.

MACHINES, IMPLEMENTS, AND PROCESSES OF MANUFACTURE.

CLASS 670.—Tillage. — Manual implements, spades, hoes, rakes. Animal-power machinery, ploughs, cultivators, horse hoes, clodcrushers, rollers, harrows. Steam-power machinery, ploughs, breakers, harrows, cultivators.
CLASS 671.—Planting.—Manual implements, corn-planters and hand drills. Animal-power machinery, grain and manure drills, corn and cotton planters. Steam-power machinery, grain and manure drills.
CLASS 672.—Harvesting.—Manual implements; grain cradles, sickles, reaping hooks. Animal-power machinery, reapers and headers. Mowers, tedders, rakes, hay elevators, and hay loaders. Potato diggers.
CLASS 673.—Preparatory to marketing.—Thrashers, clover hullers, corn shellers, winnowers, hay, cotton, wine, oil and sugar making apparatus.
CLASS 674.—Applicable to farm economy.—Portable and stationary engines, chaffers, hay and feed cutters, slicers, pulpers, corn mills, farm boilers and steamers, incubators.
CLASS 675.—Dairy fittings and appliances.—Churns for hand and power, butter-workers, cans and pails, cheese-presses, vats, and apparatus.

AGRICULTURAL ENGINEERING AND ADMINISTRATION.

CLASS 680.—Laying out and improving farms.—Clearing (stump extractors), construction of roads, draining, irrigating, models of fences, gates, drains, out-falls, dams, embankments, irrigating machinery, stack building and thatching.
CLASS 681.—Commercial fertilizers—phosphatic, ammoniacal, calcareous, etc.
CLASS 682.—Transportation.—Wagons, carts, sleds, harness, yokes, traction engines, and apparatus for road making and excavating.
CLASS 683.—Farm buildings.—Models and drawings of farm houses and tenements, barns, stables, hop-houses, fruit-driers, ice-houses, wind-mills, granaries, barracks, apiaries, cocooneries, aviaries, abattoirs, and dairies.

TILLAGE AND GENERAL MANAGEMENT.

CLASS 690.—Systems of planting and cultivation.
CLASS 691.—Systems of draining and application of manures.
CLASS 692.—Systems of breeding and stock-feeding.

DEPARTMENT VII.—HORTICULTURE.

ORNAMENTAL TREES, SHRUBS, AND FLOWERS.

CLASS 700.—Ornamental trees and shrubs, evergreens.
CLASS 701.—Herbaceous perennial plants.
CLASS 702.—Bulbous and tuberous-rooted plants.
CLASS 703.—Decorative and ornamental foliage plants.
CLASS 704.—Annuals and other soft-wooded plants, to be exhibited in successive periods during the season.
CLASS 705.—Roses.
CLASS 706.—Cactacea.
CLASS 707.—Ferns, their management in the open air, and in ferneries, wardian cases, etc.
CLASS 708.—New plants, with statement of their origin.
CLASS 709.—Floral designs, etc. Cut flowers, bouquets, preserved flowers, leaves, sea-weeds. Illustrations of plants and flowers. Materials for floral designs. Bouquet materials, bouquet holders, bouquet papers, models of fruits, vegetables, and flowers.

HOT-HOUSES, CONSERVATORIES, GRAPERIES, AND THEIR MANAGEMENT.

Class 710.—Hot-house and conservatory plants.
Class 711.—Fruit trees under glass.
Class 712.—Orchids and parasitic plants.
Class 713.—Forcing and propagation of plants.
Class 714.—Aquatic plants under glass, or in aquaria, etc.
Class 715.—Horticultural buildings, propagating houses, hot-beds, etc., and modes of heating them. Structures for propagating and forcing small fruits.
Class 716.—Portable or movable orchard houses and graperies, without artificial heat. Frames, beds.

GARDEN TOOLS, ACCESSORIES OF GARDENING.

Class 720.—Tools and implements. Machines for the transplanting of trees, shrubs, etc. Portable forcing pumps, for watering plants in green-houses and methods of watering the garden and lawn.
Class 721.—Receptacles for plants. — Flower pots, plant boxes, tubs, fern cases, jardinieres, etc. Window gardening. Plant and flower stands, ornate designs, in iron, wood, and wire.
Class 722.—Ornamental wire-work, viz., fences, gates, trellis bordering of flower beds, porches. Park seats, chairs, garden statuary, vases, fountains, etc. Designations, labels, numbers.

GARDEN DESIGNING, CONSTRUCTION, AND MANAGEMENT.

Class 730.—Laying out gardens,—designs for the laying out of gardens, and the improvement of private residences. Designs for commercial gardens, nurseries, graperies. Designs for the parterre.
Class 731.—Treatment of water for ornamental purposes, cascades, fountains, reservoirs, lakes.
Class 732.—Formation and after-treatment of lawns.
Class 733.—Garden construction, buildings, etc. Rockwork, grottoes. Rustic constructions and adornments for private gardens and public grounds.
Class 734.—Planting, fertilizing, and cultivating.

ALPHABETICAL LIST OF EXHIBITORS.

Name.	Class.	Address.
A.		
ADAIR AND Co. - - -	560	17, Neptune Street - - Liverpool.
ADAMS, JOHN - - -	202	Victoria Park - - - Sheffield.
ADAMS, ROBERT - - -	284	25, Falmouth Road, Great Dover Street. London.
ADAMS, W. M. - - -	320	Arundel Club, Salisbury St., Strand. London.
ADAMS AND Co. - - -	243	5, New Street, Bishopsgate Street. London.
ADDIS, J. B., AND SONS - -	280	Arctic Works - - - Sheffield.
AINSWORTH, THOMAS - -	233	Cleator Mills, Cleator - - Carnforth.
AIR BURNING COMPANY (LIMITED).	534	118, Green Street - - Glasgow.
AIRE AND CALDER GLASS BOTTLE COMPANY, E. BREFFIT, PROPRIETOR.	215	83, Upper Thames Street - London.
AITCHISON, JAMES - - -	253	23, Princes Street - - Edinburgh.
ALLEN, FREDERICK, AND SONS -	659	Canal Road, Mile End Road - London.
ALLEN AND HANBURYS - -	200	Plough Court, Lombard Street - London.
AMBLER, W., C.E. - - -	521	17, Elizabeth Street - - Bradford.
ANDERSON, D., AND SON -	235	Lagan Felt Works - - Belfast.
ANDREW, J. E. H. - - -	584	Waterloo Road - - - Stockport.
ANDREWS, H., AND Co. - -	235	29, Albion Street - - Leeds.
ANGUS, G., & Co. - - -	652	10, Thomas Street - - Liverpool.
ANNANDALE, A., AND SONS -	525	Beltonford Paper Works - Dunbar.
APPLEBY BROTHERS - -	563	Emerson Street, Southwark - London.
ARTHUR, F. - - -	217	18, Motcomb Street - - London.
ASH AND LACY - - -	111	Meriden Street - - Birmingham.
ASHWORTH, E., AND SONS -	230	Egerton Mills - - - Bolton.
ATKINSON, J. AND E. - -	203	24, Old Bond Street - - London.
AUDSLEY AND BOWES - -	423	11, Dale Street - - Liverpool.
AUGENER, GEORGE, AND Co. -	306	86, Newgate Street - - London.
AVELING AND PORTER - -	682	- - - - - Rochester.
B.		
BAINBRIDGE, EMERSON - -	502	Nunnery Colliery Offices - Sheffield.
BAILEY, W. AND J. A. - -	213	Alloa - - - - Scotland.
BAILLIE AND Co. - - -	453	118, Wardour Street - - London.
BAIRD, W., AND Co. - -	502	Gartsherrie Ironworks - Coatbridge, N.B.
BAKER, C., AND SONS - -	284	98, Lichfield Street - - Birmingham.
BAKER, WILLIAM - - -	280	96, Pembroke Street, Bingfield Street, Caledonian Road. London.
BALDWIN, E. P. AND W. - -	111	Wilden Works - - near Stourport.
BALL, JAMES - - -	656	12, Duke Street, Grosvenor Square. London.

Name.	Class.	Address.
BARLOW AND JONES (LIMITED) -	230	2, Portland Street - - Manchester.
BARNARD, B. - - -	217	107, St. Paul's Road, Highbury London.
BARNARD, JOHN - - -	430	5, St. Mary's Buildings - Bedford.
BARNARD, BISHOP, AND BARNARDS.	217	Norfolk Ironworks - - Norwich.
BARTHOLOMEW, JOHN - -	300	Chambers Street - - Edinburgh.
BATES, WALKER, AND Co. -	213	Dale Hall Works - - Burslem.
BAUM, F. - - - -	430	6, St. Ann's Square - - Manchester.
BAXTER, RICHARD - - -	251	St. James' Green, Thirsk - Yorkshire.
BEATTY, F. S. - - -	540	30, Summers Hill - - Dublin.
BEAU, ADOLPHE, - - -	430	283, Regent Street - - London.
BEAUFORD AND BRUCE - -	430	2 Nuns' Island, Galway - Ireland.
BECK, R. AND J. - - -	324	31, Cornhill - - - London.
BEDFORD, WILLIAM - -	430	326, Camden Road - - London.
BEESLEY AND SONS - -	515	Abbey Road Boiler Works - Barrow-in-Furness.
BENNETT, T., AND SON - -	652	70, Turnmill Street, Farringdon Road, London.
BERNARD & Co. - - -	660	The Distillery, Leith - - Scotland.
BESSBROOK GRANITE WORKS	102	Bessbrook - - - Ireland.
BESSON, F. - - - -	327	198, Euston Road - - London.
BEVIS, HENRY - - -	288	140, Pentonville Road - - London.
BEWLEY AND DRAPER - -	660	23, Mary Street - - Dublin.
BICKFORD, SMITH, AND Co. -	204	Tuckingmill - - - Cornwall.
BINDLEY AND Co. - - -	660	The Brewery - - - Burton-on-Trent.
BIRCHALL, J. D., AND Co. - -	235	Wellington and Burley Mills - Leeds.
BIRDSALL & SONS - -	306	- - - - - Northampton.
BLACKWOOD, JOHN, AND Co.	202	18, Bread Street Hill - - London.
BLISS, W., AND SONS - -	235	Chipping Norton - - Oxfordshire.
BOND, JOHN, daughter of late, now Mrs. HICKISSON.	202	15, Southgate Road - - London.
BOOSEY AND Co. - - -	327	295, Regent Street - - London.
BOOL, A. AND J. - - -	430	86, Warwick Street, Pimlico - London.
BOOTH, H., AND Co. - -	521	Edward Street - - - Preston.
BOULINIKON FLOOR CLOTH MANUFACTURING COMPANY (LIMITED).	234	Worsley Street, Salford - Manchester.
BOWES, JOHN L., AND BROTHER -	667	11, Dale Street - - Liverpool.
BOWMAN, CHARLES - -	202	6, King Street, Tower Hill - London.
BOYLE AND SON, R. M. - -	562	100, Mitchell Street - - Glasgow.
BRADBURY, AGNEW & Co. -	306	Bouverie Street - - London.
BRADFORD, W. H. - -	594	Great Saughall - near Chester.
BRECHIN, J. B. - - -	506	45, Commercial Street - - Dundee.
BRIERLEY, SONS, AND REYNOLDS.	574	81A, Edgware Road, Hyde Park. London.
BRIGG, J. F., AND Co. - -	238	- - - - - Huddersfield.
BRINSMEAD, J., AND SONS	327	18, Wigmore Street - - London.
BRITISH AND FOREIGN BLIND ASSOCIATION.	303	33, Cambridge Square, Hyde Park. London.
BROOKES AND CROOKES -	282	Atlantic Works, St. Philip's Road Sheffield.
BROOKE, E., AND SONS - -	206	Field House - - - Huddersfield.
BROOK, JONAS, AND BROTHERS	230	Meltham Mills - - - Huddersfield.
BROOKS, H., AND Co. - -	281	31, Cumberland Market - Regent's Park.
BROOKS AND COOPER - -	514	Mousehole Forge - - Sheffield.
BROWN - WESTHEAD, T. C., MOORE, AND Co.	213	Cauldon Place - - - Staffordshire Potteries.
BROWN, J. S., AND SONS - -	233	Bedford Street - - - Belfast.
BROWN, J. B., AND Co. - -	228	90, Cannon Street - - London.
BROWN, JOHN, AND Co. (LIMITED)	111	Atlas Works - - - Sheffield.
BROWNE, H. J. - - -	327	237 and 239, Euston Road - London.

Name.	Class.	Address.
BROWNFIELD, W., AND SON	213	Cobridge - - Staffordshire.
BROWETT, F., AND Co. - -	252	- - - Coventry.
BROWNHILLS POTTERY COMPANY.	206	Tunstall - - - Staffordshire.
BROWNRIGG, T. M. - -	430	32, Lower Leeson Street - Dublin.
BRUNNER, MOND, AND Co. -	200	Winnington, Northwich - Cheshire.
BRYAN, CHARLES - - -	253	West Cliff - - - Whitby.
BRYANT AND MAY - -	204	Fairfield Works, Bow - - London.
BUBB AND Co. - - -	235	Southfield Mills - near Stroud.
BUCHANAN, JAMES - -	270	56 to 62, Dale Street, Tradeston Glasgow.
BUCKLEY, J., AND Co. - -	236	Moorcroft Mills, Delph- near Manchester.
BUCKLEY, J. E. AND G. F. -	237	Linfitts Mill, Delph - near Manchester.
BULLIVANT, THOMAS - -	227	104, Ledbury Road, Bayswater London.
BURKE, E. AND J. - - -	660	16, Bachelors' Walk - - Dublin.
BURNAND, J., AND Co. - -	281	Leicester Works, Leicester Street. Sheffield.
BUSSE, G., AND Co. - -	224	8, South Street, Finsbury - London.
BUSSEY, GEORGE G., AND Co. -	652	Museum Works, Rye Lane, Peckham. London.

C.

CALVERT, F. C., AND Co. - -	200	Bradford - - near Manchester.
CAMERON, (MRS.) JULIA M. -	430	Care of Mrs. C. H. Cameron, Freshwater. Isle of Wight.
CAMMELL, CHAS., AND Co. (LIMITED).	111	Cyclops Works - - Sheffield.
CAMPBELL BRICK AND TILE COMPANY.	208	- - - - - Stoke-upon-Trent.
CAMPBELL, HUGH, AND SON -	102	Newry Granite Polishing Works, Moor Quarries. Newry.
CANTRELL AND COCHRANE -	660	Cromac Buildings, Belfast - Ireland.
CARR, I., AND Co. - - -	235	Twerton Mills - - - Bath.
CASSELL, PETTER, AND GALPIN	306	La Belle Sauvage Yard, Ludgate Hill. London.
CHAMBERS, T. F. - - -	202	51, High Street - - Hull.
CHANCE, BROTHERS, AND Co. -	214	Glass Works - - near Birmingham.
CHAPMAN, EDWIN, AND Co. -	660	10 Duke Street, Portland Place London.
CHATWOOD, SAMUEL - -	284	120, Cannon Street - - London.
CHEAVIN, GEORGE - -	224	Wide Bargate Filter Works, Boston. Lincolnshire.
CLARK, Captain E. P. - -	302	6, Edward Street - - - Bath.
CLARK, JOHN, JUN. AND Co. -	230	16, George Street, Mile End - Glasgow.
CLARK, LATIMER, STANDFIELD, AND Co.	596	6, Westminster Chambers, Victoria Street. London.
CLARKE AND DUNHAM, - -	674	69, Mark Lane - - - London.
CLAXTON, ROBERT - -	323	65, Myddelton Street, Clerkenwell. London.
CLAY, R. - - - -	269	58, Finborough Road, South Kensington. London.
CLAYTON, MARSDENS, HOLDEN, AND Co. (LIMITED).	244	Wellington Mills - - Halifax.
CLIFF, JOHN - - -	207	Runcorn - - near Liverpool.
CLIFF, J. - - - -	656	5, Dungeon Street - - Halifax.
CLOUGH, S. W. - - -	222	Stanningley - - near Leeds.
COATS, J. AND P. - - -	521	Ferguslie Thread Works - Paisley.
COCHRANE, ROBERT - -	342	Athlone - - - Ireland.
CODD, H. - - - -	660	50, Grove Lane, Camberwell - London.

Name.	Class.	Address.
COHNÉ, SIGISMUND - - -	201	13, Sise Lane - - - London.
COLLIER, LUKE - - -	582	Wellington Works, River Street Rochdale.
COLLINSON AND LOCK - -	217	109, Fleet Street - - London.
COLLMANN, LEONARD W. - -	217	67, George Street, Portman Square. London.
COLTHURST, SYMONS, AND CO. -	208	- - - - - Bridgwater.
CONSTABLE, W. H. - -	453	Stained Glass Works - near Cambridge.
COOKE, BROTHERS - -	254	65A and 66A, Constitution Hill Birmingham.
COOKE, J., AND CO. - -	502	82, Lawley Street, Belmont Passage. Birmingham.
COOPER AND CO. - -	202	5, Shoe Lane, Fleet Street - London.
COOPER AND HOLT - -	217	48, 49, and 50, Bunhill Row - London.
COOPER, GEO., AND CO. - -	430	Elm Tree House, Anlaby Road Hull.
COPELAND, GEORGE ALEXANDER	204	Camborne - - - Cornwall.
CORBETT, J., M.P. - - -	200	Stoke Prior Salt Works - Worcestershire.
CORCORAN, WITT, AND CO. -	674	28, Market Buildings, Mark Lane. London.
CORK DISTILLERIES COMPANY	662	Cork - - - - Ireland.
CORRY, W., AND CO. - -	660	Cromac Springs, Cromac Street Belfast.
CORTICENE FLOOR COVERING COMPANY.	234	115, Queen Victoria Street - London.
COX, BROTHERS - - -	233	Camperdown Works, Lochee - Dundee.
COX AND SONS - - -	217	28, 29, and 31, Southampton Street, Strand. London.
CRAIG AND ROSE - - -	202	Caledonian Oil and Colour Works. Edinburgh.
CRAVEN, DUNNILL, AND CO. (LIMITED).	208	Jackfield Works near Ironbridge Salop.
CRAWSHAY, ROBERT - -	430	Cyfarthfa Castle, Merthyr Tydfil, Glamorganshire. South Wales.
CROSSE AND BLACKWELL -	656	Soho Square - - - London.
CROSSLEY, J., AND SONS (LIMITED)	239	Deanclough Mills - - Halifax.
CROUCH, HENRY - - -	324	66, Barbican - - - London.
CROWN PERFUMERY COMPANY	203	40, Strand - - - London.
CRUICKSHANK, A. B. - -	594	5, Reform Street, Dundee - Scotland.
CULMER, W., AND SONS - -	286	Hornsey Road - - London.
CWMORTHIN SLATE COMPANY (LIMITED).	102	Port Madoc - - - North Wales.

D.

DAGGETT, CHRISTOPHER - -	251	Woodstock - - - Oxfordshire.
DALLAS, D. C. - - -	431	362, Gray's Inn Road, King's Cross. London.
DALLMEYER, J. H. - -	324	19, Bloomsbury Street - - London.
DANIELL, A. B., AND SON -	213	46, Wigmore Street - - London.
DASH, OSMOND - - -	251	10, King's Road - - Brighton.
DASHWOOD, C. W. - -	440	1, St. Clement's Church Yard, Strand. London.
DAVEY, PAXMAN, AND CO. -	550	Colchester - - - Essex.
DAVIDSON, T., JUN., AND CO. -	207	33, Garngad Hill - - Glasgow.
DAVIES, ROBERT S., AND SONS -	235	Stonehouse Mills - - Gloucestershire.
DAVIS AND WILSON - -	296	Sun Street West - - Birmingham.
DAY AND SON - - -	306	47, Charing Cross - - London.
DEAN, HENRY - - -	206	Southam - - - Rugby.
DEBENHAM AND FREEBODY -	250	27, 29, and 31, Wigmore Street- London.
DE MORINJ, CHARLES - -	453	170, Great Portland Street - London.
DEL RIEGO, M. - - -	328	284, Regent Street - - London.

Name.	Class.	Address.
DELF, Captain William - -	620	Great Bentley - - - Colchester.
DENNIS, T. H. P., and Co. -	566	Anchor Ironworks - - Chelmsford.
DENT, M. F. - - -	323	33, Cockspur Street, Charing Cross. London.
DESOTO ALKALI COMPANY (Limited).	200	Widnes - - - - Lancashire.
DEWHURST, John, and SONS -	230	Belle Vue Mills - - - Skipton.
DICKES, William - - -	306	Farringdon Road - - - London.
DICKSONS, FERGUSON, and Co.	233	Linen Hall Street - - Belfast.
DICKINSON and HIGHAM -	306	73, Farringdon Street - - London.
DICKSON, J. HILL and NEPHEW-	666	Rheea Rod Fibre Works - - Godalming.
DIXON, Frederick - -	101	20, Charterhouse Square - - London.
DOUGALL, J. D. - - -	269	59, St. James' Street - - London.
DOOLIN, W. - - -	400	23, Westland Row - - Dublin.
DOULTON, Henry, and Co. -	206	63, High Street, Lambeth - London.
DOULTON and Co. - -	207	48, High Street, Lambeth - London.
DOULTON and WATTS - -	206	Lambeth Pottery, Lambeth - London.
DOWSON (SUTHERLAND), and Co. (Limited) "Iron."	306	12, Fetter Lane - - - London.
DUDGEON, Arthur - -	101	22, Great George Street, Westminster. London.
DUNBAR, McMASTER, and Co. -	233	Gilford, County Down - - Ireland.
DUNN, Robert, and Co. - -	104	Oak Villa, St. Austell - - Cornwall.
DUNRAVEN, The Countess of -	252	Adare, co. Limerick - - Ireland.
DUNSTON ENGINE WORKS COMPANY.	505	Gateshead-on-Tyne - - Durham.

E.

EASTWOOD and COMPANY (Limited).	103	Wellington Wharf, Belvedere Road, Lambeth. London.
EDGE and SONS - - -	111	Coalport Works, Shipnal - Shropshire.
EDINBURGH WESTERN TANNING, CURRYING, AND JAPANNING COMPANY (Limited).	652	135, West Port - - - Edinburgh.
EDWARDS, G. - - -	227	149, Brompton Road - - London.
EDWARDS, John - - -	213	King Street, Fenton - - Staffordshire.
EDWARDS, J., and Son - -	213	Dalehall Pottery - - Burslem.
ELEY, BROTHERS (Limited) -	204	254, Gray's Inn Road - - London.
ELKINGTON and Co. - -	218	Newhall Street - - - Birmingham.
ELLIS, W. I. - - -	562	66, Murray Street, Higher Broughton. Manchester.
ELRICK, C. G. - - -	286	8, Aldermanbury Postern - London.
ENGERT, A. C., and Co. - -	219	75, City Road - - - London.
ENGERT and ROLFE - -	239	Barchester Street, Poplar New Town. London.
ENGLAND, William. - -	430	7, St. James' Square, Notting Hill London.
ENGLISH, John, and Co. - -	254	Feckenham - - - near Redditch.
ETZENSBERGER, R. U. - -	244	Midland Hotel, St. Pancras - London.
EVANS, David - - -	254	Studley - - - - Redditch.
EVANS and STAFFORD - -	651	Campbell Street - - - Leicester.
EVANS, LESCHER, and EVANS -	200	60, Bartholomew Close - - London.
EWART, W., and Son - -	233	- - - - - Belfast.

Name.	Class.	Address.
F.		
FAIRBAIRN, KENNEDY, AND NAYLOR.	524	- - - - - Leeds.
FARMER AND ROGERS - -	237	171, 173, and 175, Regent Street - London.
FEETHAM, M., AND Co. - -	222	9, Clifford Street - - London.
FENTON, CONNOR, AND Co. -	233	Linen Hall - - - Belfast.
FENTON, J. - - - -	254	74, Great Hampton Street - Birmingham.
FERGUSON, BROTHERS - -	232	Holme Head Works - near Carlisle.
FESTA, G. P. - - -	251	13, Charles Street, Grosvenor Square. London.
FETHERSTON, J. J. - -	312	2, Coppinger's Row - - - Dublin.
FIELD, J. C. AND J. - -	201	Lambeth Marsh - - - London.
FIRMIN AND SONS - - -	254	153, Strand - - - London.
FISH, J. AND G. - - -	520	12, Grayston Street, Fiswick - Preston.
FISON, J. P. - - -	673	Feversham Works - - Cambridge.
FLEMING, T., AND SON - -	521	West Grove Mill - - - Halifax.
FLETCHER, ROBERT, AND SONS -	259	Paper Works, Stoneclough near Manchester.
FOGERTY. WILLIAM - -	441	23, Harcourt Street - - Dublin.
FORD WORKS COMPANY (LIMITED).	260	Ford, near Sunderland - - Durham.
FRADELLE AND MARSHALL -	430	230 & 246, Regent Street - - London.
FRANCIS AND Co. - - -	103	Bridge Foot, Vauxhall - - London.
FRANCIS, THOMAS, AND Co. -	284	Liverpool Street - - - Birmingham.
FRANCATI AND SANTAMARIA -	253	65, Hatton Garden - - London.
FRENCH AND Co. - - -	247	St. Mary's Mills - - - Norwich.
FRIDLANDER, A. A. - -	253	26, Hylton Street - - Birmingham.
FRODSHAM, C., AND Co. - -	323	84, Strand - - - London.
FRY, J. S., AND SONS - -	650	252, City Road - - - London.
FUSSELL, JAMES, SONS, AND Co.	672	Frome - - - Somerset.
G.		
GADD, THOMAS - - -	521	Salford - - - - Manchester.
GALLOWAY, W. AND J., AND SONS	550	Knott Mill Iron Works - - Manchester.
GARDNER, J., AND SONS - -	223	453, Strand - - - London.
GARDNER, PETER - - -	213	Dunmore Pottery - - Stirling, N.B.
GASKELL, DEACON, AND Co. -	200	Widnes - - - - Lancashire.
GEOLOGICAL SURVEY OF UNITED KINGDOM.	311	28, Jermyn Street, A. C. Ramsay, LL.D., F.R.S. Director-General. London.
GERRARD, A. W. - - -	200	153, Liverpool Road - - London.
GEYELIN AND Co. - - -	656	Belgrave House, Argyle Square - London.
GIBBS, G. - - - -	269	29, Corn Street - - - Bristol.
GIBBS AND MOORE - - -	453	89, Southampton Row - - London.
GIBSON, WILLIAM - - -	253	Castle Place - - - Belfast.
GILL, JAMES - - - -	218	66, Regent Street, Lambeth - London.
GIMSON AND COLTMAN - -	522	Duke Street - - - Leicester.
GISSING, A. S., AND SONS -	661	Castle Street, Eye - - Suffolk.
GLASGOW APOTHECARIES CO.	276	34, Virginia Street - - Glasgow.
GODBOLD, H. J. - - -	430	8, Grand Parade - - St. Leonards-on-Sea.
GOGGIN, JEREMIAH - -	253	74, Grafton Street - - Dublin.
GOODALL, BACKHOUSE, AND CO.	656	Boar Lane - - - Leeds.
GOODALL, C., AND SON - -	306	24, Great College Street, Camden Town. London.
GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND.	111	Cwm Avon Works, Taibach - Glamorganshire.
GRANT, THOMAS - - -	660	Distillery, Maidstone - - Kent

Name.	Class.	Address.
"GRAPHIC," THE PROPRIETORS OF THE.	306	190, Strand - - - London.
GRAYS CHALK QUARRIES Co. (LIMITED).	103	90, Lower Thames Street - London.
GREAT NORTH OF SCOTLAND GRANITE COMPANY (LIMITED).	102	- - - - - Peterhead, N.B.
GREAT WESTERN IRON Co. (LIMITED).		- - - - - Soudley Newnham.
GREENBANK ALKALI CO. -	200	St. Helens - - - Lancashire.
GREEN, E., AND SON - -	550	Economiser Works - - Wakefield.
GREEN, E. C. - - -	269	High Street - - - Cheltenham.
GREEN, J., AND NEPHEW -	216	107, Queen Victoria Street - London.
GREEN, JOHN - - -	652	12, Graham Terrace, Ridley Road, Kingsland. London.
GREENER, W. W. - - -	269	St. Mary's Works - - Birmingham.
GREENING, N., AND SONS -	228	- - - - - Warrington.
GREENMOUNT SPINNING COMPANY.	233	Greenmount Factory, Harold's Cross. Dublin.
GREENWAY, H. - - -	346	Ham Street - - - Plymouth.
GREENWOOD AND BATLEY -	515	Albion Works - - - Leeds.
GREGORY, JAMES - - -	222	South Park - - - Lincoln.
GREGORY AND Co. - -	239	212 and 214, Regent Street - London.
GÜMPEL, C. G. - -	597	49, Leicester Square - - London.
GWYNNE AND Co. - - -	560	Essex Street Works, Strand - London.
GWYNNE, J. AND H. - -	560	Hammersmith - - London.
H.		
HAIGH, EDWARD M. - -	430	203, Regent Street - London.
HALL, H. E. - - -	441	44, Kingsland Park - - Dublin.
HALL, THOMAS - - -	234	8, George Street - - Edinburgh.
HAMBLET, JOSEPH - -	206	Piercy Works, West Bromwich Staffordshire.
HANDYSIDES STEEP GRADIENT CO.	570	9, Victoria Chambers, Victoria Street. London.
HANSON, WILLIAM - - -	430	Great George Street - - Leeds.
HARDMAN, JOHN, AND Co. -	453	Newhall Hill - - - Birmingham.
HARDY PATENT PICK COMPANY.	502	Mining Tool Works, Ecclesall Road. Sheffield.
HARGREAVE AND NUSSEYS -	235	Farnley Low Mills - - Leeds.
HARPER AND MOORES - -	206	- - - - - Stourbridge.
HARRINGTON, J., AND Co. -	255	Union Works, Ryde - - Isle of Wight.
HARRISON, GEORGE KING -	104	The Lye and Brettell Works - Stourbridge.
HART, SON, PEARD, AND Co. -	217	Wych Street, Strand - - London.
HATTON, SONS, AND Co., late THOMPSON, HATTON AND Co.	111	Broadwater Tin Plate Works - Kidderminster.
HAWKINS BRS., LATE HALE, J., AND Co.	296	Hatherton Works - - Walsall.
HAWKINS, J., AND SONS - -	232	8, Faulkner Street - - Manchester.
HAWKSWORTH (WILSON), ELLISON, AND Co.	284	Carlisle Works - - - Sheffield.
HAYES, CROSSLEY, AND Co. -	254	153, Cheapside - - London.
HAYNES, T., AND SONS - -	560	229, Edgware Road - - London.
HAYWOOD, J. S. - -	276	Castle Gate - - - Nottingham.
HEAP, J., AND Co. (LIMITED) -	515	Lee Street - - - Oldham
HEAPS AND WHEATLEY- -	222	Brotherton, Normanton - Yorkshire.
HEAPS, J. K. - - -	327	Folly Hall, Holbeck - - Leeds.
HEATH, VERNON - - -	430	43, Piccadilly - - - London.
HEATH, WILLIAM - - -	254	Neveux Works, Crabb's Cross Redditch.
HEATON, BUTLER, AND BAYNE	453	14, Garrick Street - - London.
HEDGES, DAVID - - -	430	7, Queen Street, Lytham - Lancashire.

Name.	Class.	Address.
HEMS, HARRY - - -	217	69, Paris Street - - Exeter.
HENDERSON, A. L. - -	430	49, King William Street, and Amersham Road, New Cross. London.
HENDERSON AND Co. - -	239	- - - - - Durham.
HENRY, ALEXANDER - -	269	12, South Saint Andrew Street Edinburgh.
HEPWORTH, B., AND SON -	235	New Wakefield Mills - - Dewsbury.
HETLEY, J., AND SON - -	214	35, Soho Square - - London.
HEWITT, WILLIAM - -	554	Prospect Villa, Sydenham Hill Bristol.
HEYMANN AND ALEXANDER -	252	Stoney Street - - - Nottingham.
HICKS, J. J. - - -	320	8, Hatton Garden - - London.
HIERONIMUS, W. - - -	219	53, City Road - - London.
HIGGIN, T., AND Co. - -	200	33, Tower Buildings West - Liverpool.
HILDITCH, G. AND J. B. - -	245	11 and 12, Cheapside - - London.
HILL AND CLARK - -	594	6, Westminster Chambers, Victoria Street. London.
HINKS, WELLS, AND Co. - -	258	Buckingham Street Works - Birmingham.
HITCHCOCK, WILLIAMS, AND Co.	250	St. Paul's Churchyard - - London.
HOARE, JOHN - - -	641	39, Bloomsbury Street - London.
HODGES, T. W., AND SONS -	249	- - - - - Leicester.
HOE, RICHARD, AND SONS -	255	44, Leadenhall Street - - London.
HOLDSWORTH, E. W. H. - -	306	12, Clifton Road, St. John's Wood. London.
HOLLAND, WILLIAM THOMAS -	206	Llanelly - - - North Wales.
HOLLICK AND Co. - -	103	- - - - - Greenwich.
HOLMES, PEYTON, & TAYLOR	500	43, Borough Road, Southwark London.
HOOKER, J. - - -	651	104, Upper Thames Street - London.
HOOPER AND Co. - - -	292	113, Victoria Street - - London.
HOOPER, C., AND Co. - -	235	Eastington Mills, Stonehouse - Gloucestershire.
HOOPER, CLEEVE, JUN. - -	652	6, 7, and 8, New Weston Street, Bermondsey. London.
HOOPER, CLEEVE W., AND SONS -	652	51, Weston Street, Bermondsey London.
HOPE AND CARTER - -	213	Burslem - - - Staffordshire.
HOUGHTON, W. D. - -	111	Friars Green Mill - - Warrington.
HOWARD AND BULLOUGH -	521	Globe Works - - - Accrington.
HOWARD AND SONS - -	217	25, Berners Street, Oxford Street. London.
HUDSON, FREDERICK - -	430	1, Regent Parade, Ventnor - Isle of Wight.
HUDSON, SAMUEL - - -	296	65, Dawson Street - - Dublin.
HUMBERT, H. - - -	251	30, Barbican - - - London.
HUNTER, JAMES - - -	102	209, King Street - - Aberdeen, N.B.
HUNTER J., AND SON - -	657	Woodhall Mills, Juniper Green Edinburgh.
HURD, FREDERICK, AND Co. -	502	Wood Street - - - Wakefield.
HUTCHINSON, J., AND Co. -	200	Widnes - - - Lancashire.
I.		
ILLUSTRATED LONDON NEWS	306	198, Strand - - - London.
IND, COOPE, AND Co. - -	660	Burton-on-Trent - - Staffordshire.
INDIA RUBBER, GUTTA PERCHA, AND TELEGRAPH WORKS COMPANY (LIMITED)	326	100, Cannon Street - - London.
INGHAM, J., AND SON - -	530	Croft Head Works, Thornton. near Bradford.
INMAN BROTHERS - -	660	Aspley Place - - - Huddersfield.
INMAN STEAMSHIP COMPANY (LIMITED).	595	22, Water Street - - Liverpool.

Name.	Class.	Address.
J.		
JAAP, J.	203	268, Buchanan Street - Glasgow.
JACOBY, M., AND Co.	252	Broadway - Nottingham.
JEFFERY, JOHN	253	14, Tottenham Court Road - London.
JEFFREY AND Co.	264	64, Essex Road, Islington - London.
JEFFREYS, CHARLES	217	103, Hatton Garden - London.
JENKINSON, A.	216	10, Princes Street - Edinburgh.
JENNINGS, GEORGE	206	Palace Wharf, Stangate - London.
JENNINGS, PAYNE	430	1, Belgrave Place, Belgrave Square, Rathmines. Dublin.
JENNINGS, THOMAS	200	Brookfield Chemical Works - Cork.
JESSOP, W., AND SONS	111	Park and Brightside Works - Sheffield.
JOHNSON AND Co.	660	- - - Canterbury.
JOHNSON AND Co.	206	Ditchling Potteries - Sussex.
JOHNSON BROTHERS	202	High Street - Hull.
JOHNSON, EDMUND	306	3, Castle Street, Holborn - London.
JOHNSON, J., AND Co.	254	Charterhouse Works, Sycamore Street. London.
JOHNSON, J. M., AND SONS (LIMITED).	306	3, Castle Street, Holborn - London.
JOHNSON, JABEZ, AND FILDES	230	44, Spring Gardens - Manchester.
JOHNSON, MATTHEY, AND Co.	110	78, Hatton Garden - London.
JOHNSTON STILL COMPANY (LIMITED).	660	Rye Vale Distillery, Leixlip, near Dublin.
JOHNSTON, W. AND A. K.	300	4, St. Andrew Square - Edinburgh.
JONES, PALMER, AND Co.	656	Eastern Works, Tabernacle Walk, Finsbury. London.
JONES, PRYCE	236	Newtown - Montgomeryshire.
K.		
KAY AND HILTON	674	Bankhall Bridge - Liverpool.
KEEN, ROBINSON, BELLVILLE, AND Co.	657	6, Garlick Hill, Cannon Street London.
KENT, GEORGE	224	200, High Holborn - London.
KENT, G. B., AND Co.	286	11, Great Marlborough Street - London.
KERR, EDWARD	219	7, Merville Terrace, Gilford Place, North Strand. Dublin.
KILNER BROTHERS	215	Great Northern Goods Station, King's Cross. London.
KIMBALL AND MORTON	531	80, Bishop Street, Anderston - Glasgow.
KIMBERLEY, N. G.	505	11, Great St. Helen's - London.
KIMPTON, THOMAS	226	2 and 3, Barnard's Inn, Holborn London.
KING BROTHERS	206	- - - - Stourbridge.
KING, WILLIAM	235	Gillroyd and Albert Mills, Morley. Leeds.
KINGSBURY, THOMAS	282	9, New Bond Street - London.
KINMOND AND Co.	200	Kenilworth Street - Leamington.
KIRBY, BEARD, AND Co.	254	18, Cannon Street - London.
KNIGHT, MISS MARY	217	1, Anderson Street, Chelsea - London.
KULLBERG, VICTOR	323	105, Liverpool Road, Islington London.

Name.	Class.	Address.
L.		
LACEY, R. G.	205	Coast Guard Station, Leigh - Essex.
LA FARGUE, Paul	217	27, South Hill Park, Hampstead London.
LAING'S PATENT OVERHEAD HAND STITCH SEWING MACHINE CO.	531	4, Bain Square - - - Dundee.
LAIRD, William, and Co.	233	Canmore Linen Works - Forfar, N.B.
LANCASTER, Alfred	269	27, South Audley Street - London.
LANCASTER, C. W.	269	151, New Bond Street - - London.
LANG, J. and J.	276	13, Charterhouse Buildings, Aldersgate Street. London.
LANG, J., and SONS	269	22, Cockspur Street, Pall Mall London.
LAPWORTH BROTHERS	239	22, Old Bond Street - - London.
LAVERS, A. H.	103	Nine Elms - - - London.
LAWRENCE and Co.	565	22, St. Mary Axe - - London.
LAWSON, S., and SONS	254	Hope Foundry - - - Leeds.
LEA & PERRINS	656	- - - - - Worcester.
LEDGER, H., and Co.	656	61 and 63, Lant Street, Borough London.
LEE and Co.	430	9, Crockherbtown - - Cardiff.
LEE, Dr. R. J.	274	4, Savile Row - - - London.
LEIGHTON, John	440	12, Ormonde Terrace, Regent's Park. London.
LEMERE, Bedford	430	147, Strand - - - London.
LEWIS, John	239	India Buildings - - Halifax.
LEWIS, J.	340	177, Canongate - - Edinburgh.
LILLY, J., and Co.	540	172, St. John's Street, Clerkenwell. London.
LINCOLN, BENNETT, and Co.	251	40, Piccadilly - - - London.
LINDLEY, R. C.	102	Mansfield - - - Nottingham.
LINDSAY and ANDERSON	206	Lilliehill Works - - Dunfermline, N.B.
LITTLE, T. W., and Co.	235	Monk Bridge Mills - - Leeds.
LIVER ALKALI WORKS CO.	200	Lightbody Street - - Liverpool.
LIVERPOOL SPUN OAKUM	229	9, North John Street - - Liverpool.
LLOYD, T., and SONS	674	327, Old Street, Shoreditch - London.
LOBB, John	251	296, Regent Street - - London.
LOCKWOOD, CROSBY, and Co.	306	7, Stationers' Hall Court, Ludgate Hill London.
LOGAN, J M.	594	Chesterton Road - - Cambridge.
LONDON STEREOSCOPIC AND PHOTOGRAPHIC CO.	430	108, Regent Street - - London.
LOTH, Dr. John Thomas	306	18, Gilmore Place - - Edinburgh.
LOVEY, Edward	683	Ponsnooth, Perran-ar-worthal - Cornwall.
LOW, SON, and HAYDON	203	148 and 330, Strand - - London.
LYNCH and Co.	276	171A, Aldersgate Street - London.
LYON, Washington	321	1, Cowper's Court, Cornhill - London.
LYONS, William	202	Park Street - - - Manchester.
M.		
MACDERMOTT, M.	502	Scott's Chambers, 25 and 26, Pudding Lane. London.
MACDONALD, A., FIELD, and Co.	102	Aberdeen Granite Works - Aberdeen, N.B.
MACINTOSH, James	219	38, Langham Street - - London.
MACKAY, John	203	119, George Street - - Edinburgh.
MACKENZIE, D. (care of W. Smith)	527	19, Salisbury Street, Strand - London.

Name.	Class.	Address.	
MAHONY, M., AND BROTHERS	235	3, Camden Quay	Cork.
MANSELL, W. A., AND Co.	430	2, Percy Street	London.
MARLING AND Co.	235	Ebley and Stanley Mills	Stroud.
MARRISON, R. D.	269	Great Orford Street	Norwich.
MARRIOTT, MRS. ELIZABETH	513	15, Oldfield Road, Stoke Newington.	London.
MARSHALL AND Co.	233	- - - - -	Leeds.
MARSHALL, T. J., AND Co.	525	Campbell Works, Gillet Street, Kingsland.	London.
MARTIN, CLAUDE	596	73 and 74, King William Street	London.
MARTIN, ROBERT	296	The Village, Old Charlton	Kent.
MARTIN, WILLIAM HENRY	254	64 and 65, Burlington Arcade, Piccadilly.	London.
MASSEY, B. AND S.	514	Openshaw	Manchester.
MATIER, H., AND Co.	233	Clarence Place	Belfast.
MATTHEWS, ED., AND SON	217	377, Oxford Street	London.
MATTHEWS, JAMES	251	43, Gibson Street, Waterloo Road	London.
MATTHEWS, JOHN	206	Royal Pottery	Weston-super-Mare.
MAW AND Co.	208	Benthall Works, Broseley	Salop.
MAW, T.	656	Windsor Place, Burmantofts	Leeds.
MAYER AND MELTZER	276	71, Great Portland Street	London.
McBRIDE, ROBERT, AND Co.	230	4, Bedford Street	Belfast.
McCANN, JOHN	657	Beamond Mills, Drogheda	Ireland.
McGEE, J. G., AND Co.	250	30, 32, 34, High Street	Belfast.
McGRATH, JOHN	453	6A, White Lion Street, Chelsea	London.
McLINTOCK, JAMES, AND SONS	250	Barnsley	Yorkshire.
McNAUGHT AND SMITH	292	- - - - -	Worcester.
McTEAR AND Co.	289	Corporation Street	Belfast.
MELLIN, GUSTAV	656	16, Tichborne Street, Regent Street.	London.
MENIER, E.	650	Southwark Street, Borough	London.
MERCER, THOMAS	323	161, Goswell Road	London.
MIDDLETON, THOMAS JOHN	324	38, Little Queen Street, High Holborn.	London.
MILL HILL WOOL AND RAG EXTRACTING COMPANY (LIMITED).	667	Mill Hill Works	Huddersfield.
MILLAR, JOHN, AND Co.	216	2, South Saint Andrew Street	Edinburgh.
MILNER, WILLIAM, AND SONS	243	Union Street, Leek	Staffordshire.
MILWARD, H., AND SONS	254	- - - - -	Redditch.
MINTON, HOLLINS, AND Co.	208	- - - - -	Stoke-on-Trent.
MINTONS	213	- - - - -	Stoke-upon-Trent.
MIRRLEES, TAIT, AND WATSON	581	Scotland Street Ironworks	Glasgow.
MONCRIEFF, J.	555	North British Glass Works	Perth, N.B.
MONCKTON, E. H. C.	551	Care of Coutt's & Co., Strand	London.
MOREWOOD, E., AND Co.	111	Coleridge House	Swansea.
MORGAN, GEORGE	402	144, Finborough Road, West Brompton.	London.
MORLEY, J. AND R.	250	18, Wood Street, Cheapside	London.
MORSON, T., AND SON	200	31, 33, and 124, Southampton Row, Russell Square.	London.
MORTON, GEORGE	328	31, Hanover Street, Islington	London.
MORTON, W., SCOTT, AND Co.	217	Art Furniture Works	Edinburgh.
MOTT AND Co.	660	18, Galltree Gate	Leicester.
MOY, THOMAS	552	37, Farringdon Street	London.
MUIR, JAMES, AND SON	660	Calton Hill Brewery	Edinburgh.
MULLINER, H., AND Co.	292	- - - -	Leamington Spa.
MUNROE, WILLIAM	683	High Street, Wick	Caithness, N.B.
MURRAY, ANDREW	306	67, Bedford Gardens, Kensington	London.
MUSPRATT, J., AND SONS	200	5, Chapel Street	Liverpool.
MUSPRATT BROS. AND HUNTLEY	200	5, Chapel Street	Liverpool.

Name.	Class.	Address.
N.		
NAIRN, M., AND Co. - -	234	- - - - Kirkcaldy, N.B.
NASH, H., AND Co. - -	111	Tower Buildings, North, Water Street. Liverpool.
NEAL, JOHN - - -	253	44, 46, 48, Edgeware Road - London.
NEAL, JOHN, AND Co. - -	282	22, 23, 24, Hampden Gurney Street, Portman Square. London.
NEEDHAM, JOHN - - -	282	69, Arundel Street - - Sheffield.
NEEDHAM, J. AND G. H. - -	269	53, Piccadilly - - - London.
NEEDHAM AND KITE - -	565	Phœnix Iron Works, Vauxhall - London.
NEGRETTI AND ZAMBRA -	320	Holborn Viaduct, 45, Cornhill, and 123, Regent Street. London.
NEIGHBOUR, G., AND SONS -	683	149, Regent Street - - London.
NEILSON, STORER, AND SONS -	230	Thorn Mills, Johnstone - near Paisley, N.B.
NEWCASTLE CHEMICAL WORKS COMPANY (LIMITED).	200	- - - - - Newcastle-on-Tyne.
NICHOLL, S. J. - - -	441	1, Caversham Road, Kentish Town. London.
NICHOLSON, H. - - -	340	Kilner Deyne Terrace, The Park. Rochdale.
NICOLE, NEILSON, AND Co., late NICOLE AND CAPT.	323	14, Soho Square - - London.
NICOLL, DONALD - - -	656	15, Clement's Inn - - London.
NORMAN, CARL - - -	430	Graphic Villa - - - Tunbridge Wells.
NORMAND, JAMES, AND SONS -	233	Dysart - - - - Fifeshire, N.B.
NORRIS AND Co. - - -	246	124, Wood Street - - London.
NORTON AND SHAW - -	306	Garrick Street - - - London.
NUSSEY AND LEACHMAN -	515	- - - - - Leeds.
O.		
OAKEY, JOHN, AND SONS - -	106	Wellington Mills, Westminster Bridge Road. London.
ORDNANCE SURVEY OFFICE, MAJOR-GENERAL CAMERON, R.E., C.B., Director-General.	311	- - - - - Southampton.
ORTNER AND HOULE - -	258	3, St. James's Street - - London.
P.		
PALMER SAMUEL - - -	306	Park House, Grove Street, South Hackney. London.
PARKINSON BROTHERS -	200	43, Hammerton Street, Burnley Lancashire.
PARTRIDGE AND Co. - -	223	89, Lombard Street - - Birmingham.
PATCHITT, E. C. - - -	656	Ilkeston Road - - Nottingham.
PATENT NUT AND BOLT COMPANY.	284	London Works - near Birmingham.
PATENT PLUMBAGO CRUCIBLE COMPANY	207	Battersea Works - - London.
PATENT SELENITIC CEMENT COMPANY (LIMITED).	103	21½, Millbank Street, Westminster. London.

Name.	Class.	Address.	
PATRICK, H. W., AND SON -	278	22, St. Luke Street, Stockbrook Street.	Derby.
PAUL, W. - - - -	306	Waltham Cross - -	Essex.
PEAKE, THOMAS - - -	206	The Tileries, Tunstall - -	Staffordshire.
PEARS, A. AND F. - - -	201	91, Great Russell Street -	London.
PEARSON, T., AND SON - -	230	54, Church Street - -	Manchester.
PENDOCK BROTHERS - -	660	Queen Street Wharf - -	Bristol.
PENROSE AND RICHARDS -	101	Swansea - - -	South Wales.
PEN - YR - ORSEDD SLATE QUARRY COMPANY (LIMITED).	102	Carnarvon - - -	North Wales.
PERKS, SAMUEL - - -	203	High Street, Hitchin - -	Herts.
PERKINS, A. M., AND SON -	222	Seaford Street, Regent's Square, Gray's Inn Road.	London.
PETERS, THOMAS, AND SONS -	292	53, Park Street, Grosvenor Square.	London.
PEYTON AND PEYTON - -	217	Bordesley Works - -	Birmingham.
PHIPSON, MISS EMMA - -	217	Monk Sherborne, Basingstoke -	Hants.
PHOSPHOR BRONZE CO. (LIMITED.)	114	139, Cannon Street - -	London.
PICKERING, J. - - -	503	Globe Works - - -	Stockton-on-Tees.
PIGOU, WILKS, AND LAWRENCE, LIMITED.	204	11, Queen Victoria Street -	London.
PIKE, WILLIAM JOSEPH - -	104	Wareham - - -	Dorsetshire.
PIM BROTHERS AND COMPANY	238	22, William Street - -	Dublin.
PIRIE, A., AND SONS - -	259	Stoneywood Works - -	Aberdeen.
PLATT, BROTHERS, AND COMPANY (LIMITED).	521	Hartford Works - -	Oldham.
PLUNKETT, J., AND CO. - -	657	PortlandWorks, Portland Street West.	Dublin.
POLLOCK, SYDNEY - - -	296	72, Lancaster Road - -	Notting Hill.
POOLE, JAMES, AND CO. - -	323	33, Spencer Street, Clerkenwell	London.
POTTS, ROBERT, M.A. - -	306	Trinity College - -	Cambridge.
POWELL AND BISHOP - -	213	Hanley - - -	Staffordshire.
POWELL AND SONS - - -	453	Glass Works, Whitefriars -	London.
POWELL, T. - - -	657	81, High Street, St. Marylebone	London.
PRATT, J. - - - -	656	227, Oxford Street - -	London.
PRICE AND CO. - - -	306	36, Great Russell Street -	London.
PRICE, J. AND C., AND BROTHERS	210	69, Victoria Street - -	Bristol.
PRICE'S PATENT CANDLE COMPANY (LIMITED).	201	Belmont Works, Battersea -	London.
PUCKRIDGE, FREDERICK, AND NEPHEW.	652	530, 534, Kingsland Road -	London.
PULLINGER, COLIN - -	224	Selsey, near Chichester -	Sussex.
PULLMAN, ROBERT AND JOHN -	652	17, Greek Street, Soho -	London.
PULVERMACHER, I. L. - -	274	194, Regent Street - -	London.
PURDEY, JAMES - - -	269	314½, Oxford Street - -	London.
Q.			
QUICK, W. M. R. - - -	422	49, Fleet Street - -	London.
R.			
RAMSEY, WILLIAM - - -	453	83 and 84, Farringdon Street -	London.
RANSOMES, SIMS, AND HEAD -	552	Orwell Works - - -	Ipswich.
RAVENSTEIN, E. G. - -	300	10, Lorn Road, Brixton -	London.

Name.	Class.	Address.
RAWLINS AND SON - -	202	Brook Works, Rainhill - Prescot.
REILLY, E. M., AND Co. - -	269	502, New Oxford Street - London.
REIN, F. C., MRS. - - -	276	108, Strand - - - London.
REIN, F. C., AND SON - -	276	108, Strand - - - London.
REYNOLDS, J. G. - - -	207	9, Old Ford Road - - London.
RICHARDS, KEARNE, AND GASQUOINE.	200	Sandbach - - - Cheshire.
RICHARDSON, J. N., SONS, AND OWDEN.	233	1, Donegall Square, North - Belfast.
RICHARDSON, EARP, AND SLATER	660	Trent and Northgate Brewery - Newark-upon-Trent.
RICKARDS, CHARLES A. - -	243	Bell Busk Mills - near Leeds.
RIGBY, JOHN, AND Co. - -	269	72, St. James' Street - - London.
RIMMEL, EUGÈNE - - -	203	96, Strand - - - London.
ROBERTS, JOHN - - -	292	10, Cavendish Street, Stretford Road. Manchester.
ROBERTS, JOHN, AND SONS -	292	West of England Carriage Works. Bridgewater.
ROBERTS, WILLIAM - -	510	139, Derby Road, Bootle near Liverpool.
ROBINSON, H. P., AND CHERILL, N. K.	430	The New Public Buildings - Tunbridge Wells.
ROBINSON, VINCENT, AND Co. -	289	38, Welbeck Street, Cavendish Square. London.
ROBY, GEORGE - - -	596	31, King Street - - Wigan.
ROE, WILLIAM ALLEN - -	251	81, Humberstone Gate - Leicester.
ROLA, VINCENT - - -	300	22, Leinster Square, Bayswater London.
ROSS, W. A. - - -	565	Cromac Buildings - - Belfast.
ROSS AND Co. - - -	324	7, Wigmore Street, Cavendish Square. London.
ROUTLEDGE, THOMAS - -	259	The Ford Works Co. - - Durham.
ROWNEY, G., AND Co. - -	202	52, Rathbone Place - - London.
RUNCORN SOAP AND ALKALI COMPANY (LIMITED).	200	6, Water Street - - Liverpool.
RUNDELL, J. B. - - -	300	Science and Art Department, South Kensington Museum. London.
RYDER, WILLIAM HENRY -	270	48, Ellis Street - - Birmingham.

S.

SAGE, FREDERICK - - -	217	80 to 84, Gray's Inn Road - London.
SAINTY, J. AND B. - - -	673	Alpha Machine Works - Wisbeach.
SALTER, SAMUEL, AND Co. -	235	Home Mills, Trowbridge - Wilts.
SANDEMAN, F. S. - - -	233	Manhattan Works - - Dundee, N.B.
SANDERSON AND PROCTER -	564	Shore Works - - - Huddersfield.
SANDS BROTHERS AND Co. -	652	Salford Chemical Works - Manchester.
SANGSTER AND Co. - -	254	140, Regent Street - - London.
SANSON, R. B. - - -	531	87, Globe Road, Mile End Road London.
SAXBY AND FARMER - -	575	Canterbury Road, Kilburn - London.
SCHILDBERG, H., AND Co. -	217	26, Moorgate Street - - London.
SCHNEIDER, E. A. - -	656	4, Cambria Villa, Chesterton Road. Cambridge.
SCHOOL OF ART NEEDLEWORK, ROYAL.	217	31, Sloane Street - - London.
SCHRIEBER, F. A. - -	250	17, Thavies Inn - - London.
SCHWABE, SALIS, AND Co.- -	232	41, George Street - - Manchester.
SCIENCE AND ART DEPARTMENT, P. CUNLIFFE OWEN, C.B., Director.	312	South Kensington Museum - London.
SCOTT, R. J. - - -	302	8, Whitefriars Street, Fleet Street. London.

Name.	Class.	Address.
SCOTT, W. AND C., AND SON -	269	Premier Gun Works, Lancaster Street. Birmingham.
SEATON, WILLIAM - - -	574	19, Salisbury Street, Strand - London.
SEWILL, J. - - - -	323	20, Cornhill, Royal Exchange - London.
SHAW, WILLIAM - - -	540	3, Sheldon Street, Bayswater - London.
SHEARER, HUGH - - -	516	21, Great George Street - London.
SHEARER, SMITH, AND Co. -	102	21, Great George Street - London.
SHELDON AND FENTON - -	245	12, King Street, Cheapside - London.
SHOOLBRED AND Co. - -	217	Tottenham Court Road - London.
SIEBE AND GORMAN - -	594	17, Mason Street, Westminster Bridge Road. London.
SIEMENS BROTHERS - -	326	12, Queen Anne's Gate - London.
SIEMENS, C. WILLIAM - -	111	12, Queen Anne's Gate - London.
SILICATE PAINT COMPANY, The	202	24, Fenwick Street - - Liverpool.
SIMON, MAY, AND Co. - -	249	Week-day Cross - - Nottingham.
SIMPSON AND KING - -	232	7, York Street - - - Manchester.
SINGER, J. W., AND SON -	217	Frome - - - - Somerset.
SKELTON AND Co. - -	223	37, Essex Street, Strand - London.
SLINGSBY, R. - - -	430	168, High Street - - Lincoln.
SLOPER, J. - - - -	258	6, King William Street, City - London.
SMARTT, W. - - -	224	Queen's Road, Buckhurst Hill London.
SMITH, BORTHWICK - - -	323	Junction Street - - Coventry.
SMITH, DAVID - - -	306	Liddal - - - - Halifax.
SMITH, DAVID, AND Co. (LIMITED)	667	Kensington Works - - Halifax.
SMITH, DILLWYN - - -	506	153, Duke Street - - Liverpool.
SMITH, F., AND Co. - - -	111	Caledonia Works - - Halifax.
SMITH, GEORGE - - -	327	57, Victoria Park Road, South Hackney. London.
SMITH, GEORGE JOHN - -	252	The Terrace, Church Road, Upper Norwood. London.
SMITH, J. AND S. - - -	522	Low Bridge Works - - Keighley.
SMITH, JAMES, AND SON - -	254	Astwood Bank - near Redditch.
SMITH, JOHN WRIGHT - -	254	121, Belgrave Gate - - Leicester.
SMITH AND STARLEY - -	531	Trafalgar Works - - Coventry.
SMITH, T. AND H., AND Co. -	656	21, Duke Street - - Edinburgh.
SMITH, WILLIAM, AND SONS -	682	Barnard Castle - - Durham.
SMYTH AND Co. - - -	250	36 and 37, Lower Abbey Street Dublin.
SOPER, WILLIAM - - -	265	23, Friar Street - - Reading.
SPENCE, PETER - - -	200	Oldham Road - - - Manchester.
SPILL, DANIEL - - -	289	124, High Street, Homerton - London.
STANLEY BROTHERS - -	208	Midland Tile Works, Nuneaton Warwickshire.
STAR PLATE AND UNIVERSAL POLISHING POWDER COMPANY.	201	6, Gracechurch Street - - London.
STEEL AND GARLAND - -	222	Wharncliffe Works - - Sheffield.
STEPHENS, H. C. - - -	202	171, Aldersgate Street - - London.
STEPHENSON, BLAKE, AND Co. -	306	199, Allen Street - - Sheffield.
STEVENS, THOMAS - - -	246	20, Warwick Lane - - London.
STEVENS, T. - - -	657	46, Hope Street, Wrexham - N. Wales.
STEWART, MOIR, AND MUIR -	249	73, Mitchell Street - - Glasgow, N.B.
STIFF, J., AND SONS - -	210	High Street, Lambeth - - London.
STOCKMAN, B. P. - - -	534	3, Poets' Corner, Westminster Abbey.
STORER, DAVID, AND SONS -	202	Sydney Street - - - Glasgow, N.B.
STORER, JOSEPH - - -	218	Stamford Brock - - Hammersmith.
STURGE'S MONTSERRAT COMPANY (LIMITED).	203	Broad Street - - - Birmingham.
SUGG, W. - - - -	509	Vincent Works, Vincent Street Westminster.
SUNDAY SCHOOL UNION -	300	56, Old Bailey - - - London.
SUTCLIFFE, JAMES S. - -	580	Bacup - - - - Lancashire.

Name.	Class.	Address.
SWAINE AND ADENEY - -	254	185, Piccadilly - - - London.
SWAINSON, BIRLEY, AND Co. -	230	42, Cheapside - - - London.
SWANSEA TIN PLATE Co. -	111	Tin Plate Works - - Swansea.
SWIFT, JAMES - - -	324	43, University Street, Tottenham Court Road. London.
SYKES, JOSEPHINE, AND Co. -	250	280, Regent Street - - London.
T.		
TANGYE BROTHERS - -	563	Cornwall Works, Soho - Birmingham.
TAPLING, THOMAS, AND Co. -	239	1 to 8, Gresham Street, West - London.
TAYLER, D. F., AND Co. - -	254	New Hall Works - - Birmingham.
TELEGRAPH CONSTRUCTION AND MAINTENANCE CO. (LIMITED).	326	38, Old Broad Street - - London.
TEMPLETON, J., AND Co. - -	239	William Street - - Glasgow, N.B.
TEMPLETON, J. AND J. S. -	239	Crownpoint Road - - Glasgow, N.B.
THERMO ELECTRIC GENERATOR COMPANY (LIMITED).	552	27, New Street, Cloth Fair - London.
THEILLAY, E. H. - - -	203	Charing Cross Hotel - - London.
THOMPSON, C. - - -	293	33, Newington Butts - - London.
THOMPSON - -		- - - - - Glasgow.
THOMSON, W. S., AND SONS -	251	97, Cheapside- - - London.
THORN, CHARLES - -	292	St. Giles Gate- - - Norwich.
THORNTON, E. - - -	222	12, Richmond Road - - Bradford.
TINWORTH, GEORGE - -	206	122, Hill Street, Walworth - London.
TOLLEY. J. AND W. - -	269	Pioneer Works, St. Mary's Square Birmingham.
TOMKINSON AND ADAM - -	239	- - - - - Kidderminster.
TOMLINE, COLONEL GEORGE -	542	Carlton Terrace - - London.
TRESS AND Co. - - -	251	3, 5, and 7, Stamford Street - London.
TULL, GLANVILL, AND Co. -	234	Crown Works, Roupell Street, Lambeth. London.
TURNER, CHARLES - -	553	3, Bugle Street - - Southampton.
TURNER, CHARLES, AND SON -	202	7, Broad Street, Bloomsbury - London.
TURNER, A., AND Co. - -	249	Bow Bridge Works - - Leicester.
TURNER, GEORGE, AND Co. -	250	94, Gracechurch Street - London.
TURNER, REUBEN PANTHER -	650	7, Market Place - - Peterborough.
TURNER, R., AND Co. - -	254	Old Factory - - - Redditch.
TURTLE AND PEARCE - -	288	11, Duke St., London Bridge - London.
TYPOGRAPHIC ETCHING COMPANY.	431	23, Farringdon Street - - London.
U.		
UHLRICH, H. S. - - -	422	Brynterian Chelsfield, Chislehurst. Kent.
ULLATHORNE AND Co. - -	233	Barnard Castle - - Durham.
UNIVERSAL CHARCOAL AND SEWAGE COMPANY (LIMITED).	681	5, High Street - - - Manchester.
USHER, RUFUS - - -	200	Bodicote, near Banbury - Oxfordshire.
V.		
VANSITTART, MRS. HENRIETTA -	554	2, Montpelier Row - - Twickenham.
VAN-VOLEN, GERRET - -	254	50 and 52, Waterloo Road, Lambeth. London.
VEITCH, J., AND SONS - -	700	Royal Exotic Nursery, King's Road, Chelsea. London.

Name.	Class.	Address.	
W.			
WALLACE AND TUCKER -	564	3, Antrim Place - -	Belfast.
WALTER, JOHN, M.P. - -	540	"Times" Office, Printing House Square.	London.
WARD, A., AND Co. - -	243	Albion Mills, Leek - -	Staffordshire.
WARD AND Co. - - -	217	158, Piccadilly - -	London.
WARD, MARCUS, AND Co. - -	259	67 and 68, Chandos Street, Strand.	London.
WARD AND HUGHES - -	453	67, Frith Street, Soho - -	London.
WARD AND PAYNE - -	280	West Street - - -	Sheffield.
WARNER, R. - - -	306	8, Crescent, Cripplegate -	London.
WARRINGTON WIRE ROPE WORKS (LIMITED).	111	32, Redcross Street - -	Liverpool.
WATCOMBE TERRA COTTA COMPANY (LIMITED).	206	St. Mary's Church, Torquay -	South Devon.
WATERER, ANTHONY - -	700	Knap Hill Nursery, Woking -	Surrey.
WATERSTON, G., AND SON -	202	56, Hanover Street - -	Edinburgh.
WATSON AND Co., of Bombay, care of WATSON, J., AND SON - -	217	Moorgate Street Chambers, City	London.
WEBB, EDWARD, AND SONS -	240	Copenhagen Street - -	Worcester.
WEBLEY, P., AND SON - -	269	82, Weaman Street - -	Birmingham.
WEBSTER, HENRY - - -	258	22, Litchfield Street, Soho -	London.
WELCH, ALFRED - - -	571	11, Bank Buildings, Metropolitan Cattle Market.	London.
WELCH, MARGETSON, AND Co.	247	16 and 17, Cheapside - -	London.
WELDON, WALTER - - -	200	Abbey Lodge, Merton - -	Surrey.
WELLOCK, J., AND Co. - -	234	62 and 64, Broom Street -	Bradford.
WEST CUMBERLAND IRON AND STEEL COMPANY.	111	Workington - - -	Cumberland.
WETHERED, E. R., MAJOR, R.A.	217	Woolwich - - -	Kent.
WHEELER, EDMUND - -	324	48, Tollington Road, Holloway	London.
WHITE, WILLIAM GEORGE -	284	Albert Villa, New Malden -	Surrey.
WHITE, J. AND J. - - -	200	80, Wilson Street - -	Glasgow.
WHITTAKER, R. - - -	323	7, Great Sutton Street, Clerkenwell.	London.
WHITWELL, THOMAS - -	111	Thornaby Iron Works - -	Stockton-on-Tees.
WIER, M. A., AND Co. - -	321	6, Kirby Street, Hatton Garden	London.
WIER, M. A. - - -	552	33, Abchurch Lane - -	London.
WIGAN COAL AND IRON COMPANY (LIMITED).	100	Wigan - - - -	Lancashire.
WILD, JOHN - -	230	Greenfield Mill, Shaw - near	Oldham.
WILKINSON, W., AND SONS -	670	Grimesthorpe - - -	Sheffield.
WILLIAMS, B. S. - - -	708	Victoria and Paradise Nurseries, Upper Holloway.	London.
WILLIAMS, E. G., AND Co. -	238	Bradford - - -	Yorkshire.
WILLIAMS, M. - - -	202	Britannia Varnish Works -	Wigan.
WILLIAMS AND POWELL -	269	25, South Castle Street -	Liverpool.
WILLIAMS, R. P. - - -	574	9, Great George Street, Westminster.	London.
WILLS, A. W. - - -	670	Park Mills, Nechells - -	Birmingham.
WILSON, G. W., AND Co. - -	430	24, Crown Street - -	Aberdeen, N.B.
WILSON, NEWTON, AND Co. -	531	144, High Holborn - -	London.
WILSON, T. AND D., AND Co. -	230	145, Ingram Street - -	Glasgow.
WILSON, WALKER, AND Co. -	652	Sheepscar Works - -	Leeds.
WINDOVER, C. S. - - -	292	32 and 33, Long Acre - -	London.
WOOD AND IVERY - -	206	Albion Brick Works, West Bromwich.	Staffordshire.

Name.	Class.	Address.
WOOD, J. W. - - -	594	Collector of H.M. Customs - Harwich.
WOODFIELD, W., AND SONS -	254	Easemore Works - - Redditch.
WOSTENHOLM AND SON (LIMITED)	281	Washington Works - - Sheffield.
WOULDHAM CEMENT COMPANY.	103	10A, King's Arms Yard, Moorgate Street. London.
WRIGHT, HERBERT, AND Co. -	660	Maxton Brewery - near Dover.
WRIGHT, P., AND SONS -	514	Constitution Hill Works, Dudley Worcestershire.
WRIGHT, WILLIAM - - -	550	Vulcan Foundry, Coatbridge - Scotland.
WRIGHT AND MANSFIELD -	217	104, New Bond Street - - London.
WYNDHAM, F., AND Co. - -	203	37, Eastcheap - - - London.
WYON, J. S. AND A. B. - -	402	287, Regent Street - - London.
Y.		
YOUNG, JAMES - - -	200	Kelly - - - - Wemyss Bay, N.B.
YORK, F. - - - -	430	87, Lancaster Road, Notting Hill London.
YORK STREET FLAX SPINNING COMPANY.	233	- - - - - Belfast.
YUILLE, ANDREW - - -	650	132, Irongate, Melville Court - Glasgow.
Z.		
ZIMDARS, C. E. - - -	284	327, Grays Inn Road - - London.
ZOBEL, C. F. J. - - -	219	139, Euston Road - - London.

ALPHABETICAL LIST OF TOWNS,

WITH

NAMES AND ADDRESSES OF EXHIBITORS.

ABERDEEN (SCOTLAND).

Hunter, J. - -	209, King Street.
Macdonald A., Field, & Co. - -	Aberdeen Granite Works.
Pirie, A., & Sons -	Stoneywood Works.
Wilson, G. W., & Co.	24, Crown Street.

ACCRINGTON (LANCASHIRE).

Howard & Bullough	Globe Works.

ADARE (CO. LIMERICK, IRELAND).

Dunraven, The Countess of - -	Adare.

ALLOA, CLACKMANNANSHIRE (SCOTLAND).

Bailey, W. & J. A. -	Alloa.

ATHLONE (IRELAND).

Cochrane, R.	

BACUP (LANCASHIRE).

Sutcliffe, J. S. -	Bacup.

BANBURY (OXFORDSHIRE).

Usher, Rufus -	Bodicote.

BARNARD CASTLE (DURHAM).

Smith, W., & Sons -	Barnard Castle.
Ullathorne & Co. -	Barnard Castle.

BARNSLEY (YORKSHIRE).

McLintock, J., & Sons.	

BARROW-IN-FURNESS (LANCASHIRE).

Beesley & Sons -	Abbey Road Boiler Works.

BASINGSTOKE (HAMPSHIRE).

Phipson, Miss E. -	Monk Sherborne.

BATH (SOMERSETSHIRE).

Carr, I., & Co. -	Twerton Mills.
Clark, Captain E. P.	6, Edward Street.

BEDFORD.

Barnard, J. - -	5, St. Mary's Buildings.

BELFAST (IRELAND).

Anderson, D., & Son -	Lagan Felt Works.
Brown, J. S., & Sons	Bedford Street.
Cantrell & Cochrane	Cromac Buildings.
Corry, W. - -	Cromac Springs, Cromac Street.

BELFAST (IRELAND)—cont.

Dicksons, Ferguson, & Co. - -	Linen Hall Street.
Ewart, W., & Son -	Belfast.
Fenton, Connor, & Co.	Linen Hall.
Gibson, W. - -	Castle Place.
Matier, H., & Co. -	Clarence Place.
McBride, R., & Co. -	4, Bedford Street.
McGee, J. G., & Co. -	30, 32, 34, High Street.
McTear & Co. -	Corporation Street.
Richardson, J. N., Sons, & Owden -	1, Donegall Square North.
Ross, W. A. - -	Cromac Buildings.
Wallace & Tucker -	3, Antrim Place.
York Street Flax Spinning Co., Limited - -	Belfast.

BESSBROOK, ARMAGH (IRELAND).

Bessbrook Granite Works, The.	

BIRMINGHAM.

Ash & Lacy - -	Meriden Street.
Baker, C., & Sons -	98, Lichfield Street.
Chance Brothers & Co. - - -	Glass Works.
Cooke Brothers -	65A & 66A, Constitution Hill.
Cooke, J., & Co. -	82, Lawley Street, Belmont Passage.
Davis & Wilson -	Sun Street West.
Elkington & Co. -	Newhall Street.
Fenton, J. - -	74, Great Hampton Street.
Francis, T., & Co. -	Liverpool Street.
Fridlander, A. A. -	26, Hylton Street.
Greener, W. W. -	St. Mary's Works.
Hardman, J., & Co. -	Newhall Hill.
Hinks, Wells, & Co.	Buckingham Street Works.
Partridge & Co. -	Lombard Street.
Patent Nut & Bolt Company - -	London Works.
Peyton & Peyton -	Bordesley Works.
Ryder, W. H. -	48, Ellis Street.
Scott, W. & C., & Son	Premier Gun Works, Lancaster Street.
Sturges Montserrat Co., Limited -	Broad Street.

BIRMINGHAM—cont.

Tangye Brothers	Cornwall Works, Soho.
Tayler, D. F., & Co.	New Hall Works.
Tolley, J. & W.	Pioneer Works, St. Mary's Square.
Webley, P., & Son	82, Weaman Street.
Wills, A. W.	Park Mills, Nechells.

BOLTON (LANCASHIRE).

Ashworth, E., & Sons	Egerton Mills.

BOOTLE (NEAR LIVERPOOL).

Roberts, W.	139, Derby Road.

BOSTON (LINCOLNSHIRE).

Cheavin, George	Wide Bargate Filter Works.

BRADFORD.

Ambler, W.	17, Elizabeth Street.
Thornton, E.	12, Richmond Road.
Wellock, J., & Co.	62 & 64, Broom Street.
Williams, E. G., & Co.	Bradford.

BRADFORD (NEAR MANCHESTER).

Calvert, F. C., & Co.	Bradford, near Manchester.

BRIDGWATER (SOMERSETSHIRE).

Colthurst, Symonds, & Co.	Bridgwater.
Roberts, J., & Sons	West of England Carriage Works.

BRIGHTON (SUSSEX).

Dash, O.	10, King's Road.

BRISTOL.

Gibbs, G.	29, Corn Street.
Hewitt, W.	Prospect Villa, Sydenham Hill.
Pendock Brothers	Queen Street Wharf.
Price, J. & C., & Bros.	69, Victoria Street.

BROSELEY (SHROPSHIRE).

Maw & Co.	Benthall Works.

BURNLEY (LANCASHIRE).

Parkinson Brothers	43, Hammerton Street.

BURSLEM (STAFFORDSHIRE).

Bates, Walker, & Co.	Dale Hall Works.
Edwards, J., & Son	Dale Hall Pottery.
Hope & Carter	Burslem.

BURTON-ON-TRENT (STAFFORDSHIRE).

Bindley & Co.	The Brewery.
Ind, Coope, & Co.	Burton-on-Trent.

CAMBORNE (CORNWALL).

Copeland, G. A.	Camborne.

CAMBRIDGE.

Constable, W. H.	Stained Glass Works.
Fison, J. P.	Feversham Works.
Logan, J. M.	Chesterton Road.
Potts, R., M.A.	Trinity College.
Schneider, E. A.	4, CambriaVilla, Chesterton Road.

CANTERBURY (KENT).

Johnson & Co.	Canterbury.

CARDIFF (SOUTH WALES).

Lee & Co.	9, Crockherbtown.

CARLISLE (CUMBERLAND).

Ferguson Bros.	Holme Head Works.

CARNARVON (NORTH WALES).

Pen-yr-orsedd Slate Quarry Co., Limtd.	Carnarvon.

CARNFORTH (LANCASHIRE).

Ainsworth, T.	Cleator Mills, Cleator.

CHELMSFORD (ESSEX).

Dennis, T. H. P., & Co.	Anchor Ironworks.

CHELTENHAM (GLOUCESTERSHIRE).

Green, E. C.	87, High Street.

CHESTER.

Bradford, W. H.	Great Saughall.

CHIPPING NORTON (OXFORDSHIRE).

Bliss, W., & Sons	Chipping Norton.

CHISLEHURST.

Uhlrich, H. S.	Brynterion, Chelsfield.

COATBRIDGE (SCOTLAND).

Baird, W., & Co.	Gartsherrie Ironworks.
Wright, W.	Vulcan Foundry.

COBRIDGE (STAFFORDSHIRE).

Brownfield, W., & Son	Cobridge.

COLCHESTER (ESSEX).

Davey, Paxman, & Co.	Colchester.
Delf, Capt. W.	Great Bentley.

CORK.

Cork Distilleries Co.	Cork.
Jennings, T.	Brookfield Works.
Mahony, M., & Bros.	3, Camden Quay.

COVENTRY.

Browett, F., & Co.	Coventry.
Smith, B.	Junction Street.
Smith & Starley	Trafalgar Works.

DALBEATTIE (SCOTLAND).

Shearer, Hugh	Dalbeattie Granite Quarry.

DERBY.

Patrick, H. W., & Son	22, St. Luke Street, Stockbrook Street.

DEWSBURY (YORKSHIRE).

Hepworth, B., & Son	New Wakefield Mills.

DITCHLING (SUSSEX).

Johnson & Co.	Ditchling Potteries.

DOVER (KENT).

Wright, H., & Co.	Maxton Brewery.

DROGHEDA, LOUTH (IRELAND).

McCann, J.	Beamond Mills.

DUBLIN.

Beatty, F. S.	30, Summers Hill.
Bewley & Draper	23, Mary Street.
Brownrigg, T. M.	32, Lower Leeson Street.
Burke, E. & J.	16, Bachelors' Walk.
Doolin, W.	23, Westland Row.
Fetherstone, J. J.	2, Coppinger's Row.
Fogerty, W.	23, Harcourt Street.
Goggin, J.	74, Grafton Street.
Greenmount Spinning Co.	Greenmount Factory, Harold's Cross.
Hall, H. E.	44, Kingsland Park.
Hudson, S.	65, Dawson Street.
Jennings, P.	1, Belgrave Place, Belgrave Square, Rathmines.
Johnston Still Co., Limited	Rye Vale Distillery, Leixlip.
Kerr, E.	7, Merville Terrace, Gilford Place, North Strand.
Pim Brothers & Co.	22, William Street.
Plunkett, J., & Co.	Portland Works, Portland Street West.
Smyth & Co.	36 & 37, Lower Abbey Street.

DUDLEY.

Wright, P., & Sons	Constitution Hill Works.

DUNBAR (SCOTLAND).

Annandale, A., & Sons	Beltonford Paper Works.

DUNDEE (SCOTLAND).

Brechin, J. B.	45, Commercial Street.
Cox, Bros.	Camperdown Works, Lochee.
Cruickshank, A. B.	5, Reform Street.
Laing's Patent Overhead Hand Stitch Sewing Machine Co.	4, Bain Street.
Sandeman, F. S.	Manhattan Works.

DUNFERMLINE, FIFESHIRE (SCOTLAND).

Lindsay & Anderson	Lilliehill Works.

DURHAM.

Henderson & Co.	Durham.
Ford Works Co.	Ford, near Sunderland.

DYSART, FIFESHIRE (SCOTLAND).

Normand, J., & Sons	Dysart.

EDINBURGH.

Aitchison, J.	23, Princes Street.
Bartholomew, J.	Chambers Street.
Craig & Rose	Caledonian Oil & Colour Works.
Edinburgh Western Tanning, Currying, & Japanning Co., Limited	135, Westport.
Hall, T.	8, George Street.
Henry, A.	12, South Saint Andrew Street.
Hunter, J., & Son	Wood Hall Mills, Juniper Green.
Jenkinson, A.	10, Princes Street.
Johnston, W. & A. K.	4, St. Andrew Square.
Lewis, J.	177, Canongate.
Loth, Dr. J. T.	18, Gilmore Place.
Mackay, J.	119, George Street.
Millar, J., & Co.	2, South Saint Andrew Street.
Morton, W., Scott, & Co.	Art Furniture Works.
Muir, James, & Son	Calton Hill Brewery.
Smith, T. & H., & Co.	21, Duke Street.
Waterston, G., & Son	56, Hanover Street.

EXETER.

Hems, Harry	69, Paris Street.

EYE (SUFFOLK).

Gissing, A. S., & Sons	Castle Street.

FECKENHAM (NEAR REDDITCH).

English, J., & Co.	Feckenham.

FENTON (STAFFORDSHIRE).

Edwards, John	King Street.

FORFAR (SCOTLAND).

Laird, W., & Co.	Canmore Linen Works.

FROME (SOMERSET).

Fussell, J., Sons, & Co.	Frome.
Singer, J. W., & Son	Frome.

GALWAY.

Beauford & Bruce	2, Nuns Island.

GATESHEAD-ON-TYNE (DURHAM).

Dunston Engine Works Co.	Gateshead-on-Tyne.

GILFORD, DOWN (IRELAND).

Dunbar, McMaster, & Co.	Gilford.

GLASGOW (SCOTLAND).

Air Burning Co., Limited	118, Green Street.
Boyle & Son, R.M.	100, Mitchell Street.
Buchanan, J.	56 to 62, Dale Street, Tradeston.
Clark, J., Jun., & Co.	16, George Street, Mile End.
Davidson, T., Jun., & Co.	33 & 41 Garngad Hill.
Glasgow Apothecaries Co.	34, Virginia Street.
Jaap, J.	268, Buchanan Street.
Kimball & Morton	80, Bishop Street, Anderston.
Mirlees, Tait, & Watson	Scotland Street Ironworks.
Stewart, Moir, & Muir	73, Mitchell Street.
Storer, D., & Sons	Sydney Street.
Templeton, J., & Co.	William Street.
Templeton, J. & J. S.	Crownpoint Road.
Thompson	Glasgow.
White, J. & J.	80, Wilson Street.
Wilson, T. D., & Co.	145, Ingram Street.
Yuille, A.	132, Irongate, Melville Court.

GODALMING (SURREY).

Dickson, J. H.	Rheea Rod Fibre Works.

HALIFAX.

Clayton, Marsdens, Holden, & Co., Limited	Wellington Mills.
Cliff, J.	5, Dungeon St., Halifax.
Crossley & Sons, Limited	Deanclough Mills.
Fleming, T., & Son	West Grove Mill.
Lewis, J.	India Buildings.
Smith, David	Liddal.
Smith, D., & Co., Limited	Kensington Works.
Smith, F., & Co.	Caledonia Works.

HANLEY (STAFFORDSHIRE).

Powell & Bishop	Hanley.

HARWICH (ESSEX).

Wood, J. W.	Collector of H.M. Customs.

HITCHIN (HERTFORDSHIRE).

Perks, S.	High Street.

HUDDERSFIELD.

Brigg, J. F., & Co.	Huddersfield.
Brooke, E., & Sons	Field House.
Brook, J., & Brothers	Meltham Mills.
Inman Brothers	Aspley Place.
Mill Hill Wool and Rag Extracting Co., Limited	Mill Hill Works.
Sanderson & Procter	Shore Works.

HULL.

Chambers, T. F.	51, High Street.
Cooper, G., & Co.	Elm Tree House, Anlaby Road.
Johnson Bros.	High Street.

ISLE OF WIGHT.

Cameron, Mrs. J. M.	Freshwater Bay, Isle of Wight.
Harrington, J., & Co.	Union Works, Ryde.
Hudson, F.	1, Regent Parade, Ventnor.

IPSWICH (SUFFOLK).

Ransomes, Sims, & Head	Orwell Works.

IRONBRIDGE (SHROPSHIRE).

Craven, Dunnill, & Co., Limited -	Jackfield Works.

JOHNSTONE (NEAR PAISLEY).

Neilson, Storer, & Sons - -	Thorn Mills.

KEIGHLEY (YORKSHIRE).

Smith, J. & S.	Low Bridge Works.

KIDDERMINSTER.

Hatton, Sons, & Co., late Thompson, Hatton, & Co. -	Broadwater Tin Plate Works.
Tomkinson & Adam -	Kidderminster.

KIRKCALDY, FIFESHIRE (SCOTLAND).

Nairn, M., & Co. -	Kirkcaldy.

LEAMINGTON (WARWICKSHIRE).

Kinmond & Co. -	Kenilworth Street.
Mulliner, H., & Co. -	Leamington Spa.

LEEDS.

Andrews, H., & Co. -	29, Albion Street.
Birchall, J. D., & Co.	Wellington and Burley Mills.
Clough, S. W. -	Stanningley.
Fairbairn, Kennedy, & Naylor - -	Leeds.
Goodall, Backhouse, & Co. - -	Boar Lane.
Greenwood & Batley	Albion Works.
Hanson, W. - -	Great George Street.
Hargreave & Nusseys	Farnley Low Mills.
Heap, J. K. - -	Folly Hall, Holbeck.
King, William -	Gillroyd and Albert Mills, Morley.
Lawson, S., & Sons -	Hope Foundry.
Little, T. W., & Co. -	Monkbridge Mills.
Marshall & Co. -	Leeds.
Maw, T. - - -	Windsor Place, Burmantofts.
Nussey & Leachman -	Leeds.
Rickards, C. A. -	Bell Busk Mills.
Wilson, Walker, & Co. - - -	Sheepscar Works.

LEEK (STAFFORDSHIRE).

Milner, W., & Sons -	Union Street.
Ward, A., & Co. -	Albion Mills.

LEICESTER.

Evans & Stafford -	Campbell Street.
Gimson & Coltman	Duke Street.

LEICESTER—cont.

Hodges, T. W., & Sons	Leicester.
Mott & Co. - -	18, Galltree Gate.
Roe, W. A. - -	81, Humberstone Gate.
Smith, J. W. - -	121, Belgrave Gate.
Turner, A., & Co. -	Bow Bridge Works.

LEIGH (ESSEX).

Lacey, R. G. - -	Coast Guard Station.

LEITH (SCOTLAND).

Bernard & Co. -	The Distillery.

LINCOLN.

Gregory, J. - -	South Park.
Slingsby, R. - -	168, High Street.

LIVERPOOL.

Adair & Co. - -	Neptune Street.
Angus, G., & Co. -	10, Thomas Street.
Audsley & Bowes -	11, Dale Street.
Bowes, J. L., & Brother	11, Dale Street.
Higgin, T., & Co. -	33, Tower Buildings West.
Inman Steamship Co., Limited - -	22, Water Street.
Kay & Hilton -	Bankhall Bridge.
Liver Alkali Works	Lightbody Street.
Liverpool Spun Oakum Co. -	9, North John Street.
Muspratt, J., & Sons	5, Chapel Street.
Muspratt Bros. and Huntley - -	Ditto.
Nash, H., & Co. -	12 & 14, Tower Buildings, North, Water Street.
Roberts, William -	139, Derby Road, Bootle.
Runcorn Soap and Alkali Co., Limited	6, Water Street.
Silicate Paint Co., The - - -	24, Fenwick Street.
Smith, Dillwyn -	153, Duke Street.
Warrington Wire Rope Works, Limited	32, Redcross Street.
Williams & Powell -	25, South Castle Street.

LLANELLY (CARMARTHENSHIRE, SOUTH WALES).

Holland, W. T. -	Llanelly.

LONDON.

Adams, R. -	25, Falmouth Road, Great Dover Street, S.E.
Adams & Co. -	5, New Street, Bishopsgate Street, E.C.
Adams, W. M.	Arundel Club, Salisbury Street, W.C.

LONDON—cont.

Aire and Calder Glass Bottle Co. (E. Breffit, Proprietor)	83, Upper Thames-Street, E.C.
Allen, Frederick, and Sons - -	Canal Road, Mile End Road.
Allen & Hanburys -	Plough Court, Lombard Street, E.C.
Allen, F., & Sons -	Canal Road, Mile End Road, E.
Appleby Brothers -	Emerson Street, Southwark, S.E.
Arthur, F. - -	18, Motcomb Street, W.
Atkinson, J. & E. -	24, Old Bond Street, W.
Augener, G., & Co. -	86, Newgate Street, E.C.
Baillie & Co. -	118, Wardour Street.
Baker, W. - -	96, Pembroke Street, Bingfield Street, Caledonian Road, N.
Ball, J. - -	12, Duke Street, Grosvenor Square, W.
Barnard, Bradly -	107, St. Paul's Road, Highbury, N.
Beau, A. - -	283, Regent Street, W.
Beck, R. & J. - -	31, Cornhill, E.C.
Bedford, W. - -	236, Camden Road, N.W.
Bennett, T., & Son -	70, 71, Turnmill Street, Farringdon Road, E.C.
Besson, F. -	198, Euston Road, N.
Bevis, H. - -	140, Pentonville Road, N.
Blackwood, J., & Co.	18, Bread Street Hill, E.C.
Bool, A. & J. -	86, Warwick Street, Pimlico, S.W.
Boosey, & Co. - -	295, Regent Street.
Bowman, C. - -	6, King Street, Tower Hill, E.C.
Bradbury, Agnew, & Co. - -	Bouverie Street.
Brierley, Sons, & Reynolds - -	81A, Edgware Road. W.
Brinsmead, J., & Sons	18, Wigmore Street, W.
British and Foreign Blind Association -	33, Cambridge Square, Hyde Park, W.
Brown, J. B., & Co. -	90, Cannon Street, E.C.
Browne, H. J. -	237, 239, Euston Road, N.W.
Bryant & May -	Fairfield Works, Bow, E.
Bullivant, T. -	104, Ledbury Road, Bayswater, W.
Busse, G., & Co. -	8, South Street, Finsbury, E.C.

LONDON—cont.

Bussey, G. G., & Co. -	Museum Works, Rye Lane, Peckham, S.E.
Cassell, Petter, & Galpin - -	La Belle Sauvage Yard, Ludgate Hill, E.C.
Chapman, E., & Co. -	10, Duke Street, Portland Place, W.
Chatwood, Samuel -	120, Cannon Street.
Clark, L., Stansfield, & Co. - -	6, Westminster Chambers, Victoria Street, S.W.
Clarke & Dunham -	69, Mark Lane, E.C.
Claxton, R. - -	65, Myddelton Street, Clerkenwell, E.C.
Clay, R. - -	58, Finborough Road, South Kensington, S.W.
Codd, H. - -	50, Grove Lane, Camberwell.
Cohne, S. - -	13, Sise Lane, E.C.
Collinson & Lock -	109, Fleet Street, E.C.
Cooper & Co.	5, Shoe Lane, Fleet Street, E.C.
Cooper & Holt -	48, 49, 50, Bunhill Row, E.C.
Corcoran, Witt, & Co.	28, Market Buildings, Mark Lane, E.C.
Corticine Foor Covering Co. -	115, Queen Victoria Street, E.C.
Cox & Sons - -	28, 29, 31, Southampton Street, Strand, W.C.
Crosse & Blackwell	Soho Square, W.
Crouch, H. - -	66, Barbican, E.C.
Crown Perfumery Co. - - -	40, Strand, W.C.
Culmer, W., & Sons -	Hornsey Road, N.
Dallas, D. C. -	362, Gray's Inn Road, W.C.
Dallmeyer, J. H. -	19, Bloomsbury Street, W.C.
Daniel, A. B., & Son	46, Wigmore Street, W.
Dashwood, C. W. -	1, St. Clement's Churchyard, Strand, W.C.
Day & Son - -	47, Charing Cross, S.W.
Debenham & Freebody - -	27, 29, 31, Wigmore Street, W.
De Morini, C. -	170, Great Portland Place, W.
Del Riego, M. -	284, Regent Street, W.

LONDON—cont.

Dent, M. F. - -	33, Cockspur Street, Charing Cross, S.W.
Dickes, W. - -	Farringdon Road, E.C.
Dickinson & Higham	73, Farringdon Street, E.C.
Dixon, F. - -	20, Charterhouse Square, E.C.
Dougall, J. D. -	59, St. James' Street, S.W.
Doulton, H., & Co. -	63, High Street, Lambeth, S.E.
Doulton & Co. -	48, High Street, Lambeth, S.E.
Doulton & Watts -	Lambeth Pottery, Lambeth, S.E.
Dowson, Sutherland, & Co., Limited	12, Fetter Lane, E.C.
Dudgeon, A. - -	22, Great George Street, Westminster, S.W.
Eastwood & Co., Limited - -	Wellington Wharf, Belvedere Road, Lambeth, S.E.
Edwards, G. - -	149, Brompton Road, S.W.
Eley Brothers, Limited - - -	254, Gray's Inn Road, W.C.
Elrick, C. G. -	8, Aldermanbury Postern, E.C.
Engert, A. C., & Co. -	75, City Road, E.C.
Engert & Rolfe -	Barchester Street, Poplar New Town, E.
England, W. -	7, St. James Square, Notting Hill, W.
Etzensberger, R. -	Midland Hotel, St. Pancras.
Evans, Lescher, & Evans - -	60, Bartholomew Close, E.C.
Farmer & Rogers -	171, 175, Regent Street.
Feetham, M., & Co. -	9, Clifford Street, W.
Festa, G. P. - -	13, Charles Street, Grosvenor Square, W.
Field, J. C. & J. -	Lambeth Marsh, S.E.
Firmin & Sons, Limited - - -	153, Strand, W.C.
Fisher, N., & Sons -	31, Marge Pond, Southwark, S.E.
Fradelle & Marshall -	230, 246, Regent Street, W.

LONDON—cont.

Francati & Santamaria - -	65, Hatton Garden, E.C.
Francis & Co. -	Bridge Foot, Vauxhall, S.E.
Frodsham, C., & Co.	84, Strand, W.C.
Fry, J. S., & Sons -	252, City Road, E.C.
Gardner, J., & Sons -	453, Strand.
Geological Survey of the United Kingdom (A. C. Ramsey, LL.D., F.R.S., Director General) - -	28, Jermyn Street, S.W.
Gerrard, A. W. -	153, Liverpool Road, N.
Geyelin & Co. -	Belgrave House, Argyle Square, W.C.
Gibbs & Moore -	89, Southampton Row, W.C.
Gibbs, J., & Co. -	16, Mark Lane, E.C.
Gill, J. - -	66, Regent Street, Lambeth, S.E.
Goodall, C., & Son -	24, Great College Street, Camden Town, N.W.
"Graphic," The Proprietors of the -	190, Strand, W.C.
Grays Chalk Quarries Co., Limited -	90, Lower Thames Street, E.C.
Green, J. - -	12, Graham Terrace, Ridley Road, Kingsland, E.
Green, J., & Nephew	107, Queen Victoria Street, E.C.
Gregory & Co. -	212, 214, Regent Street, W.
Gümpel, C. G. -	49, Leicester Square, W.C.
Gwynne, J. & H. -	Hammersmith, W.
Gwynne & Co. -	Essex Street Works W.C.
Haigh, Edward M. -	203, Regent Street, W.
Handysides Steep Gradient Co., Limited - -	9, Victoria Chambers, Victoria Street, S.W.
Hart, Son, Peard, & Co. - -	Wych Street, Strand, W.C.
Hayes, Crossley, & Co.	153, Cheapside, E.C.
Haynes, T., & Sons -	229, Edgware Road, W.
Heath, Vernon -	43, Piccadilly, W.
Heaton, Butler, & Bayne - -	14, Garrick Street, W.C.

LONDON—cont.

HENDERSON, A. L. -	49, King William Street, E.C.
HETLEY, J., & Co. -	35, Soho Square, W.
HICKISSON, M.A., MRS.	75, Southgate Road, N.
HICKS, J. J. - -	8, Hatton Garden, E.C.
HIERONIMUS, W. -	53, City Road, E.C.
HILDITCH, G. & J. B. -	11 and 12, Cheapside, E.C.
HILL & CLARK -	6, Westminster Chambers, Victoria Street, S.W.
HITCHCOCK, WILLIAMS, & Co. - -	St. Paul's Churchyard, E.C.
HOARE, J. - -	39, Bloomsbury Street, W.C.
HOE, R., & SONS -	44, Leadenhall Street, E.C.
HOLDSWORTH, E. W. H.	12, Clifton Road, St. John's Wood, N.W.
HOLLICK & Co. -	Greenwich, S.E.
HOLMES, PAYTON, & TAYLOR - -	43, Borough Road, Southwark, S.E.
HOOKER, J. - -	104, Upper Thames Street, E.C.
HOOPER & Co. -	113, Victoria Street, S.W.
HOOPER, C., JUN.	6, 7, 8, New Weston Street, Bermondsey, S.E.
HOOPER, C. W., & SONS	51, Weston Street, Bermondsey.
HOWARD & SONS -	25, Berners Street, W.
HUMBERT, H. - -	30, Barbican, E.C.
"ILLUSTRATED LONDON NEWS" - -	198, Strand, W.C.
INDIA RUBBER, GUTTA PERCHA, AND TELEGRAPH WORKS COMPANY, LIMITED -	100, Cannon Street, E.C.
JEFFERY, J. - -	14, Tottenham Court Road, W.
JEFFREY & Co.	64, Essex Road, Islington, N.
JEFFREYS, C. -	103, Hatton Garden, E.C.
JENNINGS, G. - -	Palace Wharf, Stangate, S.E.
JOHNSON, E. - -	3, Castle Street, Holborn, W.C.
JOHNSON, J., & Co. -	Charterhouse Works, E.C.
JOHNSON, J. M., & SONS, LIMITED - -	3, Castle Street, Holborn, W.C.

LONDON—cont.

JOHNSON, MATTHEY, & Co. - -	78, Hatton Garden, E.C.
JONES, PALMER, & Co.	Eastern Works, Tabernacle Walk, Finsbury, E.C.
KEEN, ROBINSON, BELLVILLE, & Co. -	6, Garlick Hill, Cannon Street, E.C.
KEITH & Co. - -	6, Denmark Street, Soho, W.C.
KENT, GEORGE -	200, High Holborn, W.
KENT, G. B., & Co. -	11, Gt. Marlborough Street, W.
KILNER BROTHERS -	Great Northern Goods Station, King's Cross, N.
KIMBERLEY, N. G. -	11, Great St. Helen's, E.C.
KIMPTON, T. - -	2 & 3, Barnard's Inn, Holborn, W.C.
KINGSBURY, T. -	9, New Bond Street, W.
KIRBY, BEARD, & Co. -	18, Cannon Street, E.C.
KNIGHT, MARY, MISS -	1, Anderson Street, Chelsea, S.W.
KULLBERG, V. -	105, Liverpool Road, Islington, N.
LA FARGUE, P. -	27, South Hill Park, Hampstead, N.W.
LANCASTER, A. -	27, South Audley Street. W.
LANCASTER, C. W. -	151, New Bond Street, W.
LANG, J., & SONS -	22, Cockspur Street, S.W.
LANG, J. & J. - -	13, Charterhouse Buildings, Aldersgate Street, E.C.
LAPWORTH BROTHERS	22, Old Bond Street, W.
LAVERS, A. H. -	Nine Elms, S.W.
LAWRENCE & Co. -	22, St. Mary Axe, E.C.
LEDGER, H., & Co. -	61, 63, Lant Street, Borough, S.E.
LEE, DR. R. J. -	4, Savile Row, W.
LEIGHTON, J. - -	12, Ormonde Terrace, Regent's Park, N.W.
LEMERE, B. - -	147, Strand, W.C.
LILLY, J., & Co. -	172, St. John Street, Clerkenwell, E.C.
LINCOLN, BENNETT, & Co. - - -	40, Piccadilly, W.
LLOYD, T., & SONS -	327, Old Street, Shoreditch, E.
LOBB, J. - -	296, Regent Street, W.
LOCKWOOD, CROSBY, & Co. - -	7, Stationers' Hall Court, Ludgate Hill, E.C.

LONDON—cont.

London Stereoscopic and Photographic Co.	108 & 110, Regent Street, W.
Low, Son, & Haydon	148 & 330, Strand, W.C.
Lynch & Co.	171a, Aldersgate Street E.C.
Lyon, W.	1, Cowper's Court, Cornhill, E.C.
Macdermott, M.	Scott's Chambers, 25, 26, Pudding Lane, E.C.
Macintosh, J.	38, Langham Street, W.
Mackenzie, D., care of W. Smith	19, Salisbury Street, Strand, W.C.
Mansell, W. A., & Co.	2, Percy Street, W.
Marriott, Mrs.	15, Oldfield Road, Stoke Newington.
Marshall, T. J., & Co.	Campbell Works, Gillet Street, Kingsland, N.
Martin, C.	73, 74, King William Street, E.C.
Martin, R.	The Village, Old Charlton, S.E.
Martin, W. H.	64, 65, Burlington Arcade, Piccadilly, W.
Matthews, E., & Son	377, Oxford Street, W.
Matthews, J.	43, Gibson Street, Waterloo Road, Lambeth, S.E.
McGrath, J.	6a, White Lion Street, Chelsea.
Mayer & Meltzer	71, Great Portland Street, W.
Mellin, G.	16, Tichborne Street, Regent Street, W.
Menier, E.	Southwark Street, Borough, S.E.
Mercer, T.	161, Goswell Road, E.C.
Middleton, T. J.	38, Little Queen Street, High Holborn, W.C.
Monckton, E. H. C., care of Coutts & Co.	Strand.
Morgan, George	144, Finborough Road, West Brompton.
Morley, I. & R.	18, Wood Street, Cheapside, E.C.
Morson, T., & Son	31, 33, & 124, Southampton Row, Russell Square, W.C.
Morton, G.	31, Hanover Street, Islington, N.

LONDON—cont.

Moy, T.	37, Farringdon Street, E.C.
Murray, A.	67, Bedford gardens, Kensington, W.
Neal, J.	44, 46, 48, Edgware Road, W.
Neal, J., & Co.	22, 23, 24, Hampden Gurney Street, Portman Square, W.
Needham & Co.	53, Piccadilly, W.
Needham & Kite	Phœnix Ironworks, Vauxhall, S.E.
Negretti & Zambra	Holborn Viaduct.
Neighbour, G., & Sons	149, Regent Street, W.
Nicholl, S. J.	1, Caversham Road, Kentish Town, N.W.
Nicole, Neilson, & Co.	14, Soho Square, W.
Nicoll, D.	15, Clement's Inn, W.C.
Norris & Co.	124, Wood Street, Cheapside, E.C.
Norton & Shaw	Garrick Street, W.C.
Oakey, J., & Sons	Wellington Works, Westminster Bridge Road, S.E.
Ortner & Houle	3, St. James Street, W.
Palmer, S.	Park House, Grove Street, South Hackney, E.
Patent Plumbago Crucible Co.	Battersea Works, S.W.
Patent Selenitic Cement Co., Limited	21½, Millbank Street, Westminster, S.W.
Patrick, H. W., & Son	29, Percy Street, Tottenham Court Road, W.C.
Pears, A. & F.	91, Great Russell Street, W.C.
Perkins, A. M., & Son	Seaford Street, Regent's Square, Gray's Inn Road, W.C.
Peters, T., & Sons	53, Park Street, Grosvenor Square, W.
Phosphor Bronze Co., Limited	139, Cannon Street, E.C.
Pigou, Wilks, & Laurence, Limited	11, Queen Victoria Street, E.C.
Pollock, Sydney	42, Lancaster Road, Notting Hill.
Poole, J., & Co.	33, Spencer Street, Clerkenwell, E.C.
Powell, T.	81, High Street, Marylebone, N.W.

LONDON—cont.

Powell & Sons	Whitefriars, E.C.
Pratt, J.	227, Oxford Street, W.
Price'sPatentCandle Co.	Belmont Works, Battersea, S.W.
Price & Co.	36, Great Russell Street, W.C.
Puckridge & Nephew	530,534,Kingsland Road, E.
Pullman, R. & J.	17, Greek Street, Soho, W.
Pulvermacher, J. L.	194, Regent Street, W.
Purdey, J.	314½, Oxford Street, W.
Quick, W. M. R.	49, Fleet Street, E.C.
Ramsey, W.	83,84, Farringdon Street, E.C.
Ravenstein, E. G.	10, Lorn Road, Brixton, S.E.
Reilly, E. M., & Co.	502, New Oxford Street, W.
Rein, F. C., Mrs.	108, Strand, W.C.
Rein, F. C., & Son	108, Strand, W.C.
Reynolds, J. G.	9, Old Ford Road, E.
Rigby, J., & Co.	72, St. James' Street, S.W.
Rimmel, E.	96, Strand, W.C.
Robinson, V., & Co.	38, Welbeck Street, Cavendish Square, W.
Rola, V.	22, Leinster Square, Bayswater, W.
Ross & Co.	7, Wigmore Street, Cavendish Square, W.
Rowney, G., & Co.	52, Rathbone Place, W.
Royal School of Art Needlework	Exhibition Road, S.W.
Rundell, J. B.	South Kensington Museum, S.W.
Sage, Fredk.	80 to 81, Gray's Inn Road.
Sangster & Co.	140, Regent Street, W.
Sanson, R. B.	87, Globe Road, Mile End Road, E.
Saxby & Farmer	Canterbury Road, Kilburn, N.W.
Schildberg, H., & Co.	26, Moorgate Street, E.C.
Schrieber, F. A.	17, Thavies Inn, E.C.
Science and Art Department.	South Kensington Museum, P. Cunliffe Owen,C.B.,Director.
Scott, R. J.	8, Whitefriars Street, Fleet Street, E.C.

LONDON—cont.

Seaton, W.	19, Salisbury Street, Strand, W.C.
Sewill, J.	20, Cornhill, E.C.
Shaw, W.	3, Sheldon Street, Bayswater.
Shearer, H.	21, Great George Street, Westminster.
Shearer, Smith, & Co.	21, Great George Street, S.W.
Sheldon & Fenton	12, King Street, Cheapside, E.C.
Shoolbred & Co.	Tottenham Court Road, W.
Siebe & Gorman	17, Mason Street, S.W.
Siemens Brothers	12, Queen Anne's Gate, S.W.
Siemens, C. W.	12, Queen Anne's Gate, S.W.
Skelton & Co.	37, Essex Street, Strand, W.C.
Sloper, J.	6, King William St., E.C.
Smartt, W.	Queen's Road, Buckhurst Hill, N.
Smith, G.	57, Victoria Park Road, South Hackney, N.
Smith, G. J.	The Terrace, Church Road, Upper Norwood, S.E.
Spill, Daniel	124, High St., Homerton.
Star Plate and Universal Polishing Company	6, Gracechurch St., E.C.
Stevens, T.	20, Warwick Lane, E.C.
Stiff, J., & Sons	High Street, Lambeth, S.E.
Storer, J.	Stamford Brook, Hammersmith, W.
Stephens, H. C.	171, Aldersgate Street, E.C.
Sugg, W.	Vincent Works, Vincent Street, Westminster, S.W.
Sunday School Union	56, Old Bailey, E.C.
Swaine & Adeney	185, Piccadilly, W.
Swainson, Birley, & Co.	42, Cheapside, E.C.
Swift, J.	43, University Street, Tottenham Court Road, W.C.
Sykes,Josephine,&Co.	280, Regent Street, W.
Tapling, Thos., & Co.	1 to 8, Gresham Street, West, E.C.

LONDON—cont.

Telegraph Construction & Maintenance Co., Limited	38, Old Broad Street, E.C.
Thermo Electric Generator Co., Limited - -	27, New Street, Cloth Fair, E.C.
Thiellay, E. H. -	Charing Cross Hotel, S.W.
Thompson, C. - -	33, Newington Butts, S.E.
Thomson, W. S., & Sons	97, Cheapside, E.C.
Tomline, Colonel -	Carlton Terrace, S.W.
Tinworth, G. - -	122, Hill Street, Walworth, S.E.
Tress & Co. - -	33, Stamford Street, S.E.
Tull, Glanvill, & Co.	Crown Works, Roupell-Street, Lambeth, S.E.
Turner, C., & Son -	7, Broad Street, Bloomsbury, W.C.
Turner, G., & Co. -	94, Gracechurch Street, E.C.
Turtle & Pearce -	11, Duke Street, E.C.
Typographic Etching Co. - - -	23, Farringdon Street, E.C.
Van Volen, G. -	50, 52, Waterloo Road, Lambeth, S.E.
Veitch, J., & Sons -	Royal Nursery, King's Road, Chelsea, S.W.
Walter, J., M.P. -	"Times" Office, Printing House Square, E.C.
Ward & Co. - -	158, Piccadilly, W.
Ward, Marcus, & Co.	67 & 68, Chandos Street, Strand, W.C.
Ward & Hughes -	67, Frith Street, W.
Watson & Co., of Bombay, care of Watson, J., & Son - -	Moorgate Street Chambers, E.C.
Warner, R. - -	8, Crescent, Cripplegate, E.C.
Webster, H. - -	22, Litchfield Street, Soho, W.C.
Welch, A. - -	11, Bank Buildings, Metropolitan Cattle Market, E.C.
Welch, Margetson, & Co. - -	16 & 17, Cheapside, E.C.
Wheeler, E. - -	48, Tollington Road, Holloway, N.
Whittaker, R. -	7, Great Sutton Street Clerkenwell, E.C.

LONDON.—cont.

Wier, M. A., & Co. -	6, Kirby Street, Hatton Garden, E.C.
Wier, M. A. - -	33, Abchurch Lane, E.C
Williams, B. S. -	Victoria and Paradise Nurseries, Upper Holloway, N.
Williams, R. P. -	9, Great George Street, Westminster, S.W.
Wilson, N., & Co. -	144, High Holborn, W.C
Windover, C. S. -	32 & 33, Long Acre, W.C.
Wouldham Cement Co. - - -	10A, King's Arms Yard, Moorgate Street, E.C.
Wright & Mansfield	104, New Bond Street, W.
Wyndham, F., & Co. -	37, Eastcheap, E.C.
Wyon, J. S. & A. B. -	287, Regent Street, W.
York, F. - -	87, Lancaster Road, Notting Hill, W.
Zimdars, C. E. -	Red Lion Square, W.
Zobel, C. F. I. -	139, Euston Road, N.W.

LYTHAM (LANCASHIRE).

Hedges, D. - -	7, Queen Street.

MAIDSTONE (KENT).

Grant, T. - -	Distillery.

MANCHESTER.

Barlow & Jones, Limited - -	2, Portland Street.
Baum, F. - -	St. Ann's Square.
Buckley, J., & Co. -	Moorcroft Mills, Delph, near Manchester.
Buckley, J. E. & G. F.	Linfitts Mill, Delph, near Manchester.
Ellis, W. J. -	66, Murray Street, Higher Broughton.
Fletcher, R., & Son -	Paper Works, Stoneclough.
Galloway, W. & J., & Sons - -	Knott Mill Ironworks.
Hawkins, J., & Sons -	8, Faulkner Street.
Johnson, J., & Fildes	44, Spring Gardens.
Lyons, W. - -	Park Street.
Massey, B. & S. -	Openshaw.
Pearson, T., & Son -	54, Church Street.
Roberts, J. - -	10, Cavendish Street, Stretford Road.
Sands Brothers & Co.	Salford Chemical Works.
Schwabe, Salis, & Co.	41, George Street.
Simpson & King -	7, York Street.
Spence, P. - -	Pendleton Works, Oldham Road, Manchester.

MANCHESTER—cont.

Universal Charcoal and Sewage Co., Limited	-	5, High Street.

MERTHYR TYDFIL.

Crawshay, Robert	-	Cyfartha Castle.

MERTON (SURREY).

Weldon, W.	-	Abbey Lodge.

MORLEY (NEAR LEEDS).

King, W.	-	Gillroyd and Albert Mills.

NEWCASTLE-ON-TYNE.

Newcastle Chemical Works Co., Limited		Newcastle-on-Tyne.

NEW MALDEN, SURREY.

White, W.	-	Albert Villa.

NEWRY (IRELAND).

Campbell, Hugh, & Son		Newry Granite Polishing Works, Moor Quarries.

NEWARK-UPON-TRENT.

Richardson, Earp, & Slater	-	Trent and Northgate Brewery.

NEWTOWN (MONTGOMERYSHIRE, NORTH WALES).

Jones, Pryce	-	Newtown.

NORMANTON (YORKSHIRE).

Heaps & Wheatley	-	Brotherton.

NORTHAMPTON.

Birdsall & Sons	-	Northampton.

NORTHWICH (CHESHIRE).

Brunner, Mond, & Co.		Winnington.

NORWICH.

Barnard, Bishop, & Barnards	-	Norfolk Ironworks.
French & Co.	-	St. Mary's Mills.
Marrison, R. D	-	Great Orford Street.
Thorn, C.	-	St. Giles Gate.

NOTTINGHAM.

Haywood, J. S.	-	Castle Gate.
Heymann & Alexander	-	Stoney Street.
Jacoby, M., & Co.	-	Broadway.
Lindley, R. C.	-	Mansfield.
Patchitt, E. C.	-	Ilkeston Road.
Simon, May, & Co.	-	Weekday Cross.

NUNEATON (WARWICKSHIRE).

Stanley Brothers	-	Midland Tile Works.

NUNS ISLAND (GALWAY, IRELAND).

Beauford & Bruce	-	2, Nuns Island.

OLDHAM (LANCASHIRE).

Heap, J., & Co., Limited	-	Lee Street.
Platt Brothers & Co., Limited	-	Hartford Works.

PAISLEY (SCOTLAND).

Coats, J. & P.	-	Ferguslie Thread Works, Paisley.

PERRAN-AR-WORTHAL (CORNWALL).

Lovey, E.	-	Ponsnooth.

PERTH (SCOTLAND).

Moncrieff, J.	-	North British Glass Works.

PETERBOROUGH (NORTHAMPTONSHIRE).

Turner, R. P.	-	7, Market Place.

PETERHEAD, ABERDEENSHIRE (SCOTLAND).

Great North of Scotland Granite Co., Limited	-	Peterhead.

PLYMOUTH (DEVONSHIRE).

Greenway, H.	-	Ham Street.

PORT MADOC (NORTH WALES).

Cwmorthin Slate Co., Limited	-	Port Madoc.

PRESTON (LANCASHIRE).

Booth, H., & Co.	-	Edward Street.
Fish, J. & G.	-	12, Grayston Street, Fishwick.

PRESCOT (LANCASHIRE).

READING (BERKSHIRE).

Soper, W.	-	23, Friar Street.

REDDITCH (WORCESTERSHIRE).

Evans, D.	Studley.
Heath, W.	Neveu Works, Crabb's Cross.
Milward, H., & Sons	Redditch.
Smith, J., & Son	Astwood Bank, near Redditch.
Turner, R., & Co.	Old Factory.
Woodfield, W., & Sons	Easemore Works.

ROCHDALE.

Collier, L.	Wellington Works, River Street.
Nicholson, H.	Kilner Deyne Terrace.

ROCHESTER (KENT).

Aveling & Porter	Rochester.

RUGBY (WARWICKSHIRE).

Dean, H.	Southam.

RUNCORN (CHESHIRE).

Cliff, J.	Runcorn.

SALFORD (NEAR MANCHESTER).

Boulinikon Floor-cloth Manufacturing Co., Limited	Worsley Street.
Gadd, T.	Salford.

SANDBACH (CHESHIRE).

Richards, Kearne, & Gasquoine	Sandbach.

SELSEY, NEAR CHICHESTER (SUSSEX).

Pullinger, C.	Selsey.

SHAW, NEAR OLDHAM (LANCASHIRE).

Wild, J.	Greenfield Mill.

SHEFFIELD.

Adams, J.	Victoria Park.
Addis, J. B., & Sons	Arctic Works.
Bainbridge, E.	Nunnery Colliery Offices.
Brooks & Cooper	Mousehole Forge.
Brookes & Crookes	Atlantic Works, St. Philip's-road.

SHEFFIELD—cont.

Brown, J., & Co., Limited	Atlas Works.
Burnand, J., & Co.	Leicester Works, Leicester St., Sheffield.
Cammell, C., & Co., Limited	Cyclops Works.
Hardy Patent Pick Co.	Mining Tool Works, Ecclesall-road.
Hawksworth (Wilson), Ellison, & Co.	Carlisle Works.
Jessop, W., & Sons, Limited	Park and Brightside Works.
Needham, J.	69, Arundel Street.
Steel & Garland	Wharncliffe Works.
Stephenson, Blake, & Co.	199, Allan St., Sheffield.
Ward & Payne	West Street.
Wilkinson, W., & Sons	Spring Works, Grimesthorpe.
Wostenholm & Son, Limited	Washington Works.

SHIPNAL (SHROPSHIRE).

Edge & Sons	Coalport Works.

SKIPTON (YORKSHIRE).

Dewhurst, J., & Sons	Belle Vue Mills.

SOUDLEY NEWNHAM.

The Great Western Iron Co., Limited	Soudley Newnham.

SOUTHAMPTON.

Ordnance Survey Office (Major-General Cameron, R.E., C.B., Director).	
Turner, Charles	3, Bugle Street.

STAFFORDSHIRE POTTERIES.

Brown, T. C., Westhead, Moore, & Co.	Cauldon Place.

ST. AUSTELL (CORNWALL).

Dunn, R., & Co.	Oak Villa.

ST. HELEN'S (LANCASHIRE).

Greenbank Alkali Co., Limited	St. Helen's Alkali Works.

STIRLING (SCOTLAND).

GARDNER, P. - - Dunmore Pottery, Stirling, Scotland.

ST. LEONARDS-ON-SEA (SUSSEX).

GODBOLD, H. J. - 8, Grand Parade.

STOCKPORT (CHESHIRE).

ANDREW, J. E. H. - Waterloo Road.

STOCKTON-ON-TEES (DURHAM).

PICKERING, J. - Globe Works.
WHITWELL, THOMAS - Thornaby Iron Works.

STOKE-ON-TRENT.

CAMPBELL BRICK AND TILE CO. - - Stoke-on-Trent.
MINTON, HOLLINS, & CO. - - - Stoke-on-Trent.
MINTON'S CHINA WORKS - - Stoke-on-Trent.

STOKE PRIOR (WORCESTERSHIRE).

CORBETT, J., M.P. - Stoke Prior Salt Works.

STONEHOUSE (GLOUCESTERSHIRE).

DAVIES, R. S., & SONS Stonehouse Mills.
HOOPER, C., & CO. - Eastington Mills.

STOURBRIDGE (WORCESTERSHIRE).

HARPER & MOORES - Stourbridge.
HARRISON, G. K. - The Lye and Brettel Works.
KING BROTHERS - Stourbridge.

STOURPORT.

BALDWIN, E. P. & W. Wilden Works.

STROUD (GLOUCESTERSHIRE).

BUBB & CO. - - Southfield Mills.
MARLING & CO. - Ebley and Stanley Mills.

SUNDERLAND (DURHAM).

FORD WORKS CO., LIMITED - - Ford.
THOMAS ROUTLEDGE - Ford.

SWANSEA (SOUTH WALES).

MOREWOOD, E., & CO. Coleridge House.
PENROSE & RICHARDS Swansea.
SWANSEA TIN PLATE CO. - - - Tin Plate Works.

TAIBACH (GLAMORGANSHIRE).

GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND Cwm Avon Works.

THIRSK (YORKSHIRE).

BAXTER, R. - - St. James' Green.

THORNTON (NEAR BRADFORD).

INGHAM, J., & SON - Croft Head Works.

TORQUAY (DEVONSHIRE).

WATCOMBE TERRA COTTA CO., LIMITED St. Mary's Church, Torquay.

TROWBRIDGE (WILTS).

SALTER, S., & CO. - Home Mills.

TUCKINGMILL (CORNWALL).

BICKFORD, SMITH, & CO. Tuckingmill.

TUNBRIDGE WELLS (KENT).

NORMAN, CARL - Graphic Villa.
ROBINSON & CHERRILL The New Public Buildings.

TUNSTALL (STAFFORDSHIRE).

BROWNHILLS POTTERY CO. - - Tunstall.
PEAKE, T. - - The Tileries.

TWICKENHAM (MIDDLESEX).

VANSITTART, H., MRS. 2, Montpelier Row.

WAKEFIELD.

HURD, F., & CO. - Wood Street.
E. GREEN & CO. - Economiser Works.

WALSALL (STAFFORDSHIRE).

HAWKINS BROS., LATE HALE, J., & CO. - Hatherton Works.

WALTHAM CROSS (HERTFORDSHIRE).

PAUL, W. - - Waltham Cross.

WAREHAM (DORSET).

PIKE, W. J. - - Wareham.

WARRINGTON (LANCASHIRE).

GREENING, N., & SONS Warrington.
HOUGHTON, W. D. - Friars' Green Mill.

WEST BROMWICH (STAFFORDSHIRE).

HAMBLET, J. - - Piercy Works.
WOOD & IVERY - Albion Brick Works.

WEMYSS BAY (SCOTLAND).

YOUNG, J. - - Kelly.

WESTON-SUPER-MARE (SOMERSETSHIRE).

MATTHEWS, J. - - Royal Pottery.

WHITBY (YORKSHIRE).

BRYAN, C. - - West Cliff.

WICK, CAITHNESS (SCOTLAND).

MUNROE, W. - - High Street.

WIDNES (LANCASHIRE).

DESOTO ALKALI CO., LIMITED - - Widnes.
GASKELL, DEACON, & CO. - - - Widnes.
HUTCHINSON, J., & CO. Widnes.

WIGAN (LANCASHIRE).

ROBY, G. - - 31, King Street.
WIGAN COAL AND IRON CO., LIMITED - Wigan.
WILLIAMS, M. - Britannia Varnish Works.

WISBEACH (CAMBRIDGESHIRE).

SAINTY, J. & B. - Alpha Machine Works.

WOKING.

WATERER, A. - - Knap Hill Nursery.

WOODSTOCK (OXFORDSHIRE).

DAGGETT, C. - - Woodstock.

WOOLWICH (KENT).

WETHERED, E. R., MAJOR, R.A. - Woolwich.

WORCESTER.

LEA & PERRINS - Worcester.
MCNAUGHT & SMITH - Worcester.
WEBB, E., & SONS - Copenhagen Street.

WORKINGTON (CUMBERLAND).

WEST CUMBERLAND IRON & STEEL CO., LIMITED - - Workington.

WREXHAM, DENBIGHSHIRE (WALES).

STEVENS, T. - - 46, Hope Street.

INTERNATIONAL EXHIBITION, PHILADELPHIA, 1876.

CATALOGUE OF THE BRITISH SECTION.

THE CATALOGUE NUMBER OF EACH EXHIBITOR WILL BE FOUND AT END OF ENTRY.

DEPARTMENT I.—MINING AND METALLURGY.

Location :—MAIN BUILDING.

MINERALS, ORES, BUILDING STONES, AND MINING PRODUCTS.

CLASS 100.—Minerals, ores, etc. Metallic and non-metallic minerals, exclusive of coal and oil. Collections of minerals systematically arranged; collections of ores and associated minerals; geological collections.

CLASS 101.—Mineral combustibles. Coal, anthracite, semi-bituminous and bituminous, coal-waste and pressed coal; albertite, asphalt, and asphaltic limestone; bitumen, mineral tar, crude petroleum.

CLASS 102.—Building stones, marbles, slates, etc. Rough, hewn, sawn, or polished, for buildings, bridges, walls, or other constructions, or for interior decoration, or for furniture.

Marble—white, black, or coloured—used in building, decoration, statuary, monuments, or furniture, in blocks or slabs not manufactured.

CLASS 103.—Lime, cement, and hydraulic cement, raw and burned, accompanied by specimens of the crude rock or material used, also artificial stone, concrete, beton.

Specimens of lime mortar and mixtures, with illustrations of the processes of mixing, etc.

Hydraulic and other cement.

Beton mixtures and results, with illustrations of the processes.

Artificial stone for building purposes, building blocks, cornices, etc.

Artificial stone mixtures, for pavements, walls, or ceilings.

Plasters, mastics, etc.

CLASS 104.—Clays, kaolin, silex, and other materials for the manufacture of porcelain, faïence, and of glass, bricks, terra-cotta and tiles, and fire brick. Refractory stones for lining furnaces, sandstone, steatite, etc., and refractory furnace materials.

CLASS 105.—Graphite, crude and refined; for polishing purposes; for lubricating, electrotyping, photography, pencils, etc.

CLASS 106.—Lithographic stones, hones, whetstones, grindstones, grinding and polishing materials, sand quartz, garnet, crude topaz, diamond, corundum, emery in the rock and pulverized, and in assorted sizes and grades.

CLASS 107.—Mineral waters, artesian wel water, natural brines, saline and alkaline efflorescences and solutions. Mineral fertilizing substances, gypsum, phosphate of lime, marls, shells, coprolites, etc., not manufactured.

Cl. **100, 115, 222, 106.**

Whitwell, Thomas, Thornaby Iron Works, Stockton-on-Tees. Collection of Cumberland Ores and Samples of Pig Iron, Illustrating the Bessemer Process. Collection of Materials used in making Cleveland Iron; Analyses of same, and Samples of Manufacture.

Model of most recent Example of Blast Furnace, with Wrightson's Hydraulic Charging Apparatus, and Whitwell's Patent Hot Blast Stoves and Ovens. Whitwell's Patent Open Stoves for Warming and Ventilating Rooms, Schools, Halls, Hospitals, Asylums, Railway Stations. Five examples. (1)

Exhibitor, Lyons, 1872 (Silver Medal); *Vienna*, 1873 (Medal for Merit); *London*, 1874 (Certificate of Merit).

Cl. **100, 101, 103.** **West Cumberland Iron and Steel Co. (Limited).** See Cl. 111.

Cl. **101.** **Wigan Coal and Iron Company** (Limited), Coal and Ironmasters, Wigan, Lancashire, England. CANNEL COAL for the production of Gas of high illuminating power, GAS COAL for the production of Gas. Pig Iron (Hæmatite, Foundry, and Forge). (2)

Exhibitors, London, 1862, for Cannel Coal (Prize Medal).

Cl. **101, 259.** **Dudgeon, Arthur,** Engineer, 22, Great George Street, Westminster, London, S.W., and 163, Great Brunswick Street, Dublin. Peat fuel manufactured by the Irish Peat Fuel Company. "Dudgeon's Process." Paper pulp manufactured from peat. (3)

Cl. **101.** **Dixon, Frederick,** Consulting Chemist, 20, Charterhouse Square, London, E.C. Patent fuel. (4)

Cl. **101.** **Penrose and Richards,** Merchants, Swansea, South Wales. Coke Fuel. (5)

Cl. **101.** **Marriott, Elizabeth.** See Cl. 513, 517.

Cl. **102.** **Macdonald, Alexander, Field, & Co.,** Workers in Polished Granites (Red, Blue, Grey, and Brown) for all varieties of monumental, architectural, and other purposes. Aberdeen Granite Works, Aberdeen, Scotland. A polished red granite monument, 21 feet high 4 feet square at base, 8 tons weight. (6)

Exhibitors, London, 1851, 1862 (Medals); *Paris*, 1855 (Medal), 1867 (Three Medals).

Cl. **102.** **Pen-yr-Orsedd Slate Quarry Co.** (Limited), Carnarvon, North Wales. Roofing slates, slate slabs, cisterns of slate, ridges for roofs, billiard slaba. Slate in the condition of slab partly manufactured and of roofing slates; with specimens illustrating the excellence of slate as a raw material. (7)

Exhibitors, Vienna, 1873 (Diploma of Merit); *Paris*, 1875 (Bronze Medal).

Cl. **102.** **Great North of Scotland Granite Company** (Limited), **The,** Granite Quarriers and Polishers, Peterhead, Scotland. Monumental Pedestal and Vase in polished Red Granite. (8)

Cl. **102.** **Lindley, Robert Charles,** Quarryman, Mansfield, Nottinghamshire. Specimens of stones from the Mansfield Quarries. (9)

Cl. **102.** **Bessbrook Granite Works,** Flynn, Thomas M. H., Manager, Bessbrook, Ireland. Irish Granites, Blue and Grey, polished and fine axed, in Headstones, Monuments, &c., and in polished Columns and Pilasters for building work. (10)

Cl **102.** **Shearer, Smith, & Co.,** Granite Merchants and Quarry Owners, and Granite Polishers, Dalbeattie Granite Quarries, Scotland, and 21, Great George Street, Westminster, London, S.W. Specimens of Scotch Polished Granite from their Quarries at Dalbeattie. Also specimens of axed and pick-dressed Granite for Buildings, Docks, Lighthouses, &c., and specimens of Street Paving Blocks. (11)

Cl. **102.** **Hunter, James,** Polished Granite Manufacturer, 209, King Street, Aberdeen, Scotland. Red polished granite Monument. (12)

Exhibitor, London, 1862, under the Firm of Robertson and Hunter.

Cl. **102.** **Cwmorthin Slate Company, The** (Limited), Slate Quarry Proprietors (Joseph F. Sims), 4, Cloak Lane, Queen Street, London, E.C., and Portmadoc, North Wales. Roofing slates. (13)

Exhibitors, Vienna, 1873 (Medal for Merit).

Cl. **102.** **Campbell, Hugh, & Son,** Newry Granite Polishing Works, Moor Quarries, Newry. Polished Granite. (14)

Cl. **103, 104.** **Grays Chalk Quarries Company, The** (Limited), Chalk Flint and Loam Merchants, Brick and Tile Makers, Lime Burners, Whiting and Paris White Manufacturers, 90, Lower Thames Street, London, E.C.; (Works) Grays, Essex. Chalk, Whiting, Kiln-dried Chalk, Gilders' Whiting, Flint. (15)

Exhibitors, London, 1874 (First Class Bronze Medal).

Cl. **103.** **Wouldham Cement Co.,** Portland Cement Manufacturers, and Grey Stone Lime Burners, Offices, 10A, King's Arms Yard, Moorgate Street, London, E.C.; Works, Wouldham-on-the-Medway, Kent, England. Specimens of Portland cement and its ingredients in different stages of manufacture. Concrete blocks and other objects made therefrom. (16)
Exhibitors, Moscow, 1872 (Grand Gold Medal); *Vienna*, 1873 (Medal for Merit); *London*, 1874 (Exhibitors Medal); *Paris Maritime Exhibition*, 1875 (Diploma of Honour).

Cl. **103.** **Patent Selenitic Cement Co.** (Limited), 21½, Millbank Street, Westminster, London, S.W. Licensors for Improved Method of Preparing Lime for Mortar, for Plastering and Brickwork, and also for Concrete in lieu of Portland Cement. (17)
Exhibitors, London, 1874 (Bronze Medal).

Cl. **103, 206.** **Eastwood & Co.** (Limited), Lime, Cement, and Brick Manufacturers, Wellington Wharf, Belvedere Road, Lambeth, London, S.E. Portland Cement, Building, Paving, Ornamental, and Fire (Stourbridge) (Newcastle) (Welsh), Bricks, Staffordshire Blue Bricks, and Grooved Paviors, Red Paving, and various Roofing Tiles, various Ridges and Clinkers. (18)

Cl. **103, 517.** **Lavers, Alfred Hamilton,** Cement Merchant, Nine Elms, London. Portland Cement; Test Blocks, &c.; Roman, Keene's, and Parian Cements; Plaster of Paris; Whiting. Testing Machine to show strength of Cement. (19)
Exhibitor, Vienna, 1873 (Diploma of Merit); *London*, 1874 (Medal).

Hollick & Co., Manufacturers of Portland Cement. Greenwich, London. Portland Cement. (20) Cl. **103.**

Francis & Co., Cement, Whiting, and Plaster of Paris Manufacturers. Offices Vauxhall, London. Works, Cliffe Creek, Rochester. Depôts, Liverpool and Goole. Specimens of Portland, Roman, Medina, and Parian Cement; also of Cement Concrete as used for Building Foundations, Stabling, Paving, and Railway Arches. Samples of Parian Scagliola and decorated Parian. (21) Cl. **103.**
Exhibitors, London, 1851 (Medal).

Busse, G., & Co., See Cl. 224. Cl. **103.**

Pike, William Joseph, Clay Merchant. Wareham, Dorsetshire. Raw materials. (22) Cl. **104.**

Harrison, George King (late Perrens and Harrison), Stourbridge Clay Proprietor Fire Brick and Gas Retort Manufacturer, The Lye and Brettell Lane Fire Clay Mines, and Brick Works, Stourbridge, England. Specimens of Stourbridge fire-clays as raised from the mine, and piece of same after having been subjected to intense heat, showing the small amount of contraction, the portion burnt fitting that unburnt. (23) Cl. **104.**
Exhibitors, London, 1862; *Paris*, 1867 (Hon. Mention).

Dunn, Robert, & Co., Clay Merchants Oak Villa, St. Austell, Cornwall. "China clay," in its raw material; also samples, for potting, bleaching, paper manufacturing, and other purposes. (24) Cl. **104.**

Oakey, John, & Sons, Emery and Black Lead Manufacturers, Wellington Mills, Westminster Bridge Road, S.E. Crude emery tone grain emery; flour emery prepared for the uses of machinists. (25) Cl. **106.**

METALLURGICAL PRODUCTS.

CLASS 110.—Precious metals.
CLASS 111.—Iron and steel in the pig, ingot, and bar, plates and sheets, with specimens of slags, fluxes, residues, and products of working.
CLASS 112.—Copper in ingots, bars, and rolled, with specimens illustrating its various stages of production.
CLASS 113.—Lead, zinc, antimony, and other metals, the result of extractive processes.
CLASS 114.—Alloys used as materials, brass, nickel, silver, solder, etc.

Cl. **110, 508.** **Johnson, Matthey, & Co.,** Metallurgists, 78, Hatton Garden, London, E.C. Articles in platinum, chiefly for chemical purposes; also rare and precious metals. (30)

Exhibitors, London. 1851, 1862; *Dublin,* 1865; *Paris,* 1867 (highest awards in each class); *Amsterdam,* 1869; *Vienna,* 1873 (Medal for Progress in two classes).

Cl. **111, 103.** **Governor and Company of Copper Miners in England, The,** Manufacturers of Copper, Tin Plates, and Iron, Cwm Avon Works, Taibach, Glamorganshire, S. Wales, and 27, Martin's Lane, Cannon Street, London, E.C. Tin and Terne Plates, ECC, Cwm Avon Charcoal. TB and BI brands. (31)

Exhibitors, Paris, 1855 (Silver Medal); *London,* 1862 (Bronze Medal); *Paris* (Maritime Exhibition), 1875 (Silver Medal).

Cl. **111.** **Houghton, William Dickson,** trading as **Houghton, W. D.,** Steel Wire Manufacturer, Friars' Green Mill, Warrington. Patent Steel Music wire for pianoforte and other purposes; Patent Steel Rope wire for Colliery, Mining, and Agricultural purposes; for Towing Hawsers, and for Tramways, Bridges, and other purposes requiring great strength and toughness combined. Round Steel wire for watch and clock purposes; for Sewing Machine purposes; Steel wire for Drills and other tools; for Needles. Square and flat, Click, and other shaped Steel wires. Steel wire for general purposes. Brass Pinion wire for gas and meter. (32)

Exhibitor, London, 1862 (Medal); *Lyons,* 1872 (Gold and Silver Medals); *Vienna,* 1873; (exhibited by mistake in French Department, and thereby disqualified to claim a medal).

Cl. **111, 113.** **Baldwin, E. P. & W.,** Iron Masters and Tin Plate Manufacturers, Wilden Works, near Stourport. Black Plates, Button Iron, Sheet Iron, Tin Plates, Tinned Sheets, Terne Plates. (33)

Exhibitors, Vienna, 1873 (Diploma of Merit).

Cl. **111.** **Smith, Frederick, & Co.,** Wire Manufacturers, Caledonia Works, Halifax, Yorkshire. Rope wire, rigging wire, telegraph wire, card wire, reed wire, and bonnet wire; samples of iron in its various stages of manufacture into card wire for dressing wool and cotton, and also superior class of charcoal wire for colliery ropes, ships' rigging, reed wire, bonnet wire, and covered wire for stems of artificial flowers, weaving wire, &c. (34)

Exhibitors, London, 1862; *Paris,* 1867; *Moscow,* 1872; *Vienna,* 1873. (Medals.)

Cl. **111.** **Brown, John, & Co.** (Limited), Iron, Steel, and Spring Manufacturers, Atlas Steel and Iron Works, Sheffield. Armour plates. Naval engineering. IN MACHINERY HALL. (35)

Exhibitors, Vienna (Diploma of Honour).

Cl. **111.** **Cammell, Charles, & Co.** (Limited), Steel and Iron Manufacturers, Cyclops Steel and Iron Works, Sheffield. Rolled Iron Armour Plate or Plates. IN MACHINERY HALL. (36)

Cl. **111, 320, 516.** **Siemens, Charles William,** Civil Engineer, 12, Queen Anne's Gate, London, S.W. Specimens of Iron and Steel. Models of Furnaces adapted to Metallurgical operations, Glass melting, &c. Pyrometers. (37)

Exhibitor, London, 1862 (Prize Medal); *Paris,* 1867 (Grand Prix); *Moscow,* 1872 (Gold Medal); *Vienna,* 1873 (Hors Concours).

Cl. **111, 113, 512** **Morewood, E., & Co.,** Tin and Terne Plate Manufacturers, South Wales Iron Works, Llanelly & Cambrian Tin and Terne Plate

Works, Llanelly; Office, Coleridge House, Swansea. Patent Tin and Terne Plates of all sizes. New patent machines for manufacturing Tin and Terne Plate and galvanized sheet Iron. (38)

Exhibitors under the firm of Morewood and Rogers, *London*, 1851, 1862; *Paris*, 1867. (Medals.)

Cl. **111, 113.** **Swansea Tin Plate Company, The,** Tin and Terne Plate Manufacturers, Swansea Tin Plate Works, Swansea. Tin and Terne Plates. (39)

Cl. **111, 113.** **Nash, Henry, & Co.,** Merchants, 12 and 14, Tower Buildings North, Water Street, Liverpool. Tin and Terne Plates, Black Plate, and "Patent Continuous" Roofing Terne Plate. (40)

Cl. **111.** **Great Western Iron Co.,** Soudley Newnham. Specimens of Pig Iron. (41)

Cl. **111, 100, 101, 103.** **West Cumberland Iron & Steel Co. (Limited),** Workington, Cumberland. Illustrations of the manufacture of Iron and Steel, The specimens include samples of Hematite and other Ores, Coal, Coke, Limestone, Pig Iron, Spiegeleisen, Granulated Blast Furnace Slag, Bessemer Steel in the Ingot. Steel Forgings, Steel Rails, and Rail Sections, Steel Boiler and Bridge Plates, Steel Railway Chairs (for India), &c. Also Samples illustrating the Testing of Steel, and the Metallurgy thereof. (42)

Exhibitors, *Paris*, 1867 (Silver Medal).

Cl. **111.** **Edge & Sons,** Coalport Works Shifnal, Shropshire. Wire Ropes and Chains for Mining and Engineering Purposes. (43)

Exhibitors, *London*, 1851 (Medal and Certificate for Excellence of Workmanship).

Cl. **111.** **Ash & Lacy,** Meriden Street, Birmingham, and Globe Works, Great Bridge Staffordshire. Galvanized, Tinned, Plain, and Corrugated Iron Sheets, perforated Zinc and Metals, &c. (44)

Cl. **111.** **Jessop, William, & Sons (Limited),** Park and Brightside Works, Sheffield. Steel in Bars, Sheets, large and small Plates. (45)

Cl. **111.** **Hatton, Sons, & Co.,** Bradley Ironworks, Bilston, Staffordshire, and Broadwater Ironworks, Kidderminster. Charcoal Sheet Iron and Charcoal Tinplates. (46)

Cl. **111.** **Warrington Wire Rope Works, Limited, The,** 32, Redcross Street, Liverpool, and Warrington. Wire Ropes for Mines and Ships' Rigging, &c.; Signal, Sash and Picture Cord; Fencing Strand, Plough and very pliable Hoisting Ropes. (47)

Cl. **111.** **Whitwell, Thomas.** See Cl. 100, 222, 506.

Cl. **114, 264.** **The Phosphor Bronze Company (Limited),** Phosphor Bronze Manufacturers and Founders, 139, Cannon Street, London, E.C.; Works, 115, Blackfriars Road, London, S. Specimens of Phosphor Bronze, such as Tools, Locks, Keys, Tubes, Wire, Sheet, Steam Fittings, Parts of Machinery, &c. (48)

MINE ENGINEERING—MODELS, MAPS, AND SECTIONS: TOOLS AND MACHINERY.

CLASS 120.—Surface and underground surveying and plotting. Projection of underground work, location of shafts, tunnels, etc. Surveys for aqueducts, and for drainage.

Boring and drilling rocks, shafts, and tunnels, etc. Surveys for aqueducts, and for ascertaining the nature and extent of mineral deposits.

Construction. Sinking and lining shafts by various methods, driving and timbering tunnels, and the general operations of opening, stopping, and breaking down ore, timbering, lagging, and masonry.

Hoisting and delivering at the surface, rock, ore, or miners.

Pumping and draining by engines, buckets, or by adits.

Ventilation and lighting.

Subaqueous mining, blasting, etc.

Hydraulic mining, and the various processes and methods of sluicing and washing auriferous gravel, and other superficial deposits.

Quarrying.

CLASS 121.—Models of mines, of veins, etc.

DEPARTMENT II.—MANUFACTURES.

Location :—Main Building.

CHEMICALS.

Class 200.—Chemicals, pharmaceutical preparations.

Mineral acids, and the methods of manufacture. Sulphuric, nitric, and hydrochloric acids.

The common commercial alkalies, potash, soda, and ammonia, with their carbonates.

Salt and its production. Salt from deposits—native salt. Salt by solar evaporation from sea water Salt, by evaporation from water of saline springs or wells. Rock salt. Ground and table salt.

Bleaching powders and chloride of lime.

Yeast powders, baking powders.

Class 201.—Oils, soaps, candles, illuminating and other gases.

Oils from mineral, animal, and vegetable sources. Refined petroleum, benzine, naptha and other products of the manufacture. Oils from various seeds, refined, and of various degrees of purity. Olive oil, cotton seed oil, palm oil. Animal oils, of various kinds, in their refined state. Oils prepared for special purposes besides lighting and for food. Lubricating oils.

Soaps and detergent preparations.

Candles, stearine, glycerine, paraffine, etc., spermaceti.

Illuminating gas and its manufacture.

Oxygen gas, and its application for heating, lighting, metallurgy, and as a remedial agent.

Chlorine and carbonic acid.

Class 202.—Paints, pigments, dyes, colours, turpentine, varnishes, printing inks, writing inks blacking.

Class 203.—Flavoring extracts, essences, perfumery, pomades, cosmetics.

Class 204.—Explosive and fulminating compounds ; in small quantities only, and under special regulations, shown in the building only by empty cases and cartridges. Black powder of various grades and sizes. Nitro-glycerine and the methods of using and exploding. Giant powder, dynamité, dualin, tri-nitro-glycerine.

Class 205.—Pyrotechnics for display, signalling, missiles.

Cl. 200, 660.

Parkinson Brothers, Chemists, 43, Hammerton Street, Burnley. Parkinson's Pastry Powder, a high-class quality of Baking Powder, prepared of the purest and most harmless ingredients only, and so balanced and neutralized, that after raising the paste no excess of the chemical ingredients remains in the food, which is rendered light, wholesome, and digestible to the weakest stomach. A new spiced pickling vinegar. (60)

Exhibitors, London, 1873 (Medal).

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Gaskell, Deacon, & Co., Alkali Manufacturers, Widnes, Lancashire. Carbonated Soda Ash, and Refined Alkali, of unusually high tests. Carbonated Soda Ash, Refined Alkali, and Caustic Soda, of the ordinary tests. Bleaching Powder, Soda Crystals, Bicarbonate of Soda, and Chloride of Calcium. (61)

Cl. 200.

Exhibitors, London, 1862 (Bronze Medal) ; *Paris*, 1867 (Silver Medal).

Cl. 200. **The Newcastle Chemical Works Co., Limited** (late C. Allhusen & Sons, Limited), Chemical Manufacturers, Newcastle-upon-Tyne. Soda ash, Alkali, refined and unrefined, Bleaching Powder, Crystals of Soda, (Sal. Soda), Bicarbonate of Soda, Caustic Soda, Chloride of Calcium. (62)

Exhibitors, Paris, 1855, *London*, 1862 (1st Class Medals); *Paris*, 1867 (Gold Medal); *Vienna*, 1873 (Medal of Merit).

Cl. 200, 201. **Calvert, F. C., & Co.,** Carbolic Acid Manufacturers, Bradford, Manchester. Carbolic and Cresylic Acids and Derivatives. Carbolic Acid Soaps. (63)

Exhibitors, Paris, 1867 (Silver Medal); *Havre*, 1868 (Gold and Silver Medals); *Amsterdam*, 1869 (Diplome d'Excellence); *Santiago, Chili* (Diplome d'Honneur); *Naples*, 1871 (Silver Medal, 1st class); *London*, 1871; *Vienna*, 1873 (Juror, Hors Concours).

Cl. 200. **Brunner, Mond, & Co.,** Alkali Manufacturers, Northwich, Cheshire. Alkali (pure), and Bicarbonate of Soda. (64)

Cl. 200. **Richards, Kearne, & Gasquoine,** Alkali Manufacturers, Malkins Bank Alkali Works, Sandbach, Cheshire. Sample of Brine from which the Soda Ash is produced; sample of Sulphate of Ammonia employed in manufacture of Soda Ash; sample of Soda Ash; sample of Bicarbonate of Soda prepared by Richards' Patent. (65)

Cl. 200. **Corbett, John, M.P.,** Salt Manufacturer, Stoke Prior Salt Works, Worcestershire. Refined Worcestershire Salt for Domestic, Dairy, and all other purposes. (66)

Exhibitor, London, 1862 (Hon. Mention); 1873 (Gold Medal); *Paris*, 1867 (Hon. Mention); *Maritime Exhibition*, 1875 (Silver Medal).

Cl. 200. **Hutchinson, John, & Co.,** Alkali Manufacturers, Widnes, Lancashire. Soda Ash (ordinary and refined, Caustic and Carbonated), Soda Crystals, Caustic Soda, Bicarbonate of Soda, Saltcake, Bleaching Powder, and Sulphur recovered from vat waste. (67)

Exhibitors, London, 1862 (Medal); *Vienna*, 1873 (Medal of Merit).

Cl. 200. **Young, James,** Chemist, Kelly, Wemyss Bay, N.B. Illustrations of manufacture of Carbonate of Soda, Chlorate of Potash, products from Petroleum, Coal, and Shale, preservation of Iron Ships. (68)

Cl. 200. **Allen & Hanburys,** Pharmaceutical Chemists, Wholesale Druggists and Manufacturers, Plough Court, Lombard Street, London. Varieties of pâte de jujube, and analogous articles prepared by Hawker's patent process to lessen adhesion and deterioration in appearance and consistence. Cod liver oil. Gelatine impregnated with Atropine and Calabar Bean for application to the eye. (69)

Exhibitors, London, 1862 (Hors Concours); *Paris*, 1867.

Cl. 200, 272. **Usher, Rufus,** Grower and Preparer of Medical Plants, Bodicote, near Banbury, Oxon. Specimens of English Medicinal Rhubarb Trimmed, Extract of Biennial Henbane, and Dried Biennial Henbane Leaves. Also Photographs of Biennial and Annual Henbane Plants. (70)

Cl. 200. **Muspratt, James, & Sons,** Chemical Manufacturers, Office, 5, Chapel Street, Liverpool; Works, Widnes, Lancashire, and Vauxhall Road, Liverpool. Soda ash (Caustic and Carbonated), 60°/₀ Cream Caustic Soda, and 60°/₀ and 70°/₀ White Caustic Soda, Bleaching Powder, Chlorate of Potash, Saltcake, and Brimstone. (71)

Exhibitors, London, 1862, (Bronze Medal); *Paris*, 1867 (Gold Medal).

Cl. 200. **Muspratt Brothers & Huntley,** Chemical Manufacturers, Office, 5, Chapel Street, Liverpool; Works, Flint, North Wales. Soda Ash, 60°/₀ Cream Caustic Soda, and 60°/₀ and 70°/₀ White Caustic Soda, Bleaching Powder, Soda Crystals, and Bi-carbonate of Soda. (72)

Exhibitors, London, 1862 (Bronze Medal).

Cl. 200, 272. **Kinmond & Co.,** Manufacturing Chemists, Kenilworth Street, Leamington. In bottles, Fluid Magnesia, containing double the strength of the British Pharmacopœia, also Effervescing Fluid Citrate of Magnesia of the same strength, and contained in a duplex bottle. (73)

Cl. 200. **Runcorn Soap and Alkali Company, The** (Limited), Alkali Manufacturers, 6, Water Street, Liverpool. Bleaching Powder,

Soda Ash, Crystals of Soda, Caustic Soda, and Refined Resin. (74)
Exhibitor, Vienna, 1873 (Medal of Merit); *Paris Maritime Exhibition*, 1875 (Gold Medal).

(Cls. **200.** **The Desoto Alkali Company** (Limited), Alkali Manufacturers; Works, Widnes, Lancashire; Registered Office, 10, Rumford Place, Liverpool. Samples of Caustic Soda, and Black Ash or Ball Soda. (75)

(Cl. **200, 272.** **Morson & Son,** Pharmaceutical Chemists, Southampton Row, Russell Square, London, W.C. General Chemicals and Specialities. Kreosote, Pepsine, Gelatine, and other products. (76)
Exhibitors, London, 1851 (Medal); 1862 (Juror, Hors Concours); *Paris*, 1855, 1867 (Medal).

(Cl. **200, 203, 272.** **Evans, Sons, & Co.,** Liverpool, and **Evans, Lescher, and Evans,** 60, Bartholomew Close, London, E.C. Wholesale Druggists, Vegetable, Animal, and Mineral Drugs and Perfumery, Pharmaceutical Products and Accessories. (77)
Exhibitors, Vienna, 1873 (Medal for Merit).

l. **200.** **Weldon, Walter,** Abbey Lodge, Merton, Surrey, S.W., Manufacture of Chlorine. Samples, and models of apparatus illustrative of the Weldon Process for the Manufacture of Chlorine. (78)

. **200, 272.** **Gerrard, Alfred William,** Pharmaceutical Chemist, 153, Liverpool Road, London, N. Mustard Plasters and Pharmaceutical preparations. (79)

l. **200.** **Higgin, Thomas, & Co.,** Salt Proprietors, 33, Tower Buildings West, Liverpool; Works, Northwich, Cheshire. HIGGIN'S FACTORY-FILLED SALT for domestic, dairy, and curing purposes generally. (80)

. **200, 260.** **Wyndham, F., & Co.,** General Merchants, 37, Eastcheap, London, E.C. "Esprit des Œufs" (Spirit of Eggs), a medicinal compound proportionately formed of citric acid, citrate of magnesia, phosphoric acid, phosphate of lime, potash, phosphate of iron, and albumen, seven ingredients in all. In AGRICULTURAL HALL. (81)
Exhibitors, Vienna, 1873; *London*, 1873 (Medal); *Paris*, 1875 (Hon. Mention).

White, John and James, Manufacturing Chemists, Shawfield Works, and 80, Wilson Street, Glasgow. Bichromate of Potash. (82) Cl. **200.**
Exhibitor, London, 1862 (Medal).

Spence, Peter, Alum Manufacturer, Manchester. Specimens of crystallized Alum, in block and in crystals, and of a new Aluminoferric compound for Precipitating Sewage, and for superseding the ordinary Aluminous cake in Paper Making. (83) Cl. **200.**
Exhibitor, London, 1851 (Hon. Mention); 1862 (Medal).

Chance Bros. & Co., Alkali Works, near Birmingham. Chemical Products. (84) Cl. **200.**

Greenbank Alkali, Co., Limited, St. Helen's, Lancashire. Chemical Products, including Pure Caustic Soda, Pure Chlorate Potash, Chloride Calcium, Concentrated Sal Soda; Soapmaker or Concentrated Lye for family soap-making; Washing Powder. (85) Cl. **200.**

Jennings, Thomas, Brookfield Chemical Works, Cork. Carbonate and Calcined Magnesia in blocks, bottles, tins, and boxes. (86) Cl. **200.**

Liver Alkali Works Co., Limited, The, Lightbody Street, Liverpool. Caustic Soda. (87) Cl. **200.**

Maw, Thomas. See Cl. 656, 660. Cl. **200, 203.**

Gissing & Sons. See Cl. 661. Cl. **200.**

Allen, F., & Sons. See Cl. 656, 659. Cl. **200.**

Goodall, Backhouse, & Co. See Cl. 656. Cl **200, 203.**

Ledger, H. & Co. See Cl. 656. Cl. **200.**

Smith, T. & H., & Co. See Cl. 656, 660. Cl. **200, 203.**

Powell, Thomas. See 657. Cl. **200.**

Jones, Palmer, & Co. See Cl. 656. Cl. **200, 203.**

Cohné, Sigismund, 13, Sise Lane, London, E.C. Chemical and Medical Soaps. Bearings requiring no lubricant. (88) Cl. **201, M. 573.**
Exhibitor, for the Chemical Soap, *Vienna* (Diploma of Merit).

Price's Patent Candle Company (Limited), Makers of Candles, Night-Lights, Oils, Soaps, Glycerine, Paraffine, Stearine, Cl. **201.**

Tapers.—Belmont Works, Battersea, London, S.W. Candles, Night-Lights, Pure Glycerine, Fatty Acids, Machinery Oils, Toilet Household and Mill Soaps, Glycerine, Paraffine, Stearine, and Tapers. (89)

Exhibitors, London, 1851 (Bronze Medal); *London*, 1862 (Juror, Hors Concours); *Paris*, 1855 (Gold, Silver, and Three Bronze Medals); *Paris*, 1867 (Gold Medal); *Dublin*, 1865 (Medal); *Dublin*, 1872 (Medal); *Havre*, 1868 (Gold Medal); *Amsterdam*, 1869 (Diplôme d'Honneur and Gold Medal); *Moscow*, 1872 (Grand Gold Medal); *Lyons*, 1872 (Gold Medal); *Vienna*, 1873 (Medal for Progress).

Cl. **201.** **Pears, A. & F.,** Toilet Soap Makers, Perfumers, &c., Inventors of Transparent Soap, 38 & 91, Great Russell Street, London, W.C., and Lanadron Soap Works, Isleworth, near London. Transparent Soap. (90)

Exhibitors, London, 1851 (Medal and Hon. Mention); 1862 (Medal); *Paris*, 1867 (Medal).

Cl. **201, 202.** **Williams, Miles,** Varnish Manufacturer, Britannia Varnish Works, Wigan, Lancashire. Samples of coach builders', painters', decorators', japanners' and other varnishes; varnish paints, enamels, acquers, and specimens of work; Gas carburetter and drawings of patents; English and American Patents; Improvement in manufacture of Gas, and Liquid Fuel. (91)

Cl. **201.** **Field, J. C. & J.,** Lambeth Marsh, London. Wax, Spermaceti, Ozokerit, Paraffine, and Self-fitting Candles, United Service, and all qualities of Toilet Soaps, Beeswax, and Refined Yellow Wax, with White Wax, Dyer's Soaps, Sealing Wax, and Fancy Ornamental Candles. Night Lights, and the Patent "Lychnophylax" or Candle Guard for effectually preventing the guttering of Candles. (92)

Exhibitors, London, 1851, 1862 (Medals); *Paris*, 1867 (Medal); *Lyons*, 1871 (Medal); *Moscow*, 1872 (Medal); *Vienna*, 1873 (Medal for Progress).

Cl. **201.** **The Star Plate and Universal Polishing Powder Co.,** 6, Gracechurch Street, London, E.C. Star Plate and Polishing Powder. (93)

Cl. **201, 202.** **Craig & Rose,** Caledonian Oil and Colour Works, Edinburgh, London, and Glasgow. Paints, Colours, Oils, Varnishes. (94)

Cl. **201.** **Marrison, Robert D.** See Cl. 269.

Cl. **202, 258.** **Stephens, Henry Charles,** Chemist, 171, Aldersgate Street, London. Writing Fluids and Copying Inks, with some new and important discoveries therein, Ink Powders, Machine Ruling and Endorsing Inks, Inkstands, Gum Mucilage, Quills, Sealing Wax, Parallel Rulers, and Stains for Wood. (95)

Exhibitor, Paris, 1867 (Two Medals, Silver and Bronze); *Havre*, 1868 (Silver Medal); *Amsterdam*, 1869 (Silver Medal); *Lyons*, 1872 (Bronze Medal); *Vienna*, 1873 (Medal for Merit).

Cl. **202.** **Lyons, William,** Writing and Copying Ink and Sealing Wax Manufacturer, Park Street, Manchester, and Watling Street, London, E.C. Blue Black Writing and Copying Fluids, Marking Ink, Sealing Wax, Gum Mucilage, Ink Powders, Paper Dye Tablets, and various Coloured Writing and Copying Inks. (96)

Exhibitor, London, 1862 (Hon. Mention); *Paris*, 1867 (Medal); *Vienna*, 1873 (Medal for Merit).

Cl. **202.** **Bowman, Charles,** Stencil Plate, Ink, and Brush Manufacturer, 6, King Street, Tower Hill, London, E. Specimens of solid ink, stencil plates, stencil brushes, &c. (97)

Exhibitor, London, 1872 (Certificate).

Cl. **202.** **Storer, David, & Sons,** Colour Manufacturers, Sydney Street, Glasgow, N.B. Colours, Pigments, and Wood Stains. Venetian, Indian, and other Reds. Drop Blacks, Greens, and other pigment Colours. (98)

Cl. **202.** **Cooper & Co.,** Ink Manufacturers, 5, Shoe Lane, Fleet Street, London, E.C. Writing Inks, Japan Ink, Register, Extra Black and Blue Black Fluid Inks, Blue Black and Copying Fluid, Black Copying Ink, Red Ink, Brilliant Scarlet Ink, Blue and Violet Inks. (99)

Cl. **202.** **Silicate Paint Company,** Paint Manufacturers, 24, Fenwick Street, Liverpool. Silicate paints and colours for House, out and indoor work, ship, general, and iron work of all kinds; petrifying liquid for damp walls, &c., &c. Griffiths' Patent Enamelling Paints for decorative work; Griffiths' Patent Anti-Fouling Paint for ships' bottoms; Vulcan Cement for steam joints, Anti-Incrustation Fluid, Nitre Killer, &c. (100)

Both (the Company and Mr. Griffiths) *Exhibitors, London*, 1874 (each obtained Medal).

Cl. 202. **Waterston, George, & Son,** Sealing Wax Makers, Edinburgh. Sealing wax for every purpose. Letter and Parcel Wax, Wax for Hot Climates, Express Wax for American Express Companies, Bottling Wax, all Colours. (101)

Exhibitors, London, 1851, 1862; *Paris,* 1855; *Dublin,* 1865 (Bronze Medals). *Paris,* 1867. (Silver Medal; the highest award given for Sealing Wax).

Cl. 202. **Blackwood, John, & Co.,** Manufacturing Chemists, Shellac Bleachers, and Ink Makers, 18, Bread Street Hill, London, E.C. Writing, Copying, Indelible Stamping, Marking and Patent "Jetoline" Marking Inks, Sealing and Bottle Wax. (102)

Exhibitors, London, 1851, 1862 (Hon. Mention); *Vienna,* 1873 (Progress Medal).

Cl. 202, 652. **Sands Brothers & Co.,** Manufacturing Chemists, Salford Chemical Works, Manchester. Writing inks, Aniline Dyes, and Blacking Inks for Bright and Dull Leather Work. In Agricultural Hall. (103)

Exhibitors (as Alfred Sands & Co.), *London,* 1871 (Certificate); *Northampton,* 1873 (Hon. Mentions and Medals for Goods dressed with S. B. & Co.'s Dyes); (as Sands Brothers & Co.) *Leeds,* 1875 (Certificate of Merit); *Paris Maritime Exhibition,* 1875.

Cl. 202. **Turner, Chas., & Son,** Varnish and Colour Manufacturers, 7, 8, and 9, Broad Street, Bloomsbury, London, W.C., and George Yard, Whitechapel, London, E. Varnishes suitable for railway companies, carriage builders, and house decorators; Fine Colours of all descriptions; Gums used in the manufacture of varnishes, linseed oil, spirit of turpentine. (104)

Exhibitors, Paris, 1867 (Medal).

Cl. 202. **Adams, John,** Chemical Manufacturer, Victoria Park, Sheffield. Polishes for Furniture, Brass, and Plate. (105)

Exhibitor, London, 1862; *Paris,* 1867 (Hon. Mention); *Vienna,* 1873 (Diploma of Merit).

Cl. 202. **John Bond,** the late, (**Hickisson, M. A.** (Mrs.), daughter of,) Marking Ink Manufacturer, 75, Southgate Road, London, N. Inventor of Crystal Palace Marking Ink and pedestals containing ink, pens, and linen stretcher and framed specimens. (106)

Exhibitor, Dublin, 1865 (Certificate of Merit); *Amsterdam,* 1869 (Received the appointment of Purveyor to the Queen and Court of Holland); *Paris,* 1870 (Gold Medal from the Académie Nationale); *London Workmen's International Exhibition,* 1870 (Silver Medal); *Lyons,* 1872 (Bronze Medal); *London,* 1873 (Certificate of Merit); *Vienna,* 1873.

Rowney, George, & Co., Manufacturing Artists' Colourmen and Fine Art Publishers, 52, Rathbone Place; 29, Oxford Street; and 10 and 11, Percy Street, Tottenham Court Road, London. Pigments, colours, varnishes, artists' materials. (107) Cl. 202.

Exhibitors, London, 1851, 1862; *Paris,* 1855, 1867; *Lyons,* 1872. (Medals.)

Mackay, John, Pharmaceutical and Manufacturing Chemist, 119, George Street, Edinburgh. Fluid Flavouring Quintessences from Spices, Fruits, and Vegetables. Preparations for domestic and culinary purposes. Articles of diet for invalid and table use. Spirit Varnishes and Polishes for coating wood of all colours, White, Mahogany, Oak, or Ebony. (108) Cl. 202, 203, 656.

Exhibitor, London, 1862; *Paris,* 1867 (Medal and Hon. Mention); *Vienna,* 1873 (Medal for Progress).

Chambers, T. F., 51, High Street, Hull. Black Varnish. (109) Cl. 202.

Johnson, Brothers, Hull. Colours, Varnishes, Machinery Oils, and Locomotives and Anti-friction Greases. (110) Cl. 202.

Rawlins & Son, Brook Works, Rainhill, Prescot. Ultramarine, both crude and finished. Smalts, both crude and finished. Raw materials used in the manufacture of Ultramarine and Smalts. (111) Cl. 202.

Atkinson, J. & E., Manufacturers of Perfumery and Fancy Soaps, 24, Old Bond Street, London, W. Essences, Bouquets, Eau de Cologne, Lavender Waters, and all kindsof Perfumes for the Handkerchief, Pomades, Toilet Powders, Hair Oils and Washes, Fancy Soaps, Cosmetics, Dentifrices, Toilet Waters and Vinegar, and Preparations for Cl. 203.

the Skin. All kinds of Perfumery and Toilet articles. (112)

Exhibitors, London, 1862 (Prize Medal); *Paris*, 1867 (only Silver Medal); *Cordova*, 1872 (only Silver Medal); *Lima, Peru*, 1872 (Silver Medal); *Vienna*, 1873 (Medal for Progress).

Cl. 203. 286. **Low, Son, & Haydon,** Perfumers, 330, Strand, London, W.C. Perfume Extracts, Toilet Soaps, and Brushes. (113)

Exhibitors, London, 1851 (Hon. Mention); 1862 (Medal).

Cl. 203. **Perks, Samuel,** Cultivator and Distiller of Lavender, High Street, Hitchin, Herts. Essential Oil of Lavender, Extract Lavender Flowers, and other Lavender productions. (114)

Exhibitor, London, 1862 (Hon. Mention); *Paris*, 1867 (Medal).

Cl. 203. **Thiellay, Eugene Henry,** Perfumer Chemist, Charing Cross Hotel, London, S.W. Manufactory, Amersham Road, New Cross, Kent. Golden Hair Tincture, Hair Dyes in every shade. Hair Bleaching Liquid; Hair Tonics and Cultivators. (115)

The effect of The "Golden Hair Tincture" was exhibited at the Paris Hair Dressing Soirée in 1867, not the Paris Universal Exhibition, and the model obtained the Gold Medal.

Cl. 203, 262. **Rimmel, Eugene,** Manufacturing Perfumer and Toilet Soap Maker, 96, Strand, London, W.C., 128, Regent Street, London, W., and 24, Cornhill, London, E.C. Extracts and Essences, Toilet Vinegar, Toilet Waters, Perfume Vaporizers, Pomades, Oils, Lime Juice and Glycerine, Hair Washes, Lotions and Cosmetics for the Skin, Toilet Powders, Dentifrices, Aromatic Disinfectants, Toilet and Shaving Soaps, Valentines, and Fancy Crackers. (116)

Exhibitor, London, 1851 (Hon. Mention); 1862 (Juror, Hors Concours); *Paris*, 1855 (Bronze Medal); 1867 (Gold Medal); 1875 (Assistant Commissioner); *Vienna*, 1873, (Medal for Progress).

Cl. 203. **Crown Perfumery Co., The,** 40, Strand, London. Perfumes and Toilet Requisites. (117)

Exhibitors, Vienna, 1873 (Medal for Merit).

Cl. 203. **Jaap, John,** Pharmaceutical Chemist, 268 and 270, Buchanan Street, Glasgow. Bitters Aromatique, Artificial Yeast, Baking Powder for making Household Bread, Browning Sauce, Curry Powder, Celery Salt, Soluble Cayenne Pepper, Prepared Taraxacum or Dandelion, Mixed Spice Powder, Savoury Sauce for Soups, &c., Raspberry and Chili Vinegar. Flavouring Quintessences for flavouring Jellies, Puddings, Creams, &c., comprising Lemon and Orange Peel, Pine Apple, Cinnamon, Cloves, Vanilla, Bitter Almonds, Ratafia, Ginger, Nutmeg, Celery, Carraways, Garlic, Shallot, Coriander, Cochineal, Curry Powder, Thyme, Sage, Orange Flowers, Parsley, White Pepper, Acidulated Lemon, Mace, Peppermint, Cayenne, Allspice, Hawthorn Bloom. (118)

Cl. 203. **Sturges Montserrat Company (Limited),** West Indian Merchants and Planters, Broad Street, Birmingham. (119)

Cl. 203. **Cliff, J.** See Cl. 656.

Cl. 203. **Lea & Perrins.** See Cl. 656.

Cl. 203. **Bewley & Draper.** See Cl. 656, 660.

Cl. 203. **Inman, Brothers.** See Cl. 656, 660.

Cl. 203. **Codd, Hiram.** See Cl. 656, 660.

Cl. 203. **Corry & Co.** See Cl. 656, 660.

Cl. 203. **Cantrell & Cochrane.** See Cls. 656, 660.

Cl. 203. **Crosse & Blackwell.** See Cl. 656, 660. 662.

Cl. 203. **Patchitt, E. C.** See Cl. 656.

Cl. 203. **Pratt, James.** See Cl. 656.

Cl. 204. **Copeland, George Alexander,** Manufacturer and Merchant, Camborne, Cornwall. Safety blasting cartridges, ready for use, and empty cases to be charged by the miner or quarryman. The Cartridges and Fuses are made waterproof or not. The casing is non-combustible. Invented and manufactured by exhibitor. (120)

Exhibitor, London, 1862 (Hon. Mention).

Cl. 204. **Bryant & May,** Patent Safety Match and Wax Vesta Manufacturers, Fairfield Works, Bow, London, E. Patent Safety Matches, Wax Vestas and Vesuvians, Patent Decorated Metal and other Boxes. (121)

Exhibitors, London, 1862; *Dublin*, 1865; *Moscow*, 1872; *Vienna*, 1873 (Medal for Merit); *Leeds* (Prize Medals.)

Cl. 204. **Eley Brothers** (Limited), Ammunition Manufacturers, 254, Gray's Inn Road, London, W.C. Agents—Messrs. Joseph C. Grubb & Co., Philadelphia. Cartridge cases (empty) Paper and Metal, sporting and military, Percussion Caps, Gun Waddings. (122)
Exhibitors, Vienna, 1873 (Medal for Progress).

Cl. 204. **Bickford, Smith, & Co.**, Patentees and Manufacturers of Patent Safety Fuses, Tuckingmill, Cornwall. Sample case of Bickford's Patent Safety Fuses for conveying fire to the charge in all blasting operations. (123)
Exhibitors, London, 1851, 1862, 1874; *Paris*, 1855; *Dublin*, 1865; *Paris*, 1867; *Altona*, 1869; *Cordova, S. America*, 1872 (Medals); and *Vienna*, 1873 (Medal for Merit).

Pigou, Wilks, and Laurence, Limited, Gunpowder Manufacturers, 11, Queen Victoria Street, London, E.C., Dartford, Kent, and Battle Sussex. Military, Sporting, African, and Mining Powders of every description. (124) Cl. 204.

Lacey, Richard George, Commission Boatman, H.M. Coast Guard, Coast Guard Station, Leigh, Essex. A rocket apparatus to be carried on board ship for throwing lines from one ship to another or to the shore, in case of shipwreck and for towing purposes, &c. An alarm signal box for use on board ship (for firing alarm rockets and blue lights). A fisherman's block, useful for hoisting steamers' mast-head lights, for trawl beams, also for barges, brailblocks, &c. (125) Cl. 204, 206.
Exhibitor, London, 1873; *Paris*, 1875. (Medals.)

CERAMICS—POTTERY, PORCELAIN, ETC.

Class 206.—Bricks, drain-tiles, terra-cotta, and architectural pottery.
Class 207.—Fire-clay goods, crucibles, pots, furnaces. Chemical stoneware.
Class 208.—Tiles, plain, enamelled, encaustic; geometric tiles and mosaics. Tiles for pavements and for roofing, etc.
Class 209.—Porcelain for purposes of construction. Hardware trimmings, etc.
Class 210.—Stone china, for chemists, druggists, etc., earthenware, stoneware, faïence, etc.
Class 211.—Maiolica and Palissy ware.
Class 212.—Biscuit-ware, parian, etc.
Class 213.—Porcelain for table and toilet use, and for decoration.

Cl. 206, 207. **Brooke, Edward, & Sons,** Fieldhouse Fire Clay Works, Huddersfield, Yorkshire. Sanitary Tubes from 2 to 36 inches in diameter, Fire Bricks and Clay for all description of Furnaces, Patent Sewer Ventilators, Silica Fire Bricks for Siemens, Furnaces. (140)
Exhibitors, Paris, 1867; *London*, 1874.

Cl. 206, 226. **Jennings, George,** Sanitary Engineer, Palace Wharf, Stangate, London, S.E. Patented Specialities in Lavatories, Baths, Closets, Urinals, and Latrines; Water Meters, Water Waste Preventers. Appliances for Ventilation, &c. Terra-cotta bricks, &c. Improved Stoneware Drain Pipes, Gulley Traps, &c. (141)
Exhibitor, London, 1851, 1862 (Bronze Medals); *Paris*, 1867 (Silver Medal); *Vienna*, 1873 (Medal for Progress, "for general excellence of articles exhibited, and novelty of application.")

Dean, Henry, Sanitary Engineer and Surveyor, Southam, Rugby, Warwickshire. Dean's Patent Stoneware Drain Traps and Yard Gullies of different Patterns. (142) Cl. 206, 226.
Exhibitor, Norwich Sanitary Exhibition, 1873 (Certificate of Merit); *London*, 1875 (Medal).

Cl. **206, 400.** **Tinworth, George,** Sculptor, 122, Hill Street, Walworth, London, S.E. A series of original Panels in Terra Cotta, Illustrative of Scripture, and sundry articles in coloured stoneware. (143)

Exhibitor, Royal Academy of Arts, 1874–1875; *Vienna*, 1873 (Coöperators Medal).

Cl. **206, 210, 213.** **Brownhills Pottery Company, The,** Earthenware Manufacturers, Tunstall, and Manufactures of Bricks, Tiles, &c., Dale Hall, Burslem, Staffordshire. Earthenware, Dinner, Dessert, and Toilet Ware, Jugs, &c., printed, enamelled, painted, and gilded. Vases and other Ornaments, painted and decorated in Enamel; Terra Cotta and Black Glazed Ware. Floor and Roof Tiles, Ridge Ornaments, &c. in Red and "Staffordshire Blue." (144)

Cl. **206.** **Peake, Thomas,** Manufacturer of Terro-Metallic Bricks, Tiles, &c., The Tileries, Tunstall, Staffordshire. Paving and facing bricks, ridge, roofing, and flooring tiles; also ornamental tiles for garden borders, skirtings, and mural decorations. (145)

Exhibitor, London, 1851 (First-class Prize Medal); *Paris*, 1867 (Silver Medal); *London*, 1871 (Certificate).

Cl. **206.** **Hamblet, Joseph,** Piercy Blue Brick Works West Bromwich, Staffordshire. Vitrified Blue Bricks, Copings, Plinths, Stable Floor Bricks, Quarries, Ridges, Roofing Tiles, and every variety of Terra Metallic Pavings. (146)

Cl. **206, 207, 210. 400.** **Doulton, Hy., & Co.,** Potters, 63, High Street, Lambeth, London, S.E. Terra-Cotta goods for Architectural and Horticultural purposes of every description; Sanitary Pottery in Salt Glazed Stoneware, consisting of Drain Pipes, Traps, &c., Queen's Ware; White Staffordshire Earthenware Sanitary Goods; Vases, Flower-pots, Fountains, &c. in Terra Cotta, &c. Vitrified Metallic Bricks and Pavings. Colossal group of America, by John Bell, Esq., on pedestal, ornamented with art pottery. (147)

Exhibitors, London, 1851 (First-class Medal); 1862 (only Medal for Drain Pipes); *Paris*, 1867 (only Silver Medal for Stoneware Pipes); *Vienna*, 1873 (Medal for Merit); *Hamburg*, 1863; *Oporto*, 1865; *New Zealand*, 1865; *Auxerre*, 1866; *Caen*, 1867; *Amsterdam*, 1869; *Lyons*, 1872; *Dublin*, 1872.

Cl. **206, 210.** **Watcombe Terra Cotta Company, The** (Limited), Terra Cotta Manufacturers, Watcombe, S. Mary Church, South Devon. Art manufactures in Terra Cotta, consisting of Painted Vases and Plaques, Statuettes in single figures and groups, miscellaneous, ornamental, and useful articles; Imperishable Frescoes for Mural Adornment, and Architectural Terra Cotta specimens. (148)

Exhibitors, London, 1874 (Medal).

Cl. **206, 207, 210, 213.** **Holland, William Thomas,** Earthenware, Brick, Pipe, and Terra-Cotta Manufacturers, Yrisymudw, near Swansea and Llanelly, South Wales. Ceramic goods, Earthenware or Faïence, in Table, Tea, Toilet Services, &c.; Architectural Terra-Cotta, Ornamental Bricks and Tiles, Fire Bricks ("Dinas," &c.) and Fire-Proof Cements; Sanitary Pipes and Sanitary Ware. (149)

Exhibitor, London, 1862, 1871.

Cl. **206, 207.** **Lindsay & Anderson,** Fire-clay and Terra Cotta Manufacturers, Lilliehill Fire-clay and Terra Cotta Works, Dunfermline, Scotland. Fountain in Terra Cotta, bust and pedestal of Sir Walter Scott, Statuette of Sir James Y. Simpson, Nymphs at Fountain, Garden Vases and Pedestals, gas stove in Terra Cotta, sewage pipes, sanitary appliances, Fire Clay bricks, chimney cans, collection of Terra-Cotta. (150)

Cl. **206.** **Matthews, John,** Pottery Manufacturer, Royal Pottery, Weston-super-Mare (Somerset). Terra-Cotta vases, Terra-Cotta fountains, Terra-Cotta baskets; Garden Pottery, &c. (151)

Exhibitor, London, 1851 (Prize Medal for Excellence of Garden Pots); 1871 (Certificate of Merit); *Birmingham Horticultural Exhibition*, 1874 (Silver Medal).

Cl. **206.** **Wood & Ivery,** Brick Manufacturers, Albion Brick Works, West Bromwich, Staffordshire. Blue Terra-Metallic Building and Fancy Bricks, Mouldings, Copings, Footpath Paving Bricks, Grooved Stable Floor Bricks, Terminals, Terra-Metallic Vases, Trusses, &c. (152)

Exhibitors, Moscow, 1872 (Gold Medal); *Vienna*, 1873; *London*, 1874 (Bronze Medal); *Paris*, 1875 (Bronze Medal).

Cl. **206, 207, 210.** **Stiff, James, & Sons** (established 1751), Manufacturers of Stoneware, Terra-Cotta, &c., London Pottery, High Street, Lambeth, London, S.E. Specimens of Fine Stoneware

Jugs, &c., in Decorated Lambeth ware: Jars, Bottles, Tiles, Terra-Cotta Vases, Medallions, &c.; Water Filters, Refrigerators, &c.; Air Bricks, Ornamental String Courses, &c.; Terra Cotta Stoves and Stove Linings; Stoneware apparatus used in chemical and other processes; Specimens of Insulators, Batteries, Jars, Porous Cylinders, Plates, &c.; Specimens of Architectural Terra-Cotta Tablets with allegorical figures in bas-relief; Terra-Cotta Figures for Church and other Decoration; Horticultural Terra-Cotta, &c.; Sanitary Stoneware, Improved Sewer Traps, Sewage Carriers, Drain Pipes, &c. (153)

Exhibitors, London, 1862 (Hon. Mention); 1871 (Certificate).

Cl. **206.** **Johnson & Co.,** Ditching Potteries, Burgess Hill, Sussex; Offices, 18, Adam Street, Adelphi, London, W.C. Manufacturers of Dark Red, Light Buff, and other Terra-Cotta, Paving and Fancy Bricks, Ridge, Roof, and Flooring Tiles, Garden Edging, &c. IN AGRICULTURAL HALL. (154)

Exhibitors, London, 1874 (Medal).

Cl. **206.** **Eastwood & Co.** See Cl. 103.

Cl. **207.** **Harper & Moores,** Fire-clay and Brick Works, Stourbridge. Fire Clays in raw state, both ground and unground, and also burnt specimens; Prepared Clays, Fire Bricks, Crucibles for Iron and Brass Founders' work, Melting Pots for Glass Works, and Bricks used in the erection of smelting furnaces, and in the manufacture of Glass, Iron, and Gas and in other Works where great fire-resisting qualities are required. (155)

Cl. **207.** **King Brothers,** Proprietors of Best Stourbridge Fire Clays, Manufacturers of all kinds of Fire Bricks, for Furnaces, &c., Gas Ovens, Gas Retorts, and Bottle House Tank Blocks, also Crucibles (in Clay and Plumbago). Stourbridge. (156)

Exhibitors, London, 1862.

Cl. **207.** **Patent Plumbago Crucible Company, The,** Manufacturers of Portable Furnaces for Melting, Dental Enamelling purposes, &c., and Assay Clay Crucibles, suitable for Gold and Silver Workers, Refiners, &c., and all kinds of Fire Standing Goods, Battersea Works, London, S.W. Portable furnaces used for enamelling, Dental Work, Jeweller's melting and cupellation; skittle pots for glass melting; crucibles for Jewellers, Assayers, Dentists, &c.; Founders' Blacking. (157)

Exhibitiors, London, 1862 (only Medal for Crucibles); *Dublin*, 1865 (only Medal for Crucibles); *Oporto*, 1865 (Silver Medal for Crucibles); *Paris*, 1867 (only Medals for Crucibles); *Havre*, 1868 (sole highest awards); *Amsterdam*, 1868 (sole highest awards); *Moscow*, 1872 (only Gold Medal given for Crucibles).

Cliff, John, Chemical Stoneware Manufacturer, Fire Brick Maker, &c., Runcorn, near Liverpool. (158) Cl. **207.**

Exhibitors, London, 1851; *Paris*, 1855; *Dublin*, 1865 (Medals). Firm: Stephen Green & Co. up to 1857, John Cliff & Co. to 1869, and subsequently John Cliff.

Reynolds, John George, Terra-Cotta, Firebrick, and Patent Torrified Amber Tobacco Pipe Manufacturer, 9, Old Ford Road, London, E. Raw materials, Pipe Clays, and Pipes, Terra-Cotta Clay and Fireclays; Gas Stoves in Terra-Cotta, Backs and Cheeks for Close Stoves, Fuel Economisers, Gas Shades, &c.; Firebricks, &c.; Water Paint for outside work. (159) Cl. **207.**

Exhibitor, London, 1871.

Price J., & C., & Bros., Stoneware Potters, 69, Victoria Street, Bristol. Jars and vessels of all kinds made of highly glazed stoneware, capable of resisting the action of all spirits and acids; Ale Bottles, Spirit Jars, Barrels, Preserve Jars, Water Filters, Feet Warmers, &c. (160) Cl. **207, 210.**

Exhibitors, Paris, 1867 (Prize Medal).

Bates, Walker, & Co. (late Bates, Elliot, & Co.), Earthenware Manufacturers, Dale Hall Works, Burslem, England. General nature of earthenware goods specially adapted for the American trade, consisting of dinner, dessert, toilet, and tea ware, jugs, vases, flower pots, and punch bowls, sanitary, photographic, druggist's, chemical, and perfumery ware, scale plates and patch boxes. Also manufacturers of ironmongers', artists', and garden ware, stick, parasol, and umbrella handles, spirit barrels, sign board letters, porcelain slates, Menu tablets, &c. (161) Cl. **207, 210, 213.**

Exhibitors, London, 1851 (Medal); *New York*, 1853 (Medal); *Paris*, 1855 (First-class Medal); *London*, 1862, 1871 (Hon. Mention, Medal); *Italy*, 1858 (Hon. Mention); *Dublin*, 1874; *Manchester*, 1875 (Hon. Mention).

Cl. 207. **Doulton & Co.,** Potters, 4, High Street, Lambeth, London, S.E. Mantlepieces, Stoves, Hearth, and Fenders entirely of Clay; Crucibles, Furnaces, Muffles, in Fire-Clay and Plumbago. (162)

Exhibitors, Paris, 1867 (Medal); *London*, 1871, 1872, 1873, 1874 (Medals); *Vienna*, 1873 (Medal for Merit).

Cl. 207. **Davidson, T., jun. & Co.,** Caledonian Pipe Works, 33 and 41, Garngad Hill, Glasgow. Specimens of clay tobacco pipes in upwards of 200 different patterns, manufactured from finest and most carefully prepared clays in white, red, and black. Also specimens of "Torrified meerschaum" coloured and highly finished white clay pipes, fitted with fancy mouth-pieces and cases. (163)

Cl. 208, 211. **Minton, Hollins, & Co.,** Tile Making, Patent Tile Works, Stoke-upon-Trent. Encaustic and Plain (glazed and unglazed); Printed, Enamelled, and Maiolica Tiles; Tile-Mosaic richly glazed Art-painted Tiles; Tile Fender, Chimney-piece, Fire-grate; Tiled Flower Vases, &c. (164)

Exhibitors, London, 1851 (Council Medal); 1862 (First-class Medal); *Paris*, 1855, 1867 (Gold Medals); *Moscow*, 1872 (Gold Medal); *Vienna*, 1873 (Medal for Progress).

Cl. 208, 211. **Maw & Co.,** Manufacturers of Geometrical Mosaic, Encaustic, and Maiolica Tiles for Pavements, Wall Lining, Hearths, Fireplaces, &c.; Architectural Maiolica for Friezes, Stringcourses, Pilasters, &c. Benthall Works, Broseley, Shropshire. Agents for United States, A. Merchant & Co., 244, Pearl Street, New York. Geometrical, Mosaic, Encaustic, and Maiolica tiles (loose specimens and specimens in mounted frames); Architectural Maiolica, Maiolica ware, and Terra-Cotta. (165)

Exhibitors, London, 1862; *Paris*, 1867; *Dublin*, 1865; *Oporto*, 1865 (Medals); and numerous other Exhibitions.

Cl. 208. **Stanley Brothers,** Manufacturers of Terra-Cotta, Blue Bricks, and Tiles, Red Ridging, &c., Midland Tile Works, Nuneaton, Warwickshire. Perforated Tiles for Malt Kiln floors. (Patent machine made.) (166)

Exhibitors, London, 1874 (Medal).

Cl. 208, 211. **Craven, Dunnill, & Co.** (Limited), Encaustic, Geometrical, and Mosaic Tile Makers, Jackfield Works, near Ironbridge, Shropshire. Encaustic, plain, and mosaic tiles for pavements, glazed hearth tiles, ornamental splays for grates and sides of fireplaces, in Printed, Maiolica, and Painted Tiles; White, Toned, Printed, Maiolica and Painted Tiles for Walls; Printed and Painted Tiles for Furniture. (167)

Exhibitors, London, 1874 (Bronze Medal).

Cl. 208. **The Campbell Brick and Tile Company,** Stoke-upon-Trent, (Robert Minton Taylor, Manager). Manufacturers of Encaustic, Geometric, Maiolica, and all kinds of glazed tiles and mosaics. Also bricks and roofings of every description. (168)

Cl. 208. **Minton's China Works,** Stoke-upon-Trent. New York Agency, 39, Murray Street. Enamelled Tiles. (169)

Exhibitors, London, 1851 (Council Medal); 1862 (Prize Medal); *Paris*, 1855 and 1867 (Gold Medals); *Vienna*, 1873 (Diploma of Honour).

Cl. 208. **Colthurst, Symons, & Co.,** Bridgwater. Patent Scouring Brick for cleansing all kinds of metals, furniture stains, or floors of houses; Patent Roman, Ridge, and Eaves Tiles; Samples of Malt Kiln Squares, Draining Pipes, Sanitary Pipes, Flooring Tiles, &c. In Agricultural Hall. (170)

Exhibitors, Paris, 1867, 1875 (Medals); *Vienna*, 1873.

Cl. 210, 211, 212, 213. **Brownfield, Wm., & Son,** Manufacturers of China, Maiolica, Ironstone China, Parian, Earthenware, Stoneware, &c., Cobridge, Staffordshire Potteries. London Offices, 2, Charterhouse Street, opposite Ely Place. (171)

Exhibitors, London, 1862 (Medal); *Paris*, 1867 (Silver Medal).

Cl. 210, 211, 212, 213. **Brown-Westhead, T. C., Moore, & Co.,** Manufacturers of China and Earthenware, Cauldon Place, Staffordshire Potteries. All goods made in China, Earthenware, Statuary Porcelain, Maiolica, &c.; Dinner, Dessert, Tea, and Toilet Services, plain and decorated; Druggists' and Perfumers' Goods; plain and ornamental Tiles, &c.; Sanitary ware, plain, printed in imitation of marble, and decorated in colours and gold. (172)

Exhibitors, London, 1851 (Medal); *Paris*, 1855 (Medal); *Manchester*, 1857 (Medal); *London*, 1862 (Medal); *Lyons*, 1872 (Medal); *Vienna*, 1873 (Medal for Merit).

Cl. **210, 217.** **Doulton & Watts,** Potters, Lambeth Pottery, Lambeth, London, S.E. Salt-glazed Stoneware applied to Domestic and Manufacturing purposes, and Chemical Works; Mantelpieces, Washstands, Cabinets, &c., with Tile Decorations; Art Pottery in Doulton and Lambeth Ware, Pulpit and Font, in Fine Art Pottery Faïence. (173)

Exhibitors, London, 1851, 1862, 1871, 1872, 1873, 1874 (Medals); *Paris,* 1867 (Medal); *Vienna,* 1873 (Medal for Progress); besides other Foreign Medals.

Cl. **210, 213.** **Powell & Bishop,** Manufacturers of China and Earthenware, Hanley, Staffordshire. Dinner, Dessert, Tea, and Toilet Services, in great variety, and all kinds of miscellaneous goods, both plain and decorated; White Granite for the United States Markets. (174)

Exhibitors, London, 1862 (Bronze Medal); *Amsterdam,* 1869 (Diplome d'Excellence); *London,* 1871; *Paris Maritime Exhibition,* 1875 (Silver Medal).

Cl. **210, 211, 212, 213.** **Daniell, A. B., & Son,** Manufacturers of China and every description of Earthenware, by Special Appointment to Her Majesty, 46, Wigmore Street, London, W. Choice examples of "Fine Art" Porcelain and Pottery, Ornamental Vases, Candelabra, &c.; Dinner, Dessert, Tea and Coffee Services; Toilette Services of special designs; Maiolica and other wares; Fountains, Jardinières, Garden Seats, Vases, &c., suitable for conservatories, corridors, &c.

Depôt for Messrs. Mintons' productions. (175)

Exhibitors, London, 1851, 1862; *Paris,* 1855; *Vienna,* 1873.

Bailey, W. & J. A., Earthenware and Glass Manufacturers, Alloa, Scotland. Rockingham Earthenware Teapots; Engraved Table Glass. (176) Cl. **213, 216.**

Exhibitors, Paris Maritime Exhibition, 1875 (Silver Medal).

Gardner, Peter, Dunmore Pottery, By Stirling, Scotland. Rockingham Teapots, Baskets, Vases, Tea Services, Jugs, and Dessert Ware. (177) Cl. **210, 213.**

Edwards, J., & Son, Dale Hall Pottery, Burslem, Staffordshire. Ironstone White ware, fancy decorated goods, Jugs, Pots, Stone Tea ware. In Agricultural Hall. (178) Cl. **210, 211.**

Hope & Carter, Burslem, Staffordshire. Ornamented and Printed Earthenware, and White Granite Earthenware. In Agricultural Hall. (179) Cl. **210, 213.**

Edwards, John, King Street, Fenton, Staffordshire. Ironstone China and Porcelaine de Terre Tea, Dinner, Toilet, and Jug Services. In Agricultural Hall. (180) Cl. **213.**

Green, James, & Nephew. See Cl. 216.

GLASS AND GLASS-WARE.

Class 214.—Glass used in construction and for mirrors. Window glass of various grades of quality and of size. Plate glass, rough, and ground or polished. Toughened glass.
Class 215.—Chemical and pharmaceutical glass-ware, vials, bottles.
Class 216.—Decorative glass-ware.

Cl. **214.** **Chance Brothers & Co.,** Glass Manufacturers, Glass Works, Near Birmingham. Glass for optical instruments. (190)

Exhibitors, London, 1851 (Medal); 1862 (Medal); *Paris,* 1855 (Medal); 1867 (Medal).

Cl. **214.** **Hetley, J., & Co.,** Glass Shade Manufacturers, 35, Soho Square, London. Glass shades. Glass used for photographic, building, and horticultural purposes. (191)

Kilner Bros., Glass Bottle Manufacturers, Great Northern Goods Station, King's Cross, London, N.; Works, Thornhill Lees, near Dewsbury, and Conisboro', near Rotherham, Yorkshire. By appointment to the British Government. Glass bottles and glass for useful and scientific applications. (192) Cl. **215.**

Exhibitors, London, 1862 (Bronze Medal); *Paris Maritime Exhibition,* 1875 (Silver Medal).

Cl. 215. **Aire and Calder Glass Bottle Company,** Proprietor, Edgar Breffit, Glass Manufacturers, 83, Upper Thames Street, London, E.C. Glass bottles of various colours and patterns, Patent Combination Stoppers, Aërated Water Bottles, with all recently patented stoppers. Improved Packing Cases, made by patent machinery, for packing without straw. Corks for all purposes, cut by patent machinery. Straw envelopes made by machinery. (193)

Exhibitors, London, 1871, 1872, 1873, and 1874; *Paris*, 1867 (Medal); *Vienna*, 1873 (Medal for Merit); *Paris Maritime Exhibition*, 1875 (Silver Medal).

Cl. 216, 213. **Green, James, & Nephew,** Cut and Engraved Glass Manufacturers, Thames Cut Glass Works, 107, Queen Victoria Street, London, E.C. Table glass, cut and engraved Table Decorations, and Flower stands, English Glass Chandeliers and Lustre candlesticks. Porcelain for Table and Decoration. (194)

Exhibitors and Prize Medallists, London, 1851 and 1862; *Dublin*, 1865; *Paris*, 1867; and *Vienna*, 1873.

Millar, John, & Co., Glass Merchants, 2, South St. Andrew Street, Edinburgh. Engraved and Cut Glass. (195) Cl. 216.

Exhibitors, London, 1851, 1862; *Paris*, 1855, 1867; *London*, 1873.

Jenkinson, Alexander, 10, Princes Street, Edinburgh. New Venetian glass in vases, comportiers, finger basins, &c., all of antique shapes, cut decanters, engraved jugs, and fine light plain glass in jugs, goblets, and wine glasses. (196) Cl. 216.

FURNITURE AND OBJECTS OF GENERAL USE IN CONSTRUCTION AND IN DWELLINGS.

Class 217.—Heavy furniture.—Chairs, tables, parlour and chamber suits, office and library furniture, vestibule furniture. Church furniture and decoration.

Class 218.—Table furniture. Glass, china, silver, silver-plate, tea and coffee sets, urns, samovars, epergnes.

Class 219.—Mirrors, stained and enamelled glass, cut and engraved window-glass, and other decorative objects.

Class 220.—Gilt cornices, brackets, picture frames, etc.

Class 221.—The nursery and its accessories; children's chairs, walking chairs.

Class 222.—Apparatus and fixtures for heating and cooking,—stoves, ranges, heaters, etc.

Class 223.—Apparatus for lighting,—gas fixtures, lamps, etc.

Class 224.—Kitchen and pantry,—utensils, tin ware, and apparatus used in cooking (exclusive of cutlery).

Class 225.—Laundry appliances, washing machines, mangles, clothes-wringers, clothes-bars, ironing tables.

Class 226.—Bath room and water closet, shower bath, earth closet.

Class 227.—Manufactured parts of buildings,—sash, blinds, mantels, metal work, etc.

Cl. 217, 252. **School of Art Needlework, The Royal,** Decorative Needlework, Exhibition Road, South Kensington, London, S.W. Artistic needlework and embroidery in appliqué, crewels and silks. Applicable for the decoration of Walls, Screens, Cabinets, Portières, &c. (210)

Cl. 217. **Arthur, Frederick,** 18, Motcomb Street, London, S.W. Cabinet Work and Fittings for Royal School of Art Needlework Exhibits. (211)

Exhibitor of decorations, London, 1862; *Paris*, 1867.

Shoolbred, James, & Co., Upholsterers and Cabinet Manufacturers, Tottenham Court Road, London, W. Four suites of furniture in the Jacobean and Queen Anne styles, and a suite of Bedroom Furniture in the Anglo- Cl. 217, 239.

Indian style, Curtains and Carpets, suitable for the above designs for Drawing Room, Dining and Bed Rooms. (212)

Cl. **217, 218.** **Schildberg, H., & Co.,** Merchants and Manufacturers, 26, Moorgate Street, London, E.C. One Mahogany writing desk with pneumatic arrangement by which means the top board can be raised to suit the height of the occupier. One Walnut writing desk with spring arrangement. Ornamental fountains. (213)

Cl. **217.** **Cooper & Holt,** Cabinet Manufacturers and Upholsterers, 48, 49, 50, Bunhill Row, London, E.C. Furniture. Carved Oak Sideboard; portion of Bed-room Suite, in Walnut, Oak, and other Woods. Decorative Drawing-room Furniture, consisting of Wall and Hanging Cabinets in various Woods; Stuffed Chairs, &c. (214)

Exhibitors, Vienna, 1873 (Medal for Merit).

Cl. **217.** **Knight, Miss Mary,** 1, Anderson Street, Chelsea, London, S.W. A small bedstead closed in front and at both ends; full-sized as when open. Takes up, when closed, the smallest possible space against a wall, and when covered has the appearance of a very narrow sideboard. Takes into three pieces for cleansing. (215)

Cl. **217, 219.** **Wright & Mansfield,** Cabinet Makers, 104, New Bond Street, London, W. Cabinet Furniture of the 18th century. (216)

Exhibitors, London, 1862, (First-class Medal awarded for great excellence of design and workmanship); *Paris*, 1867 (the only Gold Medal for British Furniture).

Cl. **217, 443, 453.** **Cox & Sons,** Church Furnishers and Art Workers in Wood, Stone, Metal, and Stained Glass, 28, 29, and 31, Southampton Street, Strand, London, W.C. Chimney Piece, forming the greater part of the end of a room, showing Stone and Marble Fireplace, inlaid with Hand-painted Tiles, representing birds, foliage, and subjects; carved oak framing with mirrors and painted panels; the fire-dogs have a reversible arrangement of cups for holding flowers in summer; Embroidered Mantel Board; Ebonized Corner Cupboard, decorated and with painted panels; Carved Oak Bookcase and Cabinet, with bureau; Carved Oak Sideboard with canopied back; Carved Oak Chairs, adjusting, covered with stamped velvet; Canterbury and adjusting Music Stand; Oak Coal Box; Folding Chair; Cabinet with richly chased metal panels; and Fire Screen, Stained Glass in Oak Frame; richly carved Chair of Glastonbury form, and Dining Room Chair covered in pigskin; Bronze subject, "The Snake Charmer," after model by Thomas Brock; Stained Glass, three-light stained glass Church window, subject "The Sermon on the Mount;" five subject panels of Domestic Stained Glass, centre, St. George and the Dragon; side panels, subjects from "The Nun's Tale," Chaucer's "Canterbury Tales," "The Feast of Comus," Milton, "King Lear," Shakespeare, "The Holy Grail," Tennyson; Wrought-Iron pulpit body; two iron and brass gas standards; two polished brass eagle lecterns; polished brass and polished brass and glass coronæ; Church plate; cased and jewelled sets of Communion plate; specimens of wrought-iron and brass work; specimens of art tiles and plaques. "The Challenge Prize of the National Musical Union," manufactured for the Crystal Palace Co. (217)

Exhibitors, London, 1862; *Paris*, 1867.

Cl. **217, 443.** **Singer, J. W., & Son,** Metal Workers, Frome, Somerset. Ornamental Brass Work; Artistic Metal Work; Altar Crosses, Altar Candlesticks, Alms Dishes, and Artistic Mural Brass Plates for Churches. (218)

Exhibitors, London, 1862; *Paris*, 1867; *London*, 1872, 1873, 1874.

Cl. **217, 443.** **Hart, Son, Peard, & Co.,** Manufacturers, Wych Street, Strand, London, W.C., Brook Street, Hanover Square, London, W., and Grosvenor Works, Birmingham. Artistic Metal Work (chiefly for ecclesiastical purposes), Gas Fixtures, Stove-grates, &c. (219)

Exhibitors, London, 1851, 1862; *Dublin* 1853, 1865; *Paris*, 1855, 1867.

Juries Report, 1862: "For great beauty and variety of design and perfection of workmanship."

Cl. **217, 503.** **Wethered, Edwin Robert,** Major and Paymaster, Royal Artillery, Woolwich, Kent. 1st, Patented lounge hammock, suspended to iron stand, admits of reclining in any desired position; forms a Screen when not in use. Exhibited also as a Camp Bed, or Garden Lounge, on light wooden fixed frame, and convertible into a chair. 2nd, Patent Friction Pulley Block, which admits of friction being

applied either to a Single or Compound Block; friction can be freed or applied at will, either by action of rope or lever, enabling one person to lower a heavy weight under complete control; suitable for Boat Lowering; exhibited as a Fire Escape, the apparatus complete weighing about 7 lbs. (220)

Cl. **217.** **Ward & Co.,** Naturalists, 158, Piccadilly, London, W. A Bear arranged as Dumb Waiter, to hold tray and lamp. (221)

Cl. **217.** **Phipson, Emma** (Miss), Monk Sherborne, Basingstoke, Hants. Sideboard for China (Italian Walnut), Card Table, Ladies' Work Table (Mexican Mahogany), Dressing Glass and Candlesticks (Mexican Mahogany). (222)
Exhibitor, Leeds, 1875.

Cl. **217.** **Peyton & Peyton,** Brass and Iron Bedstead Manufacturers, Bordesley Works, Birmingham. Metallic bedsteads only, viz., Iron, japanned and decorated; Iron and Brass combined; Brass only. (223)
Exhibitors, London, 1851 (Medal); 1862 (Only Medal for English Metallic Bedsteads); *Dublin*, 1865 (Only Medal); *Paris*, 1867 (Only Medal for English Metallic Bedsteads); *Vienna*, 1873 (Medal for Merit).

Cl. **217, 443, 453.** **Matthews, Edward, & Sons,** Memorial Brass Engraver, Stained Glass and Tile Painter, 377, Oxford Street, and 54, Berwick Street, London, W. Stained Glass Windows, Ecclesiastical and Domestic. Mural Brasses for Monumental purposes and Ecclesiastical Decoration. Decorative Tiles, illustrative of Historical, Mythological, and other subjects. (224)

Cl. **217, 222, 225, 228, 443, 720, 722.** **Barnard, Bishop, & Barnards,** Ironfounders, Art Metal Workers, Manufacturers of Wire Netting, Norfolk Ironworks, Norwich. Ornamental Wrought and Cast Iron Gates, Palisade, Pavilions, &c., Lawn Mowers, Wire Netting, Hose Reels, Garden Rollers. Every description of garden requisites of iron; Espalier Fruit Trainers, Slow Combustion Stoves, Mangles, &c., &c. (225)
Exhibitors (Medal), *London*, 1851, 1862; *Paris*, 1867 (Merit Medal); *Vienna*, 1873.

Cl. **217, 221.** **Barnard, Bradly,** Upholsterer and Cabinet Manufacturer, St. Paul's Road, Highbury, London, N. Patented Furniture and Hammock Bassinettes, Baskets, &c. (226)
Exhibitor, Vienna, 1873 (Diploma of Honour in two groups).

Cl. **217, 218, 400, 401, 403, 452, 454.** **Elkington & Co.,** Manufacturing Silversmiths and the original Patentees of the Electro-plate, 22, Regent Street, and 45, Moorgate Street, London; 25, Church Street, Liverpool; St. Anne's Square, Manchester; Manufactory and Show Rooms, Newhall Street, Birmingham. Works of High Art in Gold, Silver, and other Metals. Repoussé Works of Art in Silver and Iron. Gold and Silver Damascened Works of Art. Solid Silver and Electro Silver Plate for Domestic Use. Decorative Table Plate relieved with electro gold and oxydised silver; electrotype fac-simile reproductions. Antique Art Treasures in Metal from the South Kensington Museum; Cloisonné and Champlevé Enamels on Silver and Copper. Bronze Statuary. (227)
Exhibitors, London, 1851 (Grand Council Medal); 1862 (Juror, Hors Concours); *Paris*, 1855 (Grand Gold Medal and Cross of the Legion of Honour); 1867 (Grand Gold Medal); *Vienna*, 1873 (Diploma of Honour and Cross of Francis Joseph).

Cl. **217, 239, 264.** **Collinson & Lock,** Manufacturers of Art Furniture, Joinery, Wall Papers, and Textile Fabrics in the Old English style, 109, Fleet Street, London, E.C. (228)
Exhibitors, London, 1871, 1872; *Vienna*, 1875 (Medal for Merit).

Cl. **217, 400, 405.** **Hems, Harry,** 68, Paris Street, Exeter.
1. Statue, "Safe in the Arms of Jesus." Material: Derbyshire (English) Alabaster. 2. Carved Oak Chest made out of ancient beams (nearly 600 years old) from the Choir of Salisbury Cathedral. The carved details upon this Chest or Coffer, are in every instance careful reproductions of existing examples of early Perpendicular Gothic in the West of England. (229)

Cl. **217.** **Morton, W. Scott, & Co.,** Art Furniture Works, Edinburgh. Decorative Furniture, designed by Wm. Scott Morton. An Ebonized and Decorated Cabinet. A Sideboard in stained wainscot, with embossed leather panels. An Ebonized and Decorated Cabinet. (230)

Cl. **217, 255.** **Jeffreys, Charles,** 103, Hatton Garden, London. Air-tight Plate-glass Show Case, made upon an improved principle; Cut Glass Mirror, silvered by Patent Process, Leather Travelling Cases, Lady's and Gentlemen's Jewel Cases, Watch Makers and Jewellers' Bronzed Shop Fittings, Plate Glass Show

Stands with bevelled and polished Edges; Reflecting Lamps for Shop Windows; Morocco Watch, Bracelet, Brooch, Earring, Ring, Pin, and Stud Cases; Velvet Cases, Velvet Stands for Exhibiting Jewellery and Works of Art. (231)

Cl. 217. **Howard & Sons,** Cabinet Makers and Upholsterers, 25, 26, and 27, Berners Street, Oxford Street, London, W. Household Furniture, Decorations, and Flooring. (232)

Cl. 217, 327. **Collmann, Leonard W.,** 67, George Street, Portman Square, London, W. An oblique grand Cottage Piano (Broadwood's Works), in Carved Satinwood Case. A Music Stool to match. (233)

Exhibitor, London, 1862 (Hon. Mention); 1873 (Medal); *Paris,* 1873 (Medal).

Cl. 217, 255. **Sage, Frederick,** 80 to 84, Gray's Inn Road, London, W.C. Air-tight Show Cases on improved principle, Velvet Show Stand for Jewellers' Windows; both exhibited for design and workmanship. Bronze fittings. Specimens of glass bevelling. (234)

Exhibitor, Vienna, 1873 (Diploma of Merit).

Cl. 217. **Watson & Son,** of Bombay, care of J. Watson & Son, Moorgate Street Chambers, City, London, E.C. Indian Furniture. (235)

Cl. 217. **Doulton & Watts.** See Cl. 210.

Cl. 218. **Storer, Joseph,** Engineer, Stamford Brook, Hammersmith. Inventor of Self-acting Table Fountains. (236)

Cl. 218, 422. **Gill, James,** Engraver, 66, Regent Street, Lambeth, S.E. Specimens of general engraving, or art applied to decorate silver or other precious metals. (237)

Cl. 219, 442. **Lafargue, Paul,** Doctor, 27, South Hill Park, Hampstead, London, N.W. Engravings on metals and marbles, plaques for cabinet and artistic furniture, interior decoration (panelling, &c.). (238)

Cl. 219, 223, 453. **Kerr, Edward,** Brass Founder and Coppersmith, 7, Merville Terrace, Gilford Place, North Strand, Dublin. Kerr's Improved Process of decorating Glass for Household and Ecclesiastical purposes, &c.; Kerr's (Patent) Safety Farmer's Wind Proof Stable Lamps for Kerosene or any mineral oil, burning without either glasses or globes. (239)

Cl. 219. **MacIntosh, James,** Imitator of Woods and Marbles, and Artist Decorator, 38, Langham Street, London, W. Decorative Doors and Panels, inlaid with imitation woods, precious stones, ivory, &c. Imitations of Woods and Marbles. Decorative Designs. Decorative Paperhanging. (240)

Cl. 219, 443. **Zobel, Charles Ferdinand Julius,** Ornamental and Art Metal Worker, 139, Euston Road, London, N.W. Architectural and Artistic Hammer Work in Metal; Retriever, repoussé work in Zinc, Bouquet of flowers hammered, in Copper and Zinc; Two architectural models hammered, in Zinc; Aloe plant hammered in zinc, and painted to imitate nature. Conjuring Apparatus in Metal. (241)

Exhibitor, Royal Academy, Berlin (3 Silver Medals); *Berlin,* 1844 (Bronze Medal); *London,* 1851 (Bronze Medal); *Munich,* 1854 (Medal of Honour); *London, Workmen's Exhibition,* 1865 (Silver Medal); 1866 (Bronze Medal); *Paris,* 1867 (Bronze Medal); *London,* 1870 (Silver Cross); *The Society of Arts* 1865 (Prize for Hammerwork).

Cl. 220. **Engert, A. C., & Co.,** Patent Machine-made Ornamented Moulding Manufacturers, 75 and 82, City Road, and 31 and 32, Tabernacle Row, London, E.C. Ornamented mouldings for Picture Frames and Architectural Decorations in continuous lengths. (242)

Exhibitors, London, 1874 (Medal); *Paris Maritime Exhibition,* 1875 (Silver Medal).

Cl. 220. **Hieronimus, W.,** Manufacturer of Patent Washable Gilt Mouldings, &c., 19 and 53, City Road, London, E.C. Patterns of frame mouldings, window cornices, decorating mouldings, &c. (243)

Exhibitor, Dublin, 1865 (First-class Medal); *Stettin,* 1865 (Prize Medal).

Cl. 222. **Steel & Garland,** Stove, Grate, and Fender Manufacturers, Wharncliffe Works, Sheffield. Burnished Steel Grates, with enriched Porcelain Tiles; Fenders; Encaustic Tile hearths; Hot-air Stoves, with China Tiles; Fire Irons, Independent Fire Iron Rests for Tile hearths, Dog Grates for Turf Fires, &c. (244)

Exhibitors, London, 1862 (Hon. Mention); *Paris,* 1867 (Hon. Mention).

Cl. 222. **Feetham, Mark, & Co.,** Stove Makers, Engineers, Artistic Metal Workers, &c., 9, Clifford Street, London, W. Stoves and grates for warming rooms, with fenders, fire irons, and other appliances; decorated china applied to fireplaces. (245)

Exhibitors, London, 1851, 1862, 1878 (Medals); *Paris,* 1855 and 1867 (Medals); *Vienna,* 1873 (Medal for Merit).

Cl. 222. **Heaps & Wheatley,** Manufacturers of Patent Cooking and other Stoves, Aire and

Calder Stove Works, Brotherton, Yorkshire. "The Perfect Cooking Stove," portable, heated by petroleum, or other oils. "The Perfect Gas Stove," boiling water, steaming vegetables, and roasting meat all at the same time with two gas burners only; also portable circulating hot water boilers, &c. (246)

Exhibitors, Pontefract Annual Show, 1875 (Silver Medal); *Yorkshire Exhibition at Leeds*, 1875 (Medal for Special and General Utility); *Paris Maritime Exhibition*, 1875 (Bronze Medal).

Cl. 222. **Perkins, A. M., & Son,** Civil Engineers, Seaford Street, Regent Square, Gray's Inn Road, London, E.C. Steam oven for marine use. In Machinery Hall. (247)

Cl. 222, 503. **Gregory, James,** Cooking Apparatus Manufacturer, South Park, Lincoln. Agricultural Labourer's Patent Cooking Apparatus, Patent Lime Trough, Patent Lime Plunger, Patent Mortar Temperer, Patent Upward Fire Escape, continuous Screw Hoist. Patent Downward Fire Escape, Continuous Screw. Patent Hoist. (248)

Exhibitor, London, 1873, 1874 (Medals); *Vienna*, 1873 (Diploma of Merit).

Cl. 222. **Thornton, Ebenezer,** Ironmonger, Hot Water and Gas Engineer, 12, Richmond Road, Bradford, Yorkshire. Patent Domestic Cooking Stove, may be heated by gas or solid fuel as coal, wood, &c., having two ovens, the upper one heated by the draught before it enters the chimney; Patent Boiler behind to keep 300 gallons of water at or near boiling point for Baths, &c.; Hot Plate for Boiling Utensils, and small open fire for Roasting. In Machinery Hall. (249)

Exhibitor, Cheetham Mills Exhibition, Manchester, 1875 (Silver Medal from Society for the Promotion of Scientific Industry).

Cl. 222. **Clough, Samuel Wesley,** Butler Place, Stanningley, near Leeds. (Manufacturer, Joseph Pitt, Ironfounder, Cleckheaton. American Agent, Mr. Benjamin Stainsby, Newark, New Jersey.) Patentee of the Yorkshire Grates to fit any existing chimneys, with one or more ovens for baking or roasting. Four inches of fire is sufficient for two ovens, each oven is heated on five sides, securing an equal heat, so that neither bread nor meat requires turning. Boilers and ventilating apparatus can be affixed. Kitchen Grate, Room Grate specially adapted for Railway Companies' Offices, Waiting Rooms, &c. (250)

Exhibitor, London, 1874 (Medal); *Manchester*, 1874; *Leeds*, 1875 (Certificate).

Cl. 222. **Smartt, Walter,** Patentee, &c., Queen's Road, Buckhurst Hill, Essex, N.E. "Sub-fire Oven." (251)

Exhibitor, London, 1873 (Medal).

Cl. 222, 223. **Gardner, John, & Sons,** 453, Strand, London. Lamps, travelling, Government, and other patterns. Lamps, Ship's Cabin, new designs. Reading and Study Lamps, new designs in Electro-plate. Travelling Canteens. Lamps, Arctic Expedition, 1875 (Silver Medal, *Paris*, 1875.) Patent Safety Magazine (Silver Medal, *Paris*, 1875.) (252)

Cl. 222. **Whitwell, Thomas.** See Cl. 100, 111, 506.

Cl. 223. **Skelton & Co.,** 37, Essex Street, Strand, London, W.C. Street lamp with Skelton's Patent Catoptric Reflectors. (253)

Exhibitors, London, 1872, 1874; *Vienna*, 1873 (Diploma of Merit).

Cl. 223. **Partridge & Co.,** Gaselier Makers, 89, Lombard Street, Birmingham. Brass gaseliers, brackets, &c. (254)

Exhibitors, Amsterdam, 1869 (Medal); *Lyons*, 1872 (Medal); *Vienna*, 1873 (Diploma of Merit).

Cl. 223, 226. **Kimpton, Thomas,** Surveyor, 2 & 3, Barnard's Inn, Holborn, London W.C. "Magnetic Water Waste Preventer," Apparatus for regulating supply, and prevention of waste of water in cisterns and closets and other appertaining, self-cleansing, and self-acting appliances, "Mercurial" Gas Regulator for economizing the consumption by regulating supply and pressure of gas. "Pneumatic Sound Communicator," available for passengers to communicate with guard on railway trains in motion, also to communicate with distant parts of a building. (255)

Exhibitor, Paris, 1867.

Cl. 224, 280. **Pullinger, Colin** (a Village Mechanic), Inventor and Manufacturer, Selsey, near Chichester, Sussex. 1. A newly invented Self-acting Sifter; 2. Improved Cask Stand; 3. Improved Tapping Mallet; 4. Improved Sulphur Blower to destroy mildew or blight on Vines, Hops, Flowers, &c.; 5. Automatic Mouse Trap; 6. Perpetual Mouse Trap; 7. Self-acting Mouse Trap; 8. Dead-Fall Mouse Trap; 9. An improved Eel Spear. Improved Morticing Chisels to cut both ends and sides at once; Improved Planes, to keep

the mouth always fine; Improved Bradawl, to drive in and jump out again; Improved Brace. (256)

Exhibitor, London, 1851 (Hon. Mention); *Royal Society for Prevention of Cruelty to Animals*, 1864 (Hon. Mention); *Workmen's International Exhibition*, 1870 (Silver Medal).

Cl. 224, 103. **Busse, G., & Co.,** Charcoal Water Filter Manufacturers, 8, South Street, Finsbury, London, E.C. Charcoal water filters of every description; high pressure filters; and cement. (257)

Cl. 224. **Cheavin, George,** Wide Bargate Filter Works, Boston, Lincolnshire. Improved Patent rapid Gold Medal Water Filters. (258)

Exhibitor, London, 1851 (Medal); *Hull*, 1873 (Silver Medal); *Royal Agricultural Society, Long Sutton Association*, 1873 (Gold and Silver Medals); *Sanitary Exhibition, Norwich*, 1873 (Diploma of Honour); *Chester Agricultural Society*, 1873 (Silver Medal); *Lincolnshire Agricultural Society, Gainsboro'*, 1873 (Two President's Medals); *London*, 1874 (Bronze Medal); *Manchester, Liverpool, and Royal North Lancashire Society*, 1874; (Silver Medal); *Long Sutton Association*, 1874 (Silver Medal); *Ormskirk and Southport Agricultural Society*, 1874 (Silver Medal); *Manchester and Salford*, 1874 (Two Silver Medals); *Northamptonshire, Agricultural Society*, 1875 (Silver Medal); *Manchester*, 1875 (First Prize Medal); *Yorkshire Exhibition*, 1875 (First Prize Medal); *Long Sutton Association*, 1875 (Silver Medal).

Cl. 224. **Kent, George,** 199, 200, and 201, High Holborn, London. Patent Rotary Knife Cleaning Machine. (259)

Exhibitor, London, 1851, 1862; *Leipzig*, 1858; *Nice*, 1865; *Cologne*, 1865; *Dublin*, 1865, *New Zealand*, 1865; *Paris*, 1867; *Berar, India*, 1868; *Amsterdam*, 1869; *Vienna*, 1873.

Cl. 224. **Etzensberger, Robert Zurich,** Manager, Midland Grand Hotel, St. Pancras, London, N.W. Patent Coffee Filter. (260)

Cl. 224. **Roby, George.** See Cl. 596.

Cl. 224. **Jennings, George.** See Cl. 206.

Cl. 226. **Dean, Henry.** See Cl. 206.

Cl. 227. **Edwards, G.,** 149, Brompton Road, London. Sliding Window Sashes and Frame, showing an improved Fastening, Self-acting and Burglar-proof, which tightens the Sashes and prevents draught, admission of dust, and rattling of windows. "Edwards' Patent." (261)

Cl. 227. **Bullivant, Thomas,** Builder, 104, Ledbury Road, Bayswater, London, W. Patent air-tight noiseless sliding sash window for the exclusion of air, dust, and moisture, when closed, and the prevention of accidents from cleaning windows externally. Patented England and America. (262)

Cl. 227. **Roberts, William,** Venetian Blind Manufacturer, 139, Derby Road, Bootle, near Liverpool. A Self-acting Painting Machine for Venetian Blinds, Laths, Hoop Iron, and other purposes. (263)

YARNS AND WOVEN GOODS OF VEGETABLE OR MINERAL MATERIALS.

Class 228.—Woven fabrics of mineral origin.—Wire cloths, sieve cloth, wire screens, bolting cloth.
Asbestos fibre, spun and woven, with the clothing manufactured from it.
Glass thread, floss and fabrics.

Class 229.—Coarse fabrics, of grass, rattan, cocoa nut, and bark.
Mattings, Chinese, Japanese, palm-leaf, grass, and rushes.
Floor cloths of rattan and cocoa nut fibre, aloe fibre, etc.

Class 230.—Cotton yarns and fabrics, bleached and unbleached.
Cotton sheeting and shirting, plain and twilled.
Cotton canvas and duck. Awnings, tents.

Class 231.—Dyed cotton fabrics, exclusive of prints and calicoes.

Class 232.—Cotton prints and calicoes, including handkerchiefs, scarfs, etc.

Class 233.—Linen and other vegetable fabrics, uncoloured or dyed.

Class 234.—Floor oil cloths, and other painted and enamelled tissues, and imitation of leather, with a woven base.

Cl. 228, 683. **Brown, J. B., & Co.,** Galvanized Wire Netting Manufacturers. Offices, 90, Cannon Street, London, E.C. Manufactory, 240, New Kent Road, London, S.E. Galvanized wire netting for enclosing poultry, pheasants, and dogs; for aviaries, also field and garden enclosures or divisions, of any desired length. (270)

Exhibitors, Paris, 1867; *Amsterdam*,

1869 ("Mention Extraordinaire,"); *Vienna*, 1873 (Medal for Merit); *Bremen*, 1874 (Medal for Merit).

Cl. 228. **Greening** (N.) **& Sons,** Wire Manufacturers, Warrington. Woven wire of superior strength, width, and regularity of meshes, for rice, flour, mining and other mills, woven by steam power. (271)

Exhibitors, London, 1851, 1862; *Paris*, 1867. (Prize Medals.)

Cl. 228. **Barnard, Bishop, & Barnards.** See Cl. 217, 222, 225, 443.

Cl. 228. **Corcoran, Witt, & Co.** See Cl. 322, 673, 674.

Cl. 229, 233. **Cox, Brothers,** Merchants, Spinners, Manufacturers of all classes of Jute goods, Calenderers, Dyers and Bleachers, Camperdown Linen Works, Lochee, Dundee, Scotland. Jute yarns, Twines, &c., &c. (272)

Exhibitors, London, 1851; *Paris*, 1855.

Cl. 229, 233. **Sandeman, Frank Stewart,** Spinner and Manufacturer, Manhattan Works, Dundee, Scotland; New York Agent, E. C. Whitman, 77 and 79, Thomas Street. Linen and Jute Yarns; Carpet Yarns, Linen and Jute manufactures. Burlaps, Baggings, Canvas Paddings, Duck Grain Bags, Coffee Sacks, Hop Sackings, Scrim Cloth, Horse Covers, and Lap Robes. (273)

Cl. 229, 233. **Laird, William, & Co.,** Linen Manufacturers, Canmore Linen Works and Forfar Power Loom Works, Forfar, Scotland. Textile fabrics. Woven Goods, comprising varieties of Dices, Washed Damasks, Fancy Towellings, American Crashes, Butchers' Linen, Checked Laprobes and Horsecloths, Plain and Twilled Sheetings, Osnaburgs, Stair Covering, Patent Seamless Bags, Jute and Tow Hessians, Striped Beddings, Paddings, Ducks, Buckram, &c. (274)

Cl. 229, 276. **Liverpool Spun Oakum Company, The,** 9, North John Street; Works, 3 Beacon Street, Liverpool. Oakum. "Archibald's" Patent Machine Spun, ready for caulking. "Archibald's" Patent Machine Spun and Unspun, made from standing rigging only, for Government and special purposes. Unspun, manufactured by machinery. Stypium. Pure Antiseptic Dressing, for hospital use. (275)

Cl. 230. **Neilson, Storer, & Sons,** Thorn Mills, Johnstone, near Paisley. Cotton Spinners of Thread yarns, Hosiery yarns, and extra spun down yarns for special purposes. Manufacturers of Knitting, Mending, and other Cottons. Doublers of yarns for Lace, Curtain, and Fancy Dress manufacturers. (276)

Cl. 230, 665. **Ashworth, Edmund, & Sons,** Cotton Spinners and Thread Manufacturers. Works, Egerton Mills, Bolton, Lancashire. Warehouses, 79, Wood Street, London, E.C.; 64, Fountain Street, Manchester; 52, White Street, New York; 38, Schnurgasse, Frankfort-on-Maine. Cotton in various stages, illustrating the manufacture from the raw material to the finished thread on spools. Cop yarns, Double yarns, Sewing cottons; white, black, and colours, in Patent Glacé and Six Cord, for Machine or Hand Use. Crochet, Embroidery, Knitting and Mending cottons and Glove cottons, Linen Finish thread, suitable for shoemakers, tailors, &c., and Polished yarns. (277)

Exhibitors, London, 1862 (Medal); *Paris*, 1867 (Gold Medal); *Vienna*, 1873 (Medal for Progress).

Cl. 230. **Dewhurst, John, & Sons,** Cotton Spinners and Sewing Cotton Manufacturers, Belle Vue Mills, Skipton, Yorkshire. Sewing cotton finished and in various stages of its manufacture. (278)

Exhibitors, Vienna, 1873 (Medal for Merit).

Cl. 230. **Brook, Jonas, & Bros.,** Sewing Cotton Manufacturers, Meltham Mills, Huddersfield. Patent Glacé and Six Cord Soft Finish Spool Cotton for Hand and Machine Work, white and coloured; Crochet and Embroidery Cotton. (279)

Exhibitors, London, 1851 (only Prize Medal), 1862 (Prize Medal); *Paris*, 1855 (only First-class Medal); 1867 (Gold Medal); *Vienna*, 1873 (only Diploma of Honour).

Cl. 230. **Clark, John, jun., & Co.,** Sewing Cotton Manufacturers, Mile End, Glasgow, Scotland. Sole agent for United States, Thomas Russell, 19, Mercer Street, New York. Specimens of Spool Cotton for Hand and Machine use. (280)

Exhibitors, London, 1851, 1862 (Medal); *New York*, 1853 (Medal); *Paris*, 1855 (Medal).

Cl. 230. **Barlow & Jones** (Limited), Spinners, Manufacturers, and Printers, 2, Portland

Street, Manchester. Toilet quilts, Covers, and Mats; Quiltings, White and Printed Damasks, Cloakings, Cotton Towels, Blankets, Alhambras and Counterpanes, Plain and Fancy Muslins, &c. (281)

Exhibitors, London, 1862 (Bronze Medal); *Paris*, 1867 (Silver Medal).

Cl. **230.** **Swainson, Birley, & Co.,** Cotton Spinner and Manufacturers, Fishwick Mills, Preston, 27, Portland Street, Manchester, and 42, Cheapside, London, E.C. Bleached Cotton fabrics, including Long Cloths, Heavy and Medium Shirtings, and Plain and Fancy Muslins. (282)

Exhibitors, London, 1862 (Prize Medal); *Moscow*, 1872 (Gold Medal); *Vienna*, 1873 (Diploma of Merit).

Cl. **230, 232.** **Johnson, Jabez, & Fildes,** Manufacturers, 44, Spring Gardens, Manchester, and Moor Mills, Bolton. Toilet, Marseilles and Alhambra quilts, and other Bed Covers, Quiltings of all kinds, Toilet or Bureau Covers, Brocades, Cotton and Linen Damasks, Dimities, Muslins, and Printed Cretons, Towels, Dress Fabrics, &c., &c. (283)

Exhibitors, London, 1851, 1862 (Medals); *Paris*, 1855, 1867 (Medal); *Vienna*, 1873 (Diploma of Merit).

Cl. **230.** **Pearson, Thomas, & Son,** Victoria Mills, Little Bolton, and 54, Church Street, Manchester. Manufacturers of Toilet, Marseilles, Alexandra, Household, and Alhambra Quilts, Quiltings, Toilet Covers, and Mats. (284)

Cl. **230. 232.** **Hawkins, John, & Sons,** Cotton Spinners and Manufacturers, 8, Faulkner Street, Manchester, and 44, Bread Street, London, E.C.; Works, Preston, Lancashire. Plain and Twilled Calicoes and Prints. (285)

Exhibitors, London, 1862; *Paris*, 1867. (Medals.)

Cl. **230, 246.** **Wilson, T. & D., & Co.,** 145, Ingram Street, Glasgow. Muslins, Plain and Fancy; also Tapestries in Silk and Wool, &c. (286)

Exhibitors, London, 1862 (Medal).

Cl. **230, 231.** **Ferguson Brothers,** Holme Head Works, near Carlisle. Plain satteens made wholly of Cotton, and Silk striped Satteens being Cotton with silk stripes, for tailors' linings. (287)

Cl. **231.** **Wild, John,** Cotton Manufacturer, Greenfield Mills, Shaw, near Oldham. Wild's patent fast pile twilled back cotton plush velveteens. (288)

Cl. **232.** **Schwabe, Salis, & Co.,** Calico Printers, Rhodes Works, near Middleton, and 41, George Street, Manchester. Cotton Prints for Garments, Chintzes, and Furnitures. (289)

Cl. **232.** **Simpson & King,** Cotton Manufacturers, 7, York Street, Manchester. Printed Cotton Furniture Fabrics. (290)

Cl. **233.** **McBride, Robert, & Co.,** Manufacturers, by Power and Hand, of Plain and Fancy Muslin, Linen, and Union fabrics, 4, Bedford Street, Belfast. Cotton and mixed cotton and linen goods. (291)

Cl. **233.** **Richardson, J. N., Sons, & Owden,** Linen Manufacturers and Bleachers, 1, Donegall Square North, Belfast. Manufactory at Lurgan, Bleach Works at Lisburn, Branch Houses at London and New York. Linen goods, consisting of Shirtings, Frontings, Pillow Linens, Bed Sheetings, Napkins, Table Damasks, Pocket Handkerchiefs, Bird's-eye Diapers, Ladies Dress Lawns, Linens, Hollands and Rough Browns, &c. (292)

Exhibitors, London, 1851, 1862; *Paris*, 1865; *Dublin*, 1865, 1872. (Medals.)

Cl. **233.** **Matier, Henry, & Co.,** Linen and Handkerchief Manufacturers, Clarence Place, Belfast. Bleached and printed linens, linen cambric and linen handkerchiefs, plain, hemstitched, printed, and embroidered. (293)

Exhibitors, London, 1862 (Medal); *Paris*, 1867 (Silver Medal).

Cl. **233.** **Ainsworth, Thomas,** Flax Spinner and Linen Thread Manufacturer, Cleator Mills, Cleator, near Whitehaven, Cumberland. Linen Threads for Sewing machines, and Wax Sewing Machines, Linen Threads for Hand Sewing; Linen Towels. (294)

Exhibitor, London, 1862; *Paris*, 1867; *Amsterdam*, 1869; *Vienna*, 1873.

Cl. **233.** **Normand, James, & Sons,** Linen Manufacturers, Dysart, Fifeshire, Scotland. Linens for housekeeping, such as Table Linen, Towellings and Crash Rollerings, Pillow and Butchers' Linen, Sheeting, Damask Floor Cloth, Stair Cloth and Stair Drills, Paddings, Nursery Diaper, and Shoe Linings. (295)

Exhibitors, New York, 1853; *London*, 1862 (Hon. Mention).

Cl. 233. **Marshall & Co.,** Flax Spinners, Linen, and Linen Thread Manufacturers, Leeds and Shrewsbury. Linen sewing threads, threads for use on sewing machines. (296)

Exhibitors, London, 1851, 1862 (Medals); *Vienna,* 1873 (Medal for Progress).

Cl. 233. **Dunbar, M'Master, & Co.,** Flax Spinners, Linen Thread Manufacturers, and Bleachers, Gilford, co. Down, Ireland. Linen threads for hand and machine sewing, for knitting and crochet, for lace, for fishing nets, &c., grey and bleached yarns, for weaving linen, damasks, drills, cambrics, &c. (297)

Exhibitors, London, 1862 (Prize Medal for "Great General Excellence"); *Dublin,* 1865 (Medal for "Superior Quality").

Cl. 233. **Dicksons, Ferguson, & Co.,** Linen Manufacturers and Bleachers, Linen Hall Street, Belfast. Linens bleached and unbleached, Handkerchiefs in every variety, Damasks of all descriptions, Towelling, Glass and Tea Cloth in great variety, Drills, Bird-eye Diaper, Costume Linens, Turkish Towels, Shoe Linings, Tailors' Linens, Blouse Linen, and Linen Bed Ticks. (298)

Exhibitors, Paris, 1867; *Vienna,* 1873 (Medal for Progress).

Cl. 233. **The Greenmount Spinning Company,** Linen and Cotton Manufacturers, Greenmount Factory, Harold's Cross, Dublin, and 40 and 42, Upper Queen Street, Belfast. Damasks, Drills, Glass Cloths, Towellings, and other Linen and Cotton goods for domestic and clothing purposes. (299)

Cl. 233. **Brown, John S., & Sons,** Manufacturers by Hand and Power; Warehouses, Bedford Street, Belfast; 16, King Street, Cheapside, London, E.C.; and 53, Mercer Street, New York. Table Linen, Diapers, Sheetings, Shirting Linen, Lawns, Linen and Cambric Handkerchiefs, bleached and unbleached, and yarns used in their manufacture. (300)

Exhibitors, London, 1851, 1862, 1870 (Gold Medal); *Dublin,* 1865, 1872; *Paris,* 1867 (Gold Medal); *Belfast,* 1870.

Cl. 233. **Ullathorne & Co.,** Spinners, Manufacturers, and Wholesale Grindery Warehousemen, 12, Gate Street, Lincoln's Inn Fields, London, W.C. Flax Mills, Barnard Castle, Durham. Shoe threads, Saddler's Threads, Heel Balls, Shoe Findings. (301)

Cl. 233. **Fenton, Connor, & Co.,** Linen Manufacturers, Bleachers, and Merchants, Linen Hall, Belfast. White Linens of all kinds. Cambric, and Cambric Handkerchiefs, Linen Damask and Table Linen of all kinds. Sheeting and Family Linens, Dress Linens, and Clothing Goods; Bleached and Brown Linen Ducks, Drills, Huckaback, &c.; Printed Shirtings and Lawn Dress Goods. (302)

Exhibitors, Dublin Exhibition of Manufactures, 1841 (Silver Medal); 1865, *International* (Bronze Medal); *London,* 1851 (Three Bronze Medals); 1862 (Bronze Medal); *Paris,* 1867 (Gold Medal); *Vienna,* 1873 (Medal for Progress).

Cl. 233. **The York Street Flax Spinnning Company (Limited),** 87, Henry Street, Belfast. The various classes of Linen Piece Goods suited to the United States, including Ladies' Prints and Dress Linens, Household Linens, Drills, Ducks, and Sheetings, and Men's Wear, Shirtings and Frontings. (303)

Exhibitors, New York, 1853 (Medal).

Cl. 233. **Ewart, William, and Sons,** Flax Spinners, Linen Manufacturers and Bleachers, Belfast, Ireland. Linen fabrics. (304)

Cl. 234. **Hall, Thomas,** House Decorator, 8, George Street, Edinburgh. Hand-Painted cloths in imitation of tapestry, for wall decoration. (305)

Cl. 234. **Boulinikon Floor Cloth and Manufacturing Company, The, Limited,** Patent Floor Cloth Manufacturers, Worsley Street, Salford, Manchester. London Warehouse, 76, Queen Street, Cheapside, London, E.C. Agents for the United States, A. T. Stewart & Co., New York. Patent "Boulinikon" floor cloth, warm, carpet-like and impermeable to damp. (306)

Exhibitors, Manchester and *Leeds,* 1875 (Prize Medals).

Cl. 234. **Wellock, J., & Co.,** Manufacturers of Oil Cloths, Cart and Waggon Covers, &c., 62 and 64, Broom Street, Bradford, Yorkshire. Waterproof materials for Cart and Waggon Covers. In Grounds. (307)

Cl. 234. **Tull, Glanvill, & Co.,** Floor Covering Manufacturers, Crown Works, Roupell Street, Lambeth, London, S.E. Floor coverings, composed of a preparation of oil mixed with ground cork; also a similar material made of India-rubber and cork. (308)

Exhibitors, Paris, 1867 (Hon. Mention).

Cl. 234. **Nairn, Michael, & Co.,** Floor Cloth Manufacturers, Kirkaldy, Scotland. Floor Oil Cloths. (309)
Exhibitors, London, 1862 (Hon. Mention); *Paris*, 1867 (Silver Medal).

Corticine Patent Floor Covering Co., 115, Queen Victoria Street, London, E.C. Corticine Patent Floor Covering. (310) Cl. 234.

WOVEN AND FELTED GOODS OF WOOL AND MIXTURES OF WOOL.

Class 235.—Card wool fabrics.—Yarns, broadcloth, doeskins, fancy cassimeres. Felted goods.
Class 236.—Flannels.—Plain flannels, domets, opera and fancy.
Class 237.—Blankets, robes, and shawls.
Class 238.—Combined wool fabrics.—Worsteds, yarns, dress goods for women's wear, delaines, serges, poplins, merinoes.
Class 239.—Carpets, rugs, etc.- Brussels, Melton, tapestry, tapestry Brussels, Axminster, Venetian, ingrain, felted carpetings, druggets, rugs, etc.
Class 240.—Hair, alpaca, goat's hair, camel's hair, and other fabrics, mixed or unmixed with wool.
Class 241.—Printed and embossed woollen cloths, table covers, patent velvets.

Cl. 235. **Marling & Co.,** Woollen Cloth Manufacturers, Ebley and Stanley Mills, Stroud, Gloucestershire. Wool in the Raw, Scoured, and Dyed states; Woollen Superfine Cloths, Beavers, Venetians, Doeskins, Deerskins, Cassimeres, &c., in black, blue, and medley colours. (320)
Exhibitors, London, 1851, 1862 (Medals); *Paris*, 1867 (Medal, and a Gold Medal was given collectively to the District).

Cl. 235. **Davies, Robert S., & Sons,** Woollen Manufacturers, Stonehouse Mills, Gloucestershire. Fine Black, Blue and Scarlet Cloths, Doeskins, Venetians, Meltons, Coatings, Beavers, &c. (321)
Exhibitors, London, 1851 (Medal); 1862 (Hon. Mention); *Paris*, 1867 (Medal, with other Exhibitors from this District).

Cl. 235. **Hooper, Charles, & Company,** Superfine Woollen Cloth Manufacturers, Eastington Mills, Stonehouse, Gloucestershire. Fine Woollens, West of England Superfine Broad Cloths, Superfine Scarlet and other Military Cloths, Superfine Doeskins, Beavers, Elysians, Kerseys, Meltons, Twilled and "Hooper's" Coatings and Trowserings. (322)
Exhibitors, London, 1851, 1862 (Medals); *Vienna*, 1873 (Medal for Progress, and Cross of the Order of Francis Joseph).

Cl. 235, 238. **Birchall, J. D., & Co.,** Woollen Manufacturers, Wellington Street and Burley Mills, Leeds. Plain and fancy woollen and worsted goods. (323)
Exhibitors, London, 1862; *Paris*, 1867 (Prize Medals); *Vienna*, 1873 (Medal for Merit).

Carr, Isaac, & Co., Woollen Manufacturers, Twerton Mills, Bath, England. Woollen cloths. Single milled and treble milled Meltons, Oriental Twills, Patent, Fur, and Elysian Beavers. (324) Cl. 235.
Exhibitors, London, 1851, 1862 (Bronze Medals, and Special Gold Medal from New South Wales, 1862); *New York*, 1853 (Bronze Medal); *Paris*, 1867 (Bronze Medal).

Bliss, Wm., & Son, Fancy Woollen Manufacturers, Chipping Norton, Oxon. 3/4 and 6/4 wide Tweeds of all kinds, 6/4 wide Woollen Serges of every description and colour, Woollen Shawls in great variety, Mauds for railway travelling, Mauds and Rugs for Railway Travelling, Saddler's Woollens of every variety. (325) Cl. 235, 237.

Mahony, Martin, & Brothers, Woollen Manufacturers; Factory, Blarney; Warehouse, 3, Camden Quay, Cork. Double warp All wool Tweeds made of Australian wool. Mangerton Tweeds, the Tuskar Boating Serge, Indigo Blue; Worsted Coatings, the Tara Frieze, Railway Travelling Wraps. (326) Cl. 235, 237, 238.
Exhibitors, Dublin, 1865 (Medal); *Paris*,

1867 (Medal); *London*, 1871 (Certificate of Merit); *Royal Dublin Society Shows* (Seven Silver Medals).

Cl. 235. **Salter, Samuel, & Co.,** Woollen Manufacturers, Home Mills, Trowbridge, Wiltshire. Plain and Fancy Trowserings and 6/4 Coatings. (327)

Exhibitors, *London*, 1851 (Prize Medal); 1862 (Prize Medal); *Paris*, 1867 (Gold Medal).

Cl. 235. **King, William,** Manufacturer, Gillroyd and Albert Mills, Morley, Leeds. Black and Coloured Union and Melton Cloths. (328)

Exhibitor, *London*, 1871; *Vienna*, 1873 (Medal for Merit).

Cl. 235, 237. **Hepworth, B., & Sons,** Manufacturers, New Wakefield Mills, Dewsbury, Yorkshire. Carriage and Travelling Rugs and Railway Knee Wrappers in woven cloths, sealskins, and fancy makes, and in innumerable variety of styles. Horse Rugs and Rugging in fawns, &c. (329)

Exhibitors, *Paris*, 1867; *Vienna*, 1873 (Medal for Progress).

Cl. 235, 238. **Hargreave & Nusseys,** Woollen Manufacturers, Farnley Low Mills, Leeds. Worsted and Woollen Coatings, Woollen Coatings, Worsted Coatings in Blue-black, in summer and winter weights, Overcoatings, Kerseys, Meltons, Carriage and other descriptions of Wollen Cloths. (330)

Exhibitors, *London*, 1851 and 1862; *Paris*, 1855, 1867. (Medals.)

Cl. 235, 238. **Andrews, Henry, & Co.,** Woollen Manufacturers, 29, Albion Street, Leeds. Worsted coatings, wool and union cloths, and wool meltons. (331)

Cl. 235. **Bubb & Co.,** Cloth Manufacturers, Southfields Mills, near Stroud. Woollen cloths, Black, Blue, and Scarlet; Superfines; Green Billiards; Government and Piano Cloths. (332)

The then proprietors of the Mill exhibited at *London*, 1851, 1862 (Prize Medal "for very superior finish").

Cl. 235, 550. **Anderson, David, & Son,** Patent Felt Manufacturers, Lagan Felt Works, Belfast, Ireland; and 23 and 23½, Billiter Street, London, E.C. Roofing and Flooring Felt, ready coated and sanded, for Anderson's Prepared Patent Roofs and Floors; Patent Roofing Felt (requiring coating) making a cheap, durable, and waterproof roof; Lining Felt for lining under slate, zinc, and iron, etc., as a non-conductor, and to deaden sound; Ship Sheathing Felt, Brown and Black, for covering ships' bottoms under copper, to preserve the timber and prevent the ravages of the worm; Non-conducting dry hair felts for covering boilers and steam pipes, effecting a saving in fuel and deadening sound. In Machinery Hall. (333)

Exhibitors, *London*, 1851, 1862; *Paris*, 1867; and *Vienna*, 1873.

Cl. 235, 238. **Brigg, J. F., & Co.,** Commission and General Merchants, Huddersfield, Yorkshire. Beavers, all wool, Coatings, all wool, Wool and Cotton, Silk and Wool, Fancy Worsted, Cheviot, Cassimeres, all Wool, Wool and Cotton, Silk and Wool, Silk and Worsted, Fancy Worsted, all Cotton, Carriage and Livery Cloths, Drills, Linen and Cotton, Ducks Linen, Black Doeskins, Elysians all Wool and Cotton Warp, Meltons and Kerseys, Pilots all Wool and Cotton Warp, Plain Superfine Black and Coloured Cloths, Rugs, Sealskins, Mohair and Calfhair, Vestings and Quiltings, Velvets, all Cotton and Patent Velveteens, Union Cloths, Witneys and Reversible Coatings. (334)

Cl. 235, 550. **M'Tear & Co.,** Asphalte Felt Manufacturers, Works, Corporation Street, Belfast, Ireland; St. Benet Chambers, Fenchurch Street, London, E.C.; 54, Portland Street, Manchester. Manufactured Roofing, Ship Sheathing, and Inodorous Felt, and Model of Roof. In Machinery Hall. (335)

Cl. 235, 550. **Engert & Rolfe,** Felt Manufacturers, Poplar New Town, London, E. Asphalted Felt for roofing; Inodorous Felt for lining Roofs and Iron Houses; Fibrous Asphalte, anti-damp course for walls; non-conducting Hair Felt for covering boilers, &c.; Sheathing Felt for putting under the metal on bottoms of ships. Sheathing Thick Felt for putting between planking or between wood and iron of ships. In Machinery Hall. (336)

Exhibitors, *Havre*, 1868 (Bronze Medal); *Amsterdam*, 1869 (Bronze Medal); *Naples*, 1871 (Bronze Medal); *Moscow*, 1872 (Grand Silver Medal); *Lyons*, 1872 (Bronze Medal); *Vienna*, 1873 (Diploma of Merit); *London*, 1874 (Bronze Medal); *Paris*, 1875 (Bronze Medal).

Cl. **235.** **Little, T. W., & Co.,** Leeds. Mantle Cloths, Waterproof Tweeds, Fancy Mixed Union Bird's-eyes, Twills, Meltons, Blue and Black Deerskins and Diagonals. (337)

Cl. **236.** **Jones, Pryce,** Manufacturer, Newtown, North Wales. Welsh flannel, Powysland Home spuns, Shawls, Tweeds, Yarns, &c. (338)
Exhibitor, Aberystwith, 1865, Grand National Eisteddfod Exhibition of Wales (First Prize, Gold Medal); *Chester*, 1866, Grand National Eisteddfod Exhibition of Wales (First Prize, Silver Medal); *Ruthin*, 1867 (First Prize, Gold Medal); *Carmarthen*, 1868 (First Prize, Silver Medal); *Vienna*, 1873 (Medal for Merit); *Paris Maritime Exhibition*, 1875 (Silver Medal).

Cl. **236, 237.** **Buckley, Joseph, & Co.,** Shawl and Flannel Manufacturers, Moorcroft Mills, Delph, near Manchester. Shawls, Raised Fancies, Rob Roys and Shepherds. (339)

Cl. **237.** **Buckley, J. E. & G. F.,** Linfitts Mill, Delph, near Manchester. Queensland and Beaver Shawls. (340)

Cl. **237.** **Farmer & Rogers,** 171, 173, and 175, Regent Street, London, W. Cashmere shawls. Exhibited in INDIAN SECTION.

Cl. **238, 246.** **Pim Brothers & Company,** Manufacturers of Irish Poplins and Furniture Brocatelles, &c., 22, William Street, Dublin. Irish poplins, plain, fancy, figured, brocaded, tartans, &c. (for ladies' dresses). Silk Terries and Brocatelles, plain, figured, and brocaded (for curtains, furniture coverings, &c.). (341)
Exhibitors, Dublin, 1850, 1865, 1872; *London*, 1851, 1862, 1873; *New York*, 1853; *Paris*, 1855, 1867; *Oporto*, 1865. (All First Prize Medals.) *Vienna*, 1873 (Medal for Progress).

Cl. **238.** **Williams, E. G., & Co.,** Export Merchants, Bradford, Yorkshire. Textile fabrics used for dress goods. Black Alpacas, Bombazines, Cords, Crapes, Cobourgs, Italians, Mohairs, Serge, and Fancy Styles of Coat Linings, Silk Warp Henriettas, Coloured Alpacas and Cobourgs, Plain and Fancy Dress Goods. (342)

Cl. **239.** **Lewis, John,** Carpet Manufacturer, India Buildings, Halifax, Yorkshire. Brussels and Wilton carpets. (343)
Exhibitor, Vienna, 1873 (Progress Medal).

Cl. **239.** **Lapworth Brothers,** Carpet Manufacturers, 22, Old Bond Street, London, W. Three carpets, and Rugs. (344)
Exhibitors, London, 1851, 1862; *Paris*, 1855, 1867; *Vienna*, 1873.

Cl. **239.** **Robinson, Vincent, & Co.,** Oriental Carpet Merchants, 38, Welbeck Street, London, W. Carpets and Rugs woven entirely of Wool, Silk, or Cotton, from India, Persia, Cashmere, Affghanistan, and Central Asia. (345)
Exhibitors, London, 1851, 1862; *Paris*, 1855, 1867; *Vienna*, 1873.

Cl. **239.** **Tomkinson & Adam,** Axminster Carpet and Rug Manufacturers, Kidderminster, and 78, Newgate Street, London, E.C. Axminster carpets woven in one piece without seam. (346)
Exhibitors, Vienna, 1873 (Diploma of Honour).

Cl. **239, 246.** **Templeton, J. & J. S.,** Carpet Manufacturers, Crownpoint Road, Glasgow, N.B. Brussels and Wilton carpeting, also Silk and Wool Window Curtains. (347)
Exhibitors, London, 1862 (Hon. Mention); *Paris*, 1867 (Bronze Medal); *Vienna*, 1873 (Medal for Merit).

Cl. **239.** **Templeton, James, & Co.,** Carpet Manufacturers, William Street, Glasgow, N.B. Axminster Carpets woven in one piece, Breadth Carpeting, Hearth Rugs. (348)
Exhibitors, London, 1851, 1862 (1st Class Medals); *Paris*, 1855 (1st Class Medal); 1867 (Gold Medal); *Vienna*, 1873 (Medal for Progress).

Cl. **239.** **Henderson & Co.,** Carpet Manufacturers, Durham. Durham Axminster woven by power (patented). (349)
Exhibitors, London, 1851 (Hon. Mention); 1862 (Medal); *Paris*, 1855 (Medal); 1867 (Silver Medal); *Vienna*, 1873 (Medal for Merit).

Cl. **239.** **Gregory & Co.,** Carpet Merchants, Cabinet Makers, and Upholsterers, 212 and 214, Regent Street, London, W. Indian and Persian Carpets. (350)
Exhibitors, London, 1862; *Paris*, 1867; *Vienna*, 1873.

Cl. **239.** **Crossley, John, and Sons, Limited,** Dean Clough Mills, Halifax, Yorkshire. Carpets of various kinds, Rugs, Sofa Carpets, Table Covers, &c. (351)

Cl. **239.** **Tapling, Thomas, & Co.,** Carpet and Manchester Warehousemen, 1 to 8, Gresham Street West, 108 to 110, Wood Street, London, E.C., and Glasgow. Tapestry for Wall Decoration or Ecclesiastical purposes. (352)

Cl. 239. **Shoolbred, James, & Co.** See Cl. 217.

Cl. 239. **Collinson & Lock.** See Cl. 217, 264.

Cl. 240. **Webb, Edward, & Sons,** Hair Cloth Manufacturers, Copenhagen Street, Worcester. Coloured Damask Hair Cloth for Furniture Covering, especially suitable for the furniture of Steamships for use in Hot Climates; Hair Cloth Paddings for Tailors' use; Curled Hair for Furniture Stuffing; Plain Black Seating, ordinary and united make; Crinoline for Ladies' use; Cider Hairs; Rough Hair Cloth of all descriptions for Hop Kilns, Oil Presses, &c. (353)

Exhibitors, Society of Arts, London, 1850 *London*, 1851, 1862; *Paris*, 1855. (Medals.)

SILK AND SILK FABRICS, AND MIXTURES IN WHICH SILK IS THE PREDOMINATING MATERIAL.

Class 242.—Cocoons and raw silk as reeled from the cocoon, thrown or twisted silks in the gum.

Class 243.—Thrown or twisted silks, boiled off or dyed, in hanks, skeins, or on spools.

Class 244.—Spun silk yarns and fabrics, and the materials from which they are made.

Class 245.—Plain woven silks, lutestrings, sarsnets, satins, serges, foulards, tissues for hat and millinery purposes, etc.

Class 246.—Figured silk piece goods, woven or printed, upholstery silks, etc.

Class 247.—Crapes, velvets, gauzes, cravats, handkerchiefs, hosiery, knit goods, laces, scarfs, ties, veils, all descriptions of cut and made up silks.

Class 248.—Ribbons, plain, fancy, and velvet.

Class 249.—Bindings, braids, cords, galloons, ladies' dress trimmings, upholsterers', tailors', military, and miscellaneous trimmings.

Cl. 242, 243, 244. **Clayton, Marsdens, Holden, & Co.,** (Limited), Patent Spun Silk Spinners and Manufacturers, Wellington Mills, Halifax. Silk waste and specimens in various stages of preparation for spinning. Patent Spun Silk yarns in grey, dyed and finished states, and various woven fabrics made from spun silk, or an admixture of spun silk. (360)

Cl. 243, 244. **Rickards, Charles Ayscough,** Manufacturer of Machine Silks, Bell Busk Mills, near Leeds. Sewing and machine silks in skeins, and on various sizes of reels, and in different colours; Machine silk on 1 oz. reels, specially made for using in Buttonhole Machines; Closing Twists for leather work; Silk and Legee Twists for Tailors, Raven and Cloth Sewings, Embroidery, Knitting and Crochet Silks. (361)

Exhibitors, York, 1866 (Medal); *London*, 1873 (Medal); *Vienna*, 1873 (Diploma of Merit); *Leeds*, 1875 (Medal).

Cl. 243, 244. **Milner, Wm., & Sons,** Silk Manufacturers, Union Street, Leek, Staffordshire. Sewing silks for machine and hand sewing on Spools and in Skeins. (362)

Exhibitors, Vienna, 1873 (Medal for Merit).

Cl. 243, 244. **Adams & Co.,** Manufacturers of Filoselle, Knitting Silk, Tussore Knitting Silk, and Embroidery Silks of all kinds, 5, New Street, Bishopsgate Street, London, E. Knitting Silk, Tussore Knitting Silk, Filoselle. (363)

Cl. 243, 244. **Ward, Anthony, & Co.,** Silk Manufacturers, Albion Silk Mills, Leek, Staffordshire. Silk threads for hand-sewing and for use in sewing machines. (364)

Cl. 243, 244. **Sheldon & Fenton,** 12, King Street, Cheapside, London, E.C., and Leek, Staffordshire. Manufacturers of Sewing Silks, Tailors' Twist, Machine Silks, &c., of every description, for Home and Foreign Markets. (365)

Cl. 245, 246, 247. **Hilditch, G. & J. B.,** 11 and 12, Cheapside, and 41, Old Change, London, E.C., Silk Manufacturers and Merchants. Silk, and silk fabrics. Velvets. (366)

Cl. 246. **Norris, & Co.,** Furniture-Silk Manufacturers, 124, Wood Street, Cheapside, London, E.C. Silks for furniture and Upholstery purposes. (367)

Cl. 246. **Brigg, J. F., & Co.** See Cl. 238.

Cl. 246. **Templeton, J. & J. S.** See Cl. 239.

Cl. 246. **Wilson, T. & D., & Co.** See Cl. 230.

(Cl. 247. **French & Co.,** Crape Manufacturers, St. Mary's Mills, Norwich. Black Crape, a textile fabric, all silk, with an embossed or figured surface. (368)
Exhibitors, London, 1874 (Medal).

(Cl. 248, 520. **Stevens, Thomas,** Ribbon Manufacturer, Stevengraph Works, Coventry, and 20, Warwick Lane, Paternoster Row, London, E.C. Inventor and Sole Manufacturer of Stevengraphs, or Illuminated Silk Woven Bookmarkers. Stevens' Improved Jacquard Loom at work. Silk Woven Illuminated Bookmarkers, Embroidered Ribbons, Ladies' Sashes and Neckties, Foresters' and Odd Fellows' sashes, Badges and all kinds of Emblematical Regalia, Navy Hat Ribbons, with the names of ships woven in gold wire ; Gold and Silver Lace, Silk-centred Sachets, Cards and Valentines. (369)

(Cl. 249. **Hodges, T. W., & Sons,** Elastic Boot Webs, Braid and Cord Manufacturers, Leicester. Elastic webs for Boot Goring, Elastic Braids and Cords, composed of India Rubber, Silk, Cotton, and Wool. (370)
Exhibitors, London, 1862 ; *Paris,* 1867 (Medal).

(Cl. 249, 252. **Simon, May, & Co.,** Lace, Curtain, Net, and Elastic Web Manufacturers, Weekday Cross, Nottingham. Lace Curtains, Valances ; Plain and Mosquito Nets ; Shetland Scarves, Shawls, &c., Elastic Webs for Boots and Shoes, &c. (371)
Exhibitors, Vienna (Medal for Merit).

Turner, Archibald, & Co., Elastic Fabric Manufacturers, Bow Bridge Works, Leicester. Elastic Woven Fabrics for Boots, Shoes, Belts, Suspenders, Garters, Stays, Skirts, Pocket Books, Portmonnaies, &c., and Elastic Braided Fabrics, consisting of Cords and Braids, in Silks, Cotton, Lustre, Mohairs, &c., including Surgical Braids, and Bandages. (372) Cl. 249, 254, 255.
Exhibitor, Vienna, 1873 (Medal for Merit).

Stewart, Moir, and Muir, Manufacturers, 73, Mitchell Street, Glasgow, Scotland. Curtains for Window and decorative purposes and for use in the British Section. (373) Cl. 246. 252.

Heymann & Alexander, Lace Manufacturers and General Merchants, Stoney Street, Nottingham. Lace Curtains, Antimacassars, all descriptions of Silk, Wool, and Cotton Laces, plain Cotton Nets, Brussels Nets, extra Twist Nets, Plain and Fancy Silk Nets, Quillings, Trimmings, &c., &c. (374) Cl. 249, 252.
Exhibitors, London, 1851, 1862 ; *Paris,* 1855, 1867. (Medals at all.)

Jacoby, M., & Co., Lace Manufacturers and General Commission Merchants, Broadway, Nottingham. Patent Valenciennes and Silk Guipures, Patent Imitation Swiss Curtains, Lace Curtains in general. (375) Cl. 249, 252.
Exhibitors, London, 1862 (Bronze Medal) ; *Dublin,* 1865 (Bronze Medal); *Paris,* 1867 (Silver Medal) ; *Vienna,* 1873 (Medal for Progress).

CLOTHING, JEWELLERY, AND ORNAMENTS, TRAVELLING EQUIPMENTS.

Class 250.—Ready-made clothing, knit goods and hosiery, military clothing, church vestments, costumes, waterproof clothing, and clothing for special objects.
Class 251.—Hats, caps, boots, and shoes, gloves, mittens, etc., straw and palm-leaf hats, bonnets, and millinery.
Class 252.—Laces, embroideries, and trimmings for clothing, furniture, and carriages.
Class 253.—Jewellery and ornaments worn upon the person.
Class 254.—Artificial flowers, coiffures, buttons, trimmings, pins, hooks and eyes, fans, umbrellas, sun-shades, walking canes, pipes, and small objects of dress or adornment, exclusive of jewellery. Toys and fancy articles.
Class 255.—Fancy leather work, pocket-books, toilet cases, travelling equipments, valises and trunks.
Class 256.—Furs.
Class 257.—Historical collections of costumes, national costumes.

(Cl. 250. **Smyth & Co.,** Established 1790. Original Balbriggan Hosiers, Manufactory, George's Hill, Balbriggan, Ireland ; Warerooms, 36 and 37, Lower Abbey Street, Dublin, and 30,

Milk Street, London, E.C. Finest ladies' and gentlemen's Balbriggan hosiery; also lace hose; also sample of the finest and lightest stocking ever exhibited. (390)

Exhibitors, London, 1862; *Paris*, 1855, 1867; *Dublin*, 1853, 1865; *Vienna*, 1873. (Medals.)

Cl. **250.** **Schreiber, Felix August,** Manufacturer, 17, Thavies Inn, London, E.C. Ladies underclothing, ready-made. (391)

Cl. **250.** **Hitchcock, Williams, & Co.,** Manufacturers, Wholesale and Retail Costumes, Mantles, Millinery, Fancy Goods and General Warehousemen, St. Paul's Churchyard, Paternoster Row, London House Yard, London, E.C.; Manufactories: Ave Maria Lane, Paternoster Buildings, London, E.C. Costumes made of mixed Fabrics, Wool and Silk, Wool- and Cotton, or Wool only. (392)

Exhibitors, London, 1862 (Costumes, Medal); *Paris*, 1867 (Shawls, Hon. Mention); *Amsterdam*, 1869 (Waterproof Cloaks, Diplome d'Excellence, equivalent to Gold Medal); *Vienna*, 1873 (Costumes, Medal for Merit).

Cl. **250.** **McLintock, James, & Sons,** Patent Down Clothing Manufacturers, Barnsley, Yorkshire. Real Eider down quilts, Russian or Arctic down quilts, skirts, pillows; Patent silk down Toralium quilts, skirts, ladies' and gentlemen's jackets and dressing gowns, tea cozies, dress improvers, slippers, &c. &c. (393)

Cl. **250, 255.** **McGee, John G., & Co.,** Inventors and Makers of the "Ulster" Overcoat for Ladies and Gentlemen, High Street, Belfast, Ireland. Specialities in Gentlemen's and Ladies' "Ulster" Overcoats, and in Irish Homespun Goods in Friezes; Travelling Wraps, Shawls and Rugs. (394)

Exhibitors, London, 1851 (Prize Medal).

Cl. **250, 251.** **Morley, J. & R.,** Hosiery and Glove Manufacturers, 18, Wood Street, Cheapside, London, E.C. Hosiery and gloves. (395)

Exhibitors, London, 1851 (Medal); 1862 (Medal); *Vienna*, 1873 (Medal for Progress).

Cl. **250.** **Sykes, Josephine, & Co.,** Ladies Outfitters, 280, Regent Street, London, W., 56A, Old Steyne, Brighton. Corsets and ladies' belts. (396)

Exhibitors, London, 1851 (Hon. Mention).

Turner, Archibald, & Co. See Cl. 249. Cl. **250, 255.**

Thomson, W. S., & Co., 97, Cheapside, London. Corsets and Busks for corsets. (397) Cl. **250. 251.**

Festa, G. P., 13, Charles Street, Grosvenor Square, London. Stays for riding, Obstetrical Corset, Stays for support, Corset de luxe, Juvenile Corset for training the figure. (398) Cl. **250, 251.**

Welch, Margetson, & Co., Manufacturers, 16 and 17, Cheapside, London, E.C. Scarves and Ties, Silk Handkerchiefs, Linen Collars, Fancy Shirtings, Umbrellas, Rugs, &c. (399) Cl. **250, 254, 255.**

Exhibitors, London, 1851 (Prize Medal); *Vienna*, 1873 (Medal for Merit).

Debenham & Freebody, General Warehousemen, 27, 29, and 31, Wigmore Street, London, W., and 2, 3, and 4, Welbeck Street, London, W. Gloves. (400) Cl. **251.**

Exhibitors, London, 1851, 1863.

Tress & Co., Hat Manufacturers, 3, 5, & 7, Stamford Street, London, S.E. Gentlemen's Silk and Felt Hats; Ladies' Riding Hats, Ladies and Children's Felt and Velvet Hats; specialities in Patent Pith and Felt Solar Hats and Helmets, also in Regulation Helmets for Tropical climates. (401) Cl. **251.**

Exhibitors, London, 1851, 1862; *Paris*, 1855, 1867. (Medals at all.)

Roe, William Allen, Engineer to the Blake Sole Sewing Machine Co., Limited, 81, Humberstone Gate, Leicester. Strong Boots and Shoes. (402) Cl. **251.**

Lincoln, Bennett, & Co., Hat Manufacturers, (Hatters to Her Royal Highness the Princess of Wales and the Royal Family,) 1, 2, and 3, Sackville Street, and 40, Piccadilly, London, W. Manufactory and Wholesale and Export Departments, 24, Nelson Square, London, S.E. Felt Hats (various); Silk Velvet Napped Hats (various). (403) Cl. **251.**

Exhibitors, London, 1851, 1862 (Medals).

Lobb, John, Bootmaker, 296, Regent Street, London, W. Gentlemen's First-class boots. Walking, Dress, Riding, and Shooting; Ladies' First-class Boots. (404) Cl. **251.**

Exhibitor, Australia, 1862 (Silver Medal); *London*, 1862 (Medal); *Paris*, 1867 (Silver Medal); *Vienna*, 1873 (Medal for Progress).

Cl. 251. **Baxter, Richard,** Boot and Shoe Maker, St. James Green, Thirsk, Yorkshire. Ventilating Boots, Promenade and wooden clump boots of new invention. (405)
Exhibitor, London, 1851, 1862; *Paris,* 1855 and 1867 (Medal).

Cl. 251. **Daggett, Christopher,** Glove Manufacturer, Woodstock, Oxfordshire. Gloves. (406)

Cl. 251. **Humbert, Hermann,** Straw Hat and Bonnet Manufacturer, 30, Barbican, London, E.C. Straw, Willow Chip and Fancy Hats and Bonnets, Hat and Bonnet Shapes. (407)

Cl. 251, 254. **Dash, Osmond,** Hatter, 10, King's Road, Brighton. Silk, Felt, Pull-over, Straw and Tweed Hats in various shapes and styles, all of the finest qualities. Caps and Umbrellas. (408)

Cl. 251. **Matthews, James,** Boot Manufacturer, No. 43, Gibson Street, Waterloo Road, Lambeth, London, S.E. First-class Boots and Shoes, White Kid Boots, Blue Morocco Boot made without a seam, Velvet Turnover Slippers, Blue Satin Boots, Ladies' Patent Leather Boot, Gentlemen's Cloth Drab Boots, Blue Silk Boot Patent Goloshed, Dress Wellington Boot, Queen Anne Slippers, Ladies' Cork Boot, and Whit Kid Boot, trimmed with Morocco; all hand work. (409)

Cl. 252. **Heymann & Alexander.** See Cl. 249.

Cl. 252. **Jacoby, M., & Co.** See Cl. 249.

Cl. 252. **Smith, George John,** Lace Merchant, 4, The Terrace, Church Road, Upper Norwood, Surrey. Irish lace. The Work of the Industrial Poor. (410)
Exhibitor, London, 1862, 1870 (Gold Medal), 1874; *Paris,* 1861 (Bronze Medal); 1867 (Hon. Mention); 1875 (Gold Medal); *Amsterdam,* 1869; *Vienna,* 1873 (Medal for Merit); *Paris Maritime Exhibition,* 1875 (Gold Medal).

Cl. 249, 252. **Browett, Frederick, & Co.,** Trimming Manufacturers, Coventry. The Royal Sandringham Lace Edge Cambric Frillings. Fancy Curtain Borders, Ladies' Dress Trimmings Woven Name Tapes, and Mantles. (411)

Cl. 252. **Dunraven, The Countess of,** Adare, Co. Limerick, Ireland. Embroidery on Lawn, consisting of two robes, some pocket handkerchiefs, strips of insertion for dresses, pincushion cover, &c. &c. (412)

Cl. 252. **School of Art Needlework, The Royal.** See Cl. 217.

Cl. 252. **Simon, May, and Co.** See Cl. 249.

Stewart, Moir, and Muir. See Cl. 249. Cl. 252.

Bryan, Charles, Jet Ornament Manufacturer, West Cliff, Whitby. Jet, rough, and in ornaments of various descriptions. (413) Cl. 253.
Exhibitor, London, 1862 (Hon. Mention); *Society of Arts Prize,* 1863, 1864; *Prize,* 1867; *Leeds and York Exhibitions,* 1868.

Gibson, William, Patent Keyless Chronometer Watch Manufacturer, Diamond Jeweller; Manufacturer of Bog Oak Jewellery and Ornaments, Donegall Place and Castle Place, Belfast. Keyless Watches; Gold and Diamond Jewellery. Watches; Irish Bog Oak Jewellery; Walking Sticks and Table Ornaments. (414) Cl. 253, 254, 323.

Francati & Santamaria, Jet Cameo Mosaics and Jet Jewellery Manufacturers, 65, Hatton Garden, London, E.C. Jet ornaments manufactured in Best real Whitby Jet. Brooches, Ear Rings, Bracelets, Necklaces, &c.; Jet Cameo Mosaics carved by Roman Cameo Cutters. (415) Cl. 253.
Exhibitors, London, 1862, 1870; *Dublin,* 1865; *Paris,* 1867.

Goggin, Jeremiah, Bog Oak Ornament, Killarney Arbutus Wood, Bog Yew, Galway Marble, Jet, Pebble, and Ore Manufacturer, Jeweller in Native Gems, and Artist in Hair Ornaments, 74, Grafton Street, Dublin. Bracelets, brooches, necklaces, earrings, pins, and studs, tiaras, chatelaines, and every ornament in use for personal wear, both plain and ornamented in various settings in gold and silver, studded with native gems. Table ornaments, — dressing-cases, work-boxes, caskets, centre-pieces, candlesticks, vases, statuary, albums, blotting-books, ink-stands, envelope cases, card-cases, mirrors, time-pieces, reading stands, walking-canes, pipes, old Irish drinking cups, tankards, &c. (416) Cl. 253, 254, 258.
Exhibitor, London, 1851, 1862 (Bronze Medals); *Paris,* 1855 (Silver Medal); 1867 (Bronze Medal); *Dublin,* 1853, 1865 (Silver Medals); 1872 (Bronze Medal); *Vienna,* 1873 (Medal for Merit).

Aitchison, James, by Special Appointment Court Jeweller to H.I.M. the Emperor of Austria, 23, Princes Street, Edinburgh. Scottish jewellery in gold and silver, Highland ornaments and stones found in Scotland, such as Pearls, Cairngorms, and Pebbles. (417) Cl. 253.
Exhibitor, Vienna, 1873 (Medal for Merit).

Cl. 253, 281, 323. **Neal, John,** Jeweller, Silversmith, Watchmaker, and Pyro-Silver Manufacturer, 44, 46, 48, Edgware Road, London, W. Gold and silver jewellery, set precious stones, &c., silver-plated and electro-silver table ware, cutlery, especially Neal's Pyro-Silver cutlery, gold and silver watches, chronometers, and time-keepers. (418)

Exhibitor, London, 1862 (Hon. Mention); 1872 (Certificate); 1873, 1874 (Medals); *Paris,* 1867 (Hon. Mention); *Vienna,* 1873 (Medal for Merit).

Cl. 253. **Jefferys, John,** Manufacturing Jeweller, 14, Tottenham Court Road, W. Sleeve links, studs, solitaires, scarf rings, &c., including various patents and registrations in connexion with same. (419)

Cl. 253. **Fridlander, A. A.,** 26, Hylton Street, Birmingham. Gold Jewellery. (420)

Cl. 254, 284. **Cooke Brothers,** 65a and 66a, Constitution Hill, Birmingham. Safety Pins, Curtain Hooks, and Fancy Nails. (421)

Cl. 254. **Van Volen, Gerret,** Human Hair Merchant and Ornamental Hair Manufacturer, 50 and 52, Waterloo Road, Lambeth, London, S.E. Raw, Dutch, German and Italian, and German and English prepared Hair "Human" in natural and artificial colours; Natural and Artificial white Hair "Human;" Tools used in preparation and manufacture. (422)

Cl. 254. **Smith, John Wright,** Self-acting Needle Manufacturer and Original Patentee, 121, Belgrave Gate, Leicester. Self-acting Needles used in Hosiery Frames. (423)

Cl. 254, 296. **Swaine & Adeney,** Whip Manufacturers to the Queen and Prince of Wales, 185, Piccadilly, London, W. Whips of all descriptions; Driving, Riding, Hunting, and Four-in-hand Whips; Whip Lashes and Thongs; Whip Sockets; Hunting, Mail, and Tandem Horns; Canes, and Walking Sticks; Sporting Apparatus. (424)

Exhibitors, London, 1851, 1862 (Medals); *Paris,* 1855 (Medal); 1867 (Silver Medal); *Vienna,* 1873 (Medal for Good Taste).

Cl. 254. **Turner, R., & Co.,** Needle, Pin, and Fish Hook Manufacturers, also of G. Chambers & Co.'s Patent Needles, Old Factory, Redditch. All kinds of Needles, Pins, Fish Hooks, &c., displayed in a glass case forming model of the Exhibition of 1851. (425)

Exhibitors, Paris, 1855 (Médaille d'Honneur); *London,* 1862.

Cl. 254. **Tayler, D. F., & Co.** (late Edelsten and Williams), Pin Manufacturers, New Hall Works, Birmingham. Solid-Headed Toilet Pins, Hairpins, Hooks and Eyes, Pearl Buttons, Iron, Steel, Brass, and Copper Wire. (426)

Exhibitors, London, 1851, 1862 (Bronze Medals); *Amsterdam,* 1869 (Silver Medal); *Vienna,* 1873 (Medal for Merit).

Cl. 254, 296. **Martin, William Henry,** Umbrella, Walking Stick, and Whip Maker, 64 and 65, Burlington Arcade, Piccadilly, London, W. Umbrellas, Walking Sticks, and Whips. (427)

Exhibitor, London, 1862 (Prize Medal); *Paris,* 1867 (Two Prize Medals).

Cl. 254, 296. **Sangster & Co.,** Umbrella Makers, 140, Regent Street, 10, Royal Exchange, 94, Fleet Street, 75, Cheapside, London. Umbrellas, Parasols, Sunshades, Whips, Canes. (428)

Exhibitors, London, 1851, 1862; *New York,* 1853; *Paris,* 1855; *Vienna,* 1873 (Medal for Good Taste).

Cl. 254. **Hayes, Crossley, & Co.,** Needle and Pin Manufacturers, 153, Cheapside, London, E.C., and Alcester. New Shape Sewing needles, double pointed; these needles being tapered from the centre towards the eye can be withdrawn from any material with greater ease than those of the old shape. Machine needles, pins, bodkins, also specimens in various stages of preparation. (429)

Exhibitors, Paris, 1867 (Hon. Mention); *London Workmen's International* (Certificate of Merit); *Amsterdam,* 1869 (Silver Medal); *London,* 1873 (Large Medal); *Vienna,* 1873 (Diploma of Merit); *Paris Maritime Exhibition,* 1875 (Medal).

Cl. 254, 269. **Woodfield, William, & Sons,** Manufacturers of Needles, Sewing Machine Needles, Fancy Needle Cases, Fish Hooks, &c., Easemore Works, Redditch, England. Needles, sewing machine needles, fish hooks, &c., sail tools, and fancy needle cases. (430)

Exhibitors, Paris, 1867 (Hon. Mention); *Havre,* 1868 (Hon. Mention); *Amsterdam,* 1869 (Silver Medal); *Lyons,* 1872 (Bronze Medal); *Vienna,* 1873 (Diploma of Merit).

Cl. 254, 269. **Milward, Henry, & Sons,** Needle Manufacturers, Redditch. Needles, Sewing Machine Needles, Fish-Hooks. (431)

Exhibitors, London, 1862 (Medal); *Paris*, 1855 (Silver Medal), 1867 (Medal); *Vienna*, 1873 (Medal for Merit) — (Coöperator's Medal, Richard Bennett, 1873); *Lyons*, 1872 (Silver Medal); *Paris*, 1875 (Gold Medal).

Cl. **254, 269.** **Kirby, Beard, & Co.,** Manufacturers of Pins, Needles, and Hair Pins, of all descriptions; also of Fish Hooks for Sea and River, and Fishing Tackle. Manufactories, Birmingham and Redditch. (432)

Exhibitors, London, 1851, 1862, 1873 (Bronze Medals); *Paris*, 1855 (First-class Medal), 1867 (Silver Medal); *Havre*, 1868 (Silver Medal); *Amsterdam*, 1869 (Diplome d'Honneur); *Naples*, 1871 (Silver Medal); *Vienna*, 1873 (Diploma of Merit).

Cl. **254, 269.** **English, John, & Co.,** Needle, Fish Hook, &c., Manufacturers, Feckenham, near Redditch, Worcestershire. Sewing needles; Knitting, Mattress, Netting, Pack, Sail, and Surgeons' needles; Sewing Machine needles. Fish Hooks; Steel Pins; Hair Pins; Bodkins. (433)

Cl. **254.** **Evans, David,** Needle Manufacturer, Studley, Redditch. Needles for hand and machine sewing. (434)

Exhibitor, London, 1873 (Medal).

Cl. **254.** **Heath, William,** Needle Manufacturer, Neveux Works, Crabb's Cross, Redditch. Sewing machine needles of every description, also the Heath Patent Self-adjusting Sewing machine needles suitable for every description of Sewing machines. (435)

Exhibitor, Paris, 1867 (Hon. Mention).

Cl. **254.** **Smith, James, & Son,** Needle Manufacturers, Astwood Bank, near Redditch. Hand Sewing Needles showing stages of manufacture, Sewing Machine Needles, Sail, Surgeons', Knitting and Netting Needles, Materials of which the above are made, Bodkins, Hair Pins, and Fancy Cases for holding Needles. (436)

Cl. **254.** **Fenton, James,** Pearl Button Maker, 74, Great Hampton Street, Birmingham. Agents, John Thornton & Co., 213, Church Street, Philadelphia, and 400, Broadway, New York, U.S. Pearl buttons. (437)

Cl. **254, 262.** **Johnson, J., & Co.,** Charterhouse Works, Sycamore Street, London, E.C. Shell Boxes, Toy Furniture and Ornaments, Fancy Paper Boxes. (438)

Cl. **254, 296.** **Davis & Wilson** (late George Davis & Son), Whip Mount Manufacturers, 37, Sun Street West, Birmingham. Whip, walking stick, and umbrella mountings, African Chiefs' canes, finished whips, and general whip materials. (439)

Exhibitors, Vienna, 1873 (Diploma of Merit).

Cl. **254, 258.** **Firmin & Sons, Limited,** 153, 154, and 155, Strand, London, W.C. Samples of Badges, Military and Naval Buttons, Military, Naval, Civil, and Court Swords, Military, Naval, Civil, and Livery Ornaments. (440)

Exhibitors, London, 1851, 1862 (Medals); *Paris*, 1855 (Hon. Mention); *Dublin*, 1865 (Medal).

Cl. **255.** **Turner, George, & Co.,** Tent and Hammock Manufacturer and Travellers' Outfitter, 94, Gracechurch Street, London, E.C. Military and Travelling equipment; Hammock valise for officers and travellers' kits, arranged to form a bed, and fitted with "Tente d'Abri" if required. Articles for use in Tents or ordinary Dwellings; Hammock Bedstead; Hammock cots for children, various patterns; Hammock Sofa on portable stand for invalids and others; Mosquito Curtains, improved plan, Improved Tent, with appliances for soldiers and others sleeping off the ground, and for warming them in winter. Camp oven and Canteen. Ambulances for the wounded. Appliances for picketting horses, &c. Improved Hammocks for ship and other use. Screw anchor Peg for Tents, mooring Boats, Tethering Cattle, &c. (441)

Exhibitors, London, 1862 (Medal).

Cl. **255.** **Harrington, J., & Co.,** Patentees and Manufacturers, Agents, Ihlee and Horne, 31, Aldermanbury, London. Imitation Leather (registered name, "Leatherette,"), Hat Linings, Shoes and Shoe Linings, Wall Decorations, Pocket Books, Belts, Despatch Boxes, Dressing and Jewel Cases, Glove and Handkerchief Boxes, and other fancy Leather work. (442)

Exhibitors, London, 1874 (Medal).

Cl. **255.** **Hoe, Richard, & Sons,** Portmanteau, Trunk, and Bag Makers, 44, Leadenhall Street, London, E.C. Solid Leather Portmanteaus and Hat Cases, Morocco, Enamelled Leather, and Fitted Bags. (443)

Jeffreys, Charles. See Cl. 217. Cl. **255.**

Sage, Frederick. See Cl. 255. Cl. **255.**

Cl. 255. **Ward, Marcus, & Co.** See Cl. 258, 259, 262, 300, 306, 424.

Cl. 255, 269. **Bussey, Geo. G., & Co.,** Manufacturers and Patentees. Works: Rye Lane, Peckham, London; 20, Steelhouse Lane, Birmingham. Depôts: 311½, Walnut Street, Philadelphia; 130, Broadway, New York; Santiago, Chili. Leather Waterproof Portmanteaus, Trunks, Travelling Bags, and every description of Leather and Waterproof Goods used for shooting and travelling purposes. Breech-loading Guns and their accessories. Bussey's Patent Gyro Pigeon. (444)

Exhibitors, Paris, 1867 (Hon. Mention).

PAPER, BLANK BOOKS, AND STATIONERY.

Class 258.—Stationery for the desk, stationers' articles, pens, pencils, inkstands, and other apparatus of writing and drawing.

Class 259.—Writing paper and envelopes, blank-book paper, bond paper, tracing paper, tracing linen, tissue paper, etc., etc.

Class 260.—Printing paper for books, newspapers, etc.
Wrapping paper of all grades, cartridge and manilla paper, paper bags.

Class 261.—Blank books; sets of account books, specimens of ruling and binding, including blanks, bill heads, etc., bookbinding.

Class 262.—Cards; playing cards, cardboard, binders' board, pasteboard, paper or cardboard boxes.

Class 263.—Building paper, pasteboard for walls, cane fibre felt for car wheels, ornaments, etc.

Class 264.—Wall papers, enamelled and coloured papers, imitations of leather, wood, etc.

Cl. 258. **Hinks, Wells, & Co.,** Steel Pen and Pen Holder Manufacturers, Buckingham Steel Pen Works, Birmingham. Steel Pens, Pen Holders. (450)

Exhibitors, London, 1851, 1862 (Medals); *Paris,* 1855 (Medal); 1867 (First-class Certificate); *Havre,* 1872 (Gold Medal).

Cl. 258. **Webster, Henry,** Manufacturer of Berry's Patent Portable Inkstand and Portable Writing Cases, &c., 22, Litchfield Street, Soho, London, W.C. (451)

Exhibitor, London, 1862 (Hon. Mention).

Cl. 258, 255, 259, 262, 300, 306, 424. **Ward, Marcus, & Co.,** Publishers, Colour Printers, Bookbinders, and Manufacturers of Stationery, 67 and 68, Chandos Street, Strand, London, W.C., Royal Ulster Works, Belfast, Ireland. "Royal Irish Linen" Writing Papers and Envelopes; Illustrated Books; Chromo Prints; Maps and Atlases; Christmas, New Year, Easter, and Birthday Cards; Sunday School Reward Cards; Valentines; Photograph Albums, Scrap Books, Vere Foster's Educational Works.—Writing and Drawing Copy Books; Children's Picture Books; Gift Books; Menu and Ball Programme Cards, Fancy Leather Work, Diaries, Calendars, &c. &c., all processes used in production being carried out at the Royal Ulster Works, Belfast. (452)

Exhibitors, London, 1862 (Prize Medal); *Dublin,* 1865; *Paris,* 1867 (Three Medals, two Bronze and one Silver).

Ortner & Houle, 3, St. James's Street, London. Specimens of Seal Engraving, Steel and Copperplate Heraldic Engraving, and Die Sinking. (453) Cl. 258, 404.

Exhibitors, London, 1862 (Hon. Mention); *Paris,* 1867 (Prize Medal).

Sloper, Joseph, 6 & 7, King William Street, London, E.C. Sloper's Patent System of Indellibly Cancelling, Dating, Marking, or Numbering all kinds of Documents by Perforations, viz., Bankers' Cheques, Amounts on Credit Notes, Deeds, Government Stamps, Initialling Postage, Receipt, and Bill Stamps, Ballot Papers, Trade Marks, Railway Tickets, &c. to prevent Erasure or Fraud. (454) Cl. 258, 546.

Stephens, H. C. See Cl. 202. Cl. 258.

Cl. 259, 262. **Pirie, Alexander, & Sons,** Paper, Card, and Envelope Manufacturers, Stoneywood, Union, and Woodside Works, Aberdeen, Lambeth Hill, Upper Thames Street, London, E.C.; and Middle Abbey Street, Dublin. Assortment of Writing Papers, Cardboard, and Enamelled Papers. (455)

Exhibitors, Paris, 1855 (Medal).

Cl. 259. **Ford Works Company, The** (Limited), Thomas Routledge, Managing Director and Patentee, Ford, near Sunderland, Durham. Agents, U.S., Rice, Kendall, & Co., Federal Street, Boston. One bale bleached paper stock, one bale unbleached paper stock, manufactured from Esparto grass, under Thos. Routledge's patents. Also Case of products from Esparto, Bamboo, Megasse, Phormium Tenax, Maize, and other Fibres. Exhibited by Thomas Routledge. (456)

Thos. Routledge, Exhibitor, London, 1862 (Medal and Hon. Mention).

Cl. 259. **Fletcher, Robert, and Son,** Paper Manufacturers, Kersley Paper Works, Stoneclough, near Manchester. White and Coloured Papers. Fine tissues, suitable for Artificial Florists and Decorative purposes, Silver Tissues specially. Copying and Cigarette Papers. (457)

Dudgeon, Arthur. See Cl. 101. Cl. **259.**

Birdsall & Son. See Dickenson & Higham, Cl. 306. Cl. **261.**

Rimmel, Eugene. See Cl. 203. Cl. **262.**

Goodall, Charles, & Son, Playing and Message Card Makers and Manufacturing Stationers, Camden Works, Camden Town, London, N.W. Playing cards, and Christmas cards, showing surface printing as applied thereto. (458) Cl. **262. 424.**

Exhibitors, London, 1862 (Prize Medal); *Paris,* 1867 (Prize Medal).

Jeffrey & Co., Paper Stainers, 64, Essex Road, Islington, London, N. Artistic wall paper decorations, exhibited as Works of Art. (459) Cl. **264, 442.**

Exhibitors, London, 1862 (only Medal for Block Printing); 1873 (Medal, as Works of Art); *Paris,* 1867 (Medal).

Collinson & Lock. See Cl. 217, 239. Cl. **264.**

MILITARY AND NAVAL ARMAMENTS, ORDNANCE, FIRE ARMS, AND APPARATUS OF HUNTING AND FISHING.

Class 265.—Military small arms, muskets, pistols, and magazine guns, with their ammunition.
Class 266.—Light artillery, compound guns, machine guns, mitrailleuses, etc.
Class 267.—Heavy ordnance and its accessories.
Class 268.—Knives, swords, spears, and dirks.
Class 269.—Fire arms used for sporting and hunting, also other implements for the same purpose.
Class 270.—Traps for game, birds, vermin, etc.

Cl. 265. **Soper, William,** Gun and Rifle Manufacturer, 23, Friar Street, Reading. "The Soper Rifle" (which has been loaded and fired 60 times in one minute). (470)

Exhibitor, Reading, 1865 (Silver Medal, with Special Mention); *Basingstoke,* 1869 (First Prize); *London,* 1870 (Gold Medal, with Hon. Mention); *Lyons,* 1872 (Bronze Medal); *Moscow,* 1872 (Gold Medal); *Vienna,* 1873 (Medal for Merit); *Paris Maritime Exhibition,* 1875 (Silver Medal).

Cl. 265, 269. **Scott, W. & C., & Sons,** Gun Manufacturers, Premier Gun Works, Lancaster Street, Birmingham, and London. Sporting fire-arms, on their Patent Top Lever, under and over Treble Bolt, and the Quadruple and Quintuple Bolt Guns. The premier quality and other grades. Revolvers. Gun Materials. (471)

Greener, William Wellington, Gun Manufacturer, St. Mary's Works, Birmingham. Sporting Guns and Rifles, Breech-loading Guns. (472) Cl. **265, 269.**

Exhibitor, London, 1851 (Prize Medal); *New York,* 1853 (Two Prize Medals); *Paris,* 1855 (Two Silver Medals), 1867 (Gold Medal).

Cl. 265, 269. **Needham, J. & G. H.,** Gun Manufacturers, 53, Piccadilly, London, W. New Patent Safety Self-Extracting Central Fire Breech-Loading Double Gun (Hammerless) ; Ditto, with ordinary Locks and Hammers ; Ditto, Self Half-cocking Action. (473)

Cl. 265, 269. **Webley, P., & Son,** Gun, Rifle, and Revolver Manufacturer, 82, 83, & 84, Weaman Street, Birmingham. Sporting Breech-Loading Guns, Rifles, and Revolvers. (474)

Exhibitors, Dublin, 1872 (Medal) ; *Vienna,* 1873 (Medal for Progress).

Cl. 265, 269. **Purdey, James,** Manufacturer of Best Sporting Guns and Rifles, by special appointment to H.R.H. the Prince of Wales ; Patentee of the Snap action, Double Lock, Breech-Loader, and other inventions, and original Manufacturer of Express Double Rifles, 314½, Oxford Street, London, W. Guns and Rifles, &c. (475)

Cl. 265, 269. **Lancaster, Charles,** Gun Manufacturer and Inventor of the Breech-Loading Express Rifle, 151, New Bond Street, London, W. Guns, Central Fire Breech-Loading, with travelling cases ; Rifles, Central Fire Breech-Loading Express, with travelling cases ; Cannon. Drawings and Models of the Oval bored. (476)

Exhibitor, London, 1851, 1862 (Medals).

Cl. 265, 269. **Lancaster, Alfred,** Gun and Rifle Manufacturer, 27, South Audley Street, Grosvenor Square, London, W. High-class sporting guns and rifles. (477)

Exhibitor, Paris, 1867 (Medal) ; *Vienna,* 1873 (Medal for Progress).

Cl. 265, 269. **Dougall, James Dalziel,** Breech-loading Gun Manufacturer to their Royal Highnesses the Prince of Wales and the Duke of Edinburgh, 59, St. James's Street, London, S.W., and 39, Gordon Street, Glasgow. Improved long range, Express shot Guns and Rifles of the very highest quality, for all kinds of American running and flying game. (478)

Exhibitors, London, 1862 (First Medal) ; *Paris,* 1867 (Medal) ; *Moscow,* 1872 (Grand Gold Medal) ; *Vienna,* 1873 (Diploma of Merit).

Cl. 265, 269. **Rigby, John, & Co.,** Gun Manufacturers, 24, Suffolk Street, Dublin, and 72, St. James's Street, London, S.W. Improved Guns and Rifles for Game, Shooting, and Rifles for Target Practice, and their accessories. (479)

Exhibitors, London, 1851 (Bronze Medal) ; *Paris,* 1855 (Silver Medal) ; *Dublin,* 1834, 1838, 1844 (Four Silver Medals) ; 1841 (Gold Medal) ; 1865 (Bronze Medal).

Cl. 265, 269. **Henry, Alexander,** Rifle and Gun Manufacturer, 12, South St. Andrew Street, Edinburgh, Maker by Special Appointment to their Royal Highnesses the Prince of Wales and the Duke of Edinburgh. Fire-arms, &c. Fire-arms—viz., Patent Breech-loading Express Rifles (double and single barrelled) for Deer stalking and for the destruction of all kinds of large and dangerous game ; Double Central Fire Breech-loading Fowling Pieces ; Patent Breech-loading Harpoon and Bomblance Guns for Whale Fishing ; Patent Breech-loading Military Arms, Target Rifles. (480)

Exhibitor, Vienna, 1873 (Medal for Progress).

Cl. 265, 269. **Reilly, E. M., & Co.,** Gun and Rifle Manufacturers, 502, New Oxford Street, London, W.C., 315, Oxford Street, London, W., and Rue Scribe, Paris. Central Fire Breech-loading Guns of various calibres and qualities, comprising all the latest improvements. Express Rifles, very low trajectory, fine shooting, carrying large charges of gunpowder. (481)

Exhibitors, London, 1851 (Bronze Medal) ; 1862 (Hon. Mention) ; *Paris,* 1855 (Medal) ; 1867 (Silver Medal).

Cl. 265, 269. **Lang, J., and Sons,** Gun and Rifle Manufacturers, 22, Cockspur Street, Pall Mall, London, S.W. Guns and Rifles. (482)

Exhibitors, London, 1851 (First-class Prize Medal) ; 1862 (First Prize Medal) ; *Paris,* 1855 (First Prize) ; 1857 (Grand Medaille d'Honneur Académie National) ; 1867 (First Prize Medal).

Cl. 265, 276, 320, 594. **Clay, Randolph,** Student at the Royal School of Mines, London, 58, Finborough Road, South Kensington, London, S.W. A converter for breech-loading fire-arms ; impervious flexible gas tubing ; an instrument for tracing ellipses and other curves ; a portable invalid bed tray for hospitals, ship's berths ; model of a deck seat with life raft and of a boat disengaging hook. (483)

Cl. 265, 269. **Tolley, J. & W.,** Gun and Rifle Makers, Pioneer Works, St. Mary's Square, Birmingham. Sporting Breech-Loading Shot Guns, cleaning, loading, and re-loading implements

used therewith. Sporting, Breech-loading, "Express" Rifles, and implements used therewith. Cartridge Cases, Lubricators, Bullets, and Primets for re-loading Cartridges. (484)

Cl. 265, 269. **Gibbs, George,** 29, Corn Street, Bristol. Metford Patent and other Rifles, Patent Self-cocking and other Guns. (485)

Cl. 268. **Firmin & Son.** See Cl. 254.

Cl. 268. **Needham, John.** See Cl. 281.

Cl. 268. **Brookes & Crookes.** See Cl. 281.

Cl. 269. 201. **Marrison, Robert D.,** Patentee and Manufacturer of Guns, Rifles, and Shooting Apparatus, &c., Great Orford Street, Norwich, Norfolk. Breech-loading guns and Apparatus for filling cartridges. An apparatus which provides a substitute for living birds for shooting practice, called the "Registered Flyer," this invention flies in the air like a bird. "The Queen Soap Powder," a substitute for soda for cleaning purposes. (486)

Exhibitor, London, 1871 (Medal); *Norwich,* 1871, 1872 (Medals).

Cl. 269. **Williams and Powell,** 25, South Castle Street, Liverpool. Manufacturers of Fine Breech-loading Guns. Established 1780. Breech-loading guns. (487)

Cl. 269, 281. **Ryder, William Henry,** Fishing Tackle Manufacturer, 48, Ellis Street, Birmingham. Fishing tackle generally, also speciality for winches. Taps for drawing effervescing Wines, or Aërated Waters, without drawing the cork. (488)

Exhibitor, Paris, 1867 (Hon. Mention).

Buchanan, James, Fish-hook Manufacturer, 58 to 62, Dale Street, Tradeston, Glasgow. Sea fish-hooks, various kinds, as used in different countries, America included. The same, snooded or genged with hemp and wire. (489) Cl. 269.

Exhibitor, Arcachon, 1866 (Silver Medal); *Amsterdam,* 1861 (Bronze Medal); *Bergen,* 1865 (Bronze Medal); *Paris,* 1867 (Hon. Mention).

Green, E. C., 87, High Street, Cheltenham. Sporting guns, with their appurtenances. Double Bolt, Top Lever, Breech-Loading Shot Gun, with new pattern, fast bite fore-end fastening. Double Grip patterns ditto. Hammerless Breech-loading Shot Gun ditto. Triple-bolted Shot Gun with Top Rib extension, and Snap Fore-end fastening. Side Lever patterns ditto. Vertical Grip Top Lever patterns ditto. Appurtenances. Cleaning Rods, with attachments. Cartridge-loading Implements. Nipple Keys. Leather and wood Gun Cases. Waterproof Gun Bags. (490) Cl. 269.

Woodfield, W, & Sons. See Cl. 254. Cl. 269.

Milward, H., & Sons. See Cl. 254. Cl. 269.

Kirby Bland & Co. See Cl. 254. Cl. 269.

English, John, & Co. See Cl. 254. Cl. 269.

Bussey, G. G., & Co. See Cl. 255. Cl. 269.

Burnand, James, & Co. See Cl. 281. Cl. 869.

Wostenholm, Geo. & Son (Limited), See Cl. 281. Cl. 269.

MEDICINE, SURGERY, PROTHESIS.

Class 272.—Medicines; officinal (in any authoritative pharmacopœa), articles of the materia medica, preparations, unofficinal.

Class 273.—Dietetic preparations, as beef extract, and other articles intended especially for the sick.

Class 274.—Pharmaceutical apparatus.

Class 275.—Instruments for physical diagnosis, clinical thermometers, stethoscopes, opthalmoscopes, etc. (except clinical microscopes, etc., for which see Class 324).

Class 276.—Surgical instruments and appliances, with dressings, apparatus for deformities, prothesis, obstetrical instruments.

Class 277.—Dental instruments and appliances.

Class 278.—Vehicles and appliances for the transportation of the sick and wounded, during peace and war, on shore or at sea.

Cl. 272. **Usher, Rufus.** See Cl. 200.

Cl. 272. **Allen & Hanbury.** See Cl. 200.

Kinmond & Co. See Cl. 200. Cl. 272.

Morson & Son. See Cl. 200. Cl. 272.

Cl. 272. **Evans, Sons, & Co.** See Cl. 200, 203.

Cl. 272. **Gerrard, A. W.** See Cl. 200.

Cl. 273. **Schneider, Edward Albert.** See Cl. 656.

Cl. 273. **Mellin, Gustav.** See Cl. 656.

Cl. 276, 325. **Pulvermacher, Isaac Louis,** Electrician, 194, Regent Street, London, W. Electrical Instruments for Medical purposes, consisting of Patent Voltaic Flexible Chain and Band Batteries, Induction pocket Apparatus, Current Testing and Measuring Instruments, and various accessories. (500)

Cl. 276. **Lee, Robert James,** Physician, 4, Savile Row, London, W., and St. George's Hospital, London. Sole manufacturers, Harper & Sons, 16, Red Lion Street, Clerkenwell, London, E.C. "The Steam Draft Inhaler and Disinfector," (1) Machine for producing warm vapour for treatment of pulmonary disorders, (2) for disinfecting the air of rooms, &c. (501)

Cl. 276, 281, 325. **Mayer & Meltzer,** Surgical Instrument Makers, 71, Great Portland Street, London, W. Surgical Instruments and Galvanic Batteries of every description, and Cutlery. (502)

Cl. 276. **Lynch & Co.,** Druggists' Sundries and Surgical Instrument Makers, 171A, Aldersgate Street, London, E.C. Druggists' sundries and Surgical instruments. Spinal apparatus, chest protectors, feeding bottles, spray producers, poison bottles, &c. (503)
Exhibitors, London, 1873 (Bronze Medal) *Paris,* 1875 (Hon. Mention).

Cl. 276. **Lang, Jonas & Jules,** India Rubber Manufacturers, 13, Charterhouse Buildings, Aldersgate Street, London, E.C. Gum elastic and India Rubber surgical instruments, Enemas, Breast Exhausters, Teats, &c. Feeding Bottles, Elastic Stockings, Medical Glass Bottles, and Glass Tubes, &c. (504)
Exhibitors, Vienna, 1873 (Diploma of Merit).

Cl. 276. **Rein, F. C., Mrs.,** Surgical Bandages and Appliances, 108, Strand, London, W.C. Anatomical Belts, Artificial Breasts, Elastic Stockings for varicose veins, &c; Trusses of all descriptions, Bandages, and other appliances for surgical purposes. (505)

Cl. 276, 327. **Rein, Frederick Charles, & Son,** Surgical and Acoustic Instrument Makers, 108, Strand, London, W.C. Acoustic, Surgical and Veterinary Instruments; Respirators; Reservoir Enemas; Eye Fountains and Douches; Syphons and Breast Pumps; Bougies and Catheters, Stethoscopes; Medical Inhalers; Instruments for deformities; Anatomical Belts, Stockings and Bandages; Trusses, Crutches, Arm Slings, &c. Magneto-electric Machines for nervous diseases. Elastic appliances for surgical purposes. Speaking Tubes and Trumpets. Patented Acoustical Contrivances for churches and public buildings, &c. Anti-acoustic protector. (506)

Cl. 276. **Haywood, J. S.,** Castle Gate, Nottingham Surgical Bandages, Elastic Surgical Stockings, Belts, Trusses, &c. (507)

Cl. 276. **Glasgow Apothecaries Co.,** 34, Virginia Street, Glasgow, Scotland. Surgical Appliances and Antiseptic Dressings. (508)

Cl. 276. **Bennett, T., & Son.** See Cl. 280, 652.

Cl. 276. **Puckeridge, F., & Nephew.** See Cl. 280, 652.

Cl. 276. **Clay, Randolph.** See Cl. 265, 320, 594.

Cl. 276. **Liverpool Spun Oakum Co., Limited.** See Cl. 229.

Cl. 276. **Hicks, J. J.** See Cl. 320, 555.

Cl. 277. **Patrick, Hugh William, & Son,** Dentists and Manufacturers, 22, St. Luke Street, Stockbrook Street, Derby, and at 29, Percy Street, Tottenham Court Road, London, W.C. Porcelain Enamelled artificial Palates; Porcelain Dentures (block work in sections); Single Porcelain teeth, &c. (509)
Exhibitors, London, 1862 (Hon. Mention).

HARDWARE, EDGE TOOLS, CUTLERY, AND METALLIC PRODUCTS.

CLASS 280.—Hand tools and instruments used by carpenters, joiners, and for wood and stone in general. Miscellaneous hand tools used in industries, such as jewellers, engravers.

CLASS 281.—Cutlery, knives, penknives, scissors, razors, razor-straps, skates, and implements sold by cutlers.

CLASS 282.—Emery and sand paper, polishing-powders, polishing and burnishing stones.

CLASS 283.—Metal hollow-ware, ornamental castings.

CLASS 284.—Hardware used in construction, exclusive of tools and implements. Spikes, nails, screws, tacks, bolts, locks, latches, hinges, pulleys. Plumbers' and gasfitters' hardware, furniture fittings, ships' hardware, saddlers' hardware, and harness fittings and trimmings.

Cl. 280. **Baker, William,** Awl Manufacturer, 96, formerly 10, Pembroke Street, Bingfield Street, Caledonian Road, London, N. Awls for Shoemakers, Saddlers, and Carpenters, Bodkins for Printers and Bookbinders, Needles for Saddlers, Packers, and Upholsterers, Screwdrivers. (520)

Exhibitor, London, 1851 (Hon. Mention); 1862 (Prize Medal); *New York*, 1853 (Prize Medal).

Cl. 280. **Addis, J. B., & Sons,** Carving and General Edge Tool Manufacturers, Arctic Works, Sheffield. A newly Invented set of Tools for the economy of labour in carving Stone and Wood, so highly tempered as to cut the hardest stone. A case of scientific turning tools for iron, brass, ivory, hard wood, &c., and a selection of carpenter's tools. These are manufactured by J. B. Addis with the assistance of his Sons only. (521)

Exhibitors, 1851, 1862 (Medals); *Workmen's Exhibition, Sheffield*, 1870 (Gold Cross and Gold Medal subscribed by Merchants, Manufacturers, and Workmen).

Cl. 280. **Ward & Payne,** Manufacturers of Edge Tools, Sheep Shears, and Steel. West Street, Sheffield. Tools for the use of carpenters, joiners, coachmakers, shipwrights, millwrights, masons, bricklayers, tanners, curriers, engravers, die sinkers, plasterers, wood and stone carvers, wood, ivory, brass, and metal turners, &c.; also sheep shears and steel. (522)

(Cl. 280, 281, 573. **Hawksworth, Wilson, Ellison, & Co.,** Manufacturers of Steel, Steel Wire, Files, Cutlery, Edge Tools, Engineers' Tools, and Locomotive and Waggon Bearing Springs, Carlisle Works, Sheffield. Steel, and articles made therefrom. (523)

Exhibitors, Vienna, 1873 (Medal for Merit).

Pullinger, Colin. See Cl. 224. Cl. 280.

Puckeridge, F., & Nephew. See Cl. 276, 652. Cl. 280.

Bennett, T., & Son. See Cl. 276, 652. Cl. 280.

Wills, A. W. See Cl. 670. Cl. 280.

Kingsbury, Thomas, Cutler, 9, New Bond Street, London, W. Razors, Knives, Scissors, Dressing-case Instruments, Specimen of Processes of Manufacture. (524) Cl. 281.

Neal, John, & Co., Pyro-Silver Cutlery Manufacturers, 22, 23, 24, Hampden Gurney Street, Portman Square, London, W. Pyro-Silver table, dessert, and fish cutlery. (525) Cl. 281.

Exhibitors, Vienna, 1873 (Medal for Merit); *London*, 1873, 1874 (Medals).

Needham, John, Cutlery Manufacturer and Silversmith, 69, Arundel Street, Sheffield. Cutlery. Daggers, Table and Dessert Knives and Forks. Fish Eaters, also a Patent fast handle Knife in German Silver and Electro Plated. (526) Cl. 281, 268.

Exhibitor, London, 1872 (Medal).

Brookes & Crookes, Cutlery Manufacturers, Atlantic Works, Sheffield. Pen, Pocket, Sportman's, Bowie, and Table knives, Scissors, Razors, and Dressing Case Instruments. (527) Cl. 281, 268.

Exhibitors, London, 1862 (Medal for Excellence); *Paris*, 1867 (Gold Medal); *Vienna*, 1873 (Medal for Merit).

Cl. **281.** **Wostenholm, George, & Son (Limited)**, Washington Works, Sheffield. Spring Cutlery, Razors, Scissors, Bowie and Hunting Knives, Fine Electro Bronze Couteau de Chasse (Hunting Knives), Spring Cutlery of all descriptions, Razors in Cases and otherwise, Scissors. (528)

Cl. **281.** **Ryder, W. H.** See Cl. 269.

Cl. **281,** **Mayer & Meltzer.** See Cl. 276, 325.

Cl. **281.** **Brooks, Henry, & Co.,** 31, Cumberland Market, Regents Park. Patent Metal Indestructible Stoppers, suitable for all kinds of Bottles, Collapsible Tubes for Artists' Colours, Perfumery, &c. (529)

Exhibitors, London, 1862 (Hon. Mention).

Cl. **281.** **Burnand, James, & Co.,** Leicester Works, Leicester Street, Sheffield. Table and Dessert Cutlery; also Bowie Knives, Hunting, Jungle, and Dagger Knives, Table and Plated Cutlery, Electro-plated Fish Carvers and Eaters, Spoons, Forks, &c., Picnic Cases, Tin Case Openers, &c. (530)

Cl. **284, 574.** **Patent Nut and Bolt Co., The,** (Limited), Chief Office, London Works, near Birmingham. Iron bolts, nuts, screws, rivets, and washers as used by Engineers, Ship Builders, Railway Carriage and Waggon Builders, Machinists, Telegraph Constructors, &c.; also fish plates, sole plates, fish bolts, spikes and fang bolts used in the construction of railways. (531)

Exhibitors, London, 1862 (Bronze Medal); *Paris*, 1867 (Silver Medal); *Vienna*, 1873 (Medal for Progress).

Cl. **284.** **Adams, Robert,** Engineer and Patentee, 7, Great Dover Street, London, S.E. (late of Falmouth Road). Adjustable Spring Hinges and Shoes or Double and Single Action Doors; also Improved Secure Fastening Bolts for Doors and Casements, and Improved Weather-tight Sill Bars for French Casements, &c. (532)

Exhibitor, London, 1872 (Certificate of Merit).

Cl. **284.** **Francis, Thomas, & Co.,** Manufacturers of Malleable Shoe Nails and Castings, Liverpool Street, Birmingham. Case containing assortment of Nails. (533)

Exhibitors, Paris, 1867 (Hon. Mention); *Havre*, 1868 (Bronze Medal); *Vienna*, 1873 (Medal for Progress).

Cl. **284.** **White, William George,** Engineer, Albert Villa, New Malden, Surrey. Improved Steel Safe and Locking Apparatus, constructed to resist the violence of burglars. Model showing Section of body of Safe. Various shaped Bolts. (534)

Cl. **284, 326.** **Zimdars, C. E.,** Pneumatic Engineer, 327, Gray's Inn Road, London, W.C. Pneumatic signal, and communication apparatus; pneumatic bells or indicators; pneumatic ship and railway signals; pneumatic indicating and registering apparatus; pneumatic self-flushing watercloset. (535)

Cl. **284.** **Baker, Christopher, and Sons,** Coffin Furniture Manufacturers and Cabinet Brassfounders, 98 and 99, Lichfield Street, Birmingham; London Warehouses, 183, Tottenham Court Road, London, W., 11, Worship Street, London, E.C., Dublin, and Manchester. Coffin Furniture, Cabinet and General Brass Fittings, Rails, Stair Rods, Nails, and Bells. (536)

Cl. **284.** **Cooke, Bros.** See Cl. 254.

Cl. **284.** **Phosphor Bronze Co.** See Cl. 114.

Cl. **284.** **Chatwood, Samuel.** Fire and Burglar Proof Safes. 120, Cannon Street, London. (537)

Exhibitor, Oporto, 1865; *Dublin*, 1865; *Paris*, 1867; *Havre*, 1868; *London*, 1872; *Vienna*, 1873. (Prize Medals.)

FABRICS OF VEGETABLE, ANIMAL, OR MINERAL MATERIALS.

CLASS 285.—India rubber goods and manufactures.
CLASS 286.—Brushes.
CLASS 287.—Ropes, cordage.
CLASS 288.—Flags, insignia, emblems.
CLASS 289.—Wooden and basket ware, papier maché.
CLASS 290.—Undertakers' furnishing goods, caskets, coffins, etc.
CLASS 291.—Galvanized ironwork.

Cl. 285. **Nicoll, Donald.** See Cl. 656, 660.

Cl. 286, 652. **Kent, George Barton, & Co.,** Brush Manufacturers, 11, Great Marlborough Street, London, W. Brushes: Ivory Work—Paper Knives, Photographic Stands, and Shoe Lifts in ivory; Ivoride Brushes and Mirrors. (550)
Exhibitors, London, 1862 (Juror, Hors Concours); *Vienna*, 1873 (Medal for Merit).

Cl. 286, 652. **Elrick, Charles Gray,** Horn Comb Manufacturer, Works, Aberdeen, Scotland; London house, 8, Aldermanbury Postern, London, E.C. Dressing Combs in pure White Horn, Imitation and Real Tortoiseshell, Natural Green and Buffalo. Real and Imitation Shell Side, Braid, and High Spanish Combs, &c. (551)

Culmer, W., & Sons, Painting Brush Manufacturers, Hornsey Road, London, N. Brushes as used in Decorative Art, Carriage painting, Varnish work in general, and Artists' brushes. (552) Cl. 286
Prize Medals awarded to workmen for excellency of Workmanship and Design at *Workmen's International Exhibition, London*, 1870.

Low, Son, & Haydon. See Cl. 203. Cl. 286.

Bevis, Henry, Flag and Banner Painter, 140, Pentonville Road, London, N. Silk banner with emblematic designs. (553) Cl. 288.

Spill, Daniel, 124, High Street, Homerton, London. Ivoride and Kilonite Manufactures, as a substitute for Ivory, Precious Stones, and for other uses in the Arts. (554) Cl. 289.

CARRIAGES, VEHICLES, AND ACCESSORIES.

(For farm vehicles and railway carriages, see Departments of Agriculture and Machinery.)
(Carriages exhibited in separate Annexe.)

CLASS 292.—Pleasure carriages.
CLASS 293.—Travelling carriages, coaches, stages, omnibuses, hearses, Bath chairs, velocipedes, baby carriages.
CLASS 294.—Vehicles for movement of goods and heavy objects, carts, waggons, trucks.
CLASS 295.—Sleighs, sledges, sleds, etc.
CLASS 296.—Carriage and horse furniture, harness and saddlery, whips, spurs, horse blankets, carriage robes, rugs, etc.

Cl. 292. **Peters, Thomas, & Sons,** Coachmakers, 53, Park Street, Grosvenor Square, and Upper George Street, Portman Square, London, W. Nine Carriages, various, for private use, of the choicest construction and of superior workmanship, built at their London Works. (560)
Exhibitors, London, 1851 (Bronze Medal); 1862 (Hors Concours, Juror); *Paris*, 1855

(Silver Medal); 1867 (Gold Medal); *Vienna*, 1873 (Medal for Progress); *Dublin*, 1853 (Hors Concours); 1865 (Hors Concours); *Cologne* (Gold Medal).

Cl. **292.** **McNaught & Smith,** Carriage Builders, Worcester and London. C and Under Spring Barouche, C and Under Spring Landau, C and Under Spring Brougham. Metallic parts all of Sir Joseph Whitworth's Fluid Compressed Steel. Circular-fronted Brougham on elliptic springs. (561)

Exhibitors, London, 1862, 1873; *Paris*, 1867. (Medals.)

Cl. **292.** **Roberts, John,** Carriage Builder, 10, Cavendish Street, Stretford Road, Manchester. Parisian Phaeton, with silver-plated nave hoops, lamps, rails, &c.; Patent leather wings; Collinge patent axles, wrought-iron boxes; under 4 cwt., suitable for a Cob. Materials and workmanship warranted. (562)

Exhibitor, London, 1873. (18 First Silver Medals and one Bronze Medal given at different Agricultural Shows, the Bronze was given for Improvements, and a First Silver for Best Work.)

Cl. **292.** **Windover, Charles Sandford,** Carriage Builder to Her Britannic Majesty, 32 & 33, Long Acre, London, W.C. Private carriages: 1. Circular Front Double-seated Brougham, built specially light, fitted up with gong alarm or driver's signal, and Patent Ventilator. 2. Miniature Canoe Landau, with Patent Automatic Head, Improved Lights. 3. Victoria Parisian, with moveable Front and Hind Seats, Lunch Basket, Patent Sun Shade. 4. Stanhope Phaeton or T Cart, with revolving Hind Seat, under 4 cwt. (563)

Exhibitor, London, 1862 (Gold Medal); *Paris*, 1867 (Bronze Medal); *Moscow*, 1872 (Grand Gold Medal); *Vienna*, 1873 (Medal for Merit); and *Chili*, 1875 (Medal for Good Workmanship).

Cl. **292.** **Thorn, Charles,** Carriage Builder and Harness Maker, St. Giles' Gate, Norwich. Carriages of every description, as supplied to the Royal Courts of Europe; also Thorn's celebrated Shooting and Baggage Cart, with Patent adjusting Shaft adapted to all two-wheel carriages. (564)

Exhibitor, Paris, 1867; *London*, 1870 (Silver Medal); *Manchester and Liverpool* 1871, 1872 (Silver Medals); *Chester*, 1872 (5*l.* Prize); *Royal of Scotland*, 1872 (Silver Medal); *Vienna*, 1873 (Medal for Progress); *London*, 1873 (Medal); *Society of Arts*, 1873 (1st Prize, 30*l.*); *Manchester*, 1874 (Silver Medal); *Manchester and Liverpool*, 1875 (Silver Medal); *Preston*, 1875 (Silver Medal, and Silver Medal for Patent Shafts); *Alexandra Palace Cab Show*, 1875 (5*l.* Prize).

Roberts, John, & Sons, Carriage Makers, West of England Carriage Works, Bridgewater, Somerset. Three carriages. (565) Cl. **292.**

Mulliner, H., & Co., Carriage Builders, Northampton and Leamington Spa. Six carriages. (566) Cl. **292.**

Hooper & Co., Carriage Builders, 113, Victoria Street, Westminster, London. Carriages and drawings. (567) Cl. **292.**

Thompson, Charles, Perambulator Maker, 33, 35, 37, Newington Butts, London, S.W. One perambulator. (568) Cl. **293.**

Exhibitor, Crystal Palace, 1869 (Silver Medal); *Workmen's Industrial Exhibition*, 1870 (Silver Medal); *Dublin*, 1872 (Hon. Mention).

Smith & Starley. See Cl. 531. Cl. **293.**

Hawkins Brothers (late James Hale & Co.), Hatherton Works, Walsall. Army, Navy, Police, and Railway Contractors. Bits, Stirrups, Spurs, Chains, Buckles, Hames, and General Saddlery Ironmongers. (569) Cl. **296.**

Exhibitors, London, 1851 (Prize Medal).

Pollock, Sydney, 72, Lancaster Road, Notting Hill, London, W. A small apparatus consisting of a metallic tube resting on two short wires fixed on a narrow hoop, for checking runaway and unmanageable horses instantly. This useful and most reliable invention was patented in England, France, and Belgium in 1873. The effect of its use when fixed on the strap above the blinkers is that it blindfolds and stifles the creatures by throwing suddenly a well secured curtain over their faces. (570) Cl. **296.**

Martin, Robert, Mechanical Tool Manufacturer, The Village, Old Charlton, Kent. Horse clipping machines in its various parts. Set of circular cutters for cutting the teeth of Cl. **296.**

the above machines. SHOWN IN MACHINERY HALL. (571)

Cl. **296.** **Hudson, Samuel,** Saddler and Harness Manufacturer, 65, Dawson Street, Dublin. Trace Tug Safety and Shaft Tug Safety Buckles, for instantaneously disengaging the horse from the vehicle, increasing the durability of traces and backband, and preventing unequal strain, the Trace working in straight line. The Shaft Tug adjusting itself to the variable thickness of the shafts, grasping them firmly and allowing great facility for yoking nervous or spirited horses. "Portcullis" Safety Stirrup, for instantaneously disengaging the Lady's foot in case of her being thrown from the saddle. Invented by Exhibitor. (572)

Exhibitor of Saddlery, London, 1851 (Hon. Mention); *Paris,* 1855 (Hon. Mention).

Exhibited in case of Swaine and Adeney, Cl. 254.

Swaine & Adeney. See Cl. 254. Cl. **296.**

Martin, W. H. See Cl. 254. Cl. **296.**

Sangster & Co. See Cl. 254. Cl. **296.**

Davis & Wilson. See Cl. 254. Cl. **296.**

DEPARTMENT III.—EDUCATION AND SCIENCE.

Location :—MAIN BUILDING.

EDUCATIONAL SYSTEMS, METHODS, AND LIBRARIES.

CLASS 300.—Elementary instruction, Infant schools and kindergartens, arrangements, furniture appliances, and modes of training.

Public schools, graded schools, buildings and grounds, equipments, courses of study methods of instruction, text books, apparatus, including maps, charts, globes, etc. ; pupils' work, including drawing and penmanship ; provisions for physical training.

CLASS 301.—Higher education. Academies and high schools.

Colleges and universities. Buildings and grounds ; libraries, museums of zoology, botany, mineralogy, art, and archeology ; apparatus for illustration and research, mathematical, physical, chemical, and astronomical courses of study ; text books, catalogues, libraries, and gymnasiums.

CLASS 302.—Professional schools, theology, law, medicine and surgery, dentistry, pharmacy, mining, engineering, agriculture and mechanical arts, art and design, military schools, naval schools, normal schools, commercial schools, music.

Buildings, text books, libraries, apparatus, methods, and other accessories for professional schools.

CLASS 303.—Institutions for instruction of the blind, deaf, and dumb, and the feeble-minded.

CLASS 304.—Education reports and statistics.

National bureau of education.

State, city, and town systems.

College, university, and professional systems.

CLASS 305.—Libraries, history, reports, statistics, and catalogues.

CLASS 306.—School and text books, dictionaries, encyclopædias, gazetteers, directories, index volumes, bibliographies, catalogues, almanacs, special treatises, general and miscellaneous literature, newspapers, technical and special newspapers and journals, illustrated papers, periodical literature.

Cl. 300. **Sunday School Union,** 56, Old Bailey, London, E.C. Works for Sunday Schools: Books, Magazines, Cards, Reward Tickets, Illuminations and Large Type Texts, Sunday School Registers, Roll Books, Librarians' and Minute Books. Sunday School Newspaper, a weekly organ of intelligence. (580)

Exhibitors, London, 1851, 1862 (Medal) ; *Paris,* 1867 (Bronze Medal) ; *Vienna,* 1873 (Medals for Merit).

Cl. 300. **Bartholomew, John,** Map Engraver and Printer, Chambers Street, Edinburgh, Scotland. Specimens of Maps, Plans, &c., for Educational Atlases and other purposes. Lithographic Printing as applied to Maps. (581)

Exhibitor, Vienna, 1873 (Medal for Merit).

Ravenstein, Ernest George, F.R.G.S., F.S.S., Geographical Institute, 10, Lorn Road, Brixton Road, London, S.W. General Map of New Zealand, Geological Map of New Zealand, Physical and Statistical Atlas of United Kingdom ; a Relief Map of the United States. Geographical and Statistical Works. (582) Cl. 300.

Johnston, W. & A. K., Geographers, Engravers, and Printers to the Queen, 4, St. Andrew's Square, Edinburgh, Scotland. Maps. Physical Map of America ; Four Sheet and Outline Map of Europe ; Map of Græcia Antiqua ; Political Map of United States, and Chart of the World on Mercator's projection ; Illustrations of Human Anatomy, Astronomy, Botany, and Mechanical Powers. (583) Cl. 300.

Exhibitors, London, 1851, 1862; *Dublin*, 1865; *New Zealand*, 1865; *Paris*, 1867; *Bermuda*, 1872; *Vienna*, 1873. (Medals.)

Cl. 300, 306. **Ward, Marcus, & Co.** See Cl. 255, 258, 259, 262, 424.

Cl. 302. **Clark, Captain Edward Podmore,** Instructor of Musketry to the Herefordshire Militia, and late Lieutenant 62nd Regiment, 6, Edward Street, Bath. Military model apparatus for illustrating drill movements. Invented and patented by the Exhibitor. Received the highest approval from H.R.H. the Duke of Cambridge and the War Office Authorities. (584)

Exhibitor, Paris Maritime Exhibition, 1875 (Bronze Medal).

Cl. 302. **Augener, George, & Co.,** Music Publishers, 86, Newgate Street, London, E.C. Pauer's Complete Editions of the Classics, and other Printed Music Books. (585)

Exhibitors, Vienna, 1873 (Medal for Merit).

Cl. 302. **Adams, W. M.** See Cl. 320.

Cl. 302. **Boosey & Co.** See Cl. 327.

Cl. 303. **The British and Foreign Blind Association,** for Promoting the Education and Employment of the Blind, 33, Cambridge Square, London, W. Writing frames for the Blind. Embossed Books and Maps for the Blind. (586)

Exhibitors, Vienna, 1873 (Medal for Progress).

Cl. 306. **Rundell, Joseph Benjamin,** Clerk, Science and Art Department, South Kensington Museum, London. A new Short-hand Alphabet for the English, French, German, and Spanish Languages. (587)

Exhibitor, Vienna, 1873 (Diploma of Merit); *London*, 1871 (Exhibition of Selected Works only).

Cl. 306. **Rola, Vincent,** Professor of Piano, 22, Leinster Square, Bayswater, London, W. Improved Method or Art of teaching the Rudiments of Music, and Piano in particular. Diagrams and Specimens of Music illustrating System. (588)

Cl. 306. **Murray, Andrew, F.L.S.,** 67, Bedford Gardens, Kensington, London. Illustrations and Specimens of Galls produced by Mites, Aphides, Flies (Cecidomyia), Sandflies, Cynipidæ. (589)

Cl. 306. **Potts, Roberts, M.A.,** Trinity College, Cambridge. Educational books, edited by him and published by Longmans, London, and W. Metcalfe, Cambridge. University and School Editions of Euclid, Arithmetic; Paley's Evidences of Christianity; Maxims and Aphorisms; a Chapter of English History, with Appendix of Public Documents; King Edward VI. on the Supremacy, printed from his autograph copy. Liber Cantabrigiensis. (590)

Exhibitor, London, 1862 (Medal awarded "for the excellence of his works on Geometry").

Cl. 306. **Illustrated London News, Proprietors of the,** 198, Strand, London, W.C. Specimens illustrating the Art Department of the Illustrated London News. (591)

Cl. 306. **Proprietors of "The Graphic,"** 190, Strand, London, W.C. The whole process of producing a high class Illustrated Newspaper, from the receipt of sketches to the final issue of printed sheets to the public. (592)

Exhibitors, Vienna, 1873 (Fine Art Medal).

Cl. 306. **Dowson, Sutherland, & Co.** (Limited), Wm. John Rusby, Secretary, Newspaper Proprietors, 12, Fetter Lane, London, E.C. Complete File, in 8 volumes, of "Iron," a weekly newspaper. (593)

Cl. 306. **Lockwood, Crosby, & Co.,** Publishers, No. 7, Stationers' Hall Court, Ludgate Hill, London, E.C. Books, Weale's Rudimentary Scientific, Educational, and Classical Series. (594)

Exhibitors, London, 1862 (Medal).

Cl. 306. **Palmer, Samuel,** Park House, Grove Street, South Hackney, London, E.; Office, 75a, Strand, London, W.C. "Index to the 'Times' Newspaper," a quarterly publication; the only work of its kind. This work was commenced in Jan. 1867, and has been continued quarterly from that date to the present time. (595)

Exhibitor, London, 1872 (Certificate of Merit).

Cl. 306. **Loth, John Thomas, Dr.,** Teacher of Modern Languages, 18, Gilmore Place, Edinburgh. Educational books; and Illustrated Work—Illustrations of the Thirty-three Degrees of the Ancient and accepted Scottish Rite. (596)

Cl. 306. **Smith, David,** Dyer, Siddal, Halifax, Yorkshire. A work on the art of dyeing silk, cotton, and mixed fabrics, entitled the "Dyer's Instructor." (597)

Exhibitor, Paris, 1867 (Bronze Medal).

306. **Johnson, Edmund,** 3, Castle Street, Holborn, London, E.C. A selection of Catalogues and other Works, printed and published by J. M. Johnson & Sons, having reference to International Exhibitions—Paris, 1867; Havre Maritime, 1868; Amsterdam International, 1867; London International Exhibitions, 1871, 1872, 1873, and 1874; Moscow Polytechnic Exhibition, 1872; Vienna Universal Exhibition, 1873; Lyons, 1872; Paris Maritime International Exhibition, 1875. (598)

306, 261. **Dickinson & Higham,** Publishers, Farringdon Street, London, E.C. The Binding of the Bible by **Birdsall & Son,** Bookbinders, Northampton.

"The Hexaglot Bible." Dedicated by special permission to Her Majesty the Queen. Six royal quarto vols. A fine paper copy handsomely bound. Vol. I. The Pentateuch, 632 pages, and an elaborate Prolegomenon to the entire work, 143 pages. Vol. II. Joshua —2 Kings, 579 pages. Vol. III. 1 Chronicles —Solomon's Song, 672 pages. Vol. IV. Isaiah—Malachi, 714 pages. Vol. V. The Four Gospels, 692 pages. Vol. VI. Acts —Revelation, 914 pages. The versions selected are as follows:—The Hebrew (in The Old Testament only), is that of Van Der Hooght, carefully revised. The Greek, in The Old Testament, is Dr. Tischendorf's latest edition with the gaps supplied, in brackets, from various sources; and, in The New Testament, Dr. Tischendorf's eighth edition, similarly supplemented. The Latin in The Old Testament is the Clementine Edition of The Vulgate, and, in The New Testament, Dr. Tischendorf's edition of The Codex Amiatinus, with the gaps supplied, in brackets, from the Clementine Edition, and other peculiarities fully detailed in the Prolegomenon. The Syriac (in The New Testament only) is based on that of the justly celebrated "Biblia Sacra "Polyglotta," edited by Bishop Walton, 6 vols., folio, 1657. The English is the authorised version of 1611. The German is Martin Luther's translation. The French is the translation executed by David Martin, revised.

The first and second volumes, being the only portion then completed, were exhibited at the First of the series of Annual International Exhibitions held in London 1871. (599)

306, 424. **Cassell, Petter, and Galpin,** Publishers, La Belle Sauvage Yard, Ludgate Hill, London, E.C., and 596, Broadway, New York. Books (Illustrated); Publications (serials); Educational Books and Appliances, such as Drawing Copies, Models, Colour Boxes, and Mathematical Instruments, also Electrotypes of Engravings on Wood. (600)

Exhibitors, London, 1862 (Bronze Medal); *Paris*, 1867 (Silver Medal).

Johnson, J. M., & Sons (Limited), Printers and Show Tablet Manufacturers, 3, Castle Street, Holborn, London, E.C., and 56, Hatton Garden, London, E.C. Specimens of printing in colour, "Chromo-fulgent," "Indestructible Iron," Patent "Crystal Pearline," and Illuminated "Crystalline Iron" Show Tablets. Exhibited with the Graphic. (601) Cl. **306, 424.**

Scott, Robson John, Wood Engraver, Block Manufacturer, No. 8, Whitefriars Street, Fleet Street, London, E.C. Blocks used for wood engravings. Compound and bolted blocks of box and other woods. (602) Cl. **306, 542.**

Exhibitor, London, 1862; *Paris*, 1867; *London*, 1872 (Certificate); *City of London Workmen's Exhibition*, 1866 (Hon. Mention); *Islington International and Provincial Exhibition*, 1866 (Bronze Medal); *International Workmen's Exhibition*, 1870 (Bronze Medal); *Eastern Counties Exhibition, Norwich*, 1871 (Bronze Medal).

Stephenson, Blake, & Co., Type Founders, Sheffield and London. 1. Specimen sheets of Printing Types in glazed frame. 2. Complete book of Specimens. 3. Sample Types. (603) Cl. **306, 542.**

Exhibitors, London, 1851, 1862 (Prize Medal); *Paris*, 1867 (Silver Medal).

Dickes, William, Artist, Engraver, and Chromo-Printer, Farringdon Road, London, E.C. Specimens of chromo-lithography, engraving, and photographic engraving, and photographic engraving and printing; framed oleographs, chromographs from stone and surface printing, wood engraving, photographic engraving, &c. All framed for wall surface. (604) Cl. **306, 424.**

Day & Son, Chromo-lithographers and, Publishers, 47, Charing Cross, London, S.W. Specimens of chromo-lithography, framed and glazed. (605) Cl. **306, 424.**

Holdsworth, Edmund William Hunt, 84, Clifton Hill, St. John's Wood, London, Cl. **306.**

N.W. Work on Deep Sea Fishing and Fishing Boats. (606)

Exhibitor, Paris Maritime Exhibition, 1875 (Bronze Medal).

Cl. 306. **Paul, William,** F.L.S., Horticulturist, Waltham Cross, Herts. Six vols., Books, viz. :—

The Rose Garden.
Roses in Pots.
Roses and Rose Culture.
American Plants.
The Handbook of Villa Gardening.
Lecture on the Hyacinth. (607)

Exhibitor, London, 1851 (Hon. Mention).

Cl. 306. **Warner, Robert,** 8, Crescent, Cripplegate, London, E.C. Two vols. books, "Select Orchidaceous Plants." (608)

Cl. 306. 423. **Audsley & Bowes,** 11, Dale Street, Liverpool. Work in folio on the "Keramic Art in Japan," illustrated by 63 plates in Chromo-Lithography, Antique Type, &c. In Seven Parts, of 1*l.* 1*s.* each. (609)

Cl. 306. **Norton & Shaw,** 7, Garrick Street, Covent Garden, London; and Euston Square, London; or 4, Parker Street, Liverpool. Guide Books, Maps, &c. (610)

Cl. 306. **Price & Co.,** 36, Great Russell Street, London. Fac-similes from Ancient MSS. and Printed Books, more particularly those interesting to Americans. (611)

Cl. 306, 422. **Bradbury, Agnew, & Co.,** Bouverie Street, Fleet Street, London, E.C. Books and Specimens of Engravings and Processes. (612)

Cl. 306. **Ordnance Survey Office.** See Cl. 311.

Cl. 306. **Geological Survey.** See Cl. 311.

Cl. 306. **Williams, Benjamin Samuel.** See Cl. 708.

INSTITUTIONS AND ORGANIZATIONS.

Class 310.—Institutions founded for the increase and diffusion of knowledge. Such as the Smithsonian Institution, the Royal Institution, the Institute of France, British Association for the Advancement of Science, and the American Association, etc., their organization, history, and results.

Class 311.—Learned and scientific associations. Geological and mineralogical societies, etc. Engineering, technical, and professional associations. Artistic, biological, zoological, medical schools, astronomical observatories.

Class 312.—Museums, collections, art galleries, exhibitions of works of art and industry. Agricultural fairs, state and county exhibitions, national exhibitions. International exhibitions.

Scientific museums, and art museums.
Ethnological and archeological collections.

Class 313.—Music and the drama.

Cl. 312. **South Kensington Museum. Catalogue of Objects exhibited by Order of the Lords of the Committee of Council on Education:—**

DIVISION I.—ILLUSTRATES THE SYSTEM AND RESULT OF INSTRUCTION GIVEN TO STUDENTS IN SCHOOLS OF ART THROUGHOUT THE UNITED KINGDOM.

Sect. 1. A series of drawings executed by students showing the various stages of Instruction in use in Schools of Art. (60 frames.)

Sect. 2. Sykes' Architectural Studies in Italy. (11 frames.) These drawings were made by the late Mr. Godfrey Sykes during

a sojourn in Italy in the year 1860. Mr. Sykes was formerly a pupil, and subsequently a master in the School of Art at Sheffield, of which town he was a native. He afterwards held the appointment of decorative artist to the Museum. The ornamentation in the South Court, and the Maiolica columns in the Keramic Gallery were executed under his superintendence as well as the exterior decorations of the Central Building and Official Residences. (*See* Div. III.)

Sect. 3. A Collection of Photographs of objects of Art in the South Kensington Museum, coloured by students of the school. (16 frames.)

Photographs of objects in the South Kensington Museum, coloured by students of the school as models for their reproduction in chromolithography. (6 frames.)

Chromolithographs executed from the preceding. (6 frames.)

Sect. 4. Photograph of Triptych painted in grisaille in Limoges enamel, two leaves of which are in the South Kensington Museum, the third being the property of Mr. F. Davis, who lent it to the Special Exhibition of Enamels on Metal held in 1874. Subject: "St. John preaching in the Wilderness." Coloured by James I. Williamson, formerly a student in the National Art Training School.

Photographs (two; front and back) of a dish painted in grisaille in translucent Limoges enamel, by Martial Courtois. Subject: "Apollo and the Muses." Lent to the Special Exhibition of Enamels on Metal in 1874, by Sir Richard Wallace, Bart. Coloured by James I. Williamson.

Photographs (two; front and back) of a Limoges enamel dish, painted in grisaille, with flesh tints. Subject: "The Triumph of Galatea," after Raffaelle. Lent to the Special Exhibition of Enamels on Metal in 1874, by Sir Richard Wallace, Bart. The front coloured by T. Walter Wilson, formerly a student in the National Art Training School; the back by Miss Mansell, a student in the school.

Photographs (two; front and back) of a Limoges enamel plateau, painted in grisaille. Subject: "The Gifts of Fortune." French, 16th Century. Coloured by J. Randall, a student of the South Kensington School. The original is in the South Kensington Museum.

Sect. 5. A Series of Photographs, coloured by J. Randall, a student of the South Kensington School, for reproduction in chromolithography in order to illustrate the catalogue of the Maiolica collection in the South Kensington Museum, by C. Drury E. Fortnum, F.S.A. (2 frames.)

Sect. 6. Etchings of objects in the Museum, executed in the Etching Class by advanced students of the South Kensington School of Art. (46 frames.)

An illustration of the Etching Process. (1 frame.)

Sect. 7. Design drawn to $\frac{1}{2}$-scale for a centrepiece, awarded the prize of 50*l.* offered by the Goldsmiths' Company, London, 1875. Details of same, full size. (4 frames.) By John Watkins, student in the South Kensington School. Lent by permission of the Goldsmiths' Company.

Sect. 8. Six Medals, executed by Mr. George Morgan, formerly a student of the Birmingham School of Art, and of the South Kensington School; viz., 1. Art Union of London, 1875. 2. Reverse of same. 3. Copy in bronze of the Gold Medal presented to Mr. Thomas Carlyle on his 80th birthday, 1876. 4. Fowke Memorial Medal. 5. Reverse of International Exhibition Medal, 1873. 6. Copy in bronze of the Bessemer Gold Medal.

Sect. 9. Twenty-four specimens of Wall Papers, designed by students in the school, and executed by Messrs. Corbière and Sons, of London and Paris. Nos. 1,105, 1,128–68. (6 frames.)

A frame containing specimens of labels and labelling materials used by the Science and Art Department, South Kensington Museum.

DIVISION II.—REPRODUCTIONS OF WORKS OF ART IN THE SOUTH KENSINGTON MUSEUM, AS DISTINCT FROM COPIES BY STUDENTS OF SCHOOLS OF ART.

SECT. 1. A Collection of Plaster Reproductions of Ivories (Fictile Ivory), the originals of which are in the South Kensington Museum. (5 frames.)

SECT. 2. Paper-hangings, designs selected from patterns on materials in the South Kensington Museum. Manufactured and given by Mons. P. Balin, of Paris. (1337, 1348, 1351, c and d '74.) (4 frames.)

DIVISION III.—CONSTRUCTION AND DECORATION OF MUSEUM BUILDING.

SECT. 1. Designs for Wall Tiles, by E. J. Poynter, A.R.A., used in the decoration of the Dado of the Grill Room in the Refreshment Department of the Museum. (15 frames.)

SECT. 2. Design for a Mosaic Panel "Michael Angelo," by the late Godfrey Sykes. This design has been executed in Mosaic by the students of the South Kensington School, and forms part of the decoration of the South Court.

SECT. 3. Design for a Mosaic Panel, "Apelles," by E. J. Poynter, A.R.A. This design has been executed in Italian Glass Mosaic by Messrs. Salviati & Co., and forms part of the decoration of the South Court.

SECT. 4. Design for a Mosaic. Panel, "Donatello." By Richard Redgrave, R.A., late Director General for Art. Executed in Mosaic by Messrs. Minton, Hollins, & Co., forming part of decoration of the South Court.

SECT. 5. Designs for the decoration of the Museum; by the late Godfrey Sykes. (8 frames.)

SECT. 6. Designs for the Mosaics used in the decoration of the exterior of the Branch Museum, Bethnal Green. By F. W. Moody, Decorative Artist to the South Kensington Museum. (2 frames.)

Designs for decoration of upper part of wall in the North Court, South Kensington Museum. By F. W. Moody. (1 frame.)

SECT. 7. Photographs of Drawings by John Watkins, Student of the National Art Training School, illustrating the Interior and Exterior decoration of the Museum. (6 frames.)

SECT. 8. Designs by William Bell Scott, illustrating the History of Earthenware and Porcelain manufacture; executed on glass for the windows of the Keramic Gallery, South Kensington Museum. (2 frames.)

SECT. 9. Tiles painted by Miss A. E. Black, after designs by E. J. Poynter, A.R.A., used in the decoration of the Grill Room in the Refreshment Department of the Museum.

DIVISION IV.—DIAGRAMS PREPARED FOR AND ISSUED BY THE SCIENCE AND ART DEPARTMENT, FOR THE USE OF SCHOOLS OF SCIENCE THROUGHOUT THE UNITED KINGDOM.

I. Ten Diagrams, prepared to illustrate instruction in building construction, by W. J. Glenny, Esq., Professor of Drawing in King's College, London.

II. Table of British Strata, showing their order of superposition and relative thickness. Prepared for the use of schools by H. W. Bristow, Esq., F.R.S., Director of the Geological Survey of England and Wales.

III. Six Diagrams, a portion of a set intended to illustrate instruction in Geology and Palæontology now in course of preparation by R. Etheridge, Esq., Palæontologist to the Geological Survey of Great Britain and Ireland.

IV. Ten Diagrams, illustrating the classification of animals, prepared by R. Patterson, Esq., M.R.I.A.

V. Sixteen Diagrams, prepared to illustrate instruction in machine details, by W. Cawthorne Unwin, Esq., B. Sc., Professor of Hydraulic Engineering to the Royal Indian Civil Engineering College, Cooper's Hill, Surrey.

VI. Six Diagrams, a portion of a set intended to illustrate instruction in steam and the steam-engine, now in course of preparation by C. P. B. Shelley, Esq., C.E., Professor of Manufacturing Art in King's College, London.

VII. Two diagrams of portion of a set of 77, prepared to illustrate instruction in Mechanics, under the direction of J. Anderson, Esq., LL.D., late Superintendent of Machinery of the Royal Arsenal, Woolwich. (620)

. 311, 306. **Ordnance Survey Office, Southampton.** Major-General Cameron, R.E., C.B., *Director-General*.

List of Maps for Exhibition.

1. Mounted Map of Part of the City of Winchester, $\frac{1}{500}$ Scale. Length 7′ 6″. Depth 7′ 0″.

2. Mounted Map of Part of London, 5 feet Scale. Length 10′ 0″. Depth 7′ 0″.

3. Mounted Map of Southampton and Environs, $\frac{1}{2500}$. Length 7′ 6″. Depth 6′ 0″.

4. Mounted Map of Part of Hampshire in and around Southampton, 6-inch Scale Length 10′ 0″. Depth 9′ 0″.

5. Mounted Map of Part of Scotland, 1-inch Scale, in Outline. Length 7′ 0″. Depth 5′ 6″.

6. Mounted Map of Part of Scotland 1-inch Scale. Hill features engraved. Length 7′ 0″. Depth 5′ 6″.

All provided with a Moulding and Roller at top and bottom.

Three or four Portfolios containing various specimens of the Ordnance Maps on the different Scales, and showing the modes of production. (621)

. 311, 306. **Geological Survey of the United Kingdom of Great Britian and Ireland** (A. C. Ramsay, LL.D., F.R.S., Director General), Selection of Maps and Sections, bound in five volumes.

1. Geological Maps. Scale one inch to one mile. Parts of England and Wales, Scotland, and Ireland.

2. Geological Maps. Scale, six inches to one mile, illustrative of the coal fields. Parts of Northumberland, Durham, Lancashire, and Yorkshire.

3. Horizontal Sections. Scale (horizontal and vertical), six inches to one mile. Descriptive of the geology of the country over which they are drawn, giving the true outline of the ground and the actual dip of the beds.

4. Vertical Sections. Scale, 40 feet to one inch. Illustrative of the Sections and Maps, giving such details as it is impossible to give in the horizontal sections. In the Coal-Measure Sections the thickness of each bed of coal and the mineral structure and thickness of the strata with which they are associated are shown.

Memoirs, descriptive of the Maps, 10 vols; British Organic Remains, 13 vols.

5. Mineral Statistics. 1870–71–72–73–74. (622)

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Exhibitor, Paris, 1855; *London* (two classes), 1862.

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Astronomical instruments, and accessories, used in observatories.

Transits, mural circles, equatorials, collimators.

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Meteorological instruments and apparatus.

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Vocal music.

. 320, 66, 555.

Hicks, James Joseph, Meteorological Instrument Manufacturer, 8, Hatton Garden, London, E.C. Meteorological and Scientific Instruments. Barometers, Thermometers, Hygrometers, Hydrometers, Rain and Wind Gauges, Current and Air Meters, Clinical Thermometers, Urinometers, Spirometers, Enamel Water Gauges for Boilers, Steam and Vacuum Gauges, Self Recording Meteorological Instruments. (630)

Exhibitor, London, 1862 (Bronze Medal).

. 320, 302.

Adams, Walter Marsham, Lecturer, Arundel Club, Salisbury Street, Strand, London, W.C. The Problem of Pythagoras. For rendering visible to the eye the reasoning of Euclid in Book I. 47, and the propositions upon which it depends. The Cœlometer for illustrating the various conceptions and relations necessary for elementary astronomy. Adopted by the British Government. The Patent Mensurator, for solving triangles, quadratics, and simultaneous equations, and for illustrating the principal theorems in Euclid, Trigonometry, and Analytical Geometry, recommended by the Committee of French Scientific Society to the Ministry of Public Instruction. (631)

320, 24.

Negretti & Zambra, Holborn Viaduct, 45, Cornhill, and 128, Regent Street, London. Optical, Meteorological, and Surveying Instrument Makers to Her Majesty the Queen, H.R.H. the Prince of Wales, the Royal Observatory Greenwich, the Admiralty, and various departments of the British and Foreign Governments. Meteorological, Surveying, Optical, and Mathematical Instruments. (632)

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Siemens, Charles William. See Cl. 111, 516. Cl. **320.**

Clay, Randolph. See Cl. 265, 276, 594. Cl. **320.**

Lyon, Washington, Marine Salvage Surveyor, &c., 1, Cowper's Court, Cornhill, London, E.C. Circular calculating table for rapidly multiplying numbers above 12. (633) Cl. **321.**

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Wier, M.A., & Co., Telegraph Engineers, 6, Kirby Street, Hatton Garden, London, E.C. Hydro-Gyrometer or Revolution Indicator. (634) Cl. **321.**

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Mercer, Thomas, Chronometer Maker, 161, Goswell Road, London, E.C. Marine chronometers. (635) Cl. **323.**

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Poole, James, & Co., Chronometer and Watch Manufacturers (to the Admiralty), 33, Spencer Street, Clerkenwell, London, E.C. Marine Chronometers and Watches. (636) Cl. **323.**

Exhibitors, Paris Maritime Exhibition, 1875 (Silver Medal). Exhibited in case of W. Gibson. Class 253.

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Exhibitors, London, 1851, 1862 (Juror, Hors Concours); *Dublin*, 1865 (Juror, Hors. Concours). *Paris*, 1867 (Juror, Hors Concours). Gold Medals of Honour from Russia, France, and Turkey.

Cl. **323.** **Dent, M. F.,** Watch, Clock and Chronometer Manufacturer, 33, Cockspur Street, Charing Cross, London, S.W. Marine Chronometers fitted with Auxiliary Compensation Balances; Chronometer Keyless Watches fitted with "duo in uno" balance Springs; Chronograph Watches, Minute Repeating Watches, Chronometer Clocks, &c. &c. (638)

Exhibitor, London, 1851 (Council Medal); 1862 (Prize Medal); *Paris*, 1867 (Silver Medal).

Cl. **323.** **Claxton, Robert,** Chronometer Jeweller, 65, Myddelton Street, Clerkenwell, London, E.C. Chronometer jewellings in all stages. (639)

Cl. **323.** **Kullberg, Victor,** Chronometer and Watch Manufacturer, 105, Liverpool Road, Islington, London, N. Eight and Two Day Marine Chronometers, with improved balances for extremes of temperature; Keyless Pocket Chronometer and Lever Watches, with various improvements therein; Chronographs, Repeaters, &c. (640)

Exhibitor, London, 1862 (Medal); *Paris*, 1867 (Gold Medal); *Vienna*, 1873 (Diploma of Honour).

Cl. **323.** **Del Riego, M.,** 284, Regent Street, London, W. Chronometers, Chronographs, Repeaters, Keyless Lever Watches, &c., specially adapted for warm climates and sudden changes of temperature. (641)

Cl. **323, 322.** **Morton, George,** Watch and Chronometer Balance Spring and Wire Manufacturer, 31, Hanover Street, Islington, London, N. Chronometer (Marine and Pocket) and Watch (Breguet and Flat) Balance Springs, and Wire for making same; also Gauge for gauging same, to the 10,000th part of an inch. (642)

Exhibitor, British Horological Society's Exhibition, London, 1873 (Prize for Springs).

Cl. **323.** **Nicole, Nielson, & Co.** (late Nicole and Capt), 14, Soho Square, London. W. Watches, Chronometers, Complicated Watches, and Chronographs. (643)

Exhibitors, London, 1862 (Bronze Medal); *Paris*, 1855 (First-class Silver Medal); 1867 (Silver Medal).

Cl. **323.** **Whittaker, Richard,** Keyless Watch Maker, 7, Great Sutton Street, Clerkenwell, London, E.C. Keyless Watches. (Patented in Great Britain and the United States of America.) (644)

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Cl. **323, 340.** **Smith, Borthwick** (late J. Ryley & Co.), Watch and Chronometer Manufacturer, Junction Street, and Albion Street, Coventry. Gold and Silver Lever Watches and Chronometers, Watch Cases, Dials, and Movements of different constructions, specially illustrating processes of manufacture and the Exhibitor's Patented Improvements in watch construction. Special Tools and Machinery for Watch manufacture. Patent Rink and Parlour Skates. (646)

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Cl. **323.** **Gibson, William.** See Cl. 253, 254.

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Cl. **324.** **Crouch, Henry,** Optician, 66, Barbican, London, E.C. Microscopes, Binocular, and

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London, 1851 (Council Medal); 1862 (Medal); *Paris*, 1855 (First Class); 1867 (Gold Medal).

. **324.** **Dallmeyer, John Henry,** Optician, 19, Bloomsbury Street, London, W.C. Astronomical and Terrestrial Telescopes, Microscopes, Photographic Lenses, Cameras, and Apparatus. (653)

Exhibitor, London, 1862 (Two Medals); *Paris*, 1867 (Gold and Silver Medals).

Cl. **325.** **India Rubber, Gutta Percha, and Telegraph Works Company, Limited,** Manufacturers of India Rubber and Gutta Percha Goods, Telegraph Submarine Cables, Wires, and Stores of all descriptions, Works, Silvertown, Essex, E.; Offices, 100, Cannon Street, London, E.C. Submarine Telegraph Cables, Torpedo Telegraph Cables, Subterranean Telegraph Cables, Insulated Telegraph Wires. (654)

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Cl. **326.** **Telegraph Construction and Maintenance Company, Limited,** 38, Old Broad Street, London. Specimens of Submarine Telegraph Cables. (656)

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Cl. **327.** **Smith, George,** Musical Instrument Maker, 57, Victoria Park Road, South Hackney, London, late of Ramsgate. Portable Finger Organ, composed of Wood and Metal Pipes, with new method of distributing Wind. Each pipe answers the purpose of four distinct pipes, this is accomplished without action of any kind. The instruments are made in every variety of plain and fancy wood. Compass C C to G, 13 stops or registers and 56 notes and two complete sets of keys. Height, 5 ft. 5 in.; depth, 2 ft.; width, 4 ft. 2 in.; in elegant case. (657)

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Exhibitor, London, 1851 (Hon. Mention); *Leeds Industrial Exhibition*, 1858 (Medal); *Yorkshire Exhibition of Arts and Manufactures, Leeds*, 1875 (Prize Medal).

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Besson, F., & Co., Musical Instrument Manufacturer, 198, Euston Road, London, N. Brass Musical Instruments, suitable for Military and Orchestral purposes. F. Besson & Co.'s latest improvements. 28 Medals of Honour since 1837. (662) Cl. **327.**

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Rein, F. Charles, & Son. See Cl. 276. Cl. **327.**

Collmann, L. W. See Cl. 217. Cl. **327.**

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Codes.

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Military organisations and orders.

Trade unions and associations.

Industrial organisations.

Secret orders and fraternities.

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Religious orders and societies, and their objects.

Societies and organisations for the propagation of systems of religion by missionary effort.

Spreading the knowledge of religious systems by publications.

Bible societies, tract societies, colportage.

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Cl. **340.** **Lewis, J.**, 177, Canongate, Edinburgh. Curling stones. (670)

Cl. **340.** **Nicholson, Hamlet,** Inventor and Patentee, Kilner Deyne Terrace, The Park, Rochdale. Patent compound cricket and playing balls. Claims superiority over leather balls in cheapness and durability, a true sphere, does not absorb moisture, is less injurious to the bat, and is the exact weight prescribed by the laws of cricket. (671)

Exhibitor, London, 1862, 1871 (Certificate) ; *Paris,* 1867.

Cl. **340.** **Smith, Borthwick.** See Cl. 323.

Cl. **342.** **Cochrane, Robert, C.E.,** Architect Athlone, Ireland. Drawings illustrating the application of concrete to the erection of an improved construction of dwellings, combining the essentials of health, comfort, and economy with artistic treatment. (672)

Cl. **346.** **Greenway, Henry,** Surgeon, Plymouth, England. Drawings and description of Mr. Greenway's method of Hospital construction. This plan consists of a substantial building containing a smaller one, the side and end spaces between the two forming corridors. The inner building is made of glass (*toughened*, if procurable), or enamelled sheet-iron and glass, fixed in iron framework, and is subdivided so as to form two rows of compartments, each compartment having an entrance from the corridor. Efficient means are provided for the inlet of fresh air and the extraction of foul air, and for warming the building. By this plan each patient is surrounded with air uncontaminated by himself, by his fellow-patients, or by the building, the materials of which the compartments are made being non-absorbent, and the ventilation constant and complete. Although each patient would be isolated he would not feel lonely, as he could see and converse with his neighbour through the glass partition. The nature of the partitions also enables the nurse to see the patients through either row of compartments. This plan is especially adapted for the reception of wounded patients, for a fever hospital, and a lying-in hospital. — (See *British Medical Journal*, May 11, 1872 ; Nov. 15, 1873 ; Sept. 26, 1874 ; Jan. 30, 1875 ; June 19, 1875.) (673)

Exhibitor, London, 1873 (Medal for Surgical Inventions).

PHILADELPHIA INTERNATIONAL EXHIBITION, 1876.

British Pictures having a Black Maltese Cross attached to the right-hand corner of the Frame are for Sale. Information regarding the Price, &c. can be obtained from the Superintendent of Fine Arts, at the Office of the British Executive.

DEPARTMENT IV.—FINE ARTS.

Sculpture.

CLASS 400.—Figures and groups in stone, metal, clay, or plaster.
CLASS 401.—Bas-reliefs, in stone, or metal; electrotype copies.
CLASS 402.—Medals, pressed and engraved; electrotypes of medals.
CLASS 403.—Hammered and wrought work—*repousse* and *rehausse* work, embossed and engraved relief work.
CLASS 404.—Cameos, intaglios, engraved stones, dies, seals, etc.
CLASS 405.—Carvings in wood, ivory, and metal.

*** The Initials appended to the Names of Artists in the following pages signify as follows:—P.R.A., President, R.A., Academician, A.R.A., Associate, and A.E., Associate Engraver of the Royal Academy of Arts, England; P.R.S.A., President, R.S.A., Member, of the Royal Scottish Academy.
When not otherwise stated the Artist is also the contributor.

Cl. 400. **ADAMS-ACTON, JOHN,** 103, Marylebone Road, London.

1. IL GUIOCATORE DE CASTELLETTO—A life-size group of Boy and Dog in Carrara Marble. *Lent by* SAMUEL BUDGETT, ESQ.

2. Ideal Bust in Marble—THE STAR OF THE PERIOD.

Cl. 400. **BAILEY, EDWARD HODGES, R.A., the Late.**
Born, 1788; *died*, 1867.

3. BUST OF FLAXMAN .. .. *Lent by the* ROYAL ACADEMY, LONDON.

Cl. 400. **BELL, JOHN,** 15, Douro Place, Kensington, London.

3A. Colossal Group of "AMERICA," from the original marble at the Albert Memorial, reproduced in Terra-Cotta, by MESSRS. H. DOULTON & CO.

Cl. 400. **CHANTREY, SIR FRANCIS LEGATT, R.A., the Late.**
Born, 1781; *died*, 1842.

4. BUST OF THE LATE BENJAMIN WEST, P.R.A. *Lent by the* ROYAL ACADEMY, LONDON.

Cl. 400. **D'EPINAY, PROSPERE,** 57, Via Sistina, Rome.

5. Bronze Statue—THE SPARTAN BOY.

Cl. 400. **DOULTON, HENRY, & CO.**

5A. Terra-Cotta Reproduction of Colossal Group of "AMERICA," previously referred to.

Cl. 400, 401, 403. **ELKINGTON & CO.** See Cl. 217, 452, 454.

Cl. 400. **GIBSON, JOHN, R.A., the Late.**
Born, 1790; *died*, 1866.

6. VENUS .. .. *Lent by* RICHARD C. NAYLOR, ESQ.

Cl. 400. **GOWER, LORD RONALD LEVESON,** Stafford House, London.

6A. No. 1.—Marie Antoinette, when Dauphiness, hunting at Fontainebleau. 1773.
No. 2.—Marie Antoinette on her way to Execution, 16 October 1793.
No. 3.—"It is Finished."

Cl. 400, 405. **HEMS, HARRY.** See Cl. 217.

Cl. 400. **JOY, A. BRUCE,** The Avenue No. 8, 76, Fulham Road, London.

7. The Fairy Tale—Statuette of Child.
8. Bust of a Girl.
9. Bust of Napoleon III.
10. Medallions.

Cl. 400. **TINWORTH, GEORGE.** See Cl. 206.

Cl. 400. **WOOD, MARSHALL,** Sculptor, 17, Osnaburgh Street, Regent's Park, London.

Marble Statues.

Cl. 401. **DOOLIN, WALTER,** Monumental Stone Mason, 23, Westland Row, Dublin.

Two Celtic Crosses, carved after the ancient Irish crosses in limestone. Exhibited in the Grounds.

Cl. 402. **MORGAN, GEORGE,** 144, Finborough Road, West Brompton, London.

"Frame of Medals." Exhibited in South Kensington Collection.

Cl. 402. **WYON, J. S. & A. B.,** Chief Engravers of Her Majesty's Seals, Medallists to the Queen, &c., 287, Regent Street, and 2 & 3, Langham Chambers, London.

One frame containing Medals and Seals.

Cl. 404. **ORTNER & HOULE.** See Cl. 258.

Painting.

Class 410.—Paintings in oil on canvas, panels, etc.
Class 411.—Water colour pictures; aquarelles, miniatures, etc.
Class 412.—Frescoes, cartoons for frescoes, etc.
Class 413.—Painting with vitrifiable colours. Pictures on porcelain, enamel, and metal.

Class 410.—Oil Colour Paintings.

*** The Initials appended to the Names of Artists in the following pages signify as follows :—P.R.A., President, R.A., Academician, A.R.A., Associate, and A.E., Associate Engraver of the Royal Academy of Arts, England; P.R.S.A., President, R.S.A., Member, of the Royal Scottish Academy.
When not otherwise stated the Artist is also the contributor.

ANSDELL, RICHARD, R.A., Lytham House, St. Alban's Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1861; *elected full member,* 1870.

1. On The Hills—Ptarmigan Shooting.
2. The Anxious Mother.

ANTHONY, MARK, The Lawn, Hampstead, Middlesex.

3. Sunset after a Storm .. .. .. *Lent by* Thomas Winter, Esq.

ARCHER, J., R.S.A., 51, Phillimore Gardens, Kensington, London.

4. Portrait of Mrs. Henry Joachim .. .. *Lent by* Henry Joachim, Esq.
5. The Three Sisters.

ARMITAGE EDWARD, R.A., 3, Hall Road, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1867 ; *elected full member,* 1872.

6. Julian the Apostate presiding at a Conference of Sectarians.
Lent by the Corporation of Liverpool.

BARRY, JAMES, R.A., the Late.
Born, 1741 ; *Died,* 1806.

7. Adam and Eve .. .. *Lent by the* Society of Arts, London.

BOUGHTON, G. H., Grove Lodge, Palace Garden Terrace, Kensington, London.

8. God Speed .. .. *Lent by* A. M. Marsden, Esq.

BRETT, JOHN, 38, Harley Street, London.

9. Morning amongst the Granite Boulders .. .. *Lent by* Mrs. McEwen.

BUCKNER, R., 3, Cleveland Row, St. James's, London.

10. Portrait of Lady Marianne Alford .. *Lent by* The Earl Brownlow.

CALDERON, PHILIP H., R.A., 16, Grove End Road, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1864 ; *elected full member,* 1867.

11. After the Battle .. .. *Lent by* Henry W. F. Bolckow, Esq., M.P.
12. Desdemona .. .. *Lent by* G. C. Schwabe, Esq.
"She sang a song of willow."
13. The Siesta .. .. *Lent by* Messrs. Agnew & Sons.

CALLCOTT, SIR AUGUSTUS WALL, R.A., the Late.
Born, 1779 ; *died* 1844.

14. Morning—A Landscape .. *Diploma Picture, lent by the* Royal Academy, London.

CAMERON, HUGH, R.S.A., Albert Gate Studios, 6, William Street, Knightsbridge, London.

15. Age and Infancy .. .. .. *Lent by* James Stevenson, Esq.

CAUTY, H. H., Highlight, Campden Hill, Kensington, London.

16. Little Sunshine.

CLARK, J., 394, Camden Road, London.

17. The Sick Child .. .. *Lent by* H. J. Turner, Esq.
18. The Bird's Nest .. .. *Lent by* George Dibley, Esq.

CLINT, ALFRED, 54, Lancaster Road, Kensington Park, London.
President of the Society of British Artists, London.

19. Lake Scene—Sunset.
20. Sunset—Hastings.

COLE, VICAT, A.R.A., Little Campden House, Kensington, London.
Elected Associate of the Royal Academy, London, 1870.

21. Misty Morning .. .. *Lent by* J. C. Bunten, Esq.
"* * * the first soft light of morn that
" Melts the fairy silver of the frost."
22. Noon .. .. *Lent by* E. J. Reed, Esq., C.B., M.P.
"While Nature lies around deep lulled in noon."

CONSTABLE, JOHN, R.A., the Late.

Born, 1776; *died*, 1837.

23. The Lock .. .. *Diploma Picture, lent by the* Royal Academy, London.

COOKE, EDWARD WILLIAM, R.A., Glen Andred, Groombridge, Tunbridge Wells.

Elected Associate of the Royal Academy, London, 1851; *elected full member*, 1863.

24. The Goodwin Lightship .. .. *Lent by* Thomas Brassey, Esq., M.P.

25. The Rescue of a Barque on the Goodwins by the Van Kook North Deal Life Boat .. .. *Lent by* Henry Dewhurst, Esq.

COPE, CHARLES WEST, R.A., 19, Hyde-Park-Gate-South, Kensington Gore, London.

Elected Associate of the Royal Academy, London, 1843; *elected full member*, 1848.
Silver medallist.

26. Launcelot Gobbo .. .. *Lent by* R. Peacock, Esq.

Shylock. The patch is kind enough; but a huge feeder.
Snail slow in profit, and he sleeps by day
More than the wild cat; drones hive not with me;
Therefore I part with him; and part with him
To one that I would have him help to waste
His borrowed purse.—*Merchant of Venice*, Act ii., Scene v.

27. Taming of the Shrew .. .. .. *Lent by* J. Fielden, Esq., M.P.

Katharina. I pray you, husband, be not so disquiet;
The meat was well enough, if you were so contented.
Petruchio. I tell thee Kate, 'twas burnt and dried away.
And I expressly am forbid to touch it,
For it engenders choler, planteth anger;
And better 'twere that both of us did fast,—
Since, of ourselves, ourselves are choleric,—
Than feed it with such over-roasted flesh.
Be patient; to-morrow it shall be mended,
And, for this night, we'll fast for company.
Taming of the Shrew, Act iv., Scene i.

28. The Marriage of Griselda (from Chaucer) .. *Lent by* George Moore, Esq.

"This royalle Marquis richly was arraied,
With Lords and Ladies in his companie,
The whiche unto the feste werin yprayed,
And of his retinue the Bachelerie,
With many a soune of sondrie melodie.
And to the village of whiche I you tolde,
In this arraye the right way hath yholde."
* * * * *
"As she wolde over the threshold gone,
The Marquis came, and gan for her to calle,
And she sette doune her water-pot anon
Beside the threshold of the Ox'is stalle."
* * * * *
"Griselde, sayed he, ye shall welle understond,
It liketh unto your father and to me,
That I you wedde, and eke it may so stonde,
As I suppose, ye wolle that it so be."
Chaucer, "*Canterbury Tales*," (*Clerk's Tale*).

CRESWICK, THOMAS, R.A., the Late.

Born, 1811; *died*, 1869.

29. Landscape .. .. *Diploma Picture, lent by the* Royal Academy, London.

CROFTS, E., 34, Adlerstrasse, Düsseldorf.

30. Ligny .. .. *Lent by* W. Howe, Esq.

CROWE, EYRE, 33, Langham Street, Great Portland Street, London.

31. After a Run .. .. *Lent by* Messrs. Agnew & Sons.

32. Goldsmith's Mourners. (*See* J. Forster's "Life of Oliver Goldsmith.")

DANIELL, WILLIAM, R.A., the Late.

Born, 1769; *died*, 1837.

33. View of the Coast of Scotland. *Diploma Picture, lent by the* Royal Academy, London.

DOBSON, WILLIAM CHARLES THOMAS, R.A., Eldon House, Hampstead, London.
Elected Associate of the Royal Academy, London, 1860 ; *elected full member,* 1871.

34. Children's Children are the Crown of Old Men.
Lent by J. Carolus Stirling, Esq.

35. Nazareth .. .. *Lent by* William Bowman, Esq., F.R.S.

36. The Widow's Son raised to Life.

DONALDSON, ANDREW B., 10, Argyll Road, Kensington, London.

37. The Eve of the Battle—Jeanne d'Arc encouraging the Troops.

ELMORE, ALFRED, R.A., 1, St. Alban's Road, Victoria Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1845 ; *elected full member,* 1857.

38. Two Women shall be Grinding at the Mill .. *Lent by* John Bowring, Esq.

39. On the Housetops.
"That which ye have spoken in the ear in closets shall be proclaimed on the Housetops."

40. Lenore.

ETTY, WILLIAM, R.A., the Late.
Born, 1787 ; *died,* 1849.

41. Sleeping Nymph and Satyrs. *Diploma Picture, lent by the* Royal Academy, London.

FAED, THOMAS, R.A., Grove House, Chigwell, Essex.
Elected Associate of the Royal Academy, London, 1861 ; *elected full member,* 1864.
Hon. Member of the Imperial Academy of Fine Arts, Vienna.

42. God's Acre .. .. *Lent by* George Fox, Esq.

43. Baith Faither and Mither .. *Lent by* H. W. F. Bolckow, Esq., M.P.

FIELD, W., East Heath Studio, Hampstead, London.

44. The Milk Maid's Song to Izaak Walton.
"Come live with me and be my love."

FILDES, S. LUKE, The Studios, 22, King Henry's Road, Regent's Park, London.

45. Applicants for Admission to a Casual Ward .. *Lent by* Thomas Taylor, Esq.

46. Betty .. .. *Lent by* Isaac M. Marsden, Esq.

FRITH, WILLIAM POWELL, R.A., 7, Pembridge Villas, Bayswater, London.
Elected Associate of the Royal Academy, London, 1845; *elected full member,* 1853.
Hon. Member of the Imperial Academy of Fine Arts, Vienna.

47. The Marriage of H.R.H. the Prince of Wales in St. George's Chapel, Windsor, 10 March 1863 .. .. *Lent by* Her Majesty the Queen.

48. The Railway Station .. .. .. *Lent by* Messrs. Graves & Co.

49. Pamela .. .. .. *Lent by* H. W. F. Bolckow, Esq., M.P.

FUSELI, HENRY, R.A., the Late
Born, 1741 ; *died,* 1825.

50. Thor Battering the Serpent of Misgard.
Diploma Picture, lent by the Royal Academy, London.

GAINSBOROUGH, THOMAS, R.A., the Late.
Born, 1727 ; *died,* 1788.

51. Portrait of the Duchess of Richmond. *Lent by* Baron Lionel de Rothschild.

GILBERT, SIR JOHN, A.R.A., Vanbrugh Park, Blackheath, Kent.
Elected Associate of the Royal Academy, London, 1872.
President of the Society of Painters in Water Colours.

52. The First Prince of Wales .. .. *Lent by* Edwin Lawrence, Esq.

53. The Battle of Naseby .. .. *Lent by* Messrs. Agnew & Sons.

GILL, E., Linn Villa, Sutton Hill, Surrey.

54. Rhaiad Dú, Dol-y-Melynen, North Wales .. *Lent by* Lewis Loyd, Esq

GIRARDOT, E. G., The Studios, Upper Park Road, Haverstock Hill, London.

55. Herr Carl Deichmann, Violinist and Composer.

GOODALL, FREDERICK, R.A., Graeme's Dyke, The Levels, Harrow Weald, Middlesex.
Elected Associate of the Royal Academy, London, 1852; *elected full member,* 1863.

56. Cairo Fruit Girl .. .. .. *Lent by* Messrs. Pilgeram and Lefèvre.

GRAHAM, PETER, 93, Ladbroke Road, Notting Hill, London.

57. On the way to the Cattle Tryst .. *Lent by* Thomas Jessop, Esq., J.P.

58. Wind .. .. *Lent by* A. Brogden, Esq., M.P.

GRANT, SIR FRANCIS, P.R.A., 27, Sussex Place, Regent's Park, London.
Elected Associate of the Royal Academy, London, 1842; *elected full member,* 1851; *elected President,* 1866.

59. The late Viscount Hardinge, Governor-General of India, returning from the Battle of Ferozeshah, accompanied by his eldest Son, the Hon. Charles Hardinge (his Private Secretary), his Nephew, Colonel R. B. Wood (Military Secretary), and his second Son, the Hon. Arthur Hardinge, A.D.C. Of the remainder of his Staff, 10 in number, five were killed and five wounded. The background represents the captured Camp and Village of Ferozeshah.
Lent by Viscount Hardinge.

The following extract from a letter of the late Viscount Hardinge was quoted by Sir R. Peel on moving the vote of thanks to the Army of the Sutlej, March 3, 1846 : —

"The night of the 21st was the most extraordinary of my life. I bivouacked with the men without food or covering, and our nights are bitterly cold. A burning camp is in our front, our brave fellows were lying down under a heavy cannonade. In this state, with a handful of men who had carried the batteries the night before, I remained till morning, finding myself with my old friends of the 29th, 31st, 50th, and 9th Regiments. My answer to all and every man was that we must attack the enemy at daybreak, beat him, or die honourably in the field; in this the gallant old General (Lord Gough) entirely coincided with me. In the morning we drove the enemy without a halt, from one extremity of the camp to the other, capturing 30 or 40 guns. The men drew up afterwards in excellent line, the regimental colours lowering to me as on parade. The mournful part is the heavy loss I have sustained, 10 A.D.C.'s *hors de combat,* 5 killed and 5 wounded."

60. Portrait of Mrs. Markham.

61. Portrait of The Earl Russell, K.G. .. *Lent by* The Earl Russell, K.G.
(*Painted when he was Lord John Russell, Premier.*)

GRAVES, The Honourable HENRY, 19, Albert Mansions, Victoria Street, London.

62. Portrait of Mrs. Anderton .. *Lent by* W. I. Anderton, Esq.

HARDY, HEYWOOD, 19, St. John's Wood Road, London.

63. The Disputed Toll .. .. .. *Lent by* Messrs. Agnew & Sons.

HAYTER, Sir GEORGE.
Born, 1792; *died,* 1871.

64. Portrait of Her Majesty in Coronation Robes. *Lent by* Her Majesty the Queen.

HERDMAN, R., R.S.A., St. Bernard's, Bruntsfield Crescent, Edinburgh.

65. Portrait of Thomas Carlyle.
(*Replica.*)

66. The First Conference between Marie Stuart and John Knox, Holyrood, 1561. .. *Lent by* John H. Sherwood, Esq., of New York, U.S.

HERING, G. E., 45, Grove End Road, St. John's Wood, London.

67. A Rift in the Gloom, Glen Sannox .. *Lent by* John Pender, Esq., M.P.

HICKS, G. E., 36, Kensington Park Road, London.

68. WILL HE DO IT?

HILTON, WILLIAM, R.A., the Late.

Born, 1786; *died*, 1839.

69. THE RAPE OF GANYMEDE .. *Diploma Picture, lent by the* ROYAL ACADEMY, LONDON.

HODGSON, J. E., A.R.A., 5, Hill Road, Abbey Road, St. John's Wood, London.

Elected Associate of the Royal Academy, London, 1873.

70. A NEEDY KNIFEGRINDER .. .. *Lent by* H. J. TURNER, ESQ.

71. RETURNING THE SALUTE .. .. .. *Lent by* THOMAS TAYLOR, ESQ.

HOLL, F., 30, Gloucester Road, Regent's Park, London.

72. "THE LORD GAVE, THE LORD HATH TAKEN AWAY; BLESSED BE THE NAME OF THE LORD" .. .. *Lent by* F. C. PAWLE, ESQ.

73. VILLAGE FUNERAL.—"I AM THE RESURRECTION AND THE LIFE." *Lent by* JOHN AKROYD, ESQ.

HOOK, JAMES CLARKE, R.A., Silverbeck, Churt, Farnham, Hants.

Elected Associate of the Royal Academy, London, 1850; *elected full member*, 1860.
Gold and Silver Medallist.

74. FROM UNDER THE SEA .. .. .. *Lent by* C. P. MATTHEWS, ESQ.

HORSLEY, JOHN CALLCOTT, R.A., 1, High Row, Kensington, London.

Elected Associate of the Royal Academy, London, 1855; *elected full member*, 1864.
Silver Medallist.

75. CHECK-MATE NEXT MOVE .. .. .. *Lent by* THOMAS JESSOP, ESQ., J.P.

76. SUNNY EFFECTS .. .. *Lent by* MESSRS. AGNEW & SONS.

77. LOST AND FOUND .. .. *Lent by* J. PENN, ESQ.
"But when he was yet a great way off, his father saw him, and had compassion on him, and fell on his neck and kissed him."—*Parable of the Prodigal Son.*

HUGHES, ARTHUR, 2, Finborough Road, Fulham Road, London.

78. THE CONVENT BOAT .. .. *Lent by* GEORGE TRIST, ESQ.

HUNT, HOLMAN, 1, King Street, St. James's, London.

79. PORTRAIT OF THE ARTIST.

HUNTER, COLIN, 61, Carlton Hill, London.

80. TRAWLERS WAITING FOR THE DARKNESS .. *Lent by* ALEXR. S. STEVENSON, ESQ.

JOHNSON, C. E., 34, Gloucester Road, Regent's Park, London.

81. THE LAST OF THE SPANISH ARMADA.

JOHNSTON, A., 46, FitzRoy Street, London.

82. THE MARRIAGE OF THE COVENANTERS .. .. *Lent by* JAMES VIRTUE, ESQ.

JONES, T. A., P.R.H.A., 9, Upper Mount Street, Dublin.

83. LIMERICK LASSES .. .. *Lent by* JOHN LEWIS, ESQ.

JOPLING, Mrs. LOUISE, 8, Clareville Grove, South Kensington, London.

84. THE FIVE SISTERS OF YORK.
"He descried, at no great distance, the five sisters seated on the grass, with Alice in the centre: all busily plying their customary task of embroidering.
"'Save you, fair daughters,' said the friar."—*Vide* "*Nicholas Nickleby.*"

KING, HAYNES, Camden Studios, Camden Street, Oakley Square, London.

85. First Steps .. .. *Lent by* Edward George Barr, Esq.

KNIGHT, C. P., 5, Wetherell Place, Clifton, Bristol.

86. Newport Bay, Pembrokeshire.

LANCE, GEORGE, the Late.
Born, 1802; *died*, 1864.

87. The Unwelcome Guest .. .. *Lent by* G. E. Lance, Esq.

LANDSEER, SIR EDWIN, R.A., the Late.
Born, 1802; *died*, 1873.

88. The Travelled Monkey .. .. .. *Lent by* Lord Northbrook.

89. The Sick Monkey .. .. *Lent by* Lord Northbrook.

90. Portrait of Lord Ashburton .. .. *Lent by* Lady Louisa Ashburton.

91. Study of a Lion .. .. *Lent by* Thomas H. Hills, Esq.

92. Study of a Lion .. .. *Lent by* Thomas H. Hills, Esq.

LAURENCE, S., 6, Wells Street, Oxford Street, London.

93. Portrait of Robert Browning, The Poet.

LAWRENCE, SIR THOMAS, P.R.A., the Late.
Born, 1769; *died*, 1830.

94. Portrait of the first Lord Ashburton .. *Lent by* Lady Louisa Ashburton.

95. The Three First Partners of the Baring House; viz., Sir Francis Baring, first Baronet, his Brother John Baring, and his Son-in-Law Charles Wall. *Lent by* Lord Northbrook.

LEHMANN, RUDOLPH, 1, South Villas, Campden Hill, Kensington, London.

96. "La Rota" at the Foundling Hospital, Rome .. *Lent by* Lewin Mozley, Esq.

97. Portrait of Mrs. Henry Schlesinger .. *Lent by* Henry Schlesinger, Esq.

LEIGHTON, FREDERICK, R.A., 2, Holland Park Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1864; *elected full member*, 1868.
Correspondent of the Institute of France.

98. Summer Moon .. .. *Lent by* Alfred Morrison, Esq.

99. Interior of a Jew's House, Damascus .. .. *Lent by* Bingham Mildmay, Esq.

100. Eastern Slinger Scaring Birds in the Harvest Time—Moonrise.

LESLIE, C. R., R.A., the Late.
Born, 1794; *Died* 1859.

101. May Day in the Time of Queen Elizabeth .. .. *Lent by* J. Naylor, Esq.

LESLIE, GEORGE, D., A.R.A., 8, Grove End Road, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1868.

102. Celia's Arbour .. .. *Lent by* G. C. Schwabe, Esq.

103. The Miller's Daughter .. *Lent by* W. D. Morgan, Esq., of New York, U.S.

LEWIS, C. J., Cheyne House, Chelsea, London.

104. Sunday Morning.

105. A Berkshire Barleyfield.

LEWIS, JOHN FREDERICK, R.A., Walton-on-Thames.
Elected Associate of the Royal Academy, London, 1859; *elected full member*, 1864.

106. The Prayer of Faith healeth the Sick .. *Lent by* J. Wardell, Esq.

LUTYENS, C., 16, Onslow Square, South Kensington, London.

107. PORTRAIT OF F. BARNE, ESQ. .. .. *Lent by* F. BARNE, ESQ.

MacCALLUM, A., 47, Bedford Gardens, Kensington, London.

108. SULTRY EVE.

MACLAREN, W., Capri, near Naples.

109. A GAME OF KNUCKLEBONES .. ..

MACLISE, DANIEL, R.A., the Late
Born, 1811; *died,* 1870.

110. THE BANQUET SCENE FROM MACBETH .. .. *Lent by* F. W. COSENS, ESQ.

111. THE WOOD RANGER .. *Diploma Picture, lent by the* ROYAL ACADEMY, LONDON.

MacWHIRTER, J., 6, Marlborough Road, St. John's Wood, London.

112. OUT IN THE COLD .. .. *Lent by* CAPTAIN HILL.

113. LAND OF THE MOUNTAIN AND THE FLOOD .. .. *Lent by* KAYE KNOWLES, ESQ.

114. VALLEY OF SLAUGHTER .. . .. *Lent by* GEORGE FOX, ESQ.

MARKS, HENRY STACY, A.R.A., 15, Hamilton Terrace, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1873.

115. THE ORNITHOLOGIST .. .. *Lent by* GEORGE FOX, ESQ.

116. THE THREE JOLLY POST-BOYS .. .. *Lent by* MESSRS. AGNEW & SONS.

"Three jolly post-boys
Sitting at the Dragon,
Three jolly post-boys
Sitting at the Dragon,
And they determinèd,
And they determinèd,
And they determinèd
To finish out the flagon."

MASON, GEORGE, A.R.A., the Late.
Born, 1818; *died,* 1872.

117. WIND ON THE WOLDS .. .. *Lent by* FREDERICK LEIGHTON, ESQ., R.A.

MILLAIS, JOHN EVERETT, R.A., 7, Cromwell Place, South Kensington, London.
Elected Associate of the Royal Academy, London, 1853; *elected full member,* 1863.
Gold and Silver Medallist.

118. EARLY DAYS .. .. *Lent by* C. P. MATTHEWS, ESQ.

MOORE, HENRY, 4, Sheffield Terrace, Kensington, London.

119. A WINTER GALE IN THE CHANNEL .. .. *Lent by* H. SMITH WRIGHT, ESQ.

120. STORM COMING ON AT SUNSET—COAST OF NORTH WALES *Lent by* E. BOLLANS, ESQ.

MULREADY, WILLIAM, R.A., the Late.
Born, 1786; *died,* 1863.

121. THE VILLAGE BUFFOON .. *Diploma Picture, lent by the* ROYAL ACADEMY, LONDON.

MUTRIE, MISS A. F., 36, Palace Garden Terrace, Kensington, London.

122. WHITE CACTUS.

MUTRIE, MISS M. D., 36, Palace Garden Terrace, Kensington, London.

123. COTTAGE WINDOW.

NEWTON, GILBERT STEWART, R.A., the Late.
Born, 1795; *died,* 1835.

124. ABELARD .. .. *Diploma Picture, lent by the* ROYAL ACADEMY, LONDON.

NICOL, ERSKINE, A.R.A., 24, Dawson Place, Bayswater, London.
Elected Associate of the Royal Academy, London, 1866.

125 PAYING THE RENT .. .. *Lent by* F. O'DAY, ESQ., of St. Louis, U.S.

126. THE DISPUTED BOUNDARY .. *Lent by* A. T. STEWART, ESQ., of New York, U.S.

NORTHCOTE, J., R.A., the Late.
Born, 1746 ; *died,* 1831.

127. THE MARRIAGE OF THE YOUNG PRINCE RICHARD DUKE OF YORK, SECOND SON OF KING EDWARD THE FOURTH, WITH ANNE, DAUGHTER OF THE DUKE OF NORFOLK, 15 May 1478. *Lent by* HER MAJESTY THE QUEEN.

O'NEIL, HENRY, A.R.A., 7, Victoria Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1860.
Double Silver Medallist.

128. A VOLUNTEER.

OPIE, JOHN, R.A., the Late.
Born, 1761 ; *died,* 1807.

129. PORTRAIT OF HANNAH MORE .. .. *Lent by the* DUKE OF MANCHESTER.

ORCHARDSON, WILLIAM QUILLER, A.R.A., Hyndford House, 239, Brompton, Road, London.
Elected Associate of the Royal Academy, London, 1868.

130. PRINCE HENRY, POINS, AND FALSTAFF. .. .. *Lent by* C. MOXON, ESQ.
Prince. Farewell this latter spring,
Farewell alhallown summer.

131. MOONLIGHT ON THE LAGOONS, VENICE .. .. *Lent by* H. J. TURNER, ESQ.

OULESS, W. W., 43, Bloomsbury Square, London.

132. PORTRAIT OF JOHN ROUS, ESQ. .. .. .. *Lent by* BART. ROUS, ESQ.

133. PORTRAIT OF PHILIP M. WESTLAKE, ESQ.

OWEN, WILLIAM, R.A., the Late.
Born, 1769 ; *died,* 1825.

134. BOY AND KITTEN .. *Diploma Picture, lent by the* ROYAL ACADEMY, LONDON.

PATON, W. H., R.S.A., 14, George Street, Edinburgh.

135. A DELL WITHOUT A NAME .. .. *Lent by* ALEXR. S. STEVENSON, ESQ.

PEELE, J. T., 7, Percy Street, Bedford Square, London.

136. CHILDREN AND GOLDFISH.

PERUGINI, CHARLES EDWARD, 141, Warwick Street, Eccleston Square, London.

137. PORTRAIT OF MRS. C. E. PERUGINI.
(*Younger Daughter of the late Charles Dickens, Esq.*)

PETTIE, JOHN, R.A., 21, St. John's Wood Road, London.
Elected Associate of the Royal Academy, London, 1866 ; *elected full member,* 1873.

138. TOUCHSTONE AND AUDREY .. .. *Lent by* C. MOXON, ESQ.
Shakespeare's As You Like It.

139. SMUGGLER AND EXCISEMAN—TUSSLE FOR THE KEG .. *Lent by* W. P. FRITH, ESQ., R.A.

140. PORTRAIT OF G. H. BOUGHTON, ESQ. .. .. *Lent by* G. H. BOUGHTON, ESQ.
(*Costume of the* 16*th Century.*)

141. SANCTUARY .. .. *Lent by* GEORGE FOX, ESQ.

POINGDESTRE, G. H., 47, Colomberie, Jersey.

142. THE MARBLE QUARRIES, CARRARA *Lent by* M. O. ROBERTS, ESQ., of New York, U.S.

143. AN UNFORTUNATE RECOGNITION *Lent by* M. O. ROBERTS, ESQ., of New York, U.S.

POOLE, P. F., R.A., Uplands, Greenhill, Hampstead, London.
Elected Associate of the Royal Academy, London, 1846; *elected full member,* 1861.

144. The Lion in the Path .. .. .. *Lent by* Messrs. Agnew & Son.

POTT, L. G., 9, Marlborough Place, St. John's Wood, London.

145. Charles I. leaving Westminster Hall after his Trial.
Lent by H. T. Elwes, Esq.

POYNTER, EDWARD J., A.R.A., Beaumont Lodge, Wood Lane, Shepherd's Bush, London.
Elected Associate of the Royal Academy, London, 1869.
Director of Art, and Principal of the National Art Training School, South Kensington, London.
Slade Professor of Fine Arts, University College, London.

146. The Ibis Girl .. .. *Lent by* J. Wardell, Esq.
147. The Golden Age .. .. .. *Lent by the* Earl of Wharncliffe.
148. The Festival .. .. *Lent by the* Earl of Wharncliffe.

PRINSEP, VAL. C., 1, Holland Park Road, Kensington, London.

149. A Minuet .. .. *Lent by* George Paine, Esq.
150. The Death of Cleopatra.

"The messenger found the guards apprehensive of nothing, but on opening the door they saw her stone dead on a throne of gold, set out in all her royal ornaments. Irad, one of her women, lay dead at her feet, and Charmion, just ready to fall, scarce able to hold up her head, was adjusting her mistress's diadem. And when one said angrily, 'Was this well done of your lady Charmion?' 'Well, indeed,' she answered, 'and as became the descendant of so many kings,' and as she said this she fell down dead by the side of the throne."—*Plutarch's "Life of Anthony."*

RAEBURN, SIR HENRY, R.A., the Late.
Born, 1756; *died,* 1823.

151. Portrait of Alexander, 4th Duke of Gordon. *Lent by the* Duke of Manchester.

RAVEN, JOHN S., 6, Westbourne Park, London.

152. The Quarries of Holmground, Lancashire.

REDGRAVE, RICHARD, R.A., 18, Hyde Park Gate South, Kensington Gore, London.
Elected Associate of the Royal Academy, London, 1840; *elected full member,* 1851.

153. The Woodreeve's Orders.
154. The Alarm of an Invasion.

REYNOLDS, SIR JOSHUA, P.R.A., the Late.
Born, 1723; *died,* 1792.

155. Portrait of the Artist .. .. *Lent by the* Royal Academy, London.

RICHMOND, W. B., Beavor Lodge, Beavor Lane, Hammersmith, London.

156. Prometheus bound.

RIGAUD, JOHN FRANCIS, R.A., the Late.
Born, 1742; *died,* 1810.

157. Samson and Delilah .. *Diploma Picture, lent by the* Royal Academy, London.

RIVIÈRE, B., 5, Marlborough Road, St. John's Wood, London.

158. Circe and the Companions of Ulysses .. *Lent by* J. K. Cross, Esq., M.P.
159. War Time .. .. *Lent by* E. W. Buxton, Esq.

ROBERTS, T., 28, Carlton Road, Kentish Town, London.

160. The Night before Bosworth .. .. .. *Lent by* W. J. Alt, Esq.

SANT, JAMES, R.A., 43, Lancaster Gate, Hyde Park, London.
Elected Associate of the Royal Academy, London, 1861 ; *elected full member,* 1869.

161. "SOMETIMES WITH MOST INTENSITY GAZING, I SEEM TO SEE THOUGHT FOLDED OVER THOUGHT." .. .. *Lent by* MRS. LANCASTER.
162. YOUNG WHITTINGTON .. .. .. *Lent by* SAMUEL LORD, ESQ.

SMART, J., A.R.S.A., 4, Picardy Place, Edinburgh.

163. THE GLOOM OF GLEN OGLE.

STANFIELD CLARKSON, R.A., the Late.
Born, 1794 ; *died,* 1867.

164. ON THE SCHELDT NEAR LIERKENSHOCK.
Diploma Picture, lent by the ROYAL ACADEMY, LONDON.

STAPLES, Mrs. M. E., The White House, Sible Hedingham, Essex.
(*Formerly Miss M. E. Edwards.*)

165. IN MEMORIAM .. .. *Lent by* W. F. SHAWCROSS, ESQ.

STARR, Miss LOUISA,

166. IMOGEN .. .. .. *Lent by* H. C. HOWELLS, ESQ., of New York, U.S.

STONE, MARCUS, 1, Langham Chambers, Portland Place, London.

167. MY LADY IS A WIDOW AND CHILDLESS .. .. *Lent by* JAMES VIRTUE, ESQ.

STOREY, GEORGE A., 58, St. Mary's Terrace, Paddington, London.

168. MISTRESS DOROTHY .. .. *Lent by* G. C. SCHWABE, ESQ.
169. ONLY A RABBIT .. .. *Lent by* MESSRS. AGNEW & SONS.

STUART, GILBERT, the Late.

170. PORTRAIT OF WASHINGTON .. .. .. *Lent by* J. DELAWARE LEWIS, ESQ.

TADEMA, L. ALMA, A.R.A., 17, Titchfield Terrace, Regent's Park, London.
Elected Associate of the Royal Academy, London, 1876.

171. CONVALESCENCE .. .. *Lent by* W. H. SMITH, ESQ., M.P.
172. THE VINTAGE FESTIVAL .. .. .. *Lent by* ERNEST GAMBART, ESQ.
173. THE MUMMY—Roman Period .. .. *Lent by* MESSRS. PILGERAM & LEFÈVRE.

TOPHAM, F. W. W., 53, Queen's Road, St. John's Wood, London.

174. THE FALL OF RIENZI—THE LAST ROMAN TRIBUNE.
Lent by the CORPORATION OF LIVERPOOL.

TURNER, JOSEPH MALLORD WILLIAM, R.A., the Late.
Born, 1775 ; *died,* 1851.

175. DOLBADDEN CASTLE, NORTH WALES.
Diploma Picture, lent by the ROYAL ACADEMY, LONDON.

WALLIS, H., 24, Brecknock Crescent, Camden Road, London.

176. ACROSS THE COMMON .. .. .. *Lent by* CHARLES G. CLEMENT, ESQ.
177. THE STONE-BREAKER .. .. *Lent by* TEMPLE SOANES, ESQ.

WARD, EDWARD MATTHEW, R.A., 1, Lansdowne Road, Kensington Park, London.
Elected Associate of the Royal Academy, London, 1846 ; *elected full member,* 1855.

178. CHESTERFIELD'S ANTE-ROOM .. .. .. *Lent by* GEORGE FOX, ESQ.
179. LADY TEAZLE'S SPINSTER DAYS.

WARD, MRS. HENRIETTA, 1, Lansdowne Road, Kensington Park, London.

180. The Poet's First Love .. .. *Lent by* A. Brogden, Esq., M.P.

181. A Scene from the Childhood of the Old Pretender.
(*Awarded the Gold Medal at the Crystal Palace in* 1872.)

WARD, JAMES, R.A., the Late.
Born, 1769; *died*, 1859.

182. An Arab Horse .. .. .. *Lent by* Charles J. Freake, Esq.

WATTS, GEORGE FREDERICK, R.A., Little Holland House, Kensington, London.
Elected Associate of the Royal Academy, London, 1867; *elected full member*, 1867.

183. Portrait of John Everett Millais, R.A. *Lent by* John Everett Millais, Esq., R.A.

184. Portrait of Frederick Leighton, R.A. *Lent by* Frederick Leighton, Esq., R.A.

WEIGALL, HENRY, 35, Bryanston Square, London.

185. Portrait of the late Duke of Wellington, K.G.
Lent by the Dowager Countess of Westmoreland.

186. Portrait of Alexandra, Princess of Wales.

WELLS, HENRY TANWORTH, R.A., Thorpe Lodge, Campden Hill, Kensington, London.
Elected Associate of the Royal Academy, London, 1866; *elected full member*, 1870.

187. Portrait of the Right Honourable W. E. Forster, M.P.
Lent by the Right Honourable W. E. Forster, M.P.

188. Volunteers at a Firing Point, with Portraits of Colonel The Hon. W. J. Colville, Lt.-Col. Lord Elcho, Lt.-Col. Sir Henry Halford, Bart., Major Drake, Royal Engineers, Captain Horatio Ross, Captain Heaton, Stewart Pixley, Esq., Martin R. Smith, Esq., and Edward C. Ross, Esq.

189. Alice.

WEST, BENJAMIN, P.R.A., the Late.
Born, 1738; *died*, 1820.

190. The Death of General Wolfe .. *Lent by* Her Majesty the Queen.

191. Christ blessing Little Children.
Presentation Picture, lent by the Royal Academy, London.

WILKIE, SIR DAVID, R.A., the Late.
Born, 1785; *died*, 1841.

192. Reading the Gazette .. .. .. *Lent by* Joseph Fenton, Esq.

193. Boys digging for a Rat *Diploma Picture, lent by the* Royal Academy, London.

WILSON, RICHARD, R.A., the Late.
Born, 1714; *died*, 1782.

194. Portrait of the Artist .. .. *Lent by the* Royal Academy, London.

WYNFIELD, D. W., 14, Grove-end Road, St. John's Wood, London.

195. Fresh Flowers .. .. *Lent by* George Dibley, Esq.

196. The Death of Buckingham.

YEAMES, WILLIAM FREDERICK, A.R.A., 4, Grove end Road, St. John's Wood, London.
Elected Associate of the Royal Academy, London, 1866.

197. The Appeal to the Podestà .. .. *Lent by* Messrs. Agnew & Sons.

198. Flowers for Hall and Bower .. .. *Lent by* Messrs. Agnew & Sons

ZOFFANY, JOHANN, R.A., the Late.
Born, 1733; *died*, 1810.

199. The Meeting of the Members of the Royal Academy, London.
Lent by Her Majesty the Queen.

Class 411.—Water Colour Paintings.

ABSOLON, J., 106, Palace Gardens Terrace, The Mall, Kensington, London.
Member of the Institute of Painters in Water Colours.

1. The Beacon .. .. *Lent by* C. R. Cheffins, Esq.

BEAVIS, R., 38, Fitzroy Square, London.
Member of the Institute of Painters in Water Colours.

2. Returning Home from the Autumn Fairs (Early Snow).
Lent by David Duncan, Esq.

BRIERLY, O. W., 38, Ampthill Square, Camden Town, London.
Associate of the Society of Painters in Water Colours.
(Marine Painter in Ordinary to Her Majesty.)

3. Blake going on Board the "Resolution" off Dover to take command of the Fleet fitted out against the Dutch, June 1652 *Lent by* Messrs. Vokins.

CALLOW, W., 34, Eastbourne Terrace, Hyde Park, London.
Member of the Society of Painters in Water Colours.

4. The Grand Canal Venice, looking towards Santa Salute.

5. Menagio on the Lake of Como.

CATTERMOLE, GEORGE, the Late.
Born, 1800; *died*, 1868.

6. The Death of Duncan .. .. *Lent by* George Giles, Esq.

COX, DAVID, Junr., 2, New Park Road, Brixton Hill, London.
Associate of the Society of Painters in Water Colours.

7. Donne Castle .. .. *Lent by* F. A. Argles, Esq.

8. Mountain Solitude .. .. *Lent by* Captain Baldwin.

DONALDSON, A. B., 10, Argyll Road, Kensington, London.

9. Ludlow Churchyard.

FAHEY, E. H., 10, Elsham Road, Addison Road, London.
Associate of the Institute of Painters in Water Colours.

10. A Cloudy Day on the Moulsford Downs.

FRERE, CATHERINE FRANCES (Miss), Wressil Lodge, Wimbledon, Surrey.

10A. White Silk Fan. Subject—Fête Champêtre à la Watteau, illustrating "The Five Senses."

FRIPP, A. D., 1, Belle Vue, Hampstead, London.
Member of the Society of Painters in Water Colours (Secretary).

11. Young England .. .. .. *Lent by* Prescott G. Hewett, Esq., F.R.S.

12. Starring in the Provinces .. .. .. *Lent by* W. S. Cookson, Esq.

13. The Coming Storm .. .. *Lent by* H. Drake, Esq.

GILBERT, Sir JOHN, A.R.A., Vanbrugh Park, Blackheath Road, Kent.
Elected Associate of the Royal Academy, London, 1872.
President of the Society of Painters in Water Colours.

14. Visit of King Francis the First of France, the Queen of Navarre, Madame d'Estampes, and the Cardinal of Lorraine to the Workshop of Benvenuto Cellini.

GILLIES, Mrs. M., 25, Church Row, Hampstead, London.
Lady Member of the Society of Painters in Water Colours.

15. PROSPERO AND MIRANDA .. .. .. *Lent by* JAMES HORSFALL, ESQ.

Miranda.—"If by your art, my dearest father, you have
Put the wild waters in this roar, allay them:
* * * * O, I have suffer'd
With those that I saw suffer! A brave vessel,
Who had, no doubt, some noble creatures in her,
Dash'd all to pieces. O, the cry did knock
Against my very heart!"—*Shakespeare's Tempest*, Act i. Scene ii.

GOODALL, E. A., 57, Fitzroy Road, Primrose Hill, London.
Associate of the Society of Painters in Water Colours.

16. THE RIALTO .. .. *Lent by* F. A. ARGLES, ESQ.

17. THE ANCIENT CAUSEWAY NEAR THE PYRAMIDS OF SAKHARA.

GOODALL, WALTER, 6, Wells Street, Oxford Street, London.
Member of the Society of Painters in Water Colours.

18. THE LOTTERY TICKET .. .. *Lent by* JONES GIBB, ESQ.

HAGHE, LOUIS, Fern Lodge, Stockwell Green, London.
President of the Institute of Painters in Water Colours.

19. THE TEPIDARIUM OF THE BATHS (POMPEII) .. *Lent by* T. WOODGATE, ESQ.

"C'étoit le lieu que les philosophes choisissoient pour leurs entretiens.
Cette salle à Pompeii est oblongue avec une voute à compartiments en stuc, sa décoration est en bas-reliefs si beaux qu'il fait regretter de n'en avoir pas trouvé beaucoup de semblables. Dans les murs sont des niches ornées de petites figures d'Atlas. Plusieurs de ces niches contenaient des lampes, d'autres sont supposées avoir contenu des essences pour les baigneurs. Cet appartement auroit alors été non seulement un Tepidarium mais aussi un Unguentarium."—*Extrait de l'Italie, publié par Audat.*

20. HIS HOLINESS POPE PIUS IX. ADMINISTERING THE COMMUNION TO THE GENTLEMEN OF HIS HOUSEHOLD, AND TO PERSONS OF DISTINCTION, IN THE SISTINE CHAPEL, IN THE VATICAN .. .. *Lent by* R. M. KNOWLES, ESQ.

21. THE NIGHT WATCH.

HARGITT, E., 10, Alexander Square, Brompton, London.
Member of the Institute of Painters in Water Colours.

22. A HIGHLAND GLEN .. .. *Lent by* R. NEWBOLD, ESQ.

JENKINS, J. J., F.S.A., 67, Hamilton Terrace, St. John's Wood, London.
Member of the Society of Painters in Water Colours.

23. EN ROUTE .. .. *Lent by* H. A. HUNT, ESQ., C.B.

"Ah! Ah! Quelle heureuse rencontre mes amis."

JOHNSON, E. K., Sible Hedingham, near Halstead, Essex.
Associate of the Society of Painters in Water Colours.

24. A STUDY .. .. *Lent by* J. GALSWORTHY, ESQ.

JOHNSON, H., 10, Loudoun Road, St. John's Wood, London.
Member of the Institute of Painters in Water Colours.

25. THE CARRARA MOUNTAINS FROM LERICI, GULF OF SPEZZIA. *Lent by* E. COHEN, ESQ.

JOPLING, J. M., 8, Clareville Grove, South Kensington, London.
Associate of the Institute of Painters in Water Colours.

26. FLOSSY .. .. *Lent by* THE RIGHT HONOURABLE COWPER TEMPLE, M.P.

27. WINTER .. .. *Lent by* H. S. BICKNELL, ESQ.

28. IN THE CONSERVATORY.

KNIGHT J., 34, Maitland Park Road, Haverstock Hill, London.

29. A Morass .. .. *Lent by* Henry Crowley, Esq.

LINTON, J. D.,
Member of the Institute of Painters in Water Colours.

30. Washing the Beggars' Feet on Maunday Thursday .. *Lent by* A. Dunbar, Esq.

MAY, W., 5, Bloomsbury Square, London.
Member of the Institute of Painters in Water Colours.

31. Homeward Bound .. .. .. *Lent by* E. J. Reed, Esq., C.B., M.P.

MOLE, J. H., 7, Guilford Place, Russell Square, London.
Member of the Institute of Painters in Water Colours.

32. Somebody coming .. .. *Lent by* Latimer Clark, Esq.

MONTALBA, Miss CLARA, 20, Stanley Crescent, Kensington Park Gardens, London.
Lady Member of the Society of Painters in Water Colours.

33. Blessing a Tomb, Westminster.

NAFTEL, P. J., 4, St. Stephen's Square, Westbourne Park, London.
Member of the Society of Painters in Water Colours.

34. Isle of Skye.

NEWTON, A. P., 44, Maddox Street, Regent Street, London.
Associate of the Society of Painters in Water Colours.

35. Mountain Gloom, Glen Coe .. .. *Lent by* F. W. Strugnell, Esq.

36. Left by the Tide.

O'CONNOR, J., 47, Leicester Square, London.

37. St. Paul's, Thanksgiving Day .. .. *Lent by* Lord Ronald L. Gower.
(In distemper).

READ, S., Parkside, Bromley, Kent.

38. The Wild West Coast of the North Countries *Lent by* W. J. Ingram, Esq., M.P.

SEVERN, A., Herne Hill, London.

39. Waves by Moonlight .. .. *Lent by* The Duchess of Westminster.
"The moving waters at their priest-like task
Of pure ablution round earth's human shores."

40. Old Chelsea before the Thames Embankment *Lent by* Alfred Tylor, Esq., F.G.S.

SMALLFIELD, F., 53, Boundary Road, London.
Associate of the Society of Painters in Water Colours.

41. Italian Nurse and Child.

42. Genoese Flower Girl.

STILLMAN, Mrs. M., The Shrubbery, Clapham Common, London.

43. Sir Tristram and Queen Yseult.

TADEMA, L. ALMA, A.R.A., Townshend House, Northgate, Regent's Park, London.
Elected Associate of the Royal Academy, London, 1876.
Member of the Society of Painters in Water Colours.

44. The Picture .. .. *Lent by* Ernest Gambart, Esq.

45. The Three Friends .. .. *Lent by* Messrs. Pilgeram & Lefèvre.

46. History of an Honest Wife . *Lent by* Messrs. Pilgeram & Lefèvre.

TAYLER, F., 38, Avenue Road, Regent's Park, London.
Member of the Society of Painters in Water Colours.

47. CATTLE FERRY BOAT LANDING AT KYLARKIN FROM THE ISLE OF SKYE, SCOTLAND. *Lent by* W. GIBLEY, ESQ.
48. KEEPER'S DAUGHTER .. .. *Lent by* W. GIBLEY, ESQ.
49. A MEET IN THE FOREST .. .. *Lent by* W. GIBLEY, ESQ.

THOMAS, W. L., 7, Gilbart Terrace, Brixton Rise, London.
Member of the Institute of Painters in Water Colours.

50. THE GIRLS' SCHOOL.

THORBURN, A., A.RA., 22, Percy Street, Bedford Square, London.
Elected Associate of the Royal Academy, London, 1848.

51. DUCHESS OF MANCHESTER .. .. .. *Lent by* THE DUKE OF MANCHESTER.
52. LADY CONSTANCE GROSVENOR .. .. *Lent by* THE DUKE OF WESTMINSTER.

TOPHAM, F. W., Dinas, Arkwright Road, Hampstead, London.
Member of the Society of Painters in Water Colours.

53. LISTENING TO HER LOVER'S LETTER .. .. *Lent by* R. M. KNOWLES, ESQ.

WALTON, F., Holmbury Hill, near Dorking, Surrey.

54. CROSS WAYS FARM, NEAR DORKING.
"One of the olden time."

WILLIS, H. B., 12, Palace Gardens Terrace, Kensington, London.
Member of the Institute of Painters in Water Colours.

55. A GROUP OF HIGHLAND CATTLE IN GLEN NEVIS, WESTERN HIGHLANDS, SCOTLAND .. *Lent by* H.R.H. THE PRINCESS LOUISE (MARCHIONESS OF LORNE).
56. A GROUP OF CATTLE ON THE BANKS OF THE HAMBLE IN HAMPSHIRE. *Lent by* MRS. GEORGE MOORE.

Engraving and Lithography.

CLASS 420.—Drawings with pen, pencil, or crayons.
CLASS 421.—Line engravings from steel, copper, or stone.
CLASS 422.—Wood engravings.
CLASS 423.—Lithographs, zincographs, etc.
CLASS 424.—Chromo-lithographs.

Class 420.—Drawings with Pen, Pencil, or Crayons.

LEECH, JOHN, the Late. Lent by Miss Caroline E. Leech, 31, Gloucester Square, Hyde Park, London.

OUTLINES IN PENCIL.

Classes 421–422.—Engravings.

BARLOW, T. OLDHAM, A.R.A., 38A, Victoria Road, Kensington, London.
Elected Associate of the Royal Academy, London, 1873.

1. PRAYER, *after J. Phillip, R.A.*
2. FAITH, *do.*
3. DOLORES, *do.*
4. SIR JAMES PAGET, BART., *after J. E. Millais, R.A.*

Cl. 422. **BRADBURY, AGNEW, & CO.** See Cl. 306.

BRANDARD, E. P., 2, Albion Grove, Barnsbury, Middlesex.

5. VENICE, *after J. M. W. Turner, R.A.*
6. MEN-OF-WAR OFF PLYMOUTH—ROUGH WEATHER, *after H. Dawson.*

COPE, C. W., R.A., 19, Hyde Park Gate South, Kensington Gore, London.
Elected Associate of the Royal Academy, London, 1843 ; *elected full member*, 1848. *Silver Medallist.*

7. "THE LIFE SCHOOL OF THE ROYAL ACADEMY," Drawing for the Medal.

EDWARDS, EDWIN, 26, Golden Square, London.

8. Proofs of a Work on "OLD INNS" :—
   Title page, CROWN AND CASTLE, OXFORD.
   SCOLE INN,—*back.*
9. Proofs of a Work on "OLD INNS" :—
10. MARTLESHAM LION INN AND SIGN.
11. SCOLE INN. THE SUN. FEERING.
12. HALF MOON, BURY. ROSE AND CROWN, SUDBURY.

ETCHING CLUB.

13. ETCHINGS *by the Members of* .. .. .. *Lent by* SAMUEL REDGRAVE, ESQ.

EVERSHED, ARTHUR, 10, Mansfield Villas, Hampstead, London.

14. DRY POINTS.
15. ETCHINGS.

HADEN, FRANCIS SEYMOUR, 62, Sloane Street, London.

16. CALAIS PIER, *after J. M. W. Turner, R.A.*
17. BREAKING UP OF THE AGAMEMNON.

HESELTINE, J. P., 36, Onslow Gardens, London.

18. { BRANSCOMBE, DEVON.
    { GAINSBOROUGH LANE, IPSWICH.

JEENS, C. H., 67, St. Paul's Road, Camden Square, London.

19. PARENTS OF CHRIST SEEKING HIM, *after E. Armitage, R.A.*

LEIGHTON, J., F.S.A., 12, Ormond Terrace, Regent's Park, London.

20. PROOFS OF WOOD ENGRAVINGS, VARIOUS, *after Drawings by Artist.*
21. ETCHINGS PRINTED FROM RELIEF.

LEWIS, CHARLES G., 53, Charlotte Street, Portland Place, London.

22. The Horse Fair, *after Rosa Bonheur.*
23. Highland Cattle—Early Morn, *do.*
24. Bouricairos crossing the Pyrenees, *after Rosa Bonheur.*
25. Daniel in the Lions' Den, *after B. Rivière.*

PARKES, R. B., 7, Upper Tollington Park, Stroud Green, Hornsey.

26. Mrs. Abington as Miss Prue, *after Sir J. Reynolds, P.R.A.*

PHILLIPS, L. B., 12, Queen's Square, Bloomsbury, London.

27. The Rathaus, Cologne.
28. The Canongate Tolbooth, Edinburgh.
29. John Knox's House, Edinburgh.

Cl. 422. **QUICK, WILLIAM MICHAEL ROBERT,** 49, Fleet Street, London, E.C.

29A. Specimens of Engravings on Wood. Animals, Birds, &c.

REDGRAVE, RICHARD, R.A., 18, Hyde Park Gate South, Kensington Gore, London.
Elected Associate of the Royal Academy, London, 1840; *elected full member,* 1851.

30. Help at Hand.
31. Rustic Courtship.

RIDGWAY, W., Denmark Villas, Acton, London.

32. The Light of the World, *after Holman Hunt.*
33. Pirates of the Mediterranean, *after F. R. Pickersgill, R.A.*
34. A Triumphal Procession, *after T. Gérand.*

SADDLER, J., 6, Southampton Street, Fitzroy Square, London.

35. St. Michael's Mount, Cornwall, *after Birket Foster.*
36. Homeless, *after G. Doré.*
37. Going to the Christening, *after A. Bellowes.*

SAUNDERS, G., 12, Surrey Terrace, Lewisham High Road, New Cross, London.

38. Choosing the Wedding Gown, *after W. Mulready, R.A.*
39. The Valley Farm, *after J. Constable, R.A.*

SHARPE, C. W., Woodside Poyle, near Burnham, Maidenhead.

40. Play Scene in Hamlet, *after D. Maclise, R.A.*
41. Here Nelson Fell, *after D. Maclise, R.A.*

SLOCOMBE, C. P., 31, King Henry's Walk, Islington.

42. King Arthur's Castle, Tintagel, Cornwall.
43. Stonehenge.
44. Beach at Rottingdean, Sussex—Chalk Cliffs and Boulders.

STACPOOLE, F., 23, Vale Place, West Kensington, London.

45. Circe and the Friends of Ulysses, *after B. Rivière.*
46. Ought and Carry One, *after Miss A. Havers.*

SWAIN, JOSEPH, 6, Bouverie Street, Whitefriars, London.

47. Pictures from Punch.
48. Specimens of Book and Magazine Illustrations.

TAYLER, FREDERICK, 38, Avenue Road, Regent's Park, London.

49. Illustrations to the "Deserted Village" of Oliver Goldsmith.
50. The "L'Allegro" of Milton.
51. The "Songs of Shakespeare."

THOMAS, PERCY, 38, Doughty Street, Mecklenburgh Square, London.

52. Good Night.
53. Miss Isabel Bateman.
54. Henry Irving, Esq.

TOMKINS, CHARLES A., 187, Cold Harbour Lane, Camberwell, London.

55. Jochebed, Mother of Moses, *after Frederick Goodall, R.A.*
56. Lady Gertrude Fitzpatrick, *after Sir Joshua Reynolds, P.R.A.*
57. The Right Rev. J. W. Colenso, D.D., Bishop of Natal, *after S. Sidley.*

Cl. 422. **UHLRICH, HEINRICH SIGISMUND,** Brynterion, Chelsfield, Chislehurst, Kent.

58. Three Sets of Wood Engravings, Portraits.

WARD, GEORGE R., 2, Fitzroy Square, London.

59. Earl of Harewood and Hounds, *after Sir F. Grant, P.R.A.*
60. Mohamet Ali, Pasha of Egypt, *after T. Brigstocke.*

WILLMORE, A., 4, Compton Street, Regent Square, London.

61. Dutch Boats Landing Fish off Egmont, *after E. W. Cooke, R.A.*
62. A Calm Morning on the Thames, *after D. Cox.*
63. Windsor Castle, *after Birket Foster.*

Classes 423–424.—Lithographs, Zincographs, &c. Chromo-lithographs.

Cl. 424. **AUDSLEY & BOWES.** See Cl. 306.
Cl. 424. **DAY & SON.** See Cl. 306.
Cl. 424. **DICKES, WILLIAM.** See Cl. 306.
Cl. 424. **GOODALL, C., & SON.** See Cl. 262.
Cl. 424. **JOHNSON, J. M., & SON.** See Cl. 306.
Cl. 424. **WARD, MARCUS, & CO.** See Cl. 255, 258, 259, 262, 300, 306.

Photography.

Class 430.—Photographs on paper, metal, glass, wood, fabrics, or enamel surfaces.
Class 431.—Prints from photo-relief plates, carbon-prints, etc.
Class 432.—Photo-lithographs, etc.

Class 430.—Photographs.

BARNARD, JOHN, Photographer, 5, St. Mary's Buildings, Bedford.

Set of six Enlargements in Carbon. Frame of nine Landscapes in Carbon. Frame of four Portraits in Carbon. Frame of 16 Small Prints in Carbon.

BAUM, F., St. Ann's Square, Manchester.

Photographs, printed in Carbon (permanent).

BEAU, ADOLPHE, 283, Regent Street, London, W.

Paris, 1867 (Hon. Mention).

Heliotechnic Process for the production of Negatives from objects presenting a bright metallic surface, without any previous tampering, thus ensuring their truthful representation.

Model of the Shrine of St. Ursula (painted on panel), after Memling. Artist, Vanderbroek.

BEAUFORD & BRUCE, 2, Nun's Island, Galway, Ireland.

Photographic Views of the Western Islands, Connemara, Joyce's Country, the Isles of Arran; Panoramic Views of the "Citie of the Tribes," Galway; Photographic Albums of same, in volumes.

BEDFORD, WILLIAM, Photographer, 326, Camden Road, London, N.

Landscape Photographs:—1. On the Moat, Raglan Castle. 2. Glen Lyn, Lynmouth. 3. The Pond at Tintern. 4. Lynmouth, North Devon. 5. Castle in Old Mill Creek, on the Dart. 6. View on the Dart. 7. At Ilfracombe, N. Devon. 8. At Watermouth, N. Devon. 9. River Scene on the Conway, N. Wales. 10. Tintern Abbey, from the N.E. 11. Wells Cathedral, from the S.E. 12. In Clovelly Park, Devon. 13. The Gateway, Chiswick Gardens. 14. The Weeping Willow, Chiswick Gardens. 15. Cedars at Chiswick.

BOOL, ALFRED & JOHN, Artists and Photographers, 86, Warwick Street, Pimlico, London, S.W.

Exhibitors, *London*, 1873 (Gilt Medal); *Royal Cornwall Polytechnic Society*, *Falmouth*, 1873 (Bronze Medal); *London*, 1874 (Bronze Medal); *Falmouth*, 1874 (Silver Medal).

Crayon Portrait of Adelina Patti. Landscape Photographs: "Waverley Abbey," "Wayside Bridge, Surrey," "A Shady Nook," "On the River Wey, Surrey."

BROWNRIGG, THOMAS MARCUS, Assistant Inspector-General, Royal Irish Constabulary, 32, Lower Leeson Street, Dublin.

Exhibitor, *Dublin*, 1865 (Hon. Mention); *Paris*, 1867 (Hon. Mention); *Dublin*, 1872 (Medal); *Vienna*, 1873 (Medal for Merit); Universal Exhibitions of Photography, *Amsterdam*, 1874 (Certificate of highest award); *Vienna*, 1875 (Bronze Medal); *Brussels*, 1875 (Bronze Medal). Awards at other Photographic Exhibitions: *Dublin*, 1858, 1859 (Silver Medals); *Royal Cornwall Polytechnic Society*, 1867 (Silver Medal); 1868 (Bronze Medal); 1869 (Silver Medal); *Paris*, 1874 (Hon. Mention).

Landscape Photographs.

CAMERON, JULIA MARGARET (Mrs. Charles Hay Cameron), Freshwater, Isle of Wight.

Photographic Studies and Portraits of Eminent Men.

COOPER, GEORGE, & CO., Elm Tree House, Anlaby Road, Hull.

Portraits direct from Life. (Silver Prints.)

CRAWSHAY, ROBERT, Cyfarthfa Castle, Merthyr Tydfil, Glamorganshire, South Wales.

Photographic Prints for Exhibition.

ENGLAND, WILLIAM, 7, St. James's Square, Notting Hill, London, W.

Photographs—Landscape and Statuary.

FOGERTY, WILLIAM. See Cl. 441.

FRADELLE, ALBERT EUGENE, & MARSHALL, WILLIAM SHURY, Photographers &c., 230 & 246, Regent Street, London, W.

Carbon Enlargement Portrait of Lady (full length); three cases of Photographic Studies, each case containing six subjects, Silver Prints; three Portraits, by our special photo-mezzotint (registered).

GODBOLD, H. J., 8, Grand Parade, St. Leonards-on-Sea.

Photographs.

HAIGH, EDWARD M., 213, Regent Street, London.

Photographs, chiefly printed in Carbon.

HALL, HENRY EDWARD, Architect and Photographer, 44, Victoria Street, Dublin. See Cl. 441.

A collection of Photographs of Public Buildings through Ireland, and views of many places of interest, also a collection of frames, mounts, &c., for Photographic purposes.

HANSON, WILLIAM., Photographic Artist, Great George Street, Leeds.

Exhibitor, London International Exhibition, 1872 (Certificate); 1873 (Medal).

Cretaceous Photographs. These are silver prints, and any number of identical impressions can be printed. The styles is designated Cretaceous because it resembles a fine chalk drawing on a tinted ground. Frame of Cabinet and Carte Portraits.

HEATH, VERNON, Artist, 43, Piccadilly, London, W.

Landscape Photographs printed in permanent pigments. They comprise some of the stately homes of the British Isles; studies of a few of their grand ancestral trees, and illustrations of well-known and romantic localities.

HEDGES, DAVID, Photographer, 7, Queen Street, Lytham, Lancashire.

Exhibitor, Royal Cornwall Exhibition, 1872 (First Class Medal); *London, International Exhibition, Photographic Society of London,* 1873 (Medals); *London, International Photographic Societies of Bengal, France* (Medals); *Holland,* 1874 (First Class Certificate); *Photographic Societies of Vienna, Brussels, Maritime Exhibition, Paris* (Medals); *Royal Cornwall Exhibition,* 1875 (First Class Medal).

Four frames of Photographs, entitled "STUDIES OF ANIMALS."

HENDERSON, A. L., 49, King William Street, E.C., and Amersham Road, New Cross, London.

Ceramic or Enamel Photographs, vitrified.

HUDSON, FREDERICK, Photographer, 1, Regent Parade, Ventnor, Isle of Wight.

Exhibitor, London, 1873 (Exhibitors' Bronze Medal); *Falmouth,* 1873 (Second Silver Medal); 1874 (First Silver Medal).

Eight Landscape Photographs: UNDER THE TREES, BONCHURCH VALLEY, ISLE OF WIGHT; BONCHURCH VILLAGE AND POND; CONSERVATORY, UNDERMOUNT, BONCHURCH; GENERAL VIEW OF BONCHURCH; STEEPHILL BAY, NEAR VENTNOR; CRAB AND LOBSTER HOTEL, VENTNOR; FRESHWATER BAY, ISLE OF WIGHT. Study of Plants, Ferns, and Flowers.

JENNINGS, PAYNE, Photograph Artist and Publisher, 1, Belgrave Place, Belgrave Square, Rathmines, Dublin. London Publishers, Messrs. W. A. Mansell & Co., 2 Percy Street, London, W. 1,000 subjects, all sizes.

Exhibitor, Dublin Exhibition of Arts and Industry, 1872 (First Class Prize Medal).

Photographic Studies in the English and Irish Lake Districts.

LEE, E. P., & CO., 9 Crockherbtown, Cardiff.

Vitrified Coloured Photo-Enamels.

LEMERE, BEDFORD, & Co., Architectural Photographers to the Queen, 147, Strand, London, W.C.

Exhibitors, London, 1862, 1874; (Medal); *Paris,* 1867 (Hon. Mention); *Vienna,* 1873 (Diploma of Merit).

Photographs from casts of Gothic Work in the Royal Architectural Museum, Westminster, of Public Buildings in London, of Commercial and Domestic Architecture by leading Architects, of Architectural Drawings, Paintings, and Frescoes.

THE LONDON STEREOSCOPIC AND PHOTOGRAPHIC CO., Photographers to the Queen and other members of the Royal Family, 110, 108, & 106, Regent Street, London, W.; 54, Cheapside, London, E.C.; the Alexandra Palace; and at the Royal Aquarium and Winter Garden, Westminster, London.

Photographs and the new "Cellini" Kaleidoscope. (Under Royal Letters Patent—Thomas's Patent).

MANSELL, W. A., & CO., 2, Percy Street, London, W.

Photographs of Objects of Art, Views, &c.; Chromolithographs.

NORMAN, CARL, Graphic Villa, Tunbridge Wells.

Photographic Views from India, Egypt, the Continents of Europe and America.

ROBINSON & CHERRILL, the New Public Buildings, Tunbridge Wells.

Photographs.

Exhibitors, London, 1862 (Medal); *Dublin,* 1865 (Medal); *Berlin,* 1865 (Medal for Good Taste); *Paris,* 1867 (Two Medals); *Vienna,* 1873 (Medal); *Bengal Photographic Society* (Five Gold Medals); *Bengal Photographic Society* (Three Silver Medals); *United States National Society,* 1872 (Gold Medal); *Vienna Photographic Society,* 1875 (Silver Medal); *Photographic Society of London* (two Silver Medals); *Photographic Society of Scotland* (Seven Silver Medals); *Cornwall Polytechnic Society* (Ten Silver and Two Bronze Medals); *Photographic Society of France,* 1870 (Silver Medal). And 12 other Medals from exhibitions of minor importance.

SLINGSBY, ROBERT, 168, High Street, Lincoln.

Exhibitor, Royal Cornwall Polytechnic Society, 1868 (Medal); 1870 (First Silver Medal); 1871 (First Silver Medal); *Photographic Society of Paris,* 1870 (Medal); *Photographic Society of London,* 1873 (Medal).

Specimen of Photography in Portraiture.

WILSON, GEORGE WASHINGTON, & CO. Photographers to Her Majesty in Scotland, 24, Crown Street, Aberdeen, Scotland.

Exhibitor, London, 1862 (Bronze Medal); *Paris,* 1867 (Hon. Mention).

Photographs. Four Carbon Enlargements from small Negatives. 50 glass Stereoscopic Views in a revolving Stereoscope. Album, containing views in Scotland.

YORK, FREDERICK, Photographic Publisher, 87, Lancaster Road, Notting Hill, London, W.

Photographs, Photographic Transparencies for the Magic Lantern.

Class 431.—Prints from Photo-Relief Plates, and Carbon Prints, &c.

DALLAS, DUNCAS CAMPBELL, Photographic Engraver, Printer and Publisher, 362, Gray's Inn Road, King's Cross, London, N.

Specimens of Photographic Engraving, "Dallastype." See Cl. 423.

TYPOGRAPHIC ETCHING COMPANY, THE, Dawson, Alfred and William, Managers, Automatic and Photographic Engravers, 23, Farringdon Street, London, E.C.

Engravings by the Typographic Etching process. Engravings by the Photo-Relief process See Cl. 423.

Industrial and Architectural Designs, Models, and Decorations.

Class 440.—Industrial designs.
Class 441.—Architectural designs; studies and fragments, representations and projects of restorations from ruins and from documents.
Class 442.—Decoration of interiors of buildings.
Class 443.—Artistic hardware and trimmings; artistic castings, forged metal work for decoration, etc.

Class 440.

DAVEY, ROBERT, Furniture Designer, 20, Oxford Street, Chelsea, London, S.W.

Drawings of Furniture and Decoration.

DASHWOOD, CHRISTIAN WILLIAM, Designer and Block Cutter, 1, St. Clement's Churchyard, W.C., and 310, Strand, London.

London International Exhibition, 1874 (Medal).

Original Design for Oil Cloth; style, Egyptian.
Do. do. style, Arabian.
Do. do. representing inlaid Stones.

Class 441.—Architectural Drawings and Designs.

ADAMS, M. B., 31, Heron Road, Brixton, London.

1. Rectory House, Merston, Sussex.

AITCHISON, GEORGE, F.R.I.B.A., 5, Muscovy Court, Tower Hill, London.

2. House and Studio of F. Leighton, Esq., R.A., Kensington.
3. Serving Table, designed for F. Lehmann, Esq., Berkeley Square.
4. Decorations of Bed Room do. do.
5. Do. Boudoir do. do.
6. Do. Ceiling of Green Drawing Room, designed for F. Lehmann, Esq., Berkeley Square.
7. Do. Walls do. do. do. do. do.
8. Do. Drawing Room, do. do. do.

BURGES, WILLIAM, F.R.I.B.A., 15, Buckingham Street, Strand, London.

9. Design for New Law Courts, London (Strand front).
10. New Tower, erected at Cardiff Castle for Marquis of Bute.
11. Interior of Summer Smoking Room do.
12. Do. Winter do. do.
13. House, erected for Sir J. H. Amory, Knightshayes, Devon.
14. The Cathedral of St. Finn Barr, now erecting at Cork.
15. Chancel of New Church of St. Mary the Virgin, erected at Studley Royal for Marquis of Ripon.

COOKE, C. H., F.R.I.B.A., Burlington Chambers, 172, New Bond Street, London.

16. The Godolphin School Hammersmith, London.
17. Design for Malvern College, Worcestershire, to which the Second Premium was awarded.

FOGERTY, WILLIAM, F.R.S., B.A., Architect, 23, Harcourt Street, Dublin.

A series of Photographs of Architectural Designs and of Buildings erected under the direction of Exhibitor. See Cl. 430.

HAYWARD, C. F., F.R.I.B.A., 20, Montague Street, Russell Square, London.

18. Duke of Cornwall Hotel at Plymouth.
19. Design for Public Offices and Guildhall at Plymouth.

HALL, HENRY EDWARD. See Cl. 430.

KNIGHTLEY, T. E., F.R.I.B.A., 106, Cannon Street, London.

20. Eastbourne Hotel, Sussex.

LEE, E. C., A.R.I.B.A., 15, Bedford Row, London.

21. New Church, St. Mary, Whitechapel, London.
22. Design for Proposed New Library and Lecture Room, Inner Temple, London. } Detail of Dormer. }
23. Do. do. do. Plans and Elevation.
24. Do. do. do. Section.
25. Do. do. do. Details of Front Elevation.
26. Do. do. do. Perspective of Exterior.

NICHOLL, S. J., A.R.I.B.A., 1, Caversham Road, London.

27. Messrs. Cox and Son's Premises, Southampton Street, Strand. St. Catherine's Church, West Drayton, Middlesex.
28. Sanctuary of St. Walburge's Church, Preston, Lancashire.

PENROSE, F. C., M.A., F.R.A.S., Cathedral Surveyor's Office, St. Paul's Churchyard, London.
Architect to the Chapter of St. Paul's, London. Hon. Member Pennsylvania Academy.

29. Design for the Decoration of St. Paul's, London. The Dome.
30. Do. do. do. do.
31. Do. do. do. East End.
32. Design for New National Gallery, London.

SMIRKE, SYDNEY, R.A., F.S.A., The Hollies, Tonbridge Wells.

33. Design for Extension of Exhibition Buildings, South Kensington.

SPIERS, R. PHENÈ, A.R.I.B.A., Carlton Chambers, 12, Regent Street, London.
Master of the Architectural School, Royal Academy.

34. New Lunatic Asylum, Virginia Water, Windsor (Design for).
35. Criterion Restaurant, Piccadilly (Design for), Piccadilly front.
36. Do. do. Interior of Vestibule.
37. Church of the Sacred Heart, Montmartre, Paris (Design for).

TEULON, Wm. MILFORD, F.R.I.B.A., 96, Wimpole Street, London.

38. Mansion erected for Lord Overstone, in Northamptonshire.

WYATT, T. H., 77, Great Russell Street, London.
Fellow and Past President R.I.B.A.

39. New Exchange Buildings, Liverpool.
40. Town Mansion erected for Sir Dudley-Coutts Marjoribanks, Bart., M.P., Park Lane, London.
41. Mansion erected for John Morant, Esq., New Forest, Hampshire.

Classes 442, 443.—Decoration of Interior of Buildings; Artistic Hardware and Trimmings, Artistic Castings, Forged Metal Work for Decoration, &c.

Cl. 442. **LAFARGUE, PAUL.** See Cl. 219.

Cl. 442. **ZOBEL.**

Cl. 443. **BARNARD, BISHOP, & BARNARDS.** See Cl. 211, 222, 225, 228, 722, 770.

Cl. 443. **COX & SONS.** See Cl. 217, 453.

Cl. 443. **HART, SON, PEARD, & Co.** See Cl. 217.

Cl. 443. **MATTHEWS, EDWARD, & SONS.** See Cl. 217, 453.

Cl. 443. **SINGER, J. W., & SON.** See Cl. 217.

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Class 451.—Mosaic and inlaid work in tiles, tessaræ, glass, etc.
Class 452.—Inlaid work in wood and metal, parquetry, inlaid floors, tables, etc.
Class 453.—Stained glass.
Class 454.—Miscellaneous objects of art.

Classes 450—454.

Cl. 452, 454. **ELKINGTON, & CO.** See Cl. 217. 400, 401, 403.

Cl. 453. **BAILLIE, THOMAS, & CO.,** Glass Painters and Stainers, 118, Wardour Street, Soho, London.

One Panel. Figure, Virgin Mary. Executed in style XIV. century. Size, 35¾in. high by 25½in. wide.

One Panel. Female Figure, Autumn. Executed in style present century. Size, 35¾in. high by 20½in. wide.

Cl. 453. **CONSTABLE, WILLIAM HENRY,** Stained Glass Artist, Stained Glass Works, Cambridge.

Stained glass window.

Cl. 453. **COX & SONS.** See Cl. 443, 217.

Cl. 453. **DE MORINI, CHARLES,** Artist, 170, Great Portland Street, London, W.

Four ornamental windows.

Cl. 453, 451. **GIBBS & MOORE,** Artists in Stained Glass and Art Decorations, 89, Southampton Row, Russell Square, London, W.C.

Stained glass, art tiles; mural decorations (special).

Cl. 453. **HARDMAN, JOHN, & CO.**, Newhall Hill, Birmingham.

Stained Glass Window of Four Lights; Style, CINQUE CENTO. Subject—"OUR LORD IN THE HOUSE AT BETHANY." Executed for St. Neot's Church, Huntingdonshire.

Cl. 453. **HEATON, BUTLER, & BAYNE**, Glass Stainers and Church Decorators, 14, Garrick Street, Covent Garden, W.C.

STAINED GLASS WINDOWS for Domestic and Ecclesiastical Purposes.

Cl. 453. **MATTHEWS, EDWARD, & SONS.** See Cl. 443, 217.

Cl. 453. **McGRATH, JOHN**, Decorative Artist, 6A, White Lion Street, Chelsea, S.W.

Enamelled, painted, stained, and embossed Glass.

Cl. 453. **POWELL, JAMES, & SONS**, Whitefriars Glass Works, Temple Street, Fleet Street, London, E.C.

Three-light Painted Window. Canopies. Subject—"THE RESURRECTION: Three Women at the Tomb; Christ appearing to Mary in the Garden; The Women bringing the News of the Resurrection to the Disciples." Small Figures under, of St. Mark, St. Luke, and St. John.

Single-light window. Ground work, Stamped Quarries and Borders, with Medallion. Subject —"GOOD SAMARITAN."

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Exhibitors: London, 1862, (Hon. Mention); 1871, 1872, 1873, 1874 (Medals.) *Paris*, 1867 (Medal).

Two Stained Glass Windows: Subjects—"OUR LORD ENTHRONED," Matt. xxv. 31; and Secular Subject—"INDUSTRY."

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Specimens of general Engraving, or Art applied to decorate Silver or other precious Metals.

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Cl. 500, 552. **Holmes, Joseph E., Payton, Walter, and Taylor, Fenner, B.,** Engineers, 42 and 43, Borough Road, Southwark, London, S.E. Payton and Holmes' Patent Coal and Rock cutting machine. Payton and Holmes' 4-Cylinder Engine for steam or compressed air; Two Taylor's Rock Boring Machines, one Taylor's Revolving Steam Engine for steam or compressed air ; one air compressor to work Clayton's said machines. (680)

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Cl. 500. **Macdermott, Martin,** Engineer, Scott's Chambers, 25 and 26, Pudding Lane, London, E.C. Complete system of getting coal, illustrated by three classes of Machines : 1. Rock and Coal Perforators. 2. Machines for under-cutting coal. 3. Screw-wedge for breaking down coal. (683)

Hardy Patent Pick Company, The (Limited), Manufacturers of Mining Tools, Mining Tool Works, Ecclesall Road, Sheffield. Improved Implements for Coal, Ironstone, Gold and Silver mining for Quarrying and excavating. Especially *Cast Steel Picks* for all purposes, constructed under various Patents ; the Picks being interchangeable and detachable from their shafts or handles. (684) Cl. 502.

Cooke, Joseph, & Co., Miners' Lamp Manufacturers, Midland Davy Lamp Works, 82, Lawley Street, Belmont Passage, Birmingham. Miners' safety lamps. (685) Cl. 502.
Exhibitors, London, 1874 (Medal).

Bainbridge, Emerson, Mining Engineer, Duke of Norfolk's Collieries, Sheffield. New Miners' safety lamp, designed to combine extra light, with special degree of safety. (686) Cl. 502.

Wethered, Edwin Robert. See Cl. 217. Cl. 503.

Gregory, James. See Cl. 222. Cl. 503.

Pickering, Jonathan, Engineer, Globe Works, Stockton-on-Tees. Four sizes of Pickering's Patent Pulley Blocks; three sizes Cl. 503, 560.

of Pickering's Patent Hoists; one Pickering's Patent Direct Acting 6″ Steam Cylinder and 6″ Water Cylinder; Steam Pump. (687)
Exhibitor, *Vienna*, 1873; *Bremen*, 1874 (Prize Medal).

Cl. **505.** **The Dunston Engine Works Co.,** Engineers and Machinists. Sole Patentees and Makers of "Archer's" Stone Breaking and Ore Crushing Machinery. The Dunston Engine Works Co., Gateshead-on-Tyne, Durham. Archer's Stone Breaker, Combined Stone Breaker and Bone Cutter. (688)
Exhibitors, *Vienna*, 1873.

Cl. **505.** **Kimberley, Nathan Gold,** Engineer, 11, Great St. Helen's, London, E.C. Lucop's Patent Centrifugal Pulverizing Mills. (689)

Cl. **506.** **Smith, Dillwyn,** Engineer, 153, Duke Street, Liverpool. Mechanical Stokers for supplying fuel to furnaces automatically and removing the clinkers therefrom, rendering the opening of the fire-doors unnecessary and greatly reducing the temperature of the stoke-hole. No. 1, as used in the ordinary 2-flued Lancashire Boiler; No. 2, as used in Boilers of Steam Ships, or other Boilers constructed on the Marine plan. No. 3, "Fire Bars," used in connexion with Mechanical Stokers, by means of which the Clinkers are broken up and removed without opening fire-doors. (690)
Exhibitor, *Vienna*, 1873; *Manchester*, 1874.

Johnson, Matthey, & Co. See Cl. 110. Cl. **506.**

Cl. **509.** **Sugg, William,** Gas Engineer, Vincent Works, Vincent Street, Westminster, London, S.W. Gas burners, a new illuminating power meter. (691)

Whitwell, Thomas. See Cl. 100, 111, 222. Cl. **506.**

Cl. **506.** **Brechin, J. B.,** Dundee, Scotland. Heat Economiser. (692)

MACHINES AND TOOLS FOR WORKING METAL, WOOD, AND STONE.

Class 510.—Planing, sawing, veneering, grooving, mortising, tongueing, cutting, moulding, stamping, carving, and cask-making machines, etc., cork-cutting machines.
Class 511.—Direct acting steam sawing machines, with gang saws.
Class 512.—Rolling mills, bloom squeezers, blowing fans.
Class 513.—Furnaces and apparatus for casting metals, with specimens of work.
Class 514.—Steam, trip, and other hammers, with specimens of work, anvils, forges.
Class 515.—Planing, drilling, slotting, turning, shaping, punching, stamping, and cutting machines. Wheel cutting and dividing machines, emery wheels, drills, taps, gauges, dies, etc.
Class 516.—Stone-sawing and planing machines, dressing, shaping, and polishing, sand blasts, Tilghman's machines, glass-grinding machines, etc.
Class 517.—Brick, pottery, and tile machines. Machines for making artificial stone.
Class 518.—Furnaces, moulds, blowpipes, etc., for making glass and glass-ware.

Cl. **510.** **Roberts, William,** Venetian Blind Manufacturer, 139, Derby Road, Bootle, near Liverpool. A Self-acting Painting Machine for Venetian Blinds, Laths, Hoop Iron, and other purposes. (700)

Cl. **511, 514.** **Massey, B. & S.,** Engineers, Openshaw, Manchester. Steam hammers for heavy Forge Work, Tilting Steel, Smith Work and Forging Files, Cutlery and light work; Special Steam Stamps for forging in Dies at one blow; Circular Saw for Cutting Hot Iron and Steel. Models of Steam Hammers. Samples of Forgings. (701)
Exhibitors, *Paris*, 1867; *Havre*, 1868; *High-and Society*, 1870; *Liverpool*, 1871; *Moscow*, 1872; *Vienna*, 1873; *Manchester*, 1875; *Leeds*, 1875; *Paris*, 1875. (Prize Medals.)

Morewood, E., & Co. See Cl. 111, 113. Cl. **512.**

Marriott, Elizabeth, 15, Oldfield Road, Stoke Newington, London. Prepared Fuel and Machine to show Manufactures. (702) Cl. **513, 517.**

Wright, Peter, & Sons, Anvil and Vice Manufacturers, Constitution Hill Works, Dudley, Worcestershire. Patent solid wrought Anvils, various kinds; Patent solid box vices and parallel vices; Smiths' Tools of various kinds. Hammers. (703) Cl. **514.**
Exhibitors, *London*, 1851, 1862 (Prize Medal).

Cl. 514. **Brooks & Cooper,** Anvil, Vice, &c., Manufacturers, Mousehole Forge, Sheffield. Anvils, Vices, Hammers, Shear Steel Tue Irons, &c. Predecessors of present Firm, M. & H. Armitage. (704)
Exhibitors, London, 1851 (Prize Medal); *Paris*, 1855.

Cl. 514. **Brown, John, & Co., Limited.** See Cl. 111.

Cl. 514. **Cammell, Chas., & Co.** See Cl. 111.

Cl. 515. **Heap, Joshua, & Co.** (Limited), Engineers, Tool Makers, Oldham. Tools and machines. Taps for Gas and bolt Purposes; also Special Taps for Heaps' Machines, Standard Hobs for making chaser, Heaps' Patent Pipe, Bolt screwing and Nut Tapping Machines. (705)

Cl. 515, 521, 531, 540. **Greenwood & Batley,** Machine Makers, Albion Works, Leeds. Bolt forging machines; machine for tyeing in warps for looms; sewing machine for waxed threads; printing machine. (706)

Cl. 515. **Beesley & Sons,** Boiler Makers, Abbey Road Boiler Works, Barrow-in-Furness. Patent Punching, Shearing, and Angle cropping machine for iron, steel, or other metals. (707)
Exhibitors, Manchester, 1875 (Medal).

Cl. 515, 563. **Nussey & Leachman,** Engineers, Leeds, Self-acting Hydraulic pressing machine for pressing woollen and other fabrics; Hydraulic punching, shearing, and riveting machine, dispensing with the ordinary valves and accumulators. (708)

Cl. 515. **Martin, Robert.** See Cl. 296.

Cl. 516. **Shearer, Hugh,** 21, Great George Street, Westminster, London, S.W. Machine for dressing stone, an American invention. (709)
Exhibitor, Vienna, 1873 (Medal for Progress); *London*, 1874 (Medal).

Cl. 516. **Siemens, Charles William.** See Cl. 111, 320.

Cl. 518. **Perkins, A. M., & Son,** Civil Engineers, Seaford Street, Regent Square, Gray's Inn Road, London, E.C. Steam oven for marine use. In Machinery Hall. (710)

Lavers, A. H. See Cl. 103.

MACHINES AND IMPLEMENTS OF SPINNING, WEAVING, FELTING, AND PAPER MAKING.

Class 520.—Machines for the manufacture of silk goods.
Class 521.—Machines for the manufacture of cotton goods.
Class 522.—Machines for the manufacture of woollen goods.
Class 523.—Machines for the manufacture of linen goods.
Class 524.—Machines for the manufacture of rope and twine, and miscellaneous fibrous materials.
Class 525.—Machines for the manufacture of paper, and felting.
Class 526.—Machines for the manufacture of india-rubber goods.
Class 527.—Machines for the manufacture of mixed fabrics.

Cl. 520, 521, 522, 523, 524. **Fleming, Thomas, & Son,** Card Manufacturers, West Grove Mill, Halifax. Card Clothing, in Leather, Wood, Cloth, Metal and Brass faced for Carding Machines, &c., for Flax, Tow, Jute, Hemp, China Grass, Cotton, Woollen, Worsted, Silk, Shoddy, &c.; Silk Combs and Teeth, and all sorts of Needle pointed Cards for Carding, Combing, and Dressing Silk; Patent Diamond Point Needle-pointed Sectoral Knife, Flat and Oval Wire, &c., for Takers in, for Cotton and Woollen Carding Engines, Needle-point Teeth. (720)
Exhibitors, Vienna, 1873 (Medal for Merit); *Paris*, 1875 (Silver Medal).

Cl. 520, 521, 522. **Ambler, William,** 17, Elizabeth Street, Bradford, Yorkshire. Machine for making paper cop tubes used in spinning Worsted, Silk, and Cotton Yarns; Machine for cleaning the teeth of wheel castings by means of an emery wheel.
Both wheels are patented. (721)

Cl. 520. **Mackenzie, Duncan,** Engineer, care of Wm. Smith, Esq., 19, Salisbury Street, Strand, London, W.C. The machine which embodies the invention is a "Self-Acting Reader for the "Jacquard Loom," and is adapted for all kinds of ornamental figured textile fabrics,

from the most delicate lace or ribbon to the stoutest carpet or tapestry. The invention is founded on a principle of arithmetical progression and geometrical exactness, and dispenses with skilled labour of adults, and places the manipulations of the operations of the "Reader" under the control of juvenile hands. One of its motions exhibits a combination of mechanism of a new construction, having a compound parallel and perpendicular movement, which is applicable to a variety of other purposes, amongst others bracing and ruling papers, doing the two sides of the sheet at the same time without change of pens. (722)

Cl. **520, 521, 522, 523.** **Ingham, John, & Sons,** Shuttle Makers, &c., Croft Head Works, Thornton, near Bradford. Case of shuttles, &c. for weaving worsted, cotton, silk, ribbons, alpaca, mohair, flax, linen, carpets, woollens, coatings, fustian and lastings, damask and moreens; also all kinds of tacking, all kinds of shuttle pikes, and all kinds of stocks and bowls for weaving. (723)

Cl. **520.** **Fish, J. & G.,** 12, Grayston Street, Fiswick, Preston, and 776–2 Avenue, New York, U.S.A. Silk Swivel Power Loom. Box of Samples Silk Reeds. (724)

Cl. **520.** **Stevens, Thomas.** See Cl. 248. Improved Jacquard Loom at work. (725)

Cl. **521.** **Booth, H., & Co.,** Spindle and Flyer Makers and Machinists, Edward Street, Preston, Lancashire. Slubbing, Roving, Jack Frame, and Throstle Spindles and Flyers, Mule Spindles, Long Collars, Bobbin and Spindle wheels, and Footsteps, for cotton spinning machinery; Cast Steel Roving and Slubbing Flyers for high speed. (726)

Exhibitors, London, 1851; *Paris,* 1855, 1867; *Dublin,* 1865. (Medals.)

Cl. **521.** **Coats, J. and P.,** Ferguslie Thread Works, Paisley. One spooling machine, one thread winding machine, one machine for ticketting. (727)

Exhibitors, London, 1851, 1862 (Medals); *Paris,* 1855, 1867 (Medals); *London,* 1871, 1872, 1873, and 1874 (Medals); *Vienna,* 1873 (Medal for Merit).

Cl. **521.** **Platt Bros. & Co., Limited,** Engineers and Machine Makers, Hartford Works, Oldham, Lancashire. One Patent double Macarthy roller cotton gin, for cleaning different varieties of seed cotton by separating the fibre from the seed. (728)

Exhibitors, London, 1851 (Council Medal); 1862 (Prize Medal); *Paris,* 1855 (Medaille d'Honneur); 1867 (Gold Medal); *Moscow,* 1872 (Gold Medal); *Vienna,* 1873 (Diploma of Honour).

Gadd, Thomas, Engineer, Salford, Manchester. Agents for U.S. and Canada, E. Szarbinowski and Nathan, 40 Brazenose Street, Manchester. 8c/s Printing machine for large size garment rollers, 2c/s Angular engine and intermediate geering; Improved combined engraving and punching machine, self-acting; Setting-out table with micrometer &c., Patent combined varnishing and ruling machine; and the following for mills and dies, Machine for setting out, Ruling machine self-acting, Clams, Engravers block, and Lathe. (729) Cl. **521.**

Howard & Bullough, Globe Works, Accrington. Machinery used for spinning cotton. (730) Cl. **521.**

Greenwood & Batley. See Cl. 515, 531, 540. Cl. **521.**

Gimson & Coltman, Patent Hosiery Machinists, Duke Street, Leicester. Patent Rib Top Machine for making Selvidge Rib Tops with welt and slack course, fitted up with three carriers and adjustable motion to produce the Royal Rib Stitch in any part of the work without stopping the machine. Large and Small Circular Machines. Large Circular Machine, with 12 feeders, for making Cardigan Jackets, fitted with adjustable motion to make the plain rib work. Small Circular Machine for making Cardigan Jacket Sleeves with welt and cuff complete. (231) Cl. **522.**

Smith, John & Samuel, Low Bridge Works, Keighley, Yorkshire. Makers of Engineers' and Machine Tools and all kinds of Worsted machinery; viz., Combing preparing and drawing or spinning preparing, also Spining and Twisting or Doubling. The following machines are exhibited: 1. Two-Spindle Gill Box; 2. Six-Spindle Drawing Box; 3. Twenty-four-Spindle Dandy Roving Frame Cl. **522.**

4. 144-Spindle Spinning Frame; 5. 120-Spindle Twisting Frame. (732)

Exhibitors, Paris, 1867 (Medals).

Cl. 523, 524. **Fairbairn, Kennedy, & Naylor,** Engineers and Machinists, Leeds. Machinery for preparing and spinning Jute, Hemp, Flax, Tow, and similar Fibres. Carding Engine; Drawing, Roving, and Spinning Frames. Cop Winding and Quadruple Drilling Machine for Locomotive Work. (733)

Exhibitors, London, 1862 (Medal and Hon. Mention).

Cl. 524. **Lawson, Samuel, & Sons,** Machine Makers, Hope Foundry, Leeds. Machinery for Carding, Preparing, and Spinning Jute; Cop Winding Machine. (734)

Exhibitors, London, 1851 (Council Medal); 1862 (Hon. Mention); *Paris*, 1855 (Hon. Mention); 1867 (Grande Medaille); *Paris Maritime Exhibition*, 1875 (Grand Diploma); *Vienna*, 1873 (Diploma of Honour).

Cl. 525. **Marshall, T. J., & Co.,** Paper-making Machinery, Dandy Roll and Wire Cloth Manufacturers, Campbell Works, Gillet Street, Kingsland, London, N. Dandy rolls with Patent Water marking, improved Carriages for same, wire cloth, &c. for paper making, and Patent Pulp Strainer. (735)

Exhibitors, London, 1862 (Hon. Mention).

Cl. 525. **Annandale, Alex., & Sons,** Beltonford Paper Works, Dunbar, Scotland. Paper Maker's Strainer Comb-out or Knotter Plate, as reclosed under Process. (736)

MACHINES, APPARATUS, AND IMPLEMENTS USED IN SEWING AND MAKING CLOTHING AND ORNAMENTAL OBJECTS.

Class 530.—Machines used in the manufacture of tapestry, including carpets, lace, floor-cloth, fancy embroidery, etc.
Class 531.—Sewing and knitting machines, clothes making machines.
Class 532.—Machines for preparing and working leather.
Class 533.—Machines for making boots and shoes.
Class 534.—Machines for ironing, drying, and scouring.
Class 535.—Machines for making clocks and watches.
Class 536.—Machines for making jewellery.
Class 537.—Machines for making buttons, pins, needles, etc.

Cl. 531. **Wilson, Newton, & Co.,** Engineers and Sewing Machine Manufacturers, 144, High Holborn, London, and St. George's Foundry, Birmingham. Sewing machines, their appliances and apparatus. Hand and Treadle, Family and Manufacturing. Hand Sewing machines, Single Thread, the "Queen Mab," "Express," "Queen of Scots," and "Cleopatra." Shuttle-lock Stitch, the "Newcastle," "The Tower," and the "Princess of Wales." Lock and Herring-bone Stitch. "England's Queen." All patented by Newton Wilson and Co. Treadle Sewing Machines of the "Wheeler and Wilson" and "Singer" class, with patented improvements by Newton Wilson and Co. New Attachments and Apparatus for sewing machines. Circular Feed or Repairing Machine, originally invented by Newton Wilson and Co. (750)

Exhibitors, London, 1862 (Hon. Mention); *Paris*, 1867 (Prize Medal); *Lyons*, 1872 (Prize Medal); *Vienna*, 1873 (Prize Medal).

Cl. 531, 293. **Smith & Starley,** Sewing Machine Manufacturers, Trafalgar Works, Coventry. Makers to the British Army and Government School Boards. Sewing machines. The "Europa," the "Queen of Hearts," the "Little Dorrit," and other Patented Lockstitch and Loopstitch Sewing Machines, adapted for Domestic or Manufacturing purposes. Sewing Machine Needles and Attachments, Stocking Darning Machines, Button-hole Sewing Machines, Improved Automatic Work Holders, Electric Motors applicable to sewing machines and other mechanism. Patented Bicycles and Suspended Wheels. (751)

Exhibitors, Vienna, 1873 (Medal for Merit); *London*, 1874 (First Prize Medal); *Manchester Mechanical*, 1875 (Silver Medal, the highest award to Sewing Machines).

Cl. **531, 533.** **Kimball & Morton,** Sewing Machine Manufacturers, 80, Bishop Street, Anderston, Argyle Street, Glasgow, and Reform Street, Dundee. The Lion and New Family and Medium Machines. The Nos. 2 and 3 Tailoring and Bootmaking Machines, the Medium Machine for light sacks, and the large Overhead machines for heavy sacks, sails, and tarpaulins. (752)

Exhibitors, Edinburgh, 1869, *the Highland and Agricultural Society's Show*; *Burton-on-Trent, Staffordshire Agricultural Society's Show* (First Prizes); *Royal Agricultural Association of England,* 1873 (First Prize for Sewing Machines).

Cl. **531.** **Sanson, Robert Bell,** Engineer, 87, Globe Road, Mile End Road, London, E. Spring arm endless band knife, cloth cutting machine, and parallel pressing machine for tailors' use. (753)

Greenwood & Batley. See Cl. 515, 521, 540. Cl. **531.**

Laing's Patent Overhead Hand Stich Sewing Machine Co. (Limited), 4, Bain Square, Dundee. A New and Improved Overhead Sewing Machine. (754) Cl. **531.**

Pullman, R. & J. See Cl. 652. Cl. **532.**

Air Burning Company, The (Limited), Owners of Patents (Robertson's) for Heating Irons, &c. by Combination of Gas and Air, 118, Queen Street, Glasgow, Scotland. Patent Ironing Table. (755) Cl. **534.**

Exhibitors, London, 1873 (First Medal for Irons).

Stockman, Benjamin Pryor, 3, Poets Corner, Westminster Abbey, London. Improved Apparatus for Ironing, an Ironing Table; also a Water Meter. (756) Cl. **534, 566.**

MACHINES AND APPARATUS FOR TYPE SETTING, PRINTING, STAMPING, EMBOSSING, AND FOR MAKING BOOKS, AND PAPER WORKING.

Class 540.—Printing presses.
Class 541.—Type-casting machines, apparatus of stereotyping.
Class 542.—Types and type-setting machines. Type-writing machines.
Class 543.—Printers' furniture.
Class 544.—Book-binding machines.
Class 545.—Paper-folding machines.
Class 546.—Paper and card cutting machines.
Class 547.—Envelope machines.

Cl. **540.** **Beatty, Francis S.,** Engraver and Lithographer, 30, Summer Hill, Dublin. Beatty's Lithographers' manifold transfer machines for the reproduction of printed matter of enlarged or reduced dimensions from that of the original, used for the multiplication of printed books of various sizes from one type forme, and reproduced by the typo-relievo etching process for printing. (770)

Exhibitor, London, 1872.

Cl. **540.** **Lilly, John, & Co.,** Engineers and Machine Makers, 172, St. John Street, Clerkenwell, London, E.C. Fast English Perfecting Machine for printing Books, Newspapers, at a speed of 1,500 per hour. Simple Single Cylinder Machine for printing Books and Colour work. (771)

Walter, John, M.P., "Times" Office Printing House Square, London, E.C. The "Walter" Printing Press. (772) Cl. **540.**

Shaw, William, Printer and Newspaper Proprietor, 3, Sheldon Street, Bayswater, London, W. New Patent Platten Printing Machine. (773) Cl. **540.**

Greenwood & Batley. See Cl. 515, 521, 531. Cl. **540.**

Sloper, Joseph. See Cl. 258. Cl. **540.**

Tomline, Colonel George, Carlton Terrace, London, S.W. Patent Logotypes and Logotype Cases, will be shown in operation. (774) Cl. **542.**

Exhibitor, London, 1873–4.

Scott, Robson John. See Cl. 306. Cl. **542.**

Stephenson, Blake, & Co. See Cl. 306. Cl. **542.**

MOTORS AND APPARATUS FOR THE GENERATION AND TRANSMISSION OF POWER

Class 550.—Boilers and all steam or gas-generating apparatus for motive purposes.
Class 551.—Water-wheels, water engines, hydraulic rams, wind-mills.
Class 552.—Steam, air, or gas engines, electro-magnetic engines.
Class 553.—Apparatus for the transmission of power, shafting, belting, cables, transmission of power by compressed air, etc., gearing, cables.
Class 554.—Screw propellers, wheels for the propulsion of vessels and other motors.
Class 555.—Implements and apparatus used in connexion with motors, steam gauges, manometers, etc.

Cl. **550, 555.** **Green, Edward, & Son,** Engineers, Manchester and Wakefield. One Green's Patent Fuel Economiser for heating the feed water for Steam Boilers. Effects a saving of from 18 to 25 per cent. of fuel. (780)
Exhibitors, Paris, 1867 (Medal); *Moscow*, 1872 (Grand Gold Medal); *Vienna*, 1873 (Medal for Progress); *Manchester*, 1868 (Gold Medal); *Leeds*, 1868 (Gold Medal).

Cl. **550, 552, 674.** **Davey, Paxman, & Co.,** Mechanical Engineers, Colchester, Essex. I. 8-Horse Power Portable Steam Engine, designed with a view to economy of fuel. II. 8-Horse Power Davey Paxman Patent Vertical Boiler, with 8-Horse Power Engine vertically attached. III. Patent Steam Corn Dryer, for drying all kinds of grain, coffee, &c. IV. Patent Water Heater, "B," acts as incrustation trap, raises the temperature of the water to 212° between the pump and the boiler. This boiler evaporates 10½ lbs. of water with 1 lb. of coal. The circulation of the water is perfect and priming is prevented. (781)

Cl. **550.** **Galloway, W. and J., & Sons,** Engineers, Knott Mill Iron Works, Manchester. Three 60-horse power Steel Boilers for use in the British Section. (782)
Exhibitors, London, 1851, 1862; *Paris*, 1867; *Vienna*, 1873.

Cl. **550, 552, 674.** **Ransomes, Sims, & Head,** Agricultural Engineers, Orwell Works, Ipswich. 10-Horse-Power Portable Steam Engine, fitted with "Head and Schemioth's" patent apparatus for burning straw, reeds, sticks, maize stalks, and cotton stalks, as well as coal and wood. 6-Horse Power Portable Steam Engine, fitted as above. (783)
Exhibitors, London, 1851, 1862; *Paris*, 1855, 1867; *Vienna*, 1873 (Diploma of Honour).

Cl. **550, 552.** **Moy, Thomas,** Engineer, 37, Farringdon Street, London, E.C. Small steam-engines for tramways and general purposes, where small weight and space and economy in working are required. (784)

Cl. **550.** **Wright, William,** Vulcan Foundry, Coatbridge, Scotland. Hot-water Boilers for heating Dwellings, Conservatories, &c., &c. (785)

Cl. **550.** **Anderson, David, & Son.** See Cl. 235.

Cl. **550.** **McTear & Co.** See Cl. 235.

Cl. **550.** **Engert & Rolfe.** See Cl. 235.

Cl. **551.** **Wier, Marshall Arthur,** Telegraph Engineer, 33, Abchurch Lane, Lombard Street, London, E.C. Pneumatic motor, Water Meter, Hydro-Gyrometer, Locomotive Speed Indicator, Pneumatic Gyrometer, Reciprocating Counter. (786)

Cl. **551.** **Monckton, E. H. C.,** care of Coutts & Co., Strand, London, W.C. Hydraulic Machinery. (787)

Cl. **552, 325.** **Thermo-Electric Generator Co., Limited** (H. Crump, Secretary), 27, New Street, Cloth Fair, London, E.C. Patent of M. Clamond. Thermo-electric batteries worked by gas, charcoal, coke, or mineral oils, in nature approaching the appearance of a gas stove. (788)
Exhibitors, Paris Maritime Exhibition, 1875 (Diplome d'Honneur, Gold Medal); *La Société d'Encouragement pour l'Industrie Nationale* (Grand Gold Medal).

Cl. **552.** **Holmes, Payton, & Taylor.** See Cl. 500.

Cl. **552.** **Hurd, Frederick, & Co.** See Cl. 500.

Cl. **553.** **Turner, Charles,** Civil Engineer, 3, Bugle Street, Southampton. Couplings for Propeller Shafts and other purposes. (789)

Cl. 553, 554, 267. **Hewitt, William,** Prospect Villa, Sydenham Hill, Bristol. No. 1, Model of an impoved Screw Propeller. No. 2, Model of a "Feathering" Screw Propeller. No. 3, Model of an improved principle for driving machinery—(this will be affixed to Stand No. 2). No. 4, Improved Gun Carriage. No. 5, Improved Breech-loader Gun. (790)

Exhibitor of Gun and Gun Carriage, *Paris*, 1867.

Cl. 554. **Vansittart, Henrietta, Mrs.,** Mechanical Artist, Bell House, Montpelier Row, Twickenham. The Lowe-Vansittart curved line or three pitch wave line, non-vibrating, full backing Economical Screw Propeller, as fitted in the British Navy and Merchant Service, by Mrs. Henrietta Vansittart, who is the daughter of Mr. J. Lowe, the inventor of Screw propulsion. (791)

Naples Maritime Exhibition, 1870 (First Class Diploma); *Dublin*, 1872 (Medal); *Paris Maritime Exhibition*, 1875 (Silver Medal).

Cl. 555. **Moncrieff, John,** North British Glass Works, Perth, Scotland. Steam Boiler Water Gauge Glasses. (792)

Cl. 555. **Hicks, James Joseph.** See Cl. 320, 276.

HYDRAULIC AND PNEUMATIC APPARATUS, PUMPING, HOISTING, AND LIFTING.

Class 560.—Pumps and apparatus for lifting and moving liquids.
Class 561.—Pumps and apparatus for moving and compressing air or gas.
Class 562.—Pumps and blowing engines, blowers, and ventilating apparatus.
Class 563.—Hydraulic jacks, presses, elevators, lifts, meters, cranes.
Class 564.—Fire engines, hand, steam, or chemical, and fire extinguishing apparatus, hose, ladders, fire-escapes, etc.
Class 565.—Beer engines, soda-water machines, bottling apparatus, corking machines.
Class 566.—Stop valves, cocks, pipes, etc.
Class 567.—Diving apparatus and machinery.
Class 568.—Ice machines.

Cl. 560. **Gwynne, John and Henry,** Engineers, Hammersmith Ironworks, London, W. A model of one Pair of Compound Surface Condensing Engines with Patent Centrifugal Pumps made to $\frac{1}{8}$th Scale. Four Pairs of a similar size are at work at Codigoro, near Ferrara, Italy, and form the largest pumping machinery in the World, capable of raising 2,000 tons of Water per minute 15 feet high. Highly finished, in plate glass frame. (800)

Exhibitors, Brabant, 1868 (Gold Medal); *Ahola*, 1868 (Two Silver Medals); *Havre*, 1868 (Silver Medal); *Altona*, 1869 (Silver Medal); *Chili*, 1869 (Silver Medal); *Courtrai*, 1872 (Gold Medal); *Vienna*, 1873 (Imperial Order of Francis Joseph conferred by H.I.M. the Emperor of Austria); *Cologne*, 1875 (Special Gold Medal).

Cl. 560. **Gwynne & Co.,** Engineers, Essex Street, Works, Strand and Victoria Embankment, London. Patent Combined Double-acting Centrifugal Pumping Engine, Patent Double-Acting Centrifugal Pump, new form, case opening horizontally, bed plate and standard cast with pump base. Patent Double-acting Centrifugal Pump, case opening vertically, standard and bed plate separate pieces. Gwynne and Beales' Patent Combined Gas Exhauster and Engine. (801)

Exhibitors, London, 1862; *Paris*, 1867 (First Class Medals); *Vienna*, 1873 (Medal for Merit); and 27 other medals obtained at all the Great Exhibitions.

Cl. 560, 564. **Adair & Co.,** Patent Pump Manufacturer, Neptune Street, Liverpool. One pair Adair's Patent Double-action Pumps, complete, to act as main pump or fill engine, to pump from hold or sea. One pair Adair's Patent Double-action Main and Bilge Pump, combined to pump from main well or bilges. Adair's

Patent Double-action Fire-engine with hose complete.

Cl. 560. **Pickering, Jonathan.** See Cl. 503.

Cl. 560. **Fison, J. P.** See Cl. 670, 673, 674, 683.

Cl. 562. **Ellis, William Irlam,** Engineer, 66, Murray Street, Higher Broughton, Manchester. A. Blower or Exhauster for air or gas. A machine for blowing air into foundry cupolas and other furnaces, or for exhausting gas in the manufacture of coal gas, for ventilating mines, ships, &c. Patented in United States. (802)

Cl. 562. **Boyle, Robert, & Son,** 100, Mitchell Street, Glasgow. Boyle's Patent Self-acting Air Pumps. Ventilators. Apparatus for Prevention of Smoke. Ventilator for Steam Ships. (803)

Cl. 563. **Appleby, Charles James and Thomas Hodgson, Brothers,** Engineers, Emerson Street, Southwark, London, S.E. Four portable steam cranes. Seven ton steam crane with wrought-iron permanent way carriage, springs and buffers; lifts, turns round, alters radius of jib, and travels by steam.—Three tons ditto, ditto.—Five ton steam crane on low cast-iron carriage, with all motions as above.—Five ton ditto, ditto, except travels by hand. (804)

Exhibitors, London, 1862; *Paris,* 1867; *Vienna,* 1873.

Cl. 563. **Nussey & Leachman.** See Cl. 515.

Cl. 564. **Haynes, Thomas, & Sons,** Wholesale Ironmongers and Patentees, 227, 229, 231, Edgware Road, London, W. The Patent Hydronette; the Patent Hydron—a platform pump; the Patent Regina Garden Syringe; the Patent Water Bringer, for overcoming friction caused by drawing water through long lengths of hose. The Patent Syreileon—a self-acting Hose-Coiler. (805)

Exhibitors, First Prize Silver Medals awarded to Haynes and Sons for their Patent Water-throwing Apparatus. *Highland Agricultural Society of Scotland,* 1869; *Linnæan Society, Brussels,* 1869; *Free States of Hamburgh,* 1869; *Horticultural and Agricultural Society of Hainault,* 1869; *Wirral Agricultural Society,* 1870; *Royal North Lancashire Agricultural Society,* 1870; *Channel Islands Exhibition,* 1871; *Lyons,* 1872; *Cologne International Horticultural Exhibition,* 1875; *Vienna,* 1873 (Hon. Mention), &c., &c.

Cl. 564. **Wallace, John S., & Tucker, Edward,** Timber Merchants, 3, Antrim Place, Belfast. The Wallace-Tucker Fire Annihilator acts automatically by the production of carbonic acid gas within the apartment in which a fire is burning, this gas extinguishing the flame (patented). "The Buoy," or Turret System of life preservation in case of shipwreck. A compartment distinct and detached from the ship is built within her large enough to contain the provisions for the voyage, and *all* the passengers if required. Should the vessel go down it floats, and those on board can take refuge in her. Model. (806)

Cl. 564. **Sanderson and Proctor,** Electric and General Engineers, Shore Works, Huddersfield, and 19 and 21, Queen Victoria Street, London, E.C. Patent Automatic Fire Extinguisher and Alarm for Mills, and all Buildings where Steam is used. Also of Improved Patent Copper Lightning Conductors for the Protection of Ships and every Description of Buildings from Damage by Lightning. (807)

Cl. 565 **Needham & Kite,** Engineers, Phœnix Ironworks, Vauxhall, 220, Upper Kennington Lane, London, S.E. For clarifying opaque or turbid fluids, to work by hand, a High Pressure-Filter Press. The mechanical clarifier is used in this country for clarifying turbid wine, beer, cider, vinegar, aniline dyes, varnish, oils, and all turbid liquors where the opaque substance is in suspension. (808)

Cl. 565. **Lawrence & Co.,** Brewers' Engineers, Coppersmiths, Architects, Brass and Iron Founders, &c., 22, St. Mary Axe, London, E.C. Refrigerators for cooling Brewers' and Distillers' Worts and Mash; also for cooling Milk and all other fluids; for condensing and purifying water. Mashing Machines, Spargers, &c., &c. (809)

Exhibitors, Royal Agricultural Society of England, 1873; *Worcestershire Agricultural Society,* 1873; *Manchester and Liverpool Agricultural Society,* 1873. (Silver Medals.) *Vienna,* 1873 (Medal for Progress); *Agricultural Society of Bremen,* 1874; *Horticultural and Agricultural Society Flora of Cologne,* 1875. (Silver Medals.) *Agricultural Society, Warschau, Poland,* 1875 (Hon. Mention). *Agricultural Show at Namur, Belgium,*

1875 ; *Agricultural Show at Luxemburg*, 1875. (Silver Medals.) *Hagenau*, 1875 (First Prize Medal).

Cl. 565. **Ross, William Adolphus,** Cromac Buildings, Belfast, Ireland. Bottling Apparatus (Patented). (810)

Dennis, T. H. P., & Co., Engineers, Anchor Iron Works, Chelmsford, and Mansion House Buildings, London, E.C. New patent full-way High-Pressure Valves for steam, hot water, cold water, or gas. (811) Cl. 566.

Stockman, B. P. See Cl. 534. Cl. 566.

RAILWAY PLANT, ROLLING STOCK, AND APPARATUS.

Class 570.—Locomotives, models, drawings, plans, etc.
Class 571.—Carriages, waggons, trucks, cars, etc.
Class 572.—Brakes, buffers, couplings, and snow-ploughs.
Class 573.—Wheels, tires, axles, bearings, springs, etc.
Class 574.—Permanent ways, ties, chairs, switches, etc.
Class 575.—Station arrangements, signals, water-cranes, turn-tables.
Class 576.—Miscellaneous locomotive attachments.
Class 577.—Street railways and cars.

Cl. 570. 571. **Handysides Steep Gradient Co., Limited,** 9, Victoria Chambers, Victoria Street, Westminster, London. Working Model of Locomotive and Waggon, to work on an incline. (820)

Cl. 571. **Welch, Alfred,** Cattle Salesman, No. 11, Bank Buildings, Metropolitan Cattle Market, London. Improved Railway Cattle Waggons, specially adapted to feed and water, in transit, animals carried in them. Received official recommendation of the Royal Society for the Prevention of Cruelty to Animals. Also received a First Class Medal from the Highland and Agricultural Society of Scotland. (821)

Cl. 573. **Clarke & Dunham.** See Cl. 322, 674.

Cl. 573. **Cohné, Sigismund.** See Cl. 201.

Cl. 573. **Hawksworth, Wilson, Ellison, & Co.** See Cl. 280, 281.

Cl. 574. **Williams, Richard Price,** Civil Engineer, No. 9, Great George Street, Westminster, London, S.W. Continuous railway crossings, "switches" for doing away with facing points on railways. (822)
Exhibitor, *London*, 1873 ; *Leeds*, 1875. (Medals.)

Cl. 574. **Brierley, Sons, & Reynolds,** Railway Signal Engineers, 81A, Edgware Road, Hyde Park, London, W. Railway signal model of railway junction, comprising switches and signals, locking and interlocking apparatus, worked on the "Block System." (823)

Seaton, William, Civil Engineer, 19, Salisbury Street, Strand, London, W.C. Seaton's Improved Saddle Rail and Permanent Way construction. (824) Cl. 574.

Saxby & Farmer, Railway Signalling Engineers, Kilburn, London, N.W. 1. Railway Signals. Model of a Junction with switches and signals interlocked on the English system for the prevention of collisions and accidents. 2. Railway Switches, Model of Locking Bar and apparatus for securing the proper position of facing switches, and the immovability of them during the passing of trains over them. 3. Railway Level Crossing Gates, Model of arrangement for working gates simultaneously and interlocking them with signals to secure the safe passage of traffic on Road and Rail. (825) Cl. 574, 575.
Exhibitors, *Paris*, 1867 (Gold Medal) ; *Vienna*, 1873 (Medal for Progress).

Patent Nut and Bolt Co., The. See Cl. 284. Cl. 574.

MACHINES USED IN PREPARING AGRICULTURAL PRODUCTS.

Class 580.—Flour mills.
Class 581.—Sugar refining machines.
Class 582.—Confectioners' machinery.
Class 583.—Oil-making machinery.
Class 584.—Tobacco manufacturing machines.
Class 585.—Mills for spices, coffee, etc.

(Cl. 580. **Sutcliffe, James S.,** Corn Miller, Bacup, Lancashire. "Middlings Flour Separater." (830)
Exhibitor, Paris Maritime Exhibition, 1875 (Gold Medal).

(Cl. 581, 582, 562. **Mirrlees, Tait, & Watson.** Glasgow. Machinery in motion, consisting of one Large Sugar Mill to make from five to six thousand pounds per hour. One Small Sugar Mill to make from two to three hundred pounds per hour. One Patent Valveless Engine working an Air Pump for a vacuum pan and driving. Two 30-in. Weston's Patent self-balancing suspended Centrifugal Machines ; and One 18-in. Weston's Patent Pivot Centrifugal Machine. (831)
Exhibitors, London, 1862.

Cl. 582. **Collier, Luke,** Confectioners' and Biscuit Bakers' Machine Maker, Wellington Works, River Street, Rochdale. Confectioners' machines in general. (832)
Exhibitor, London, 1862, 1873 (Medals) ; *Paris*, 1867 ; *Lima, Peru*, 1872.

Cl. 584. **Andrew, J. E. H.,** Machine Maker, Waterloo Road, Stockport. (Sole maker of Robinsons' and Andrew's Patent Tobacco Spinning Machines.) Machines for spinning all descriptions of Twist or Roll Tobacco, from $\frac{1}{8}$ to 2 inches diameter, also samples of Twist Tobacco spun in various countries in Europe. (833)

AERIAL, PNEUMATIC, AND WATER TRANSPORTATION.

Class 590.—Suspended cable railways.
Class 591.—Transporting cables.
Class 592.—Balloons, flying machines, etc.
Class 593.—Pneumatic railways, pneumatic dispatch.
Class 594.—Boats and sailing vessels. Sailing vessels used in commerce. Sailing vessels used in war. Yachts and pleasure boats. Rowing boats of all kinds. Life-boats and salvage apparatus, with life rafts, belts, etc. Submarine armour, diving bells, etc. Ice boats.
Class 595.—Steamships, steamboats, and all vessels propelled by steam.
Class 596.—Vessels for carrying telegraph cables, and railway trains, also coal barges, water boats, and dredging machines, screw and floating docks, and for other special purposes.
Class 597.—Steam capstans, windlass, deck-winches, and steering apparatus, fans.

(Cl. 594, 597. **Hill & Clark,** Engineers, 6, Westminster Chambers, Victoria Street, London, S.W. Boat Disengaging Hooks, and models of same with boat, &c., to show how fitted. (840)
Exhibitors, Northfleet Exhibition ; London, 1871 (Award), 1871-73-73 (Medals) ; *Paris Maritime Exhibition*, 1875 (Gold Medal).

Cl. 594. **Logan, John Maxwell,** Boat Builder, Chesterton Road, Cambridge. Model of four-oared racing boat, to take to pieces for convenience in travelling, with case to carry it in. (841)

Cl 594. **Siebe & Gorman,** 17, Mason Street, Westminster Bridge Road, London (late of 5,

Denmark Street, Soho, London). Improved Diving Apparatus for two Divers, as adopted by the Admiralty and War Office. A figure of Diver in Diving Suit complete, with the "Crown" improved Helmet and Speaking Apparatus, with which the Diver can correspond with the surface. (842)

Exhibitor, London, 1851, 1862, 1874; *Paris*, 1855; *Exhibition Maritime*, 1875; *Naples*, 1871 (Medals at all); *Vienna*, 1873 (Medal for Merit).

Cl. **594.** **Cruickshank, A. B.,** 5, Reform Street, Dundee, Scotland. Self-acting safety cleats for boat and yachts. (843)

Exhibitor, Paris Maritime Exhibition, 1875 (Bronze Medal).

Cl. **594.** **Clay, Randolph.** See Cl. 265, 276, 320.

Cl. **594.** **Sainty, John, & Barnard.** See Cl. 673, 674.

Cl. **594, 595, 410.** **Inman Steamship Company, Limited,** Steamship Owners, 22, Water Street, Liverpool. Full rigged model of "The Inman "Steamship Company's" Royal Mail Steamer, "City of Berlin;" built by Messrs. Caird & Co., Greenock, 1875. Length 523 feet, breadth 44 feet, depth 36 feet; gross tonnage 5,490 tons, net 3,140 tons; indicated horse-power, 5,000 horses; nominal, 950 horses; speed, 15 knots; (made the fastest passage on record from Queenstown to New York in September 1875. Time, 7 days, 18 hours, 2 minutes, and from New York to Queenstown, October 1875. Time, 7 days, 18 hours, 48 minutes). Oil Painting, of the "Inman "Royal Mail Steamer, 'City of Berlin,' off "the Old Head of Kinsale," Ireland, bound for Queenstown and Liverpool. (Artist, Samuel Walters, Liverpool.) (844)

Cl. **594, 597.** **Bradford, William Henry,** Great Saughall, near Chester. Model of Iron Life Boat uncapsizable under full sail. Covered accommodation for females and children. Security for water, provision, mail bags, &c. No lowering apparatus required. Model represents a 36-ft. ship's principal Life-saving Boat, placed as Long Boat, to be run overboard with hawser attached to a sinking ship; masts to be stepped and sails hoisted when clear of the wreck. Lateen rig. Sketch on same principle, represents a 90-ft. Life or Salvage Boat, to go under steam from the shore, with novel composite screw and paddle propellers; designed to launch herself or go over a sand or mud bank to a wreck, forming a combined Life and Tug Boat. Model of a Ship's Course Indicator, whereby a ship's course, as steered by compass, may be shown at night by lamps. (845)

Exhibitor, London, 1873 (Medal); *Paris Maritime Exhibition*, 1875 (Hon. Diploma).

Clark, Standfield, & Co., Civil Engineers, 6, Westminster Chambers, London, S.W. Models of patent floating and gridiron depositing docks. (846) Cl. **596.**

Exhibitor, Paris Maritime Exhibition, 1875 (Medal).

Roby, George, Wigan, Inventor and Patentee of Hydro-pneumatic and other vessels for the storage of Gunpowder and other substances liable to damage by heat or evaporation, or by fire, or by flooding with water. (847) Cl. **596, 224.**

Wood, John William, Harwich, Essex. Wood's patent Iron self-adjusting shot hole, rivet hole, and leak stopper for application to ships, buoys, boilers, or other hollow vessels. (848) Cl. **597.**

Exhibitor, Northfleet Exhibition, London, 1872; *Liverpool Exhibition of Marine Appliances*, 1873 (Certificates); *Paris Maritime Exhibition*, 1875 (Gold Medal).

Martin, Claude, Patent Anchors and Patent Chain Cables Manufacturer, 73 and 74, King William Street, London, E.C. "Martin's Patent Self-Canting Anchors, with or without stock," Martin's Patent "Zig-Zag," Chain-Cables, Model of H.M.'s Turret Ram "Alexandra," fitted with Martin's anchors. (849) Cl. **597.**

Exhibitor and Awards, London, 1862; *Paris*, 1855 (Bronze); 1867 (Silver); *Havre*, 1868 (Gold); *Naples*, 1871 (Gold); *Lima*, 1872 (Gold); *Vienna*, 1873 (Medal for Merit); *Paris Maritime Exhibition*, 1875 (Gold); also National Awards from several Foreign Governments.

Gümpel, Charles Godfrey, Assoc. I. C. E. & I. N. A., Engineer and Machinist. 49, Leicester Square, London, W.C. A new im- Cl. **597.**

proved Ship's Rudder, represented by several models showing its application—1. To a Man-of-War Screw Steamer; 2. To an American river steamer; 3. To a Paddle Steamer or Sailing Vessel. Its distinctive character is shown by three small models, representing A, the common, B, the balanced, and C "Gümpel's Rudder." (850)

MACHINERY AND APPARATUS ESPECIALLY ADAPTED TO THE REQUIREMENTS OF THE EXHIBITION.

Boilers, engines, cranes, pumps, etc.

Aveling & Porter. See Cl. 682.
Tangye Brothers. See Cl. 563.
Pickering, Jonathan. See Cl. 503, 560.

DEPARTMENT VI.—AGRICULTURE.

Location :—AGRICULTURAL BUILDING.

ARBORICULTURE AND FOREST PRODUCTS.

CLASS 600.—Timber and trunks of trees, entire or in transverse or truncated sections, with specimens of barks, leaves, flowers, seed vessels, and seed.

Masts, spars, knees, longitudinal sections of trees, railway ties, ship timber, lumber roughly sawn ; as planks, shingles, lath, and staves.

Timber and lumber prepared in various ways to resist decay and combustion ; as by injection of salts of copper and zinc.

CLASS 601.—Ornamental woods used in decorating and for furniture ; as veneers of mahogany, rosewood, ebony walnut, maple, and madrona.

CLASS 602.—Dye-woods, barks, and galls for colouring and tanning.

CLASS 603.—Gums, resins, caoutchouc, gutta percha, vegetable wax.

CLASS 604.—Lichens, mosses, fungi, pulu, ferns.

CLASS 605.—Seeds, nuts, etc., for food and ornamental purposes.

CLASS 606.—Forestry.—Illustrations of the art of planting, managing, and protecting forests. Statistics.

Cl. 602. **Hooper, Cleeve, junr.** See Cl. 652. | **Hooper, Cleeve W., & Sons.** See Cl. 652. Cl. 602.

POMOLOGY.

CLASS 610.—Fruits of temperate and semi-tropical regions ; as apples, pears, quinces, peaches, nectarines, apricots, plums, grapes, cherries, strawberries, and melons.

CLASS 611.—Tropical fruits and nuts, oranges, bananas, plantains, lemons, pine-apples, pomegranates, figs, cocoa nuts.

AGRICULTURAL PRODUCTS.

CLASS 620.—Cereals, grasses, and forage plants.

CLASS 621.—Leguminous plants and esculent vegetables.

CLASS 622.—Roots and tubers.

CLASS 623.—Tobacco, hops, tea, coffee, and spices.

CLASS 624.—Seeds and seed vessels.

Cl. 620. **Delf, Captain William,** Great Bentley, Colchester. Agricultural grain. Specialité, a new and distinct variety of Wheat, named the "Mainstay." (860)

Cl. 623. **Fry, J. S., & Sons.** See Cl. 656.

Menier, Emile. See Cl. 656. Cl. 623.

Turner, R. P. See Cl. 656. Cl. 623.

Yuille, Andrew. See Cl. 651, 656, 660. Cl. 623.

LAND ANIMALS.

Class 630.—Horses, asses, mules.
Class 631.—Horned cattle.
Class 632.—Sheep.
Class 633.—Goats, alpaca, llama, camel.
Class 634.—Swine.
Class 635.—Poultry and birds.
Class 636.—Dogs and cats.
Class 637.—Wild animals.
Class 638.—Insects, useful and injurious. Honey bees, cochineal, silkworms.

LIVE STOCK.

1. The Live Stock display at the International Exhibition will be held within the months of September and October, 1876 ; the periods devoted to each class and family being fifteen days, and the division as follows:—

Horses, Mules, and Asses, from September first to fifteenth.
Horned Cattle (of all varieties), from September twentieth to October fifth.
Sheep, Swine, Goats, and Dogs, from October tenth to twenty-fifth.
Poultry will be exhibited from October twenty-eight to November tenth.

FULL DESCRIPTIONS OF THE VARIOUS ENTRIES WILL APPEAR IN SUBSEQUENT EDITIONS OF THE CATALOGUE.

MARINE ANIMALS, FISH CULTURE, AND APPARATUS.

Class 640.—Marine mammals.—Seals, cetaceans, etc., specimens living in aquaria, or stuffed, salted, preserved in alcohol or otherwise.
Class 641.—Fishes, living or preserved.
Class 642.—Pickled fish, and parts of fish used for food.
Class 643.—Crustaceans, echinoderms, beche de mer.
Class 644.—Mollusks, oysters, clams, etc., used for food.
Class 645.—Shells, corals, and pearls.
Class 646.—Whalebone, shagreen, fish-glue, isinglass, sounds, fish-oil.
Class 647.—Instruments and apparatus of fishing.—Nets, baskets, hooks, and other apparatus used in catching fish.
Class 648.—Fish culture.—Aquaria, hatching pools, vessels for transporting roe and spawn, and other apparatus used in fish breeding, culture, or preservation.

Cl. **641.** **Hoare, John,** Pisciculturist, 39, Bloomsbury Street, Bedford Square, London, W.C., and the British Perpetual Salmon Angling Association. Specimens of emasculated salmon (salmo salar).

The object of this process is to cultivate the salmon in enclosed ponds or Vivaria, either salt or fresh water, to have it perpetually in season, in good condition and fit for food or angling all the year round. (870)

Exhibitor at Royal Dublin Society, Royal Zoological Society, Lancashire and Liverpool Agricultural Society, Middleton Agricultural Society, &c. &c.

ANIMAL AND VEGETABLE PRODUCTS

(Used as Food, or as Materials).

Class 650.—Sponges, sea-weed, and other growths used for food or in the arts.
Class 651.—The dairy.—Milk, cream, butter, cheese.
Class 652.—Hides, furs, and leather, tallow, oil, and lard, ivory, bone, horn, glue.
Class 653.—Eggs, feathers, down.
Class 654.—Honey and wax.
Class 655.—Animal perfumes; as musk, civet, ambergris.
Class 656.—Preserved meats, vegetables, and fruits. Dried, or in cans or jars. Meat and vegetable extracts.
Class 657.—Flour; crushed and ground cereals, decorticated grains.
Class 658.—Starch and similar products.
Class 659.—Sugar and syrups.
Class 660.—Wines, alcohol, and malt liquors.
Class 661.—Bread, biscuits, crackers, and cakes.
Class 662.—Vegetable oils.

Cl. 651, 656, 660, 623.

Yuille, Andrew, Practical Chemist, 132, Irongate, Melville Court, Glasgow. Essences of Coffee, Coffee and Chicory, Chocolate, Coffee and Milk, Condensed Milk, Sauce, Vinegar in Bottle. (880)
Exhibitor, Vienna, 1873 (Medal for Merit).

Cl. 651.

Evans & Stafford, Stilton Cheese Makers and Factors, Campbell Street, Leicester. Stilton cheese. (881)

Cl. 651.

Hooker, J., F.C.S., Analytical Chemist, 104, Upper Thames Street, London, E.C. A large tin of milk which has been exposed to the air for five years; also "Grimwade's Desiccated Milk"; Condensed milk, and other preparations made with milk. (882)
Exhibitor, London, 1873 (Medal).

Cl. 651, 660.

Chapman, Edwin, & Co., Manufacturers of Koumiss, Sparkling Bland, &c., 10, Duke Street, Portland Place, London, W. Koumiss, a beverage prepared from Cow's Milk, by double fermentation, in five varieties:

A. Full Koumiss, containing the maximum of Casein.
B. Medium Koumiss, containing more Lactose, Phosphates, but less Casein than A.
C. Whey Koumiss, free from Casein and Fat.
D. Diabetic Koumiss, with or without Glycerine.
E. Sparkling Bland, a Koumiss for general use at table, in summer, etc., and least deteriorated by time.

The Koumiss Extract, for converting Milk into Koumiss, best suited for Export. (883)
Exhibitors, London, 1873 (Medal).

Cl. 652.

Green, John, Gelatine Manufacturer, 12, Graham Terrace, Ridley Road, Kingsland, London, E. Sheet gelatine. Gelatine used by confectioners for wrappers, &c., cigar boxes, printers and engravers, and artificial flower makers. (884)
Exhibitor, London, 1862; *Paris,* 1867; *Vienna,* 1873.

Cl. 652, 532.

Pullman, Robert and John, Leather Dressers, 17, Greek Street, Soho, London, W. Manufactured leather and machinery. A case of manufactured leather, &c., buck, doe, and fawn skins, chamois, Norway does, tan, sheep, white sheep, white lambs, white splits, basils, leather, aprons, buff hides, do. white enamelled, gloves, men's harvest tan, housemaids' tan and wash, bleaching composition. Leather finishing machines: One stoning machine; one kniving machine. (885)

Cl. 652, 602.

Hooper, Cleeve, Junior, Leather, Hide, and Bark Factor, 6, 7, & 8, New Weston Street, Bermondsey, London, S.E. Salted Roans, Skivers, and Calf; English Tanned Buffalo, Calf, Horse, Hides, Sheep, Kip; Australian Basils; East India Kips, Goats, Sheep, Buffalo; Skivers and Roans, Chamois. Glue of various kinds, Glue pieces, Sheep Pelts, Sheep Fleshings, Buffalo Cuttings, Pickers. Tanning materials, Oak, Cork Tree, Larch, and Mimosa

Bark; Hemlock and Chesnut Extract; Divi Divi, Shumac, Valonia, Cutch, Gambier, Myrabolans, Cod Oil, &c. (886)
Exhibitor, London, 1874 (Bronze Medal).

Cl. **652, 276, 280.** **Puckridge, Fred, & Nephew,** Manufacturers of Goldbeaters' Moulds and Goldbeaters' Skin, 530 to 534, Kingsland Road, London, N. Goldbeaters' moulds as used for beating gold into leaves for gilding purposes. Goldbeaters' Skin as used for medical purposes. (887)
Exhibitors, London, 1851, 1862 (Medals); *Paris*, 1867 (Silver Medal).

Cl. **652, 276, 280.** **Bennett, Thomas, & Son,** Goldbeaters' Skin Manufacturers, 70 and 71, Turnmill Street, Farringdon Road, London, E.C. Goldbeaters' Skin, a manufactured article used in the production of gold leaf. (888)

Cl. **652.** **Wilson, Walker, & Co.,** Spanish Leather and Glue Manufacturers, Sheepscar Works, Leeds. Coloured fancy leather for bookbinders, pocket-book makers, hatters and upholsterer's Chamois (or oil leather), and Calf, Kid, with sundry other goods used by the boot trade, also glue. (889)
Exhibitors, London, 1851, 1862 (Bronze Medals); *Paris*, 1855 (Bronze Medal); 1867 (Silver Medal).

Cl. **652.** **Sands Bros. & Co.** See Cl. 202.

Cl. **652.** **Kent, George Barton, & Co.** See Cl. 286.

Cl. **652.** **Elrick, Charles Gray.** See Cl. 286.

Cl. **652.** **Edinburgh Western Tanning, Currying, and Japanning Company, The Limited,** 135 and 141, West Port, Edinburgh. Dressed Pigskins and Brown Leathers for Saddlers' Use. (890)

Cl. **652.** **Hooper, Cleeve, W., & Co.,** 51 to 55, Weston Street, Bermondsey, London, S.E. Tanning Materials, and various Articles used in the Manufacture of Leather; also Samples of Leathers. (891)

Cl. **652.** **Angus, G., & Co.,** 10, Thomas Street, Liverpool, and St. John's Leather Works, Newcastle-on-Tyne. English Sole Leather. (892)

Cl. **623, 656.** **Menier, Emile,** Chocolate Maker, Southwark Street and Worcester Street, Boro', London, S.E. Chocolates and Cocoas. (893)
Exhibitor, London, 1851, 1862; *Paris*, 1855, 1867; *Vienna*, 1873.

Turner, Reuben Panther, Homœopathic Chemist and Cocoa Manufacturer, &c., 7, Market Place, Peterborough. Food for infants, Cocoas, Chocolates, &c. (894) Cl. **656, 623.**

Fry, Joseph Storrs, & Sons, Chocolate and Cocoa Manufacturers, 12, Union Street, Bristol, and 252, City Road, London, E.C. Chocolate and cocoa, and specimens illustrative of the process of manufacture. (895) Cl. **656, 623.**
Exhibitors, London, 1851, 1862; *New York*, 1853; *Paris*, 1855; *Dublin*, 1865, 1872. (Bronze Medals.) *Paris*, 1867 (Silver Medal); *Moscow*, 1872 (Bronze Medal); *Vienna*, 1873 (Medal for Progress).

Ball, James, Italian Warehouseman, 12, Duke Street, Grosvenor Square, London. W. "The Genuine Qui-Hi Sauce." (896) Cl. **656, 203.**

Crosse & Blackwell, Purveyors to Her Majesty, Manufacturers of Pickles, Sauces, Malt Vinegar, Jams, Soups, and Preserved Provisions, Soho Square and Brewery Road, London, and Morrison's Quay, Cork, Ireland. Pickles; Sauces for Fish, Meat, &c.; Malt Vinegar and Flavoured Vinegars; Jams and Jellies, Calvesfoot, &c.; Marmalade, Orange and Apricot; Potted and Preserved Meats; Preserved Fruits, Soups, and Fish; Oils for Salads, &c.; Essences for Flavouring, &c. Preserved Provisions, Sausages, Vegetables, &c. (897) Cl. **656, 660, 662 203.**
Exhibitors, Paris, 1867 (Three Prize Medals); *Vienna*, 1873 (Two Prize Medals).

Geyelin & Co., Concentrated Food Manufacturers, Argyle Square, London, W.C. Concentrated animal and vegetable food, either combined or separate. (898) Cl. **656.**
Exhibitors, London, 1870 (Silver Medal); 1873; *Vienna*, 1873 (Diploma of Merit); *Marseilles*, 1874. *Norwich, Glasgow, Brighton, Birmingham, Manchester, Croydon, Portsmouth.*

Goodall, Backhouse, & Co., Wholesale Druggists, Drysalters, &c., Leeds. Goodall's Yorkshire Relish (Sauce), Goodall's Orange Quinine Wine, Goodall's Baking Powder, Dr. Hassall's Food for Infants and Invalids. (899) Cl. **656, 200, 203 273.**
Exhibitors, Vienna, 1873 (Diploma of Merit); *London*, 1874 (Medal); *Paris Maritime Exhibition*, 1875 (Two Medals); *Leeds* (Medal).

(Cl. 656, 200.

Ledger, H., & Co., Merchants, 61 and 63, Lant Street, Borough, London, S.E. Pure Extract of Meat; The Universal Disinfecting Fluid. (900)

(Cl. 656, 273.

Mellin, Gustav, Chemist, 16, Tichborne Street, Regent Street, London, W. A non-farinaceous food for infants and invalids, prepared from wheaten flour, malt, and potash, by Professor Liebig's process; this process transforms the starch into grape sugar, and dextrin, which after evaporation results in a dry granular powder consisting principally of grape sugar, dextrin, and assimilable constituents, rich in nitrogen and phosphoric acid. (901)

(Cl. 656, 660, 285.

Nicoll, Donald, 15, Clement's Inn, London, W.C. Starch and compounds, rendering fabrics and timber uninflammable. Tea and coffee combined with milk and sugar, contained in soluble capsules or cases of isinglass and gelatine for distribution in single cups, &c. Aërated beverages in vessels to allow rapid distribution, in single draughts. Carbon combined with caoutchouc, prepared for the preservation of the surfaces of wood and iron, and to resist the action of percussion force. Preserved food, containing meat, vegetables, and condiments, in suitable vessels. (902)

Exhibitor, Paris, 1867 (Hon. Mention); *Moscow,* 1872 (Grand Gold Medal); *Vienna,* 1873 (Medal for Merit); *London,* 1871, 1872 (Certificate for Scientific Inventions); *National Association, England,* 1873 (Certificate of Merit, Sanitary and Educational). Awarded for the manufactures of Donald Nicoll.

(Cl. 656, 203.

Patchitt, Edwin Cheshire, Pickle and Sauce Manufacturers, Ilkeston Road, Nottingham. Pickles, Nottinghamshire Sauces, Anchovy and Bloater Paste. (903)

Exhibitor, Dublin, 1865; *Paris,* 1867; *London,* 1873.

Cl. 656, 203.

Pratt, James, 227, Oxford Street, London, W. "National Sauce." (904)

Exhibitor, London, 1873 (Medal).

Cl. 656, 273.

Schneider, Edward Albert, Cook, 4, Cambria Villa, Chesterton Road. Liquid Essence of Beef. (905)

Exhibitor, International Workman's Exhibition, London, 1870 (Silver Medal).

Cl. 656, 660, 200, 203.

Smith, T. & H., & Co., Manufacturing Chemists, 21, Duke Street, Edinburgh. Essences of Coffee, and Coffee with Chicory; Flavouring essences, and Aërated waters; Morphine salts, Alkaloids, Resins, Chloroform, Opium products, and Chemical products. (906)

Exhibitors, London, 1851, 1862 (Bronze Medals); *New York,* 1853 (Bronze Medal); *Paris,* 1855 (Bronze Medal); 1867 (Silver Medal); *Vienna,* 1873 (Medal for Progress).

Cl. 656, 657.

Keen, Robinson, Bellville, & Co., Manufacturers of Keen's Mustards, Robinson's Patent Barley and Patent Groats, Scotch Oatmeal, Pearl Barley, 6, Garlick Hill, Cannon Street, London, E.C., 64, Red Lion Street, Holborn, London, W.C. Factory established A.D. 1742. Preparations from mustard, barley, oats, &c. (907)

Exhibitors, London, 1862 (Prize Medal); *Dublin,* 1865 (Prize Medal); *Paris,* 1867 (Prize Medal); *Académie Nationale,* 1872 (Gold Medal); 1874 (Diplome d'Honneur); *Moscow,* 1872 (Grand Gold Medal).

Cl. 656, 200, 203.

Jones, Palmer, & Co., Condiment Manufacturers, "The Eastern" Works, Tabernacle Walk, Finsbury, London, E.C. The Eastern condiments, sauces, baking, custard, curry powders, &c., in boxes and packets. (908)

Cl. 656, 659, 200.

Allen, Frederick, & Sons, Manufacturing Confectioners, Canal Road, Mile End Road, London, E. Manufactured confectionery; Medicated Lozenges, Jujubes, Effervescing Citrate of Magnesia, Table Jellies, Pontefract Liquorice in Cakes, Rolls, and Pipes; Confectionery in Fancy Packets, &c. (909)

Exhibitors, London, 1873 (Medal).

Cl. 656, 660, 203.

Cantrell & Cochrane, Aërated and Mineral Water Manufacturers (by Royal Letters Patent), Nassau Place, Dublin, and Cromac Building, Belfast, Ireland. Ginger Ale (Aromatic) and Aërated Beverages (suited to all climates) such as Lemonade, Sarsaparilla, Dandelion, Quinine, Lime Juice, and Lime Juice Syrup; also, Mineral Waters, Seltzer, Potash (Kali), Soda, Lithia, &c. &c. (910)

Exhibitors, Dublin, 1872 (Medal); *Vienna,* 1873 (Diploma of Merit); *Paris Maritime Exhibition,* 1875 (Gold Medal).

Cl. 656, 660, 203. **Corry, William, & Co.,** Aërated Water Manufacturers, Cromac Springs, Cromac Street, Belfast, Ireland. Samples of Pure Aërated Waters, all prepared by them from the limpid waters of their celebrated Cromac Springs at Belfast. The samples of Aërated Waters comprise Ginger Ale, Lemonade, Aërated Quinine, Aromatic Tonic, Soda Water, Potass or Kali Water, Sarsaparilla, Summer and Winter Beverages, Cromac Seltzer Water, Fruit Nectar, Lithia, Carrara, and Carbonated Cromac Waters. They also exhibit samples of the Patent non-Metallic Valves, Plungers, Connexions, Taps, and Cylinder Lining, as employed in their apparatus. (911)

Exhibitors, Workman's Exhibition, 1870 (Certificate of Merit); *London*, 1873 (Medal); *Paris Maritime Exhibition*, 1875 (Gold Medal).

Cl. 656, 660, 203. **Codd, Hiram,** Patentee and Mineral Water Manufacturer, 50, Grove Lane, Camberwell, London, S.E. (912)

Cl. 656, 660. **Grant, Thomas,** The Distillery, Maidstone. Grant's Morella Cherry Brandy. (913)

Exhibitor, London, 1873 (Gold Medal).

Cl. 656, 660, 203. **Inman Brothers,** Manufacturers of Aërated Waters, Aspley Place, Huddersfield, Yorkshire. Aërated waters. (914)

Cl. 656, 203, 660. **Bewley and Draper,** 23, Mary Street, Dublin. Aërated Waters as Beverages, and in imitation of Natural Mineral Waters; Soda, Seltzer, Kali, and Lithia Waters; Lemonade, Ginger Beer, and Ginger Ale. (915)

Exhibitors, Dublin, 1865, 1872 (Prize Medals); *Vienna*, 1873 (Diploma of Merit).

Cl. 656, 660, 203, 200. **Maw, Thomas,** Pickle and Sauce Manufacturer, and Confectioner, Windsor Place, Burmantofts, Leeds. Pickles, Sauces, Lozenges, Syrups, Vinegars, &c. Baking Powder. (916)

Cl. 656, 203. **Lea & Perrins,** Sauce Manufacturers, Worcester. Worcestershire Sauce. (917)

Exhibitors, New-York, 1853 (Medal).

Cl. 656. **Mackay, John.** See Cl. 202, 203.

Cl. 656. **Cliff, J.,** 5, Dungeon Street, Halifax, Yorkshire. Sauces. (918)

Cl. 657. **Hunter, John, and Son,** Manufacturers of Oatmeal and Pot Barley, Woodhall Mills, Juniper Green, near Edinburgh. Round, Medium, and Fine Oatmeal; Pot Barley, Nos. 1, 2, 3. (919)

Cl. 657. **McCann, John,** Miller and Corn Merchant, Beamond Mills, Drogheda; Office, 58, Middle Abbey Street, Dublin. XX Oatmeal, Fine Oatmeal, and Groats. (920)

Exhibitor, London, 1851.

Cl. 657, 660. **Plunkett, John, & Co.,** Maltsters and Patent Malt Manufacturers, Portland Works, Portland Street West, Dublin. Pale Malt for Brewing and Distilling, and Patent Roasted Malt for colouring and flavouring Porter and Ale. (921)

Exhibitors, Dublin, 1872 (Medal for Excellence); *Vienna*, 1873 (Medal for Progress); *London*, 1873 (Medal).

Cl. 657, 200. **Powell, Thomas,** Self-raising Flour Manufacturer, 81, High Street, St. Marylebone, London, N.W. Self-raising flour, recommended for purity, excellence, and economy in making bread without yeast, and cakes and pastry with less butter and eggs; baking powder. (922)

Exhibitor, London, 1873 (Medal); *Paris*, 1875 (Medal).

Cl. 659, 661. **Stevens, Thomas,** Cook and Confectioner, 46, Hope Street, Wrexham, N. Wales. Ornamental Confectionery. Birthday and Christening Cakes, Meringues, Medallions, Ornamental Sugar Stand. Rich Cake. (923)

Cl. 660. **Burke, Edward and John,** Wine, Spirit, and Foreign Export Merchants, Dublin, Liverpool, and 40, Beaver Street New York. English Ales, Dublin Stout, Irish and Scotch Whiskies. (924)

Cl. 660, 673. **Johnston Still Company** (Limited), Manufacturers of Distilling Apparatus, Rye Vale Distillery, Leixlip, near Dublin. Samples of Irish and Scotch whiskies, made by the Improved "Johnston Still," by which the acetic and other ethers, and fusil oils are separated from whiskies and other spirits, rendering them fit for consumption as soon as distilled, and thus obviating the necessity of storage. Model and drawings of the Improved "Johnston Still." (925)

Cl. 660. **Ind, Coope, & Co.,** Brewers, Burton-on-Trent, Staffordshire. Ale in casks and bottles. (926)

Cl. 660. **Bindley & Co.,** Brewers, Burton-on-Trent. Burton Ales; Export Pale, Strong, and Mild Ales in wood and bottle. (927)

Cl. 660. **Wright, Herbert, & Co.,** Diamond Brewery, Dover. Export Pale Ale in bulk and bottled. Pale Ale bottled for export to hot climates. Bottled Stout. (928)

Cl. 660. **Johnson & Co.,** Export Brewers, Canterbury. Pale Ale in bottle, for export, specially adapted to hot climates (Brewed and Fermented by Special Processes, preserving its brilliancy and condition, unaltered by time or temperature). (929)
Paris Maritime Exhibition, 1875 (Gold Medal).

Cl. 660. **Mott & Co.,** Wine Merchants and Cowslip Wine Makers, 18, Galltree Gate, Leicester. Leicestershire Cowslip Wine in bottles. (930)
Exhibitors, London, 1873 (Medal).

Cl. 660. **Pendock Brothers,** Cider Growers and Cider and Perry Merchants, Queen Street Wharf, Bristol. Devonshire Cider and Herefordshire Perry; prepared especially for export. (931)
Exhibitors, London, 1873 (Medal).

Cl. 660. **Muir, Jas., & Son,** Calton Hill Brewery, Edinburgh. I. Strong Scotch Ale (brewed specially for the United States Market). II. Pale India Ale. Both qualities in bottle. (932)

Cl. 660. **Richardson, Earp, & Slater,** Trent and Northgate Brewery, Newark-upon-Trent. Ale in Cask. (933)

Cl. 660. **Parkinson, Bros.** See Cl. 200.

Cl. 660. **Wyndham, F., & Co.** See Cl. 200.

Cl. 660. **Bernard & Co.,** The Distillery, Leith, Scotland. Quart Bottle of Whiskey before Fusel Oil is extracted; Quart Bottle of Whiskey after Fusel Oil is extracted; Quart Bottle of Fusel Oil. (934)

Cl. 660. **Cork Distilleries Co.,** Cork, Irish Whiskey. (935)

Cl. 661, 200. **Gissing, Anthony S., & Sons,** Biscuit Bakers and Baking Powder Manufacturers, Castle Street, Eye, Suffolk. "East Anglian," "Hand-made," "Ne Plus Ultra" Fancy Biscuits; Baking Powder. (936)
Exhibitors, London, 1873 (Medal).

TEXTILE SUBSTANCES OF VEGETABLE OR ANIMAL ORIGIN.

Class 665.—Cotton on the stem, in the boll, ginned, and baled.
Class 666.—Hemp, flax, jute, ramie, etc., in primitive forms, and in all stages of preparation for spinning.
Class 667.—Wool in the fleece, carded and in bales.
Class 668.—Silk in the cocoon and reeled.
Class 669.—Hairs, bristles.

Cl. 665, 666, 667, 668, 669. **Dickson, James Hill, and Nephews** Mechanical Engineers, Patentees, and Proprietors of the Rheea Fibre Works, Godalming, Surrey. Rheea in the rod and in every stage up to final finish. Yarn and woven cloth made from the Indian Rheea fibre alone, and also Yarn and Cloth mixed with Silk, Worsted, Alpaca, Mohair, and Cotton; also Damask Table Cloth made from Rheea Fibre; Rope and Canvas Plantain, Pine Apple, and Aloe fibres, spun and woven; Irish and English Flax in all stages; Work by J. Hill Dickson on the improved method of cultivating flax and hemp, and the science and art of spinning and weaving, illustrated with specimens. (950)
Exhibitors, Leeds, 1858.

Cl. 665. **Ashworth, Edmund, & Sons.** See Cl. 230.

Cl. 667. **The Mill Hill Wool and Rag Extracting Company** (Limited), Extractors of Wool and Rags, Mill Hill Works, Huddersfield. Wools for manufacturing purposes made from old rags and other descriptions of refuse, by a new patent process, whereby the wool is prepared for manufacture without injury to the fibre and without the slightest

damaging effect upon the dyeing or milling properties. (951)

Paris Maritime Exhibition, 1875 (Silver Medal).

Cl. **667.** **Smith, David, & Co.** (Limited), Wool Extractors and Merchants, Kensington Works, Halifax, Yorkshire. Variety of Wools cleaned; also variety of Wools extracted from Waste products, as burrs, &c., by Chemical process. (952)

Exhibitors, Exposicion Nacional Argentina held at Cordova 1871 (Bronze Medal, First Prize); *Paris Maritime Exhibition*, 1875 (Silver Medal).

Bowes, John L., & Bro., Wool Brokers, 11, Dale Street, Liverpool, & 20, Basinghall Street, London, E.C. Raw materials used in the woollen and worsted trade. (953) Cl. **667.**

Exhibitors, Vienna, 1873.

MACHINES, IMPLEMENTS, AND PROCESSES OF MANUFACTURE.

Class 670.—Tillage.—Manual implements, spades, hoes, rakes. Animal power machinery, ploughs, cultivators, horse-hoes, clod crushers, rollers, harrows. Steam power machinery, ploughs, breakers, harrows, cultivators.

Class 671.—Planting.—Manual implements, corn planters, and hand-drills. Animal power machinery, grain and manure drills, corn and cotton planters. Steam power machinery, grain, and manure drills.

Class 672.—Harvesting.—Manual implements; grain-cradles, sickles, reaping hooks. Animal power machinery, reapers and headers. Mowers, tedders, rakes, hay elevators, and hay loaders.

Potato diggers.

Class 673.—Preparatory to marketing.—Thrashers, clover-hullers, corn-shellers, winnowers, hay, cotton, wine, oil and sugar making apparatus.

Class 674.—Applicable to farm economy.—Portable an stationary engines, chaffers, hay and feed-cutters, slicers, pulpers, corn mills, farm boilers and steamers, incubators.

Class 675.—Dairy fittings and appliances.—Churns for hand and power, butter-workers, cans and pails, cheese-presses, vats, and apparatus.

Cl. **670, 673, 674, 683, 560.** **Fison, J. P.,** Agricultural Engineer, Teversham Works, Cambridge. Agricultural machinery: Improved Combined Vertical Steam Engine and Boiler, 2-Horse Power; Improved Chaff-Cutter; 4-Inch Centrifugal Pump; Steam Thrashing Machine fitted with Patent Combined Guard and Feeder—this apparatus obtained the first Special Prize of the Royal Agricultural Society of England at Taunton 1875; General Purpose Chain Harrow. Models: Portable Steam Engine; Moveable Hut—one full size obtained the First Prize of the Royal Agricultural Society at Bedford 1874; Centrifugal Pump; Double Furrow Plough—the full sized implement gained the First Prize at Newmarket 1873; Improved Single Furrow Plough. (960)

Cl. **670, 672.** **Fussell, James, Sons, & Co.,** Edge Tool Manufacturers, Mell's Iron Works, near Frome, Somersetshire. Edge Tools used in Agriculture. (961)

Wills, Arthur Winkler (late Walter Allcock), Edge Tool Manufacturer, Park Mills, Nechells, Birmingham. Hoes, Axes, and other implements comprised under the general term of "Edge Tools." "Trade Mark, a Hand." (962) Cl. **670, 280.**

Exhibitor, Vienna, 1873 (Medal for Merit).

Wilkinson, William, and Sons, Spring Works, Grimesthorpe, Sheffield. Sheep and Garden Shears. (963) Cl. **670, 672, 720.**

Exhibitors, London, 1851, 1862 (the only Prize Medals for Sheep Shears).

Sainty, John, & Barnard, Agricultural and Horticultural Engineers, Alpha Machine Works, Wisbeach, Cambridgeshire. Apparatus for preventing the loss of life by water under any circumstances, by night or day. Self-feeding, sacking, drying, and dressing machine from the heap, to enable two men to do 100 bushels per hour; Machine for separating grain from seeds of any kind, also wheat from Cl. **673, 674, 594.**

barley or oats, self-feeding,—one man can separate 50 bushels per hour. (964)

Cl. **673, 674, 228, 322.** **Corcoran, Witt, & Co.,** Mill Furnishers, Millwrights, and Wire Weavers, 26, 27, 28, Market Buildings, 28, Mark Lane, London, E.C., and Epernon, Eure et Loire, France. Samples of French Burr and Derbyshire Peak stones for shelling rice. French Burr millstones, for grinding wheat, corn, &c.; mill bills and handles for dressing and furrowing millstones; woven iron wire for rice cleaning, mining purposes, sieves, &c.; woven wires for paper-making, woven wire for malt kiln floors, and for corn drying; stones for shelling and whitening rice. Chrondometer, or corn weighing apparatus, to enable anyone to tell the exact weight of a bushel of corn or seeds of any kind, from a sample of a quarter of a pint to one pint, made with scales for all nations. (965)

Exhibitors, London, 1851 (Medal and Hon. Mention); *Paris*, 1855 (Prize Medal and two Hon. Mentions); *Leicester*, 1868 (Prize Medal); *Moscow*, 1872 (Grand Gold Medal).

Lloyd, T., & Sons, Steel Mill Makers. 327, Old Street, Shoreditch, London, E. Flour mills and dressing machines to grind and dress wheat into flour at one operation by hand. Indian corn or maize, and universal grinding mill. Coffee Mills. (966) Cl. **673, 674.**

Société d'Agriculture Boulogne-sur-Mer, 1856, 1857; *Amsterdam*, 1857; *Vienna*, 1857. (Silver Medals.)

Clarke & Dunham, Millstone and Flour Mill Machinery Factors, 69, Mark Lane, London, E.C. Millstones, chrondometers for measuring and weighing grain, and lubricators. (967) Cl. **674, 322, 573.**

Kay & Hilton, Millstone and Grindstone Manufactures, Liverpool, England One pair French burr Millstones, finest quality, for Wheat grinding. Grindstones, &c. (968) Cl. **674.**

Davey, Paxman, & Co. See Cl. 550, 552. Cl. **674.**

Ransomes, Sims, & Head. See Cl. 550, 552. Cl. **674.**

AGRICULTURAL ENGINEERING AND ADMINISTRATION.

Class 680.—Laying out and improving farms.—Clearing, (stump extractors,) construction of roads, draining, irrigating, models of fences, gates, drains, outfalls, dams, embankments, irrigating machinery, stack building, and thatching.

Class 681.—Commercial fertilizers,—phosphatic, ammoniacal, calcareous, etc.

Class 682.—Transportation.—Waggons, carts, sleds, harness, yokes, traction engines, and apparatus for road making and excavating.

Class 683.—Farm buildings.—Models and drawings of farmhouses and tenements, barns, stables, hop-houses, fruit-driers, ice-houses, windmills, granaries, barracks, apiaries, cocooneries, aviaries, abattoirs, and dairies.

Cl. **681.** **Universal Charcoal and Sewage Company** (Limited), 5, High Street, Manchester. Charcoals of various sorts, and charcoal manure, Illustrating the utilisation of town's Refuse. (980)

Cl. **682.** **Smith, William, & Sons,** Patent Road Scraper and Brushing Machine Manufacturers, Agricultural Implement Makers, and Iron Founders, Barnard Castle, County Durham. Patent Street Sweeper and Road Scraper. (981)

Aveling & Porter, Engineers, Rochester, Kent, and 72, Cannon Street, London, E.C.; 9, Avenue Montaigne, Paris; Agent in New York, W. C. Oastler, 43, Exchange Place. Agricultural Locomotive Engine, for general farm work, Locomotive Crane Engine for ordinary roads, Steam Road Roller, Waggons for Road Locomotive Engines. (982) Cl. **682 670.**

Exhibitors, Mecklenberg-Schwerin, 1861 (Gold Medal); *London*, 1862 (Bronze Medal); *Hamburg*, 1863 (Silver Medal); *Odense*, 1863

(Silver Medal); *Königsberg*, 1863 (Silver Medal); *Paris*, 1867 (Silver Medal); *Brussels*, 1868 (Gold Medal); *Amiens*, 1868 (Gold Medal); *Compiegne*, 1868 (Gold Medal); *Moulins*, 1869 (Gold Medal); *Beauvais*, 1869 (Two Gold Medals); *Royal Agricultural Society of England*, 1869 (Silver Medal); *Lille*, 1870 (Three Gold Medals, and large Special Gold Medal, Bronze Medal, and 500 francs); *Royal Agricultural Society of England*, 1871 (Silver Medal); *Albany, United States*, 1871 (Bronze Medal); *New Jersey*, 1871 (Gold Medal); *Royal Agricultural Society of England*, 1872 (50*l.* and 20*l.*); *Lyons*, 1872 (Diploma of Honour and Gold Medal); *Vienna*, 1873 (Order of Franz Joseph and Medal for Progress); *Lille*, 1874 (Gold Medal); *Nesle*, 1874 (Gold Medal); *Nantes*, 1874 (Gold Medal); *Soissons*, 1874 (Gold Medal, large special); *Brussels*, 1874 (Gold Medal and Two Silver Medals); *Ayr*, 1874 (Bronze Medal); *Royal Agricultural Society of England*, 1874 (10*l.*).

Munroe, William, Architect, Inverness, Models and drawings of Farm Steadings and Cottages. Models of ancient Highland Cart, and of an ancient Shetland Plough. (983) *Exhibitor, London*, 1851, 1862; *Paris*, 1867. — Cl. **670, 682.**

Lovey, Edward, Artist, Ponsnooth, Perran-ar worthal, Cornwall. Beehives (with samples of honey and wax). (984) *Exhibitor, London*, 1862 (Hon. Mention); *Paris*, 1867 (Medal); *Vienna*, 1873 (Diploma of Merit). — Cl. **683, 654.**

Neighbour, G., & Sons, Apiarians, 149, Regent Street, London, W., and 127, High Holborn, London, W.C. Beehives and bee furniture. (985) — Cl. **683.**

Brown, J. B., & Co. See Cl. 228. — Cl. **683.**

TILLAGE AND GENERAL MANAGEMENT.

Class 690.—Systems of planting and cultivation.
Class 691.—Systems of draining and application of manures.
Class 692.—Systems of breeding and stock feeding.

DEPARTMENT VII.—HORTICULTURE.

Location :—Horticultural Building.

ORNAMENTAL TREES, SHRUBS, AND FLOWERS.

Class 700.—Ornamental trees and shrubs, evergreens.
Class 701.—Herbaceous perennial plants.
Class 702.—Bulbous and tuberous-rooted plants.
Class 703.—Decorative and ornamental foliage plants.
Class 704.—Annuals and other soft-wooded plants, to be exhibited in successive periods during the season.
Class 705.—Roses.
Class 706.—Cactaceæ.
Class 707.—Ferns, their management in the open air, and in ferneries, Wardian cases, etc.
Class 708.—New plants with statement of their origin.
Class 709.—Floral designs, etc. Cut flowers, bouquets, preserved flowers, leaves, seaweeds. Illustrations of plants and flowers. Materials for floral designs. Bouquet materials, bouquet holders, bouquet papers, models of fruits, vegetables, and flowers.

HOTHOUSES, CONSERVATORIES, GRAPERIES, AND THEIR MANAGEMENT.

Class 710.—Hothouse and conservatory plants.
Class 711.—Fruit trees under glass.
Class 712.—Orchids and parasitic plants.
Class 713.—Forcing and propagation of plants.
Class 714.—Aquatic plants under glass, or in aquaria, etc.
Class 715.—Horticultural buildings, propagation houses hot-beds, etc., and modes of heating them. Structures for propagating and forcing small fruits.
Class 716.—Portable or moveable orchard houses and graperies, without artificial heat. Frames, beds.

Cl. **708, 700.** **Veitch, James, & Sons,** Royal Exotic Nursery, King's Road, Chelsea, London, S.W. and Coombe Wood, Kingston Hill, Surrey. Collection of choice Coniferæ, including Taxads, Rhododendrons, Hollies. A small collection of *New* and *Rare* Hardy Evergreen Shrubs. (990)

Cl. **700.** **Waterer, Anthony,** Knap Hill Nursery, Woking, Surrey. Exhibition of Rhododendrons and Azaleas in the Special Tent. (991)

Williams, Benjamin Samuel, Victoria and Paradise Nurseries, Upper Holloway, London, N. Set of Books. Miscellaneous collection of new and rare plants. (992) Cl. **708, 306.**

Exhibitor, London, 1866; *Ghent,* 1873; *Manchester,* 1874; *Antwerp,* 1875; *Edinburgh,* 1875; *Cologne,* 1875 (Awarded the Prize of Honour given by their Imperial Highnesses the Crown Prince and Princess of Prussia).

GARDEN TOOLS, ACCESSORIES OF GARDENING.

Class 720.—Tools and implements. Machines for the transplanting of trees, shrubs, etc. Portable forcing pumps, for watering plants in green houses, and methods of watering the garden and lawn.

Class 721.—Receptacles for plants.—Flower pots, plant boxes, tubs, fern cases, jardinieres, etc. Window gardening. Plant and flower stands, ornate designs, in iron, wood, and wire.

Class 722.—Ornamental wire work; viz., fences, gates, trellis bordering of flower beds, porches. Park seats, chairs, garden statuary, vases, fountains, etc. Designations, labels, numbers.

Cl. **720.** **Wilkinson, William, & Sons.** See Cl. 670, 672.

Cl. **722.** **Barnard, Bishop, & Barnard.** See Cl. 217, 222, 225, 228, 443, 720.

GARDEN DESIGNING, CONSTRUCTION, AND MANAGEMENT.

Class 730.—Laying out gardens,—designs for the laying out of gardens, and the improvement of private residences. Designs for commercial gardens, nurseries, graperies. Designs for the parterre.

Class 731.—Treatment of water for ornamental purposes, cascades, fountains, reservoirs, lakes.

Class 732.—Formation and after treatment of lawns.

Class 733.—Garden construction, buildings, etc.—Rock work, grottoes. Rustic constructions and adornments for private gardens and public grounds.

Class 734.—Planting, fertilising, and cultivating.

SUBJECT INDEX OF CONTRIBUTIONS BY BRITISH EXHIBITORS TO THE PHILADELPHIA INTERNATIONAL EXHIBITION OF 1876, TOGETHER WITH THE NAMES AND ADDRESSES OF THE MANUFACTURERS AND PRODUCERS.

Object, and Name of Exhibitor.	Address of Exhibitor.
AËRATED WATERS AND AËRATED WATER MACHINERY.	
Bewley & Draper	23, Mary Street - Dublin.
Cantrell & Cochrane	Cromac-buildings - Belfast and Dublin.
Corry & Co.	Cromac Springs, Cromac-street - Belfast.
Inman Bros.	Aspley-place - Huddersfield.
Nicoll, D.	15, Clement's Inn - London.
Smith, T. and H., & Co.	21, Duke-street - Edinburgh.
AGRICULTURAL IMPLEMENTS, APPLIANCES, AND TOOLS (Miscellaneous).	
Clarke & Dunham	69, Mark-lane - London.
Corcoran, Witt, & Co.	28, Market-buildings, Mark-lane - London.
Davey, Paxman, & Co.	- - - - Colchester, Essex.
Dunston Engine Works Co.	- - - - Gateshead-on-Tyne.
Fison, J. P.	Feversham Works - Cambridge.
Fussell, J., Sons, & Co.	- - - - Frome, Somerset.
Smith, W., & Sons	Barnard Castle - Durham.
AGRICULTURAL PRODUCE.	
Hunter, J., & Sons	Wood Hall Mills, Juniper-green near Edinburgh.
McCann, J.	Beamond Mills - Drogheda, Ireland.
Usher, R.	- - - - Bodicote, near Banbury, Oxfordshire.
AIR BLOWING MACHINERY.	
Ellis, W. I.	66, Murray-street - Higher Broughton, Manchester.
AIR COMPRESSORS.	
Holmes, Payton, & Taylor	43, Borough-road - Southwark, London.
Hurd, F., & Co.	Wood Street - Wakefield.
AIR PUMPS.	
Wier, M. A.	33, Abchurch-lane - London.
ALE, PORTER, STOUT, AND BEER OF ALL KINDS.	
Bindley & Co.	The Brewery - Burton-on-Trent.
Ind, Coope, & Co.	- - - - Burton-on-Trent.
Johnson & Co.	- - - - Canterbury.
Wright, H., & Co.	Maxton Brewery - near Dover, Kent.
ALUM.	
Spence, P.	Pendleton Works, Oldham-road - Manchester.

Object, and Name of Exhibitor.	Address of Exhibitor.
AMMUNITION.	
Copeland, G. A.	Camborne, Cornwall.
Eley Bros., Limited	254, Gray's Inn-road — London.
Pigou, Wilks, & Laurence, Limited	11, Queen Victoria-street — London.
ANCHORS.	
Martin, C.	73 and 74, King William-street — London.
ARCHITECTURAL PLANS, DESIGNS, AND DRAWINGS.	
Cochrane, R., C.E.	Athlone, Ireland.
Fogerty, W., F.R.S.	23, Harcourt-street — Dublin.
Francis & Co.	Bridge Foot, Vauxhall — London.
Greenway, H.	Ham-street — Plymouth.
Hall, H. E.	44, Kingsland Park — Dublin.
Munroe, W.	High-steet, Wick — Caithness, Scotland.
Nicholl, S. J.	1, Caversham-road, Kentish Town — London.
ARMOUR PLATES, BOLTS, SCREWS.	
Brown, John, & Co., Limited	Atlas Works — Sheffield.
Cammell, C., & Co., Limited	Cyclops Works — Sheffield.
ARTIFICIAL LIMBS AND TEETH, DENTAL INSTRUMENTS, &c.	
Patrick, H. W., & Son	22, St. Luke's Street, Stockbrook-street — Derby.
ARTILLERY.	
Hewitt, W.	Prospect Villa, Sydenham Hill — Bristol.
ARTISTS' COLOURS AND MATERIALS.	
Culmer, W., & Son	Hornsey-road — London.
Rowney, G., & Co.	52, Rathbone-place — London.
Storer, D., & Sons	Sydney-street — Glasgow.
ASSAY APPARATUS.	
Johnson, Matthey, & Co.	78, Hatton-garden — London.
Patent Plumbago Crucible Company	Battersea Works — London.
ASTRONOMICAL INSTRUMENTS.	
Adams, W. M.	Arundel Club, Salisbury-street, Strand London.
Dallmeyer, J. H.	19, Bloomsbury-street — London.
BAROMETERS, THERMOMETERS, &c.	
Beck, R. & J.	31, Cornhill — London.
Hicks, J. J.	8, Hatton-garden — London.
Negretti & Zambra	Holborn Viaduct — London.

Object, and Name of Exhibitor.	Address of Exhibitor.
BARRACK FURNITURE.	
Turner, G., & Co.	94, Gracechurch-street - London.
Wethered, E. R., Major, R.A.	- Woolwich, Kent.
BATHS.	
Thornton, E.	12, Richmond-road - Bradford.
BEEHIVES.	
Lovey, E.	Ponsnooth, Perran-ar-worthal, Cornwall.
Neighbour, G., & Sons	149, Regent-street - London.
BISCUITS.	
Gissing, A. S., & Sons	Castle-street - Eye, Suffolk.
BLOCKS FOR WOOD ENGRAVING.	
Scott, R. J.	8, Whitefriars-street, Fleet-street - London.
BOATS, AND BOAT LOWERING APPARATUS.	
Bradford, W. H.	Great Saughall, near Chester.
Hill & Clark	6, Westminster-chambers, Victoria-street - London.
Logan, J. M.	Chesterton-road - Cambridge.
Roby, G.	31, King-street - Wigan.
BOILERS, BOILER PLATES, TUBES, FEED PUMPS, &c.	
Davey, Paxman, & Co.	Colchester, Essex.
Galloway, W. & J., & Sons	Knott Mill Ironworks - Manchester.
Graham & Co.	Premier Boiler Works, Premier-road Halifax.
Wright, W.	Vulcan Foundry - Coatbridge, Scotland.
BOLTS AND NUTS.	
Adams, R.	25, Falmouth-road, Great Dover-street London.
Patent Nut and Bolt Co., Limited	London Works - near Birmingham.
BOLT FORGING MACHINE.	
Greenwood & Batley	Albion Works - Leeds.
BOOKS, BOOK BINDING, ALBUMS, &c.	
Augener, G., & Co.	86, Newgate-street - London.
Birdsall & Co.	Northampton.
Cassell, Petter, & Galpin	La Belle Sauvage Yard, Ludgate-hill London.
Dickson, J. H., & Nephew	Rheea Rod Fibre Works - Godalming, Surrey.
Dickinson & Higham	73, Farringdon-street - London.
Holdsworth, E. W. H.	12, Clifton-road, St. John's Wood - London.
Johnson, E.	3, Castle-street, Holborn - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
BOOKS, BOOK BINDING, ALBUMS, &c.—*cont.*	
Lockwood & Co.	7, Stationers' Hall-court, Ludgate-hill London.
Loth, J. T., Dr.	18, Gilmore-place - Edinburgh.
Paul, W.	- Waltham Cross, Hertfordshire.
Potts, R.	Trinity College - Cambridge.
Prendergast, T.	Meldon Lodge - Cheltenham.
Smith, D.	Liddal - Halifax.
Sunday School Union	56, Old Bailey - London.
Ward, M., & Co.	67 and 68, Chandos-street, Strand - London.
Warner, R.	8, Crescent, Cripplegate - London.
Williams, B. S.	Victoria and Paradise Nurseries, Upper Holloway - London.
BOOTS, SHOES, ELASTIC WEBS FOR DO., SPURS, &c.	
Baxter, R.	St. James' Green - Thirsk, Yorkshire.
Hale, J., & Co.	Hatherton Works - Walsall.
Hodges, T. W., & Sons	- Leicester.
Lobb, J.	296, Regent-street - London.
Matthews, James	43, Gibson-street, Waterloo-road - London.
Roe, W. A.	81, Humberstone-gate - Leicester.
Simon, May, & Co.	Week-day Cross - Nottingham.
Ullathorne & Co.	- Barnard Castle, Durham.
BORING AND BLASTING TOOLS, AND ACCESSORIES.	
Bickford, Smith, & Co.	Tucking Mill - Cornwall.
Copeland, G. A.	- Camborne, Cornwall.
Pigou, Wilks, & Laurence	11, Queen Victoria-street - London.
BOTTLES.	
Aire & Calder Glass Bottle Co. (E. Breffit, Proprietor)	83, Upper Thames-street - London.
Codd, H.	14, Dunster House, Mark-lane - London.
Kilner Brothers	Great Northern Goods Station, King's Cross - London.
BRASS CASTINGS, SHEETS, TUBES, WIRE, NAILS, SPIKES.	
Baker, C., & Sons	98, Lichfield-street - Birmingham.
Cox & Sons	28, 29, 31, Southampton-street, Strand London.
Keith & Co.	6, Denmark-street, Soho - London.
Matthews, E.	377, Oxford-street - London.
Singer, J. W., & Son	- Frome, Somerset.
BRICKS, BRICKMAKING, TILES, COPINGS, &c.	
Brooke, E., & Sons	Field House - Huddersfield.
Brownhills Pottery Co.	- Tunstall, Staffordshire.

Object, and Name of Exhibitor.	Address of Exhibitor.
BRICKS, BRICKMAKING, TILES, COPINGS, &c.—*cont.*	
Campbell Brick and Tile Company - - - -	- - - - - Stoke-on-Trent.
Cliff, J. - - - -	- - - - - Runcorn, near Liverpool.
Colthurst, Symonds, & Co. -	- - - - - Bridgwater, Somerset.
Eastwood & Co., Limited -	Wellington Wharf, Belvedere-road, Lambeth - - - - London.
Hamblet, J. - - -	Piercy Works - - - West Bromwich, Staffordshire.
Harper & Moores - -	- - - - - Stourbridge.
Holland, W. T. - - -	- - - - - Llanelly, South Wales.
Johnson & Co. - - -	Ditchling Potteries - - - Sussex.
King Brothers - -	- - - - - Stourbridge.
Peake, T. - - - -	The Tileries - - - Tunstall, Staffordshire.
Reynolds, J. G. - - -	9, Old Ford-road - - London.
Stanley Brothers - -	Midland Tile Works - - Nuneaton, Warwickshire.
Stiff, J., & Sons - - -	High-street, Lambeth - - London.
Wood & Ivery - - -	Albion Brick Works - - West Bromwich, Staffordshire.
BRONZE GOODS.	
Phosphor Bronze Company, Limited - - -	139, Cannon-street - - - London.
BRUSHES, COMBS, AND SPONGES.	
Elrick, C. G. - - -	8, Aldermanbury Postern - - London.
Kent, G. B., & Co. - -	11, Great Marlborough-street - London.
Low, Son, & Haydon - -	148 and 330, Strand - - London.
CANDLES, MATCHES, &c.	
Bryant & May - - -	Fairfield Works, Bow - - London.
Field, J. C., & J. - - -	Lambeth Marsh - - - London.
Price's Patent Candle Co. -	Belmont Works, Battersea - - London.
CANDELABRA AND CHANDELIERS.	
Green, J., & Nephew - -	107, Queen Victoria-street - - London.
CARPETS, RUGS, AND CARPET DESIGNS.	
Crossley, J., & Sons, Limited -	Deanclough Mills - - - Halifax.
Gregory & Co. - - -	212, 214, Regent Street - - London.
Henderson & Co. - - -	- - - - - Durham.
Lapworth Brothers - -	22, Old Bond-street - - - London.
Lewis, John - - -	India-buildings - - - Halifax, and 78, Watling-street, London.
Robinson, V., & Co. - -	38, Welbeck-street, Cavendish-square London.
Shoolbred, J., & Co. - -	Tottenham Court-road - - London.
Templeton, J., & Co. - -	William-street - - - Glasgow.
Templeton, J., & J. S. - -	Crownpoint-road - - - Glasgow.
Tomkinson & Adam - -	- - - - - Kidderminster.

Object, and Name of Exhibitor.	Address of Exhibitor.
CARRIAGES, PARTS OF CARRIAGES, AND FITTINGS OF CARRIAGES, CARTS, &c.	
Hooper & Co. - - -	113, Victoria-street, Westminster - London.
McNaught & Smith - -	- - - - - Worcester.
Mulliner, H., & Co. - -	- - - - - Leamington Spa, Warwickshire.
Peters, T., & Sons - -	53, Park-street, Grosvenor-square - London.
Roberts, J. - - -	10, Cavendish-street, Stretford-road Manchester.
Roberts, J., & Sons - -	West of England Carriage Works - Bridgewater.
Thorn, C. - - - -	St. Gile's-gate - - - Norwich.
Windover, C. S. - - -	32, 33, Long Acre - - - London.
CEMENTS, CHALK, LIME, &c.	
Busse, G., & Co. - - -	8, South-street, Finsbury - - London.
Eastwood & Co., Limited -	Wellington Wharf, Belvedere-road, Lambeth - - - London.
Francis & Co. - - -	Bridge Foot, Vauxhall - - London.
Gray's Chalk Quarries Co., Limited - - - -	90, Lower Thames-street - - London.
Holland, W. T. - - -	- - - - - Llanelly, South Wales.
Hollick & Co. - - -	- - - - - Greenwich, London.
Lavers, A. H. - - -	Nine Elms - - - London.
Patent Selenitic Cement Co., Limited - - - -	21½, Millbank-street, Westminster - London.
Wouldham Cement Co. - -	10A, King's Arms-yard, Moorgate-st. - London.
CHEESE.	
Evans & Stafford - -	Campbell-street - - - Leicester.
CHEMICAL AND PHARMACEUTICAL PRODUCTS.	
Allen & Hanburys - -	Plough-court, Lombard-street - London.
Brunner, Mond, & Co. - -	- - - - - Winnington, Northwich, Cheshire.
Calvert, F. C., & Co. - -	- - - - - Bradford, near Manchester.
Chambers, T. F. - - -	51, High Street - - - Hull.
Chance, Brothers, & Co. -	Alkali Works - - near Birmingham.
Desoto Alkali Company, Limited	- - - - - Widnes, Lancashire.
Evans, Lescher, & Evans -	60, Bartholomew Close - - London.
Gaskell, Deacon, & Co. - -	- - - - - Widnes, Lancashire.
Gerrard, A. W. - - -	153, Liverpool-road - - - London.
Greenbank Alkali Company, Limited - - - -	- - - - - St. Helen's, Lancashire.
Hutchinson, J., & Co. - -	- - - - - Widnes, Lancashire.
Jennings, T. - - -	Brookfield Works - - - Cork, Ireland.
Johnson Bros. - - -	High Street - - - Hull.
Kinmond & Co. - - -	Kenilworth-street - - - Leamington, Warwickshire.
Liver Alkali Works Company -	Lightbody Street - - - Liverpool.
Morson, T., & Son - -	31, 33, & 124, Southampton-row, Russell-square - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
CHEMICAL AND PHARMACEUTICAL PRODUCTS—*cont.*	
Muspratt, J., & Sons	5, Chapel-street - Liverpool.
Muspratt, Bros., & Huntley	5, Chapel-street - Liverpool.
Newcastle Chemical Works Co., Limited	- Newcastle-on-Tyne.
Price's Patent Candle Company	Belmont Works, Battersea - London.
Rawlins & Son	Brook Works, Rainhill - Prescot.
Richards, Kearne, & Gasquoine	- Sandbach, Cheshire.
Runcorn Soap and Alkali Co., Limited	6, Water-street - Liverpool.
Smith, T. & H., & Co.	21, Duke-street - Edinburgh.
Weldon, W.	Abbey Lodge - Merton, Surrey.
White, J. & J.	80, Wilson-street - Glasgow.
Wyndham, F., & Co.	37, Eastcheap - London.
Young, J.	- Kelly, Wemyss Bay, Scotland.
CHINA, EARTHENWARE, AND OTHER POTTERY.	
Bailey, W. & J. A.	- Alloa, Scotland.
Bates, Walker, & Co.	Dale Hall Works - Burslem.
Brown-Westhead, Moore, & Co.	Cauldon-place - Staffordshire Potteries.
Brownfield, W., & Son	- Cobridge, Staffordshire.
Brownhills Pottery Company	- Tunstall, Staffordshire.
Craven, Dunnill, & Co., Limited	Jackfield Works - near Ironbridge, Shropshire.
Daniell, A. B., & Son	46, Wigmore-street - London.
Doulton & Watts	Lambeth Pottery, Lambeth - London.
Edwards, John	King-street, Fenton - Staffordshire.
Edwards, J. & Son	Dale Hall Pottery - Burslem.
Gardner, P.	Dunmore Pottery - Stirling, Scotland.
Green, James, & Nephew	107, Queen Victoria-street, City - London.
Holland, W. T.	- Llanelly, South Wales.
Hope and Carter	Burslem - Staffordshire.
Maw & Co.	Benthall Works - Broseley, Shropshire.
Millar, J., & Co.	2, South Saint Andrew-street - Edinburgh.
Minton, Hollins, & Co.	- Stoke-on-Trent.
Powell & Bishop	- Hanley, Staffordshire.
CHRONOMETERS AND CLOCKS, AND WATCH WORK OF ALL KINDS.	
Claxton, R.	65, Middleton-street, Clerkenwell - London.
Del Riego, M.	284, Regent-street - London.
Dent, M. F.	33, Cockspur-street, Charing Cross - London.
Frodsham, C., & Co.	84, Strand - London.
Gibson, W.	Castle-place - Belfast.
Kullberg, V.	105, Liverpool-road, Islington - London.
Mercer, T.	161, Goswell-road - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
CHRONOMETERS, &c.—*cont.*	
MORTON, G. - - -	31, Hanover-street, Islington - London.
NEAL, J. - - - -	44, 46, 48, Edgware-road - - London.
NICOLE, NEILSON, & Co. - -	14, Soho-square - - - London.
POOLE, J., & Co. - - -	33, Spencer-street, Clerkenwell - London.
SEWILL, J. - - - -	20, Cornhill - - - London.
SMITH, BORTHWICK - -	Junction-street - - - Coventry.
WHITTAKER, R. - - -	7, Great Sutton-street, Clerkenwell - London.
CHURCH FURNITURE.	
COX & SONS - - -	28, 29, 31, Southampton-street, Strand - - - - London.
GILL, J. - - - -	66, Regent-street, Lambeth - - London.
HART, SON, PEARD, & Co. - -	Wych-street, Strand - - London.
HEMS, HARRY - - -	69, Paris Street - - - Exeter.
MATTHEWS, E. - - -	377, Oxford-street - - - London.
SINGER, J. W., & SON - -	- - - - - Frome, Somerset.
CLEATS, SELF-ACTING, SAFETY.	
CRUICKSHANK, A. B. - -	5, Reform-street - - - Dundee, Scotland.
CLAY.	
DAVIDSON, T., JUN., & Co. -	33 and 41, Garngad-hill - - Glasgow.
DUNN, R., & Co. - - -	Oak Villa - - - St. Austell, Cornwall.
HARPER & MOORES - -	- - - - - Stourbridge.
KING BROTHERS - - -	- - - - - Stourbridge.
PIKE, W. J. - - -	- - - - - Wareham, Dorsetshire.
REYNOLDS, J. G. - -	9, Old Ford-road - - - London.
CLOTHING.	
DICKSON, J. H., & NEPHEW -	Rheea Rod Fibre Works - - Godalming, Surrey.
FESTA, G. P. - - -	13, Charles-street, Grosvenor-square London.
HITCHCOCK, WILLIAMS, & Co. -	St. Paul's Churchyard - - London.
JONES, P. - - - -	- - - - - Newtown, Montgomeryshire.
MCGEE, J. G., & Co. - -	30, 32, 34, High-street - - Belfast.
MCLINTOCK, J., & SONS - -	Utilitas Works - - - Barnsley, Yorkshire.
SCHREIBER, F. A. - - -	17, Thavies Inn - - - London.
SYKES, JOSEPHINE, & Co. - -	280, Regent-street - - - London.
THOMSON, W. S., & SONS - -	97, Cheapside - - - London.
COAL, COKE, AND OTHER FUEL.	
MARRIOTT, ELIZABETH - -	15, Oldfield Road - - - Stoke Newington.
PENROSE & RICHARDS - -	- - - - - Swansea, South Wales.
WIGAN COAL & IRON COMPANY, LIMITED - - - -	- - - - - Wigan, Lancashire.
COCOA, CHOCOLATE, COFFEE, CHICORY, AND THEIR PREPARATIONS.	
FRY, J. S., & SONS - - -	252, City-road - - - London.
MENIER, E. - - -	Southwark-street, Borough - - London.
TURNER, R. P. - - -	7, Market-place - - - Peterborough.

Object, and Name of Exhibitor.	Address of Exhibitor.
COLOURS, PAINTS, DYES, VARNISHES, AND STAINS.	
Craig & Rose	Caledonian Works - Edinburgh.
Reynolds, J. G.	9, Old Ford-road - London.
Rowney, G., & Co.	52, Rathbone-place - London.
Silicate Paint Company, The	24, Fenwick-street - Liverpool.
Stephens, H. C.	171, Aldersgate-street - London.
Storer, D., & Sons	Sydney-street - Glasgow.
Turner, C. & Son	7, Broad Street, Bloomsbury - London.
Williams, M.	Britannia Varnish Works - Wigan.
CONDIMENTS, SAUCES, SPICES, FLAVOURINGS, &c.	
Ball, J.	12, Duke-street, Grosvenor-square - London.
Crosse & Blackwell	Soho-square - London.
Gissing, A. S., & Sons	Castle-street - Eye, Suffolk.
Goodall, Backhouse, & Co.	Boar-lane - Leeds.
Jaap, J.	268, Buchanan-street - Glasgow, Scotland.
Jones, Palmer, & Co.	Eastern Works, Tabernacle-walk, Finsbury - London.
Keen, Robinson, Bellville, & Co.	6, Garlick Hill, Cannon-street - London.
Lea & Perrins	- Worcester.
Mackay, J.	119, George-street - Edinburgh.
Maw, T.	Windsor-place - Burmantofts, Leeds.
Mellin, G.	16, Tichborne-street, Regent-street - London.
Nicoll, D.	15, Clement's Inn - London.
Parkinson Brothers	43, Hammerton-street - Burnley, Lancashire.
Patchitt, E. C.	Ilkeston-road - Nottingham.
Powell, T.	81, High-street, St. Marylebone - London.
Pratt, J.	227, Oxford-street - London.
Smith, T. & H., & Co.	21, Duke-street - Edinburgh.
Turner, R. P.	7, Market-place - Peterborough.
Yuille, A.	132, Irongate, Melville-court - Glasgow.
CONVERTER OF BREECH LOADING FIRE-ARMS.	
Clay, R.	58, Finborough-road, South Kensington - London.
COOKING APPARATUS.	
Etzensberger, R. U.	Midland Hotel, St. Pancras - London.
Perkins, A. M., & Son	Seaford-street, Regent-square, Gray's Inn-road - London.
Thornton, E.	12, Richmond-road - Bradford.
COTTON, COTTON YARN, COTTON THREAD.	
Ashworth, E., & Sons	Egerton Mills - Bolton.
Brook, J., & Brothers	Meltham Mills - Huddersfield.
Clark, J., Jun., & Co.	16, George-street, Mile-end - Glasgow.
Coats, J. P., & Co.	Ferguslie Thread Works - Paisley.

Object, and Name of Exhibitor.	Address of Exhibitor.
COTTON, YARN, COTTON YARD, COTTON THREAD.—*cont.*	
Dewhurst, J., & Sons	Belle Vue Mills - Skipton.
Ferguson Brothers	Holme Head Works near Carlisle.
Neilson, Storer, & Sons	Thorn Mills - Johnstone, near Paisley.
Ullathorne & Co.	- Barnard Castle, Durham.
COTTON FABRICS.	
Barlow & Jones, Limited	2, Portland-street - Manchester.
Brigg, J. F., & Co.	- Huddersfield.
Greenmount Spinning Co.	Greenmount Factory - Harold's Cross, Dublin.
Hawkins, J., & Sons	8, Faulkner-street - Manchester.
McBride, R., & Co.	4, Bedford-street - Belfast.
Schwabe, Salis, & Co.	41, George-street - Manchester.
Simpson & King	7, York-street - Manchester.
Swainson, Birley, & Co.	42, Cheapside - London.
Wilson, T. & D., & Co.	145, Ingram-street - Glasgow.
CRAPE.	
French & Co.	St. Mary's Works - Norwich.
CRUCIBLES, MELTING POTS.	
Doulton & Co.	48, High-street, Lambeth - London.
Harper & Moores	- Stourbridge.
Patent Plumbago Crucible Company	Battersea Works - London.
CUTLERY.	
Brookes & Crookes	Atlantic Works, St. Philip's-road - Sheffield.
Burnand & Co.	Leicester Works, Leicester-street - Sheffield.
Hawkesworth (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.
Kingsbury, T.	9, New Bond-street - London.
Neal, J.	44, 46, 48, Edgware-road - London.
Neal, J., & Co.	22, 23, 24, Hampden Gurney-street, Portman-square - London.
Needham, J.	69, Arundel-street - Sheffield.
Wostenholm & Son (Limited)	Washington Works - Sheffield.
DAMASK LINENS.	
Barlow & Jones, Limited	2, Portland-street - Manchester.
Dicksons, Ferguson, & Co.	Linen Hall-street - Belfast.
Ewart, W. & Son	- Belfast.
Greenmount Spinning Company	Greenmount Factory - Harold's Cross, Dublin.
Johnson, J., & Fildes	44, Spring-gardens - Manchester.
Laird, W., & Co.	Canmore Linen Works - Forfar, Scotland.
Richardson, J. N., Sons, & Owden	1, Donegall-square, North - Belfast.
Webb, E., & Sons	Copenhagen-street - Worcester.

Object, and Name of Exhibitor.	Address of Exhibitor.
DESIGNS FOR MANUFACTURES AND DECORATIONS.	
Bevis, H.	140, Pentonville-road - London.
Dashwood, C. W.	1, St. Clement's Churchyard, Strand London.
Hooper & Co.	113, Victoria-street, Westminster - London.
Kerr, E.	7, Merville-terrace, Gilford-place, North Strand - Dublin.
Leighton, John	12, Ormonde-terrace, Regent's Park, London.
McIntosh, J.	38, Langham-street - London.
Nicholl, S. J.	1, Caversham-road, Kentish Town - London.
DISINFECTANTS, DISINFECTORS, FUMIGATORS, INSECT AND VERMIN DESTROYERS.	
Calvert, F. C., & Co.	- Bradford, near Manchester.
Ledger, H., & Co.	61, 63, Lant-street, Borough - London.
Lee, R. J., Dr.	4, Savile-row - London.
Rimmel, Eugene	96, Strand - London.
DRUGS.	
Allen & Hanburys	Plough Court, Lombard-street - London.
Evans, Lescher, & Evans	60, Bartholomew Close - London.
Gerrard, A. W.	153, Liverpool Road - London.
Kinmond & Co.	Kenilworth Street - Leamington.
Morson & Son	Southampton Row, Russell Square - London.
Smith, T. & H., & Co.	21, Duke-street - Edinburgh.
Tyne Vale Chemical Co.	Northumberland Works, Forth Banks Newcastle-on-Tyne.
Usher, R.	- Bodicote, near Banbury, Oxfordshire.
EDUCATIONAL BOOKS, &c.	
British and Foreign Blind Association	33, Cambridge-square, Hyde-park - London.
Cassell, Petter, and Galpin	La Belle Sauvage Yard, Ludgate-hill London.
Lockwood & Co.	7, Stationers' Hall-court, Ludgate-hill London.
Loth, J. T., Dr.	18, Gilmore-place - Edinburgh.
Potts, R., M., A.	Trinity College - Cambridge.
Rola, V.	22, Leinster-square, Bayswater - London.
Rundell, J. B.	Science and Art Department, South Kensington Museum - London.
Sunday School Union	56, Old Bailey - London.
Ward, M., & Co.	67, 68, Chandos-street, Strand - London.
ELASTIC FABRICS AND ELASTIC WEB.	
Hodges, T. W., & Sons	- Leicester.
Lang, J. & J.	13, Charterhouse-buildings, Aldersgate-street - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
ELASTIC FABRICS, AND ELASTIC WEB.—*cont.*	
Rein, F. C., Mrs.	108, Strand - London.
Simon, May, & Co.	Week-day Cross - Nottingham.
Turner, A., & Co.	Bow Bridge Works - Leicester.
ELECTRICAL MACHINES AND ELECTRO-MAGNETIC AND GALVANIC BATTERIES, APPARATUS, LAMPS, &c.	
Pulvermacher, I. L.	194, Regent-street - London.
Rein, F. C., & Son	108, Strand - London.
Smith & Starley	Trafalgar Works - Coventry.
Thermo Electric Generator Co., Limited	27, New-street, Cloth Fair - London.
ELECTRO REPRODUCTIONS OF WORKS OF ART.	
Elkington & Co.	Newhall Street - Birmingham.
EMERY.	
Oakey, J., & Sons	Wellington Works, Westminster-bridge-road - London.
ENGRAVING AND ENAMELLING ON WOOD, GEMS, METAL, GLASS, &c.	
Dickes, W.	Farringdon-road - London.
Fetherston, J. J.	2, Coppingers-row - Dublin.
Gill, James	66, Regent Street, Lambeth - London.
Johnson, J. M., & Sons, Limited	3, Castle-street, Holborn - London.
Lafargue, P., Dr.	27, South Hill-park, Hampstead - London.
Typographic Etching Co.	23, Farringdon-street - London.
Ulrich, H. S.	Brynterian, Chelsfield, Chislehurst - Kent.
FELT AND ARTICLES MADE OF FELT.	
Anderson, D., & Son	Lagan Felt Works - Belfast.
Engert & Rolfe	Barchester-street, Poplar New Town - London.
McTear & Co.	Corporation-street - Belfast.
FILES AND RASPS.	
Hawksworth, (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.

Object, and Name of Exhibitor.	Address of Exhibitor.
FILTERS, FILTERING BAGS, &c.	
Busse, G., & Co. - - -	8, South-street, Finsbury - - London.
Cheavin, George - - -	Wide Bargate Filter Works, Boston - Lincolnshire.
Stiff, J., & Sons - - -	High-street, Lambeth - - London.
FIRE-ARMS.	
Bussey, G. G., & Co. - -	Museum Works, Rye-lane, Peckham - London.
Dougall, J. D. - - -	59, St. James-street - - - London.
Gibbs, G. - - - -	29, Corn-street - - - Bristol.
Green, E. C. - - -	87, High-street - - - Cheltenham.
Greener, W. W. - - -	St. Mary's Works - - - Birmingham.
Henry, A. - - - -	12, South St. Andrew-street - - Edinburgh.
Lancaster, A. - - -	27, South Audley-street - - London.
Lancaster, C. W. - - -	151, New Bond-street - - London.
Lang, J., & Sons - - -	23, Cockspur-street - - - London.
Needham & Co. - - -	53, Piccadilly - - - London.
Purdey, J. - - - -	314½, Oxford-street - - - London.
Reilly, E. M., & Co. - -	502, New Oxford-street - - London.
Rigby, J., & Co. - - -	72, St. James-street - - - London.
Scott, W. & C., & Sons - -	Premier Gun Works, Lancaster-street Birmingham.
Soper, W. - - - -	23, Friar-street - - - Reading.
Tolley, J. & W. - - -	Pioneer Works, St. Mary's-square - Birmingham.
Webley, P., & Son -	82, Weaman-street - - - Birmingham.
Williams & Powell - -	25, South Castle-street - - Liverpool.
FIRE-BRICKS AND FIRE-CLAY.	
Cliff, J. - - - -	- - - - - Runcorn, near Liverpool.
Harrison, G. K. - - -	The Lye and Brettel Works - Stourbridge.
Harper & Moores - -	- - - - - Stourbridge.
Holland, W. T. - - -	- - - - - Llanelly, South Wales.
King Brothers - - -	- - - - - Stourbridge.
Reynolds, J. G. - - -	9, Old Ford-road - - - London.
FIRE ENGINES AND FIRE EXTINGUISHING APPARATUS.	
Adair & Co. - - -	Neptune-street - - - Liverpool.
Wallace, J. S., & Tucker, E. -	3, Antrim-place - - - Belfast.
FIRE-PROOF SAFES, FIRE PROOFING.	
Chatwood, Samuel - -	120, Cannon Street - - - London.
Roby, G., & Co. - - -	31, King-street - - - Wigan.
White, W. G. - - -	Albert Villa - - - New Malden, Surrey.

Object, and Name of Exhibitor.	Address of Exhibitor.
FISHHOOKS, FISHING NETS AND TACKLE.	
Buchanan, J.	56 to 62, Dale-street - Tradeston, Glasgow.
English, J., & Co.	- Feckenham, near Redditch.
Henry, A.	12, South St. Andrew-street Edinburgh.
Milward, H., & Sons	- Redditch.
Pullinger, C.	- Selsey, near Chichester, Sussex.
Ryder, W. H.	48, Ellis-street - Birmingham.
Turner, R., & Co.	Old Factory - Redditch.
Woodfield, W., & Sons	Easemore Works - Redditch.
FLAGS.	
Bevis, H.	140, Pentonville-road - London.
Turtle & Pearce	11, Duke Street, London Bridge - London.
FLANNEL.	
Jones, P.	- Newtown, Montgomeryshire.
FLAX, HEMP, JUTE, AND OTHER FIBRES.	
Cox Brothers	Camperdown Works - Lochee, Dundee.
Laird, W., & Co.	Canmore Linen Works - Forfar, Scotland.
Sandeman, F. S.	Manhattan Works - Dundee.
FLOORCLOTHS AND MATTING.	
Boulinikon Floor Cloth Manufacturing Company, Limited	Worsley-street - Salford, Manchester.
Corticene Floor Covering Company	115, Queen Victoria-street - London.
Nairn, M., & Co.	- Kirkcaldy, Scotland.
Tull, Glanvill, & Co.	Crown Works, Roupell-street, Lambeth London.
FLOUR AND FLOUR MILLS.	
Lloyd, T., & Sons	327, Old-street, Shoreditch - London.
Powell, T.	81, High-street, St. Marylebone London.
Sutcliffe, J. S.	- Bacup, Lancashire.
FUEL ECONOMISERS.	
Green, E., & Son	14, St. Anne's-square - Manchester.
Brechin, J. B.	45, Commercial-street - Dundee.
FURNACES, FORGES, AND BLOWING MACHINERY.	
Doulton & Co.	48, High-street, Lambeth - London.
Ellis, W. J.	66, Murray-street - Higher Broughton, Manchester.

Object, and Name of Exhibitor.	Address of Exhibitor.
FURNACES, FORGES, &c.—*cont.*	
Patent Plumbago Crucible Company	Battersea Works - London.
Siemens, C. W.	12, Queen Anne's-gate - London.
Smith, D.	153, Duke-street - Liverpool.
FURNITURE DECORATION AND DESIGNS.	
Arthur, F.	18, Motcomb-street - London.
Barnard, B.	107, St. Paul's-road, Highbury - London.
Collinson & Lock	109, Fleet-street - London.
Collman, L. W.	67, George-street, Portman-square - London.
Cooper & Holt	48, 49, 50, Bunhill-row - London.
Cox & Sons	28, 29, 31, Southampton-street, Strand London.
Hems, Harry	69, Prior-street - Exeter.
Howard & Sons	25, Berners-street - London.
Jeffreys, Charles	103, Hatton Garden - London.
Knight, Mary	1, Anderson-street, Chelsea - London.
Lafargue, P.	27, South Hill-park, Hampstead - London.
McIntosh, J.	38, Langham-street - London.
Morton, W., Scott, & Co.	Dabry House - Edinburgh.
Peyton & Peyton	Bordesley Works - Birmingham.
Phipson, Emma	- Monk Sherborne, Basingstoke, Hampshire.
Roberts, W.	139, Derby-road - Bootle, near Liverpool.
Royal School of Art Needlework	Exhibition-road - London.
Sage, Frederick	80–84, Gray's Inn Road - London.
Schildberg, H., & Co.	26, Moorgate-street - London.
Shoolbred, J., & Co.	Tottenham Court-road - London.
Watson, J., & Son	Moorgate-street Chambers - London.
Watson & Co.	Bombay, care of J. Watson & Co., Moorgate-street Chambers - Loondon.
Wright & Mansfield	104, New Bond-street - London.
FURNITURE AND UPHOLSTERY STUFFS, &c.	
Norris & Co.	124, Wood-street - London.
Pim Brothers & Co.	22, William-street - Dublin.
Royal School of Art Needlework	Exhibition-road - London.
Sage, Frederick	80–84, Gray's Inn-road - London.
Simpson & King	7, York-street - Manchester.
GAMES AND TOYS.	
London Stereoscopic and Photographic Company	110 and 108, Regent-street - London.
Lewis, J.	177, Cannongate - Glasgow.
Marrison, R. D.	Great Orford-street - Norwich.
Middleton, T. J.	38, Little Queen-street, High Holborn London.
Nicholson, H.	Kilner Deyne-terrace - Rochdale.

Object, and Name of Exhibitor.	Address of Exhibitor.
GARDEN AND PARK ENGINES, FURNITURE, FITTINGS, AND UTENSILS.	
Barnard, Bishop, and Barnards	Norfolk Ironworks - - - Norwich.
Kerr, E. - - - -	7, Merville-terrace, Gilford-place, North Strand - - - Dublin.
Pullinger, C. - - -	- - - - - Selsey, near Chichester, Sussex.
Wilkinson, W., & Son - -	Spring Works - - - Grimesthorpe, Sheffield.
Wills, A. W. - - -	Park Mills, Nechells - - Birmingham.
GAS APPARATUS, GASOMETERS, METERS, AND FITTINGS.	
Air Burning Co., Limited -	118, Green-street - - - Glasgow.
Gwynne & Co. - - -	Essex-street Works - - London.
Hart, Son, Peard, & Co. - -	Wych-street, Strand - - London.
Kimpton, T. - - -	2, 3, Barnards Inn, Holborn - London.
Partridge & Co. - - -	Lombard-street - - - Birmingham.
Reynolds, J. G. - - -	9, Old Ford-road - - - London.
Sugg, W. - - - -	Vincent Works, Vincent-street, Westminster - - - London.
Williams, M. - - -	Britannia Varnish Works - - Wigan.
GELATINE, ISINGLASS, GLUE, &c.	
Green, J. - - - -	12, Graham-terrace, Ridley-road, Kingsland - - - London.
Hooper, C., Jun. - - -	6, 7, 8, New Weston-street, Bermondsey - - - - London.
GIRDERS.	
McTear & Co. - - -	117, 119, 121, Corporation-street - Belfast.
GLASS, ARTICLES MADE OF GLASS, AND STAINED GLASS.	
Aire and Calder Glass Bottle Co. (E. Breffit, Proprietor) -	83, Upper Thames-street - - London.
Bailey, W. & J. A. - -	- - - - - Alloa, Scotland.
Baillie & Co. - - -	118, Wardour-street - - London.
Chance Brothers & Co. - -	Glass Works - - near Birmingham.
Codd, H. - - -	14, Dunster House, Mark-lane - London.
Constable, W. H. - - -	Stained Glass Works - near Cambridge.
Cox & Sons - - -	28, 29, 31, Southampton-street, Strand London.
Daniell, A. B., & Son - -	46, Wigmore-street - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
GLASS ARTICLES, &c.—*cont.*	
De Morini C.	170, Great Portland-street - London.
Gibbs & Moore	89, Southampton-row - London.
Green, J., & Nephew	107, Queen Victoria-street - London.
Heaton, Butler, & Bayne	14, Garrick-street - London.
Hardman, John, & Co.	Newhall Hill - Birmingham.
Hetley, J., & Son	35, Soho-square - London.
Jenkinson, A.	10, Princes-street - Edinburgh.
Kilner Brothers	Great Northern Goods Station, King's Cross - London.
Matthews, E., & Son	377, Oxford-street - London.
McGrath, J.	6a, White Lion-street, Chelsea - London.
Middleton, T. J.	38, Little Queen-street, High Holborn London.
Millar, J., & Co.	2, South Saint Andrew-street - Edinburgh.
Powell & Sons	Whitefriars Glass Works - London.
Ramsey, W.	83 and 84, Farringdon-street - London.
Ward & Hughes	67, Frith-street - London.
GLOVES.	
Daggett, C.	- Woodstock, Oxfordshire.
Debenham & Freebody	27, 29, 31, Wigmore-street - London.
Morley, J. & R.	18, Wood-street, Cheapside - London.
Pullman, R. & J.	17, Greek-street, Soho - London.
Welch, Margetson, & Co.	16 and 17, Cheapside - London.
GOLDBEATERS' SKIN.	
Bennett, T., & Son	70, Turnmill-street, Farringdon-road London.
Puckridge, F., & Nephew	530, Kingsland-road - London.
GOLDSMITHS' AND SILVERSMITHS' WORK AND PLATED GOODS.	
Aitchison, J.	23, Princes-street - Edinburgh.
Elkington & Co.	Newhall-street - Birmingham.
Neal, J.	44, 46, 48, Edgware-road - London.
Neal, J., & Co.	22, 23, 24, Hampden Gurney-street, Portman-square - London.
HAIR (HUMAN).	
Van Volen, G.	50 and 52, Waterloo-road, Lambeth, London.
HATS, CAPS, AND THEIR MATERIALS.	
Dash, O.	10, King's-road, Brighton - Sussex.
Humbert, H.	30, Barbican - London.
Lincoln, Bennett, & Co.	40, Piccadilly - London.
Tress & Co.	33, Stamford-street - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
HEEL BALL.	
Ullathorne & Co. - -	- - - - - Barnard Castle, Durham.
HONEY.	
Lovey, E. - - - -	- - - - - Ponsnooth, Perran-ar-worthal, Cornwall.
HORSE CLIPPERS.	
Martin, R. - - -	The Village - - - - Old Charlton, Kent.
HORTICULTURE.	
Paul, W. - - - -	- - - - - Waltham Cross, Hertfordshire.
Veitch, J., & Sons - -	Royal Nursery, King's-road, Chelsea London.
Warner, R. - - -	8, Crescent, Cripplegate - - London.
Waterer, Anthony - -	Knap Hill Nursery - - Woking, Surrey.
Williams, B. S. - - -	Victoria and Paradise Nurseries, Upper Holloway - - - London.
HOSIERY.	
Morley, J. & R. - - -	18, Wood-street, Cheapside - - London.
Smyth & Co. - - -	36 and 37, Lower Abbey-street - Dublin.
Welch, Margetson, & Co. -	16 and 17, Cheapside - London.
HOSPITALS, AMBULANCES, &c.	
Clay, R. - - - -	58, Finborough-road, South Kensington - - - - London.
Turner, G., & Co. - -	94, Gracechurch-street - - London.
HYDRAULIC JACKS, PRESSES, HOISTS, TUBES, AND FITTINGS.	
Nussey & Leachman - -	- - - - - Leeds.
Tangye Bros. - - -	Cornwall Works, Soho - - Birmingham.
West & Co. - - -	Crown-place, Kentish Town-road - London.
INDIA-RUBBER BELTING, PACKING, HOSE AND FABRICS, &c., GUTTA PERCHA.	
India-rubber, Gutta Percha, and Telegraph Works Company, Limited - - -	100, Cannon-street - - London.
Lang, J. & J. - - -	13, Charterhouse-buildings, Aldersgate-street - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
INKS AND INKSTANDS.	
Blackwood, J., & Co.	18, Bread-street Hill - London.
Bowman, C.	6, King-street, Tower-hill - London.
Cooper & Co.	5, Shoe-lane, Fleet-street - London.
Hickisson, M. A., Mrs. (Daughter of the late John Bond)	75, Southgate-road - London.
Lyons, W.	Park-street - Manchester.
Sands Brothers & Co.	Salford Chemical Works - Manchester.
Stephens, H. C.	171, Aldersgate-street - London.
Webster, H.	22, Litchfield-street, Soho - London.
IRON, IRON PLATE, FORGINGS, TUBES, CASTINGS, TANKS, BEDSTEADS, &c.	
Adams, R.	25, Falmouth-road, Great Dover-street London.
Ash & Lacy	Meriden Street - Birmingham.
Baldwin, E. P., & W.	Wilden Works - near Stourport.
Barnard, Bishop, and Barnards	Norfolk Ironworks - Norwich.
Brown, John, & Co., Limited	Atlas Works - Sheffield.
Cammell, C., & Co., Limited	Cyclops Works - Sheffield.
Cox & Sons	
Governor and Company of Copper Miners in England	Cwm Avon Works - Taibach, Glamorganshire.
Great Western Iron Co.	Shepton - Wouldham.
Hatton, Sons, & Co.	Broadwater Works - Kidderminster.
Hawkins, J., & Co.	16, Station-street - Walsall.
Patent Nut and Bolt Co., Limited	London Works - near Birmingham.
Siemens, C. W.	12, Queen Anne's-gate - London.
West Cumberland Iron and Steel Co., Limited	Workington - Cumberland.
Whitwell, Thomas	Thornaby Iron Works - Stockton-on-Tees.
Wigan Coal and Iron Co., Limited	- Wigan, Lancashire.
Wood, J. W.	Collector of H.M.'s Customs - Harwich, Essex.
IVORY, BONE WARE, AND IMITATIONS.	
Elrick, C. G.	8, Aldermanbury Postern - London.
Spill, Daniel	124, High-street, Homerton - London.
JEWELLERY, TRINKETS, AND JEWEL CASES.	
Aitchison, J.	23, Princes-street - Edinburgh.
Bryan, C.	West Cliff - Whitby, Yorkshire.

Object, and Name of Exhibitor.	Address of Exhibitor.
JEWELLERY, TRINKETS, AND JEWEL CASES—*cont.*	
Fetherston, J. J.	2, Coppinger's-row - Dublin.
Francati & Santamaria	65, Hatton-garden - London.
Fridlander, A. A.	26, Hylton-street - Birmingham.
Gibson, W.	Castle-place - Belfast.
Goggin, J.	74, Grafton-street - Dublin.
Jeffery, John	14, Tottenham Court-road - London.
Neal, J.	44, 46, 48, Edgware-road - London.
LACE, NET, LACE DRESSES, CURTAINS, &c.	
Dunraven, Countess of	Adare - Co. Limerick.
Heyman & Alexander	Stoney-street - Nottingham.
Jacoby, M., & Co.	Broadway - Nottingham.
Simon, May, & Co.	Week-day Cross - Nottingham.
Smith, G. J.	The Terrace, Church-road - Upper Norwood, Surrey.
Stewart, Moir, & Muir	73, Mitchell-street - Glasgow.
LAMPS, LANTERNS, AND SAFETY LAMPS.	
Bainbridge, E.	Nunnery Colliery Offices - Sheffield.
Cooke, J., & Co.	82, Lawley-street, Belmont-passage - Birmingham.
Gardner, J., & Sons	458, Strand - London.
Kerr, E.	7, Merville-terrace, Gilford-place, North Strand - Dublin.
Skelton & Co.	37, Essex-street, Strand London.
LEAK STOPPER.	
Wood, J. W.	Collector of H.M. Customs - Harwich, Cambridgeshire.
LEATHER.	
Angus, G., & Co.	10, Thomas-street - Liverpool.
Bussey, G. G., & Co.	Museum Works, Rye-lane, Peckham - London.
Edinburgh Western Tanning Company, Limited	135, West Port - Edinburgh.
Harrington, J., & Co.	Union Works - Ryde, Isle of Wight.
Hoe, R., & Sons	44, Leadenhall-street - London.
Hooper, C., Jun.	6, New Weston-street, Bermondsey - London.
Hooper, C. W., & Sons	51, Weston-street, Bermondsey - London.
Pullman, R. & J.	17, Greek-street, Soho - London.
Wilson, Walker, & Co.	Sheepscar Works - Leeds.

Object, and Name of Exhibitor.	Address of Exhibitor.
LIFE-SAVING AND DIVING APPARATUS.	
LACEY, R. G.	Coast Guard Station - Leigh, Essex.
SAINTY, J. & B.	Alpha Works - Wisbeach, Cambridge.
SANDERSON & PROCTOR	Shore Works - Huddersfield.
SIEBE & GORMAN	17, Mason-street, Westminster Bridge-road - London.
WALLACE & TUCKER, E.	3, Antrim-place - Belfast.
LINEN YARNS, THREAD, AND FABRICS.	
AINSWORTH, T.	Cleator Mills - Cleator, Carnforth, Cumberland.
BRIGG, F., J. & Co.	- Huddersfield.
BROWETT, F., & Co.	- Coventry.
BROWN, J. S., & SONS	Bedford-street - Belfast.
DICKSONS, FERGUSON, & Co.	Linen Hall-street - Belfast.
DUNBAR, McMASTER, & Co.	- Gilford, County Down, Ireland.
EWART, W., & SONS	- Belfast, Ireland.
FENTON, CONNOR, & Co.	Linen Hall - Belfast.
GREENMOUNT SPINNING COMPANY	Greenmount Factory, Harold's-cross Dublin.
JOHNSON, J., & FILDES	44, Spring-gardens - Manchester.
LAIRD, W., & Co.	Canmore Linen Works - Forfar, Scotland.
MARSHALL & Co.	- Leeds.
MATIER, H., & Co.	Clarence-place - Belfast.
NORMAND, J., & SON	Dysart - Fifeshire, Scotland.
RICHARDSON, J. N., SONS, & OWDEN	1, Donegall-square, North - Belfast.
SANDEMAN, F. S.	Manhattan Works - Dundee.
YORK STREET FLAX SPINNING Co., LIMITED	- Belfast, Ireland.
LITHOGRAPHIC PRINTING AND MATERIALS, LITHOGRAPHY, CHROMO LITHOGRAPHY, &c.	
AUDSLEY & BOWES	11, Dale Street - Liverpool.
BARTHOLOMEW, J.	Chambers-street - Edinburgh.
DAY & SON	47, Charing Cross - London.
DICKES, W.	Farringdon-road - London.
JOHNSON, J. M., & SONS, LIMITED	3, Castle-street, Holborn - London.
ROWNEY, G., & Co.	52, Rathbone-place - London.
LOCKS.	
PHOSPHOR BRONZE COMPANY, LIMITED	139, Cannon-street - London.
WHITE, W. G.	Albert Villa - New Malden, Surrey.

Object, and Name of Exhibitor.	Address of Exhibitor.
LOOMS AND ACCESSORIES FOR WEAVING.	
Fish, J. & G.	12, Grayston Street - Fiswick, Preston.
Greenwood & Batley	Albion Works - Leeds.
Ingham, J., & Son	Croft Head Works, Thornton near Bradford.
Mackenzie, D.	Care of W. Smith, 19, Salisbury-street, Strand - London.
Stevens, T.	- Coventry ; and 20, Warwick lane, London.
LUBRICATORS AND LUBRICATING OILS.	
Clarke & Dunham	69, Mark-lane - London.
MACHINE TOOLS.	
Beesley, L. W. & J., & Sons	Abbey-road Boiler Works - Barrow-in-Furness.
Greenwood & Batley	Albion Works - Leeds.
Heap, J., & Co., Limited	Lee-street - Oldham.
Nussey & Leachman	- Leeds.
Roberts, W.	139, Derby-road - Bootle, near Liverpool.

MACHINERY.

AIR BLOWING MACHINERY.	
Ellis, W. J.	66, Murray-street, Higher Broughton Manchester.
AIR COMPRESSORS.	
Holmes, Payton, & Taylor	43, Borough-road, Southwark - London
Hurd, F.	Grove House - Walton, near Wakefield.
AIR PUMPS.	
Wier, M. A.	33, Abchurch-lane - London.
BOILERS.	
Davey, Paxman, & Co.	Colchester - Essex.
Galloway, W. & J., & Sons	Knott Mill Ironworks - Manchester.
Graham & Co.	Premier Boiler Works, Premier-road Halifax.
BOLT FORGING MACHINERY.	
Greenwood & Batley	Albion Works - Leeds.

Object, and Name of Exhibitor.	Address of Exhibitor.
BONE CRUSHING MACHINERY.	
Dunston Engine Works Co. -	- - - - - Gateshead-on-Tyne.
BOTTLE-FILLING MACHINE.	
Codd, H. - - - -	14, Dunster House, Mark-lane - London.
Ross, W. A. - - -	Cromac Buildings - - - Belfast.
BREWERS' MACHINERY.	
Lawrence & Co. - - -	22, St. Mary Axe - - - London.
CALICO PRINTING MACHINERY.	
Gadd, T. - - - -	Salford - - - - Manchester.
CARDING MACHINERY.	
Fleming, T., & Son - -	West Grove Mill - - - Halifax.
CLARIFYING MACHINERY.	
Needham & Kite - - -	Phœnix Ironworks, Vauxhall - London.
CLOTH CUTTING AND PRESSING MACHINERY.	
Sanson, R. B. - - -	87, Globe-road, Mile End-road - London.
COAL CUTTING MACHINERY.	
Baird, W., & Co. - - -	Gartsherrie Ironworks - - Coatbridge, Scotland.
Holmes, Payton, & Taylor -	43, Borough-road, Southwark - London.
Hurd, F. - - - -	Grove House - - - Walton, near Wakefield.
Macdermott, M. - - -	Scott's Chambers, 25 and 26, Pudding-lane - - - London.
CONFECTIONERS' MACHINERY.	
Collier, L. - - -	Wellington Works, River-street - Rochdale.
CORN DRESSING MACHINERY.	
Davey, Paxman, & Co. - -	- - - - - Colchester, Essex.
CORN WEIGHING MACHINERY.	
Clarke & Dunham - -	69, Mark-lane - - - London.
Corcoran, Witt, & Co. -	Market-buildings, 28, Mark-lane - London.

Object, and Name of Exhibitor.	Address of Exhibitor.	
COTTON WORKING MACHINERY.		
Gadd, T.	-	- Salford, Manchester.
Howard & Bullough	Globe Works	- Accrington, Lancashire.
Platt Brothers & Co., Limited	Hartford Works	- Oldham.
West & Co.	Crown-place, Kentish Town-road	- London.
CRANES.		
Appleby Brothers	Emerson-street, Southwark	- London.
Aveling & Porter	-	- Rochester, Kent; and Cannon-street, London.
DARNING MACHINERY.		
Smith & Starley	Trafalgar Works	- Coventry.
DISTILLERY MACHINERY.		
Lawrence & Co.	22, St. Mary Axe	- London.
DRILLING MACHINERY.		
Macdermott, M.	Scott's Chambers, 25 and 26, Pudding-lane	- London.
ELECTRICAL MACHINERY.		
Thermo-Electric Generator Co., Limited	27, New-street, Cloth Fair	- London.
FLAX MACHINERY.		
Fairbairn, Kennedy, & Naylor	-	- Leeds.
Lawson, S., & Sons	Hope Foundry	- Leeds.
HIGH-PRESSURE TESTING MACHINERY.		
Siemens, C. W.	12, Queen Anne's-gate	London.
HOISTING MACHINERY.		
Pickering, J.	Grove Works	- Stockton-on-Tees.
Tangye Bros.	Cornwall Works	- Soho, Birmingham.
HOSIERY MACHINERY.		
Gimson & Coltman	Duke-street	- Leicester.
HYDRAULIC MACHINERY.		
Monckton, G. H.	Care of Coutts & Co.	- London.
KNIFE CLEANING MACHINERY.		
Kent, George	200, High Holborn	- London.

Object, and Name of Exhibitor.	Address of Exhibitor.
KNITTING MACHINERY.	
Smith & Starley - - -	Trafalgar Works - - - Coventry.
LAWN MOWERS.	
Barnard, Bishop, & Barnards -	Norfolk Ironworks - - - Norwich.
LEATHER MACHINERY.	
Pullman, R. & J. - - -	17, Greek-street, Soho - London.
LITHOGRAPHING MACHINERY.	
Beatty, F. S. - - -	30, Summers Hill - - - Dublin.
LOCOMOTIVES.	
Handysides Steep Gradient Company, Limited - -	9, Victoria-chambers, Victoria-street London.
LOGOTYPES.	
Tomline, Colonel - -	Carlton Terrace - - - London.
LOOMS.	
Stevens, T. - - -	- - - - - Coventry; and 20, Warwick-lane, London.
MACHINE TOOLS.	
Beesley, L. W. & J., & Sons -	Abbey-road Boiler Works - - Barrow-in-Furness.
Greenwood & Batley - -	Albion Works - - - Leeds.
Heap, J., & Co., Limited - -	Lee-street - - - - Oldham.
Nussey & Leachman - -	- - - - - - Leeds.
Roberts, W. - - -	139, Derby-road - - - Bootle, near Liverpool.
MARINE ENGINES.	
Hewitt, W. - - -	Prospect Villa, Sydenham-hill - Bristol.
PAINTING MACHINE.	
Roberts, W. - - -	139, Derby-road - - - Bootle, near Liverpool.
PAPER-MAKING MACHINERY.	
Annandale, Alex, & Sons -	Beltonford Paper Works - - Dunbar.
Marshall, T. J., & Co. - -	Campbell Works, Gil et-street, Kingsland - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
PRINTING MACHINERY.	
Lilly, J., & Co.	172, St. John-street, Clerkenwell - London.
Shaw, W.	3, Sheldon-street, Bayswater - London.
Walter, J., M.P.	"Times" Office, Printing House-square - London.
PULVERIZING MACHINERY.	
Kimberley, N. G.	11, Great St. Helen's - London.
PUNCHING AND SHEARING MACHINERY.	
Beesley & Sons	Abbey-road Boiler Works - Barrow-in-Furness.
Nussey & Leachman	- Leeds.
ROCK DRILLING MACHINERY.	
Annandale, Alex., & Sons	Beltonford Paper Works - Dunbar.
Holmes, Payton, & Taylor	43, Borough-road, Southwark - London.
SCREW CUTTING MACHINERY.	
Heap, J., & Co., Limited	Lee-street - Oldham.
SCREW PROPELLERS.	
Hewitt, W.	Prospect Villa, Sydenham-hill - Bristol.
Vansittart, Henrietta	2, Montpelier-row, Twickenham - Middlesex.
SEWING MACHINES.	
Kimball & Morton	80, Bishop-street - Anderston, Glasgow.
Laing's Patent Overhead Sewing Machine Co.	4, Bain-square - Dundee.
Smith & Starley	Trafalgar Works - Coventry.
Wilson, Newton, & Co.	144, High Holborn - London.
Greenwood & Battey	Albion Works - Leeds.
SILK MACHINERY.	
Stevens, T.	20, Warwick-lane - London.
SPINNING MACHINERY.	
Fairbairn, Kennedy, & Naylor	- Leeds.
Howard & Bullough	Globe Works - Accrington, Lancashire.
Lawson & Sons	Hope Foundry - Leeds.
SPOOLING MACHINERY.	
Coats, J. & P.	Ferguslie Thread Works - Paisley.

Object, and Name of Exhibitor.	Address of Exhibitor.
STEAM ENGINE FITTINGS.	
Cohné, S.	13, Sise-lane - London.
Dennis, T. H. P., & Co.	Anchor Ironworks - Chelmsford.
Phosphor Bronze Company, Limited	139, Cannon-street - London.
Turner, C.	3, Bugle-street - Southampton.
Wier, M. A.	33, Abchurch-lane - London.
STAMPING MACHINERY.	
Massey, B. & S.	- Openshaw, Manchester.
Sloper, Joseph	6, King William-street, City - London.
STEAM HAMMERS.	
Massey, B. & S.	- Openshaw, Manchester.
STEAM PUMPS.	
Fison, J. P.	Feversham Works - Cambridge.
Gwynne, J. & H.	Hammersmith - London.
Gwynne & Co.	Essex-street Works - London.
Pickering, J.	Globe Works - Stockton-on-Tees.
STEAM ROAD ROLLERS.	
Aveling & Porter	- Rochester, Kent.
STONE DRESSING MACHINERY.	
Shearer, H.	21, Great George-street, Westminster London.
STONE BREAKING MACHINERY.	
Dunston Engine Works Co.	- Gateshead-on-Tyne.
STREET SWEEPING AND SCRAPING MACHINERY.	
Smith & Sons	- Barnard Castle, Durham.
SUGAR MACHINERY.	
Mirrlees, Tait, & Watson	Scotland-street Ironworks - Glasgow
TAILORS' MACHINERY.	
Sanson, R. B.	87, Globe-road, Mile End-road - London.
THRASHING MACHINERY.	
Fison, J. P.	Feversham Works - Cambridge.

Object, and Name of Exhibitor.	Address of Exhibitor.
THREAD WINDING AND TICKETTING MACHINERY.	
Coats, J. & P. - - -	Ferguslie Thread Works - - Paisley.
TOBACCO MACHINERY.	
Andrew, J. E. H. - - -	Waterloo-road - - - Stockport.
TRACTION ENGINES.	
Aveling & Porter - -	- - - Rochester, Kent.
WASHING AND IRONING MACHINERY.	
Air Burning Co., Limited -	118, Green-street - - - Glasgow.
Pullinger, C. - - -	- -- - - - Selsey, near Chichester.
WEIGHING MACHINERY.	
Clarke & Dunham - -	69, Mark-lane - - - London.
Corcoran, Witt, & Co. - -	Market-buildings, 28, Mark-lane - London.
WOOD WORKING MACHINERY.	
Roberts, W. - - -	139, Derby-road - - - Bootle, near Liverpool.
WOOL AND WORSTED WORKING MACHINERY.	
Nussey & Leachman - -	- - - - - Leeds.
Smith, J. & S. - - -	Low Bridge Works - - - Keighley.
MAGIC LANTERN SLIDES.	
Middleton, T. J. - - -	38, Little Queen-street, High Holborn London.
York, F. - - -	87, Lancaster-road, Notting-hill - London.
MALT.	
Plunkett, J., & Co. -	Portland Works. Portland-street West Dublin.
MANURES.	
Universal Charcoal & Sewage Company, Limited - -	5, High-street - - - Manchester.
MAPS, GLOBES, AND MAP ENGRAVING.	
Bartholomew, J. - - -	Chambers-street - - - Edinburgh.
British & Foreign Blind Association - - -	33, Cambridge-square, Hyde-park - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
MAPS, GLOBES, AND MAP ENGRAVING—*cont.*	
Geological Survey of the United Kingdom (A. C. Ramsay, LL.D., F.R.S., Director-General)	28, Jermyn-street - - - London.
Johnston, W. & A. K. - -	4, St. Andrew-square - Edinburgh.
Ordnance Survey Office -	- - - - - Southampton.
Ravenstein, E. G. - - -	10, Lower-road, Brixton - - London.
Ward, M., & Co. - - -	67, 88, Chandos-street, Strand - London.
MARKING INK.	
Hickisson, M. A. - - -	75, Southgate-road - - - London.
MARINE ENGINES.	
Hewitt, W. - - -	Prospect Villa, Sydenham Hill - Bristol.
MATCHES.	
Bryant & May - - -	Fairfield Works, Bow - London.
MATHEMATICAL, SURVEYING, MEASURING, AND OTHER SCIENTIFIC INSTRUMENTS, RULES, &c	
Adams, W. M. - - -	Arundel Club, Salisbury-street, Strand London.
Cassell, Petter, & Galpin -	La Belle Sauvage Yard, Ludgate-hill London.
Clay, R. - - - - -	58, Finborough-road, South Kensington, London.
Hicks, J. J. - - -	8, Hatton-garden - - - London.
Kimpton, T. - - -	2 and 3, Barnard's Inn, Holborn - London.
Lyon, W. - - - - -	1, Cowper's-court, Cornhill - - London.
Wier, M. A., & Co. - -	6, Kirby-street, Hatton-garden - London.
Zimdars, C. E. - - -	28, Red Lion-square - - London.
MEAL.	
Hunter, J., & Son - - -	Wood Hall Mills, Juniper-green, near Edinburgh.
MEDALS AND DIE SINKING.	
Morgan, Geo. - - -	144, Finborough-road, West Brompton - - - - London.
Wyon, J. S. & A. B. - -	287, Regent-street - - - London.
Ortner & Houle - - -	3, St. James's-street - - London.
MILITARY EQUIPMENT.	
Clarke, Captain E. P. - -	6, Edward-street - - - Bath.
Firmin & Sons, Limited - -	155, Strand - - - - London.
Henry, A. - - - -	12, South St. Andrew-street - Edinburgh.
Soper, W. - - - -	23, Friar-street - - - Reading.
Turner, G., & Co. - - -	95, Gracechurch-street - - London.
Webley, P., & Son - -	82, Weeman-street - - - Birmingham.
MILLS, MILLSTONES, AND UTENSILS.	
Clarke & Dunham - -	69, Mark-lane - - - London.
Corcoran, Witt, & Co. - -	28, Market-buildings, Mark-lane - London.
Kay & Hilton - - -	Bankhall-bridge - - - - Liverpool.

Object, and Name of Exhibitor.	Address of Exhibitor.
MINING, QUARRYING, &c.	
BAIRD, W., & Co. - - -	Gartsherrie Ironworks - - Coatbridge, Scotland.
HARDY PATENT PICK COMPANY, LIMITED - - - -	Mining Tool Works, Ecclesall-road - Sheffield.
HOLMES, PAYTON, & TAYLOR -	43, Borough-road, Southwark - London.
HURD, F. - - - -	Grove House - - - Walton, near Wakefield.
MACDERMOTT, M. - - -	Scott's Chambers, 25 & 26, Pudding-lane - - - - London.
MODELS.	
BRADFORD, W. H. - - -	Great Saughall - - near Chester.
BRIERLEY, SONS, & REYNOLDS -	81A, Edgware-road - - - London.
CLARKE, CAPTAIN E. P. - -	6, Edward-street - - - Bath.
CLARK, L., STANDFIELD, & Co. -	6, Westminster Chambers, Victoria-street - - - - London.
FISON, J. P. - - -	Feversham Works - - - Cambridge.
FRANCIS & Co. - - -	Bridge Foot, Vauxhall - - London.
"GRAPHIC," THE PROPRIETORS OF THE - - - -	190, Strand - - - - London.
GREEN, E., & SON - - -	Economiser Works - - - Wakefield.
GÜMPEL, C. G. - - -	49, Leicester-square - - - London.
GWYNNE, J. & H. - - -	Hammersmith - - - London.
HANDYSIDES STEEP GRADIENT CO., LIMITED - - - -	9, Victoria-chambers, Victoria-street London.
HEWITT, W. - - -	Prospect Villa, Sydenham Hill - Bristol.
INMAN STEAMSHIP CO., LIMITED -	22, Water-street - - - Liverpool.
JOHNSTON STILL COMPANY, LIMITED - - - -	43, Dame-street - - - Dublin.
KERR, E. - - - -	7, Merville-terrace, Gilford-place, North Strand - - - Dublin.
LOGAN, J. M. - - -	Chesterton-road - - - Cambridge.
MUNROE, W. - - -	High-street - - - - Wick, Caithness, Scotland.
RAVENSTEIN, E. G. - -	10, Low-road, Brixton - - London.
ROBY, G., & Co. - -	31, King-street - - - Wigan.
SAXBY & FARMER - - -	Kilburn - - - - London.
SIEMENS, C. W. - - -	12, Queen Anne's-gate - - London.
WALLACE & TUCKER - -	3, Antrim-place - - - Belfast.
WELCH, A. - - - -	11, Bank-buildings, Metropolitan Cattle Market - - - London.
ZOBEL, C. F. J. - - -	139, Euston-road - - - London.
MOULDS, MOULDINGS, &c.	
ENGERT, A. C., & Co. - -	75, City-road - - London.
HIERONIMUS, W. - - -	53, City-road - - - London.
MUSEUMS, COLLECTIONS, AND ART GALLERIES.	
FETHERSTON, J. J. - - -	2, Coppinger's-row - - - Dublin.

Object, and Name of Exhibitor.	Address of Exhibitor.
MUSEUMS, &c.—*cont.*	
GEOLOGICAL SURVEY OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND, A. C. Ramsay, LL.D., F.R.S., Director-General - -	28, Jermyn-street - - - London.
ORDNANCE SURVEY OFFICE, Major-General Cameron, R.E., C.B., Director-General - - -	- - - - Southampton.
SCIENCE AND ART DEPARTMENT, P. Cunliffe Owen, C.B., Director -	South Kensington Museum - - London.
MUSIC AND MUSICAL INSTRUMENTS.	
AUGENER, G., & Co. - -	86, Newgate-street - - - London.
BESSON, F. - - - -	198, Euston-road - - - London.
BOOSEY & Co. - - -	295, Regent-street - - - London.
BRINSMEAD, J., & SONS - -	18, Wigmore-street - - - London.
BROWNE, H. J. - - -	237, 239, Euston-road - - London.
HEAPS, J. K. - - -	Folly Hall - - - - Holbeck, Leeds.
ROLA, V. - - - -	22, Leinster-square, Bayswater - London.
SMITH, G. - - - -	57, Victoria Park-road, South Hackney London.
MUSLINS.	
BARLOW & JONES, LIMITED -	2, Portland-street - - - Manchester.
JOHNSON, J., & FILDES - -	44, Spring-gardens - - - Manchester.
SWAINSON, BIRLEY, & Co. -	42, Cheapside - - - London.
NAILS, SPIKES, SCREWS, &c.	
BAKER, C., & SONS - - -	98, Lichfield-street - - - Birmingham.
FRANCIS, T., & Co. - -	Liverpool-street - - - Birmingham.
PATENT NUT & BOLT COMPANY, LIMITED - - - -	London Works - - near Birmingham.
NATURAL HISTORY.	
MURRAY, A. - - -	67, Bedford-gardens, Kensington - London.
WARD & Co. - - -	158, Piccadilly - - - London.
WHEELER, E. - - -	48, Tollington-road, Holloway - London.
NEEDLES, NEEDLE CASES, &c.	
ENGLISH, J., & Co. - -	- - - - Feckenham, near Redditch.
EVANS, D. - - - -	Studley - - - - Redditch.
HAYES, CROSSLEY, & Co. - -	153, Cheapside - - - London.
HEATH, W. - - - -	Neveux Works, Crabb's Cross - Redditch.
KIRBY, BEARD, & Co. - -	18, Cannon-street - - - London.
MILWARD, H., & SONS - -	- - - - - Redditch.
SMITH, J., & SON - - -	Astwood Bank - - near Redditch.
SMITH, J. W. - - -	121, Belgrave-gate - - - Leicester.
SMITH & STARLEY - - -	Trafalgar Works - - - Coventry.
TURNER, R., & Co. - - -	Old Factory - - - Redditch.
WOODFIELD, W., & SONS - -	Easemore Works - - - Redditch.

Object, and Name of Exhibitor.	Address of Exhibitor.
NEWSPAPERS.	
Dowson, Sutherland, & Co.	12, Fetter-lane - London.
Illustrated London News, Editor of	198, Strand - London.
Palmer, S.	Park House, Grove-street, South Hackney - London.
OAKUM.	
Liverpool Spun Oakum Company	9, North John-street - Liverpool.
OATMEAL.	
McCann, J.	Beamond Mills - Drogheda, Ireland.
OILS, OIL CAKE.	
Allen & Hanbury's	Plough-court, Lombard-street - London.
Craig & Rose	Caledonian Works - Edinburgh.
Price's Patent Candle Company	Belmont Works, Battersea - London.
OPTICAL INSTRUMENTS, MICROSCOPES, AND OPTICAL TOYS.	
Beck, R. & J.	31, Cornhill - London.
Crouch, H.	66, Barbican - London.
Dallmeyer, J. H.	19, Bloomsbury-street - London.
Negretti & Zambra	Holborn Viaduct - London.
Ross & Co.	7, Wigmore-street - London.
Swift, J.	43, University-street, Tottenham Court-road - London.
Wheeler, E.	48, Tollington-road, Holloway - London.
PAINT BRUSHES.	
Bowman, C.	6, King-street, Tower-hill - London.
Culmer, W., & Sons	Hornsey-road - London.
PAPER AND MATERIALS FOR MANUFACTURE OF PAPER, STATIONERY.	
Dudgeon, A.	22, Great George-street, Westminster London.
Fletcher, R., & Son	Kersley Works - Stoneclough, nr. Manchester.
Ford Works Company, Limited	- Ford, near Sunderland, Durham.
Harrington, J., & Co.	Union Works - Ryde, Isle of Wight.
Jeffrey & Co.	64, Essex-road, Islington - London.
Johnson, J., & Co.	Charterhouse Works, Sycamore-street London.
Pirie, A., & Sons	Stoneywood Works - Aberdeen.
Sands Brothers & Co.	Salford Chemical Works - Manchester.
Ward, M., & Co.	67, 68, Chandos-street, Strand - London.
Waterston, G., & Sons	56, Hanover-street - Edinburgh.

Object, and Name of Exhibitor.	Address of Exhibitor.
PARAFFIN, PETROLEUM, &c.	
PRICE'S PATENT CANDLE COMPANY	Belmont Works, Battersea - London.
PATENT AND PEAT FUEL.	
DIXON, F.	20, Charterhouse-square - London.
DUDGEON, A.	22, Great George-street, Westminster London.
MARRIOTT, ELIZABETH	15, Oldfield-road, Stoke Newington - London.
PENS, PENHOLDERS, PENCILS, AND PENCIL CASES.	
HINKS, WELLS, & Co.	Buckingham-street Works - Birmingham.
PERAMBULATORS.	
THOMPSON, C.	33, Newington Butts - London.
PERFUMERY AND TOILET REQUISITES.	
ATKINSON, J. & E.	24, Old Bond-street - London.
CROWN PERFUMERY CO.	40, Strand - London.
ELRICK, C. G.	8, Aldermanbury Postern - London.
KENT, G. B., & Co.	11, Great Marlborough-street - London.
LOW, SON, & HAYDON	148, Strand - London.
PERKS, S.	High-street - Hitchin, Herts.
PRICE'S PATENT CANDLE CO.	Belmont Works, Battersea - London.
RIMMEL, E.	96, Strand - London.
THIELLAY, E. H.	Charing Cross Hotel - London.
PHOTOGRAPHS.	
BARNARD, JOHN	5, St. Mary's Buildings - Bedford.
BAUM, F.	St. Ann's-square - Manchester.
BEAU, A.	283, Regent-street - London.
BEAUFORD & BRUCE	2, Nuns Island - Galway, Ireland.
BEDFORD, W.	326, Camden-road - London.
BOOL, A. & J.	86, Warwick-street, Pimlico - London.
BROWNRIGG, T. M.	32, Lower Leeson-street - Dublin.
CAMERON, J. M., MRS.	- Freshwater, Isle of Wight.
COOPER, GEO., and Co.	Elm Tree House, Aulaby-road - Hull.
CRAWSHAY, ROBERT	Cyfarthfa Castle, Merthyr Tydfil - Glamorganshire.
DALLAS, D. C.	362, Gray's Inn-road - London.
DALLMEYER, J. H.	19, Bloomsbury-street - London.
ENGLAND, W.	7, St. James'-square, Notting-hill - London.
FOGERTY, W.	23, Harcourt-street - Dublin.
FRADELLE & MARSHALL	230, Regent-street - London.
GODBOLD, H. J.	Grand Parade - St. Leonards-on-Sea.
HAIG, E. M.	203, Regent-street - London.
HALL, H. E.	44, Kingsland-park - Dublin.
HANSON, W.	Great George-street - Leeds.
HEATH, V.	43, Piccadilly - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
PHOTOGRAPHS—*cont.*	
Hedges, D.	7, Queen-street - Lytham, Lancashire.
Henderson, A. L.	49, King William-street, City - London.
Hudson, F.	1, Regent-parade - Ventnor, Isle of Wight.
Jennings, P.	1, Belgrave-place, Belgrave-square - Rathmines, Dublin.
Kerr, E.	7, Merville-terrace, Gilford-place, North Strand - Dublin.
Lee & Co.	9, Crockherbtown - Cardiff, Wales.
Lemere, B.	147, Strand - London
London Stereoscopic & Photographic Co.	110 and 108, Regent-street - London.
Mansell, W. A., & Co.	2, Percy-street - London.
Norman, C.	Graphic Villa - Tunbridge Wells, Kent.
Robinson & Cherrill	The New Public Buildings - Tunbridge Wells, Sussex.
Ross & Co.	7, Wigmore-street, Cavendish-sq. - London.
Slingsby, R.	168, High-street - Lincoln.
Typographic Etching Co.	23, Farringdon-street - London.
Wilson, G. W., & Co.	24, Crown-street - Aberdeen.
York, F.	87, Lancaster-road, Notting-hill - London.
PINS, HAIR PINS, HOOKS AND EYES, &c.	
Cooke, Bros.	65*a*, Constitution-hill - Birmingham.
English, J., & Co.	- - Feckenham, near Redditch.
Hayes, Crossley, & Co.	153, Cheapside - London.
Kirby, Beard, & Co.	18, Cannon-street - London.
Tayler, D. F., & Co.	New Hall Works - Birmingham.
PIPES, TOBACCO (CLAY).	
Davidson, T., Jun., & Co.	33 and 41, Garngad-hill - Glasgow.
PISCICULTURE.	
Hoare, J.	39, Bloomsbury-street - London.
PLANTS, GRASS, AND FLOWER SEEDS.	
Sutton & Sons	Royal Berkshire Seed Establishment, Reading.
Veitch, J. & Sons	Royal Nursery, King's road, Chelsea, London.
Waterer, Anthony	Knap-hill Nursery, Woking - Surrey.
Williams, B. S.	Victoria and Paradise Nurseries, Upper Holloway - London.
PLATINUM, PALLADIUM, AND OTHER RARE METALS.	
Johnson, Matthey, & Co.	78, Hatton-garden - London.
PLAYING CARDS.	
Goodall, C., & Son	24, Great College-street, Camden Town London.
PLOUGHS.	
Fison, J. P.	Feversham Works - Cambridge.

Object, and Name of Exhibitor.	Address of Exhibitor.
PNEUMATIC APPARATUS, &c.	
Boyle, Robert M., & Son -	100, Mitchell-street - - - Glasgow.
Wier, M. A. - - -	33, Abchurch-lane - - - London.
Zimdars, C. E. - - -	28, Red Lion-square - - London.
POLISHING POWDERS, PASTES, &c.	
Oakey, J., & Sons - -	Wellington Works, Westminster Bridge-road - - - London.
Star Plate and Universal Polishing Powder Company - -	Gracechurch-street - - - London.
POPLINS.	
Pim Brothers & Co. - -	22, William-street - - - Dublin.
PRESERVED PROVISIONS AND CONSERVES.	
Allen, F., & Sons - -	Canal-road, Mile End-road - - London.
Ball, J. - - - -	12, Duke-street, Grosvenor-square - London.
Chapman, E., & Co. - -	10, Duke-street, Portland-place - London.
Cliff, J. - - - -	5, Dungeon-street - - - Halifax.
Crosse & Blackwell - -	Soho-square - - - - London.
Geyelin & Co. - - -	Belgrave House, Argyle-square - London.
Hooker, J. - - -	104, Upper Thames-street - - London.
Ledger, H., & Co. - -	61, 63, Lant-street, Borough - London.
Nicoll, D. - - - -	15, Clement's Inn - - - London.
Patchitt, E. C. - - -	Ilkeston-road - - - Nottingham.
Schneider, E. A. - - -	4, Cambria-villas, Chesterton-road - Cambridge.
Stevens, T. - - -	46, Hope-street - - - Wrexham, Wales.
PREVENTION OF ACCIDENTS IN FEEDING THRESHING MACHINES.	
Sainty, J. & B. - - -	Alpha Works - - - Wisbeach, Cambridgeshire.
PRINTING.	
Augener, G., & Co. - -	86, Newgate-street - - - London.
Bradbury, Agnew, & Co. -	Bouverie-street - - - London.
British and Foreign Blind Association - - -	33, Cambridge-square, Hyde Park - London.
Dickinson & Higham - -	73, Farringdon-street - - London.
Dowson, Sutherland & Co., Limited - - - -	12, Fetter-lane - - London.
Goodall, C., & Son - -	24, Great College-street, Camden Town - - - - London.
"Graphic," The Proprietors of the - - - -	190, Strand - - - - London.
Illustrated London News -	198, Strand - - - - London.
Johnson, Edmund - - -	3, Castle-street, Holborn - - London.
Johnson, J. M., & Sons, Limited - - - -	3, Castle-street, Holborn - - London.
Norton & Shaw - - -	7, Garrick-street - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
PRINTING—*cont.*	
PALMER, S. - - -	Park House, Grove-street, South Hackney - - - London.
PRICE & Co. - - -	36, Great Russell-street - - Bloomsbury.
SUNDAY SCHOOL UNION - -	56, Old Bailey - - - London.
WARD & Co., MARCUS - -	67, 68, Chandos-street, Strand - London.
PRINTING TYPES, LOGOTYPES, AND MACHINERY, STAMPS, &c.	
BEATTY, F. S. - - -	5, Aston's-quay - - - Dublin.
BOWMAN, C. - - -	6, King-street, Tower-hill - - London.
GREENWOOD & BATLEY - -	Albion Mills - - - Leeds.
LILLY, J., & Co. - - -	172, St. John's-street, Clerkenwell - London.
SHAW, W. - - - -	3, Sheldon-street, Bayswater - London.
STEPHENSON, BLAKE, & Co. -	- - - - - Sheffield.
TOMLINE COLONEL - - -	Carlton-terrace - - - London.
WALTER, J., M.P. - - -	"Times" Office, Printing House-square - - - - London.
PULLEY BLOCKS.	
LACEY, R. G. - - -	Coast Guard Station - - Leigh, Essex.
PICKERING, J. - - -	Globe Works - - - Stockton-on-Tees.
WETHERED, E. R. - - -	- - - - - Woolwich, Kent.
PULVERIZING MACHINE.	
KIMBERLEY, N. G. - - -	11, Great St. Helen's - - London.
PUMPS AND PUMPING ENGINES.	
ADAIR & Co. - - -	Neptune-street - - - Liverpool.
GWYNNE, J. & H. - - -	Hammersmith - - - London.
GWYNNE & Co. - - -	Essex-street Works - - - London.
HAYNES, T., & SONS - -	229, Edgware-road - - - London.
KERR, E. - - - -	7, Merville-terrace, Gilford-place, North Strand - - - Dublin.
PICKERING, J. - - -	Globe Works - - - Stockton-on-Tees.
PUNCHING AND SHEARING MACHINERY.	
BEESLEY & SONS - - -	Abbey-road Boiler Works - - Barrow-in-Furness.
NUSSEY & LEACHMAN - -	- - - - - Leeds.
QUILLS AND QUILL PENS.	
STEPHENS, H. C. - - -	171, Aldersgate-street - - London.
QUILTS, QUILTINGS, &c.	
PEARSON, T., & SON - -	54, Church-street - - - Manchester.
RAILS, RAILWAY PLANT, CARRIAGES, SIGNALS, &c.	
BRIERLEY, SONS, & REYNOLDS -	81A, Edgware-road - - - London.
PATENT NUT & BOLT Co., LIMITED	London Works - - near Birmingham.

Object, and Name of Exhibitor.	Address of Exhibitor.
RAILS, RAILWAY PLANT, &c. —*cont.*	
SAXBY & FARMER	Canterbury-road, Kilburn - London.
SEATON, W.	19, Salisbury-street, Strand - London.
WELCH, ALFRED	11, Bank-buildings, Metropolitan Cattle Market - London.
WEST CUMBERLAND IRON & STEEL CO., LIMITED	- Workington, Cumberland.
WILLIAMS, R. P.	9, Great George-street, Westminster - London.
ZIMDARS, C. E.	28, Red Lion-square - London.
REFRIGERATORS AND ICE SAFES.	
LAWRENCE & CO.	22, St. Mary Axe - London.
STIFF, J., & SONS	High-street, Lambeth - London.
ROBY, G.	31, King-street - Wigan.
ROCK DRILLING MACHINE.	
HOLMES, PAYTON, & TAYLOR	43, Borough-road, Southwark - London.
SADDLERY AND HARNESS.	
HAWKINS BROS. (late J. HALE & CO.)	Hatherton Works - Walsall.
HUDSON, S.	65, Dawson-street - Dublin.
POLLOCK, SYDNEY	72, Lancaster-road, Notting-hill - London.
SWAINE & ADENEY	185, Piccadilly - London.
SALT.	
CORBETT, J., M.P.	Stoke Prior Salt Works - Worcestershire.
HIGGINS, T., & CO.	33, Tower-buildings - West Liverpool.
SANITARY APPARATUS, SANITARY POTTERY, WATER-CLOSETS, &c.	
BATES, WALKER, & CO.	Dale Hall Works - Burslem.
BROWNE, WESTHEAD, MOORE, & CO.	Cauldon-place, Staffordshire Potteries.
DEAN, H.	Southam - Rugby, Warwickshire.
GREENWAY, H.	Ham-street - Plymouth.
HOLLAND, W. T.	- Llanelly, South Wales.
JENNINGS, GEORGE	Palace Wharf, Stangate - London.
LINDSAY & ANDERSON	Lilliehill Works - Dunfermline, Scotland.
STIFF, J., & SONS	High-street, Lambeth - London.
ZIMDARS, C. E.	28, Red Lion-square - London.
SCREW CUTTING MACHINE.	
HEAP, J., & CO., LIMITED	Lee-street - Oldham.
SCREW PROPELLERS AND FITTINGS.	
HEWITT, W.	Prospect Villa, Sydenham Hill - Bristol.
VANSITTART, HENRIETTA	2, Montpelier-row - Twickenham, Middlesex.

Object, and Name of Exhibitor.	Address of Exhibitor.
SEWAGE, TREATMENT AND PRODUCTS.	
Universal Charcoal & Sewage Company, Limited - -	5, High-street - - - Manchester.
SEWING MACHINES.	
Greenwood & Batley - -	Albion Works - - - Leeds.
Kimball & Morton - -	80, Bishop-street - - - Anderston, Glasgow.
Smith & Starley - - -	Trafalgar Works - - - Coventry.
Wilson, Newton, & Co. - -	144, High Holborn - - - London.
SHEEP AND GARDEN SHEARS.	
Wilkinson, W., & Sons - -	Spring Works - - Grimesthorpe, Sheffield.
SHIP MODELS, SIGNALS, SHEATHING, MACHINERY, IRON WORK, &c.	
Gümpel, C. G. - - -	49, Leicester-square - - - London.
Hewitt, W. - -	Prospect Villa, Sydenham Hill - Bristol.
Hill & Clark - - -	6, Westminster Chambers, Victoria-street - - - - London.
Inman Steamship Co., Limited -	22, Water-street - - - Liverpool.
Lacey, R. - - - -	Coast Guard Station - - Leigh, Essex.
Sainty, J. & B. - - -	Alpha Works - - - Wisbeach, Cambridgeshire.
Tucker & Wallace - -	3, Antrim-place - - - Belfast.
Turner, C. - -	3, Bugle-street - - - Southampton.
Vansittart, Henrietta - -	2, Montpelier-row - - - Twickenham, Middlesex.
Zimdars, C. E. - - -	28, Red Lion-square - - - London.
SILK MACHINERY.	
Stevens, T. - - -	20, Warwick-lane - - - London; and Coventry.
SILK, RAW, YARN, SEWING SILK, CORD, &c.	
Adams & Co. - - -	5, New-street, Bishopsgate-street - London.
Clayton, Marsdens, Holden, & Co., Limited - - -	Wellington Mills - - - Halifax.
Milner, W., & Sons - -	Union-street - - - Leek, Staffordshire.
Rickards, C. A. - - -	Bell Busk Mills - - near Leeds.
Ward, A., & Co. - - -	Albion Mills - - - Leek, Staffordshire.
SILKS AND VELVETS, MIXED GOODS, SILK LACE, SHAWLS, &c.	
Brigg, J. F., & Co. - -	- - - - - Huddersfield.
Farmer & Rogers - -	171, 173, 175, Regent-street - London.
French & Co. - - -	St. Mary's Mills - - - Norwich.
Hilditch, G. & J. B. - -	11 and 12, Cheapside - - London.
Humbert, H. - - -	30, Barbican - - - London.
Norris & Co. - -	124, Wood-street - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
SILKS, VELVETS, &c.—*cont.*	
Pim Brothers & Co. - -	22, William-street - - - Dublin.
Sheldon & Fenton - -	12, King-street, Cheapside - - London.
Stevens, T. - - -	20, Warwick-lane - - - London; and Coventry.
Welch, Margetson, & Co. -	16, 17, Cheapside - - - London.
Wild, J. - - - -	Greenfield Mill - - - Shaw, near Oldham.
SKINS, FURS, AND LEATHER, LEATHER GOODS.	
Angus, G., & Co. - - -	10, Thomas-street - - - Liverpool.
Bennett, T., & Son - -	70, Turnmill-street, Farringdon-road London.
Bussey, G. G., & Co. - -	Museum Works, Rye-lane, Peckham London.
Edinburgh Western Tanning Co., Limited - - -	135, West Port - - - Edinburgh.
Harrington, J., & Co. - -	Union Works - - - Ryde, Isle of Wight.
Hoe, R., & Sons - - -	44, Leadenhall-street - - London.
Hooper, Cleeve, Junior -	6, 7, 8, New Weston-street, Bermondsey - - - - London.
Hooper, Cleeve, W., & Sons -	51, Weston-street, Bermondsey - London.
Marling & Co. - - -	Ebley and Stanley Mills - - Stroud, Gloucester.
Puckridge, F., & Nephew -	530, 534, Kingsland-road - - London.
Pullman, R. & J. - -	17, Greek-street, Soho - - London.
Ward, Marcus, & Co. - -	67, 68, Chandos-street, Strand - London.
Wilson, Walker, & Co. - -	Sheepscar Works - - - Leeds.
SLATE AND ENAMELLED SLATE.	
Cwmorthin Slate Company, Limited - - - -	- - - - - Portmadoc, North Wales.
Pen-yr-orsedd Slate Quarry Company, Limited - -	- - - - - Carnarvon, North Wales.
SMALL WARES, SUCH AS BUTTONS, STUDS, LINKS, BUCKLES, CLASPS, HOOKS AND EYES.	
Baker, C., & Sons - -	98, Lichfield-street - - - Birmingham.
Fenton, J. - - - -	74, Great Hampton-street - - Birmingham.
Smith, J., & Son - - -	Astwood Bank - - near Redditch.
Tayler, D. F., & Co. - -	New Hall Works - - - Birmingham.
SOAP.	
Atkinson, J. & E. - - -	24, Old Bond-street - - - London.
Cohné, S. - - - -	13, Sise-lane - - - London.
Field, J. C. & J. - - -	Lambeth Marsh - - - London.
Low, Son, & Haydon - -	148, Strand - - - London.
Marrison, R. D. - - -	Great Orford-street - - Norwich.
Pears, A. & F. - - -	91, Great Russell-street - - London.
Price's Patent Candle Company - -	Belmont Works, Battersea - - London.
Rimmel, E. - - -	96, Strand - - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
SPINNING MACHINERY AND ACCESSORIES.	
Ambler, W. - - -	17, Elizabeth-street - - - Bradford.
Booth, H., & Co. - - -	Edward-street - - - Preston.
Fairbairn, Kennedy, & Naylor - - - -	- - - - - Leeds.
Howard & Bullough - -	Globe Works - - - Accrington, Lancashire.
Lawson, S., & Sons - -	Hope Foundry - - - Leeds.
Smith, J. & S. - - -	Low Bridge Works - - - Keighley.
SPOOLING AND THREAD-WINDING MACHINE.	
Coats, J. & P. - - -	- - - - - Paisley.
SPRINGS.	
Hawksworth (Wilson), Ellison, & Co. - - - -	Carlisle Works - - - Sheffield.
STARCH, STARCH PRODUCTS, AND FIREPROOF STARCH.	
Nicoll, D. - - - -	15, Clements Inn - - - London.
STEAM CRANES AND HOISTS.	
Appleby Brothers - -	Emerson-street, Southwark - - London.
Aveling & Porter - -	- - - - Rochester, Kent.
STEAM ENGINE AND OTHER BOILERS AND GENERATORS.	
Brechin, J. B. - - -	45, Commercial-street - - Dundee.
Davey, Paxman, & Co. - -	- - - Colchester, Essex.
Galloway, W. & J., & Sons -	Knott Mill Ironworks - - Manchester.
Graham & Co. - - -	Premier Boiler Works, Premier-road Halifax.
STEAM ENGINE FITTINGS, FORGINGS, &c.	
Cohné, S. - - - -	13, Sise-lane - - - London.
Dennis, T. H. P., & Co. - -	Anchor Ironworks - - - Chelmsford, Essex.
Moncrieff, J. - - -	North British Glass Works - - Perth, Scotland.
Phosphor Bronze Co., Limited -	139, Cannon-street - - - London.
Turner, C. - - -	3, Bugle-street - - - Southampton.
Wier, M. A. - - -	33, Abchurch-lane - - - London.
STEAM ENGINES, LOCOMOTIVES, AND TRACTION ENGINES.	
Aveling & Porter - -	- - - - - Rochester, Kent.
Davey, Paxman, & Co. - -	- - - - Colchester, Essex.
Green, E., & Son - - -	Economiser Works - - - Wakefield.
Moy, Thomas - - -	37, Farringdon-street - - London.
Ransomes, Sims, & Head - -	Orwell Works - - - Ipswich.

Object, and Name of Exhibitor.	Address of Exhibitor.
STEAM HAMMERS, STAMPS, AND STRIKERS.	
Massey, B. & S.	Openshaw - Manchester.
STEAM PUMPS, AND INJECTORS.	
Fison, J. P.	Feversham Works - Cambridge.
Gwynne, J. & H.	Hammersmith - London.
Gwynne & Co.	Essex-street Works - London.
Pickering, J.	Globe Works - Stockton-on-Tees.
STEAM ROAD ROLLERS.	
Aveling & Porter	- Rochester, Kent.
STEEL.	
Brown & Co., John, Limited	Atlas Works - Sheffield.
Cammell, C., & Co., Limited	Cyclops Works - Sheffield.
Great Western Iron Co., Limited	Soudley - Newnham.
Hawksworth (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.
Jessop, W., & Sons, Limited	Park and Brightside Works - Sheffield.
Siemens, C. W.	12, Queen Anne's-gate - London.
West Cumberland Iron & Steel Co., Limited	- Workington, Cumberland.
STEEL RAILS, TYRES, CASTINGS, FORGINGS, SPINDLES, SHUTTERS, AND OTHER GOODS.	
Great Western Iron Co., Limited	Soudley - Newnham.
Hawksworth (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.
Houghton, W. D.	Friars Green Mill - Warrington.
Ward & Payne	West-street - Sheffield.
STOKERS (MECHANICAL).	
Smith, Dillwyn	153, Duke-street - Liverpool.
STONE DRESSING MACHINES, STONE BREAKING MACHINES.	
Dunston Engine Works Company	- Gateshead-on-Tyne.
Shearer, H.	21, Great George-street, Westminster- London.
STONE, STONEWARE, MARBLE WORK, &c.	
Bessbrook Granite Works	- Bessbrook, Ireland.
Brooke, E., & Sons	Field House - Huddersfield.
Brownfield, W., & Son	- Cobridge, Staffordshire.
Campbell, Hugh, & Son	Newry Granite Polishing Works, Moor Quarries - Newry.
Dean, H.	- Southam, Rugby.
Doolin, Walter	23, Westland-row - Dublin.

Object, and Name of Exhibitor.	Address of Exhibitor.
STONE, STONEWARE, &c.—*cont.*	
Doulton, H., & Co.	63, High-street, Lambeth - London.
Doulton & Watts	Lambeth Pottery, Lambeth - London.
Great North of Scotland Granite Co., Limited	- - - - Peterhead, Scotland.
Hunter, J.	209, King-street - Aberdeen.
Lindley, R. C.	- - - - Mansfield, Nottingham.
Macdonald, A., Field, & Co.	Aberdeen Granite Works - Aberdeen.
Price, J. & C., & Brothers	69, Victoria-street - Bristol.
Shearer, Smith, & Co.	21, Great George-street - London.
Stiff, J., & Sons	High-street, Lambeth - London.
STOVES, RANGES, AND GRATES, FENDERS, AND FIRE-IRONS.	
Barnard, Bishop, and Barnards	Norfolk Ironworks - Norwich.
Clough, S. W.	Stanningley - near Leeds.
Doulton & Co.	48, High-street, Lambeth - London.
Feetham, M., & Co.	9, Clifford-street - London.
Gregory, J.	South Park - Lincoln.
Heaps & Wheatley	- - - - Brotherton, Normanton, Yorkshire.
Kerr, E.	84, Talbot-street - Dublin.
Perkins, A. M., & Sons	Seaford-street, Regent's-square, Gray's Inn-road - London.
Smart, T. W.	Queens-road, Buckhurst Hill - London.
Steel & Garland	Wharncliffe Works - Sheffield.
Thornton, E.	12, Richmond-road - Bradford.
STRAW PLAIT AND FINISHED ARTICLES.	
Humbert, H.	30, Barbican - London.
STREET SWEEPING AND SCRAPING MACHINE.	
Smith, W., & Sons	- - - - Barnard Castle, Durham.
SUGAR MACHINERY.	
Mirrlees, Tait, & Watson	Scotland-street Ironworks - Glasgow.
SURGICAL AND MEDICAL INSTRUMENTS AND APPLIANCES.	
Glasgow Apothecaries Co.	34, Virginia-street - Glasgow.
Haywood, J. S.	Castle Gate - Nottingham.
Lang, J. & J.	13, Charterhouse-buildings, Aldersgate-street - London.
Lee, R. J., Dr.	4, Savile-row - London.
Lynch & Co.	171A, Aldersgate-street - London.
Mayer & Meltzer	71, Great Portland-street - London.
Pulvermacher, I. L.	194, Regent-street - London.
Rein, F. C., Mrs.	108, Strand - London.
Rein, F. C., & Son	108, Strand - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
TABLE FOUNTAINS.	
Storer, J. - - - -	Stamford Brook, Hammersmith - Middlesex.
TAILORS' MACHINERY.	
Sanson, R. B. - - -	87, Globe-road, Mile End-road - London.
TANNING MATERIAL.	
Hooper, Cleeve, W., & Sons -	51, Weston-street, Bermondsey - London.
Sands Bros. & Co. - -	Salford Chemical Works - - Manchester.
TAPESTRY.	
Hall, T. - - - - -	8, George-street - - - Edinburgh.
TELEGRAPHIC APPARATUS AND MATERIALS.	
India-rubber, Gutta Percha, and Telegraph Works Co., Limited - - - -	100, Cannon-street - - - London.
Siemens Brothers - -	12, Queen Anne's-gate - - London.
Telegraphic Construction and Maintenance Co. - -	38, Old Broad-street - - London.
Wier, M. A. - - -	33, Abchurch-lane - - - London.
TERRA-COTTA WORK.	
Brooke, E., & Sons - -	Field House - - - - Huddersfield.
Doulton, H., & Co. - -	63, High-street, Lambeth - - London.
Holland, W. T. - - -	- - - - - Llanelly, South Wales.
Jennings, G. - - -	Palace Wharf, Stangate - - London.
Johnson & Co. - - -	Ditchling Potteries - - - Sussex.
Lindsay & Anderson - -	Lilliehill Works - - - Dunfermline, Scotland.
Matthews, J. - - -	Royal Pottery - - - Weston-super-Mare, Somersetshire.
Maw & Co. - - -	Benthall Works - - - Broseley, Shropshire.
Reynolds, J. G. - - -	9, Old Ford-road - - - London.
Stiff, J., & Sons - - -	High-street, Lambeth - - London.
Tinworth, G. - -	122, Hill-street, Walworth - - London.
Watcombe Terra-Cotta Co., Limited - - - -	- - - - - Torquay, South Devon.
Wood & Ivery - - -	Albion Brick Works - - West Bromwich, Staffordshire.
THRASHING MACHINES.	
Fison, J. P - - - -	Feversham Works - - - Cambridge.
TICKETTING MACHINE.	
Coats, J. & P. - - -	Ferguslie Thread Works - - Paisley.
TILES, ENCAUSTIC, AND OTHERS.	
Brownhills Pottery Co. -	- - - - - Tunstall, Staffordshire.
Campbell Brick & Tile Company - - - -	- - - - - Stoke-on-Trent.
Colthurst, Symonds, & Co. -	- - - - - Bridgwater, Somerset.
Cox & Sons - - -	28, 29, 31, Southampton-street, Strand London.
Craven, Dunnill, & Co., Limited - - - -	Jackfield Works - - near Ironbridge, Salop.

Object, and Name of Exhibitor.	Address of Exhibitor.
TILES, ENCAUSTIC, &c.—*cont.*	
Eastwood & Co., Limited	Wellington, Wharf, Belvedere-road, Lambeth - London.
Gibbs & Moore	89, Southampton-row - London.
Holland, W. T.	- Llanelly, North Wales.
Johnson & Co.	Ditchling Potteries - Sussex.
Matthews, E.	377, Oxford-street - London.
Maw & Co.	Benthall Works - Broseley, Salop.
Minton, Hollins, & Co.	- Stoke-on-Trent.
Minton's China Works	- Stoke-on-Trent.
Stanley Brothers	Midland Tile Works - Nuneaton, Warwickshire.
Stiff, J., & Sons	High-street, Lambeth - London.
TIN, TIN AND TERNE PLATES, TIN WORK, TIN FOIL.	
Ash & Lacy	Meriden-street - Birmingham.
Baldwin, E. P. & W.	Wilden Works - near Stourport, Worcestershire.
Governor & Company of Copper Miners in England	Cwm Avon Works - Taibach, Glamorganshire, South Wales.
Morewood, E., & Co.	Coleridge House - Swansea.
Nash, H., & Co.	12 and 14, Tower-buildings North, Water-street - Liverpool.
Swansea Tin Plate Co.	Swansea Tin Plate Works - Swansea.
Hatton, Sons, & Co.	Broadwater Works - Kidderminster.
TISSUE PAPER.	
Fletcher, R., & Sons	Kersley Works - Stoneclough, nr. Manchester.
TOBACCO MACHINERY.	
Andrew, J. E. H.	Waterloo-road - Stockport, Cheshire.
TOOLS, EDGE TOOLS, AND OTHERS.	
Addis, J. B., & Sons	Arctic Works - Sheffield.
Baker, W.	10, Pembroke-street, Bingfield-street, Caledonian-road.
Beck, R. & J.	31, Cornhill - London.
Brooks & Cooper	Mousehole Forge - Sheffield.
Fussell, J., Sons, & Co.	- Frome, Somerset.
Hardy Patent Pick Company, Limited	Mining Tool Works, Ecclesall-road - Sheffield.
Hawksworth (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.
Heap, J., & Co., Limited	Lee-street - Oldham.
Phosphor Bronze Company, Limited	139, Cannon-street - London.
Pullinger, C.	- Selsey, near Chichester, Sussex.
Ward & Payne	West-street - Sheffield.
Wills, A. W.	Park Mills - Nechells, Birmingham.
Woodfield, W., & Sons	Easemore Works - Redditch.
Wright, P., & Sons	Constitution Hill Works - Dudley, Worcestershire.

Object, and Name of Exhibitor.	Address of Exhibitor.
TRAVELLING ARTICLES, TRUNKS, &c.	
Bliss, W., & Sons	Chipping Norton, Oxfordshire.
Bussey, G. G., & Co.	Museum Works, Rye-lane, Peckham London.
Hepworth, B., & Son	New Wakefield Mill - Dewsbury, Yorkshire.
Hoe, R., & Sons	44, Leadenhall-street - London.
TUBES, TUBE EXPANDERS AND SCRAPER.	
Brooks, H., &. Co.	31, Cumberland-market - London.
Clay, R.	58, Finborough-road, South Kensington - London.
Phosphor Bronze Company, Limited	139, Cannon-street - London.
UMBRELLAS AND PARASOLS.	
Davis & Wilson	Sun-street, West - Birmingham.
Martin, W. H.	64 and 65, Burlington Arcade, Piccadilly - London.
Sangster & Co.	140, Regent-street - London.
Swaine & Adeney	185, Piccadilly - London.
VARNISHES.	
Adams, J.	Victoria Park - Sheffield.
Mackay, J.	119, George-street - Edinburgh.
Rowney, G., & Co.	52, Rathbone-place - London.
Turner, C., & Son	7, Broad-street, Bloomsbury - London.
Williams, M.	Britannia Varnish Works - Wigan.
VICES, ANVILS, &c.	
Brooks & Cooper	Mousehole Forge - Sheffield.
Wright, P., & Sons	Constitution Hill Works - Dudley.
WASHING AND IRONING MACHINES AND FLUIDS.	
Air Burning Company, Limited	118, Green-street - Glasgow.
Pullinger, C.	Selsey, near Chichester, Sussex.
WATER SUPPLY, APPARATUS AND FITTINGS, WATER BOILING APPARATUS, WATER METERS.	
Dennis, T. H. P., & Co.	Anchor Ironworks - Chelmsford.
Graham & Co.	Premier Boiler Works, Premier-road Halifax.
Heaps & Wheatley	Brotherton, Normanton, Yorkshire.
Kimpton, T.	2 and 3, Barnard's Inn, Holborn - London.
Stockman, B. P., C.E.	3, Poets' Corner - Westminster Abbey.
Thornton, E.	12, Richmond-road - Bradford.
Wier, M. A.	33, Abchurch-lane - London.
Wright, W.	Vulcan Foundry - Coatbridge, Scotland.
Zimdars, C. E.	28, Red Lion-square - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
WATERPROOF ARTICLES.	
Turner, G., & Co.	94, Gracechurch-street - London.
Wellock, J., & Co.	62 and 64, Broom-street - Bradford.
WAX AND WAX CANDLES, SEALING WAX.	
Blackwood, J., & Co.	18, Bread-street-hill - London.
Field, J. C., & J.	Lambeth Marsh - London.
Lovey, E.	- Ponsnooth, Perran-ar-worthal, Cornwall.
Lyons, W.	Park-street - Manchester.
Stephens, H. C.	171, Aldersgate-street - London.
Waterston, G., & Son	56, Hanover-street - Edinburgh.
WEIGHTS AND WEIGHING MACHINES.	
Clarke & Dunham	69, Mark-lane - London.
Corcoran, Witt, & Co.	28, Market-buildings, Mark-lane - London.
WHEAT.	
Delf, Captain	Great Bentley - Colchester.
WHEEL CLEANING MACHINE.	
Ambler, W.	17, Elizabeth-street - Bradford.
WHIPS AND WALKING STICKS.	
Davis & Wilson	Sun-street, West - Birmingham.
Martin, W. H.	64, 65, Burlington Arcade - London.
Swaine & Adeney	185, Piccadilly - London.
WINES, SPIRITS, CIDER, PERRY, &c.	
Bernard & Co.	The Distillery - Leith.
Burke, E. & J.	16, Bachelor's Walk - Dublin.
Cork Distilleries Co.	- Cork.
Goodall, Backhouse, & Co.	Boar-lane - Leeds.
Grant, T.	Distillery - Maidstone, Kent.
Johnson Still Company, Limited	Rye Vale Distillery - Leixlip, near Dublin.
Mott & Co.	18, Galltree-gate - Leicester.
Muir, James, & Son	Calton Hill Brewery - Edinburgh.
Pendock Brothers	Queen-street Wharf - Bristol.
Richardson, Earp, & Slater	Trent and Northgate Brewery - Newark-on-Trent.
WIRE AND WIREWORK.	
Brown, J. B., & Co.	90, Cannon-street - London.
Corcoran, Witt, & Co.	28, Market-buildings, Mark-lane - London.
Edge & Sons	Coalport Works - Shlfnal, Shropshire.
Greening, N., & Sons	- Warrington.
Hawksworth (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.
Houghton, W. D.	Friars Green Mill - Warrington.

Object, and Name of Exhibitor.	Address of Exhibitor.
WIRE AND WIREWORK—*cont.*	
Phosphor Bronze Company, Limited	139, Cannon-street - London.
Smith, F., & Co.	Caledonia Works - Halifax.
Tayler, D. F., & Co.	New Hall Works - Birmingham.
Warrington Wire Rope Works	32, Redcross-street - Liverpool.
WOOD, WOODWORK, AND WOOD WORKING MACHINERY.	
Bullivant, T.	104, Ledbury-road, Bayswater - London.
Edwards, G.	149, Brompton-road - London.
Keith & Co.	6, Denmark-street, Soho - London.
Roberts, W.	139, Derby-road - Bootle, near Liverpoo..
WOOL, WOOLLEN, AND WORSTED YARNS.	
Bowes, J. L., & Brother	11, Dale-street - Liverpool.
Mill Hill, Wool and Rag Extracting Company, Limited	Mill Hill Works - Huddersfield.
Smith, D., & Co., Limited	Kensington Works - Halifax.
WOOL AND WORSTED WORKING MACHINERY.	
Nussey & Leachman	- Leeds.
Smith, J. & S.	Low Bridge Works - Keighley, Yorkshire.
WOOLLEN, WORSTED, AND MIXED FABRICS.	
Andrews, H., & Co.	29, Albion-street - Leeds.
Birchall, J. D., & Co.	Wellington and Burley Mills - Leeds.
Bliss, W., & Sons	- Chipping Norton, Oxfordshire.
Brigg, J. F., & Co.	- Huddersfield.
Bubb & Co.	Southfield Mills - near Stroud.
Buckley, J., & Co.	Moorcroft Mills - Delph, near Manchester.
Buckley, J. E. & G. F.	Linfitt Mills - Delph, near Manchester.
Carr, I., & Co.	Twerton Mills - Bath.
Davies, R., & Sons	Stonehouse Mills - Gloucestershire.
Hargreave & Nusseys	Farnley Low Mills - Leeds.
Hepworth, B., & Son	New Wakefield Mills - Dewsbury.
Hooper, C., & Co.	Eastington Mills - Stonehouse, Gloucestershire.
King, W.	Gilroyd and Albert Mills - Morley, near Leeds.
Little, J. W., & Co.	- Leeds.
Mahony, M., & Brothers	3, Camden Quay - Cork.
Marling, G., & Co.	Ebley and Stanley Mills - Stroud, Gloucestershire.
McGee, J. G., & Co.	30, 32, 34, High-street - Belfast.
Salter, S., & Co.	Home Mills - Trowbridge, Wiltshire.
Williams, E. G., & Co.	- Bradford.
WRITING DESKS, &c.	
Schildberg, H., & Co.	26, Moorgate-street - London.
Webster, H.	22, Litchfield-street, Soho - London.
ZINC.	
Zobel, C. F. J.	139, Euston-road - London.

INDIA.

A SPECIAL CATALOGUE OF THE INDIAN COLLECTION HAS BEEN PREPARED, AND IS ON SALE IN THE BUILDING, PRICE 25 CENTS.

COLONIAL SECTION.

BAHAMAS.
BERMUDAS.
BRITISH GUIANA.
CEYLON AND STRAITS SETTLEMENTS.
JAMAICA.
GOLD COAST.
MAURITIUS.
NEW ZEALAND.
QUEENSLAND.
SEYCHELLES ISLANDS.
TASMANIA.
TRINIDAD.
VICTORIA.

CONTRIBUTIONS FROM HER MAJESTY'S COLONIES TO THE PHILADELPHIA INTERNATIONAL EXHIBITION OF 1876.

BAHAMAS.

History.

A chain of islands lying between 21° 42′ and 27° 34′ N. lat., and 72° 40′ and 79° 5′ W. long. The group is composed of about 20 inhabited islands and an immense number of islets and rocks. The principal islands are New Providence (containing the capital, Nassau), Abaco, Harbour Island, Eleuthera, Inagua, Mayaguana, St. Salvador, Andros Island, Great Bahama, Ragged Island, Rum Cay, Exuma, Long Island, Crooked Island, Acklin Island, Long Cay, Watling's Island, the Berry Islands, and the Biminis.

St. Salvador, one of the islands composing this chain, was the first land discovered by Columbus on his voyage in 1492. New Providence was settled by the English in 1629, and held till 1641, when the Spaniards expelled them, but made no attempts to settle there themselves. It was again colonized by England in 1667, but fell into the hands of the French and Spaniards in 1703, after which it became a rendezvous for pirates, who were in 1718 extirpated, when a regular colonial administration was established, and the seat of Government was fixed there. In 1781 the Bahamas were surrendered to the Spaniards, but at the conclusion of the war they were once more annexed by, and finally confirmed to, Great Britain at the Peace of Versailles, 1783.

In 1848 the Turks and Caicos Islands were separated from the other Bahamas, and formed into a distinct Government, under the Government-in-Chief of the Governor of Jamaica.

The Turks and Caicos Islands lie between 21° and 22° N. lat., and 71° and 72° 37′ W. long.

Trade and Industry.

There are ten colonial custom-houses and ports of entry in the Government of the Bahamas, *viz.*, Nassau, Abaco, Eleuthera, Harbour Island, Exuma, Rum Cay, Long Island, Long Cay, Inagua, and Ragged Island. Considerable quantities of pine-apples, oranges, and sponges are exported, chiefly to England and the United States.

The pine-apple crop is very precarious. The industry of salt raking has ceased to be remunerative, owing to the high protective duties imposed on salt by the United States.

Experiments in coffee planting and other branches of industry have been commenced under the patronage of the present Governor.

Revenue and Expenditure.

	£	£
1864	102,024	98,636
1865	84,488	83,549
1866	53,283	76,985
1867	46,826	80,372
1868	40,777	68,306
1869	35,576	39,304
1870	40,710	47,270
1871	41,869	40,662
1872	37,574	39,000
1873	55,289	51,881
1874	37,283	38,374

Public Debt, 1873, 65,081*l.*

Imports and Exports.

	£	£
1864	5,346,132	4,672,398
1865	1,470,467	2,063,474
1866	328,622	261,972
1867	365,316	227,248
1868	231,526	131,522
1869	240,584	163,002
1870	283,970	190,253
1871	239,190	152,410
1872	201,051	136,224
1873	226,306	156,613
1874	183,993	130,293

Population.

39,162 (Census 1871).

(*From "Colonial Office List*, 1876.")

The history of the Bahamas began in 1492, when Columbus, the great pioneer, navigator, and discoverer of a New World landed on the shore of Guanaliani and named it St. Salvador. Commerce did not immediately follow in the wake of discovery, but about 250 years after that event, pine apples were grown at and exported from Eleuthera, and 50 years later cotton was extensively cultivated, and salt and wood added to the exports.

At the present time the colony's staples are salt, fruit, sponge, barks, dye and furniture woods, guano, and straw, turtle shell, fish scale and shell work.

The articles on exhibition fairly represent the productions and manufactures of these islands, and both might be indefinitely extended. But it is not the commercial position of the Bahamas only which should make a knowledge of them general. Their equality and wonderful salubrity of climate commend them to all who seek a genial, healthy, life-giving atmosphere. As a winter home for the afflicted, Peter Henry Bruce wrote nearly a century and a half ago, "It is no wonder the sick fly hither for relief, being sure to find a cure here." Modern travellers also testify that as a resort from damp and cold to sunshine and summer for those who require change and climatic benefit the Bahamas offer peculiar advantages. The heat is tempered by an ocean breeze of softness and purity seldom experienced elsewhere. Tropical flowers gladden the eye, and the luscious pine-apple, orange, and melon tempt the palate with their freshness and beauty. Fish abound in the clear pellucid waters surrounding these islands, and the northern fowl seek a home on the lakes. In a word, the Bahamas seem by nature fitted as a grand sanitarium for the afflicted from the North American Continent, and as a most desirable winter resort for all who wish to escape the rigours of the Northern Season.

SPECIMENS OF WOODS (MANUFACTURED).

Where the Price is given it is always to be understood as in Gold in Bond.

Cl. **600, 601.** **Sawyer, R. H., & Co.** 1 log Sabicu or Horseflesh (furniture), very durable wood, used for building purposes. 2 crotchets Mahogany or Madeira (do.), this wood is largely exported to London. 2 pieces Satin Wood (do.), this wood is largely exported to London. 1 piece Bull Wood (do.), a new wood not at present exported, very handsomely curled. 1 piece Cedar (do.), used for building purposes. 1 piece Cocoanut Wood (do.) 1 piece Stopper Wood (do.), very durable, used principally for the piles of wharves. 1 ship's Knee of Sabicu; knees like the one exhibited can be largely exported. 3 pieces Green Ebony (dye), largely exported to London. 4 pieces Braziletto Wood (do.), generally exported to the United States. 1 piece Logwood (do.), generally exported to London. To be sold to the highest bidder. Nos. 1 to 11.

George, Jno. S. 1 piece Logwood (dye), generally exported to London. 4 pieces Braziletto (do.), generally exported to the United States. 2 pieces Green Ebony (do.) 1 piece Yellow pine (furniture), large forests of Pitch Pine are in the Bahamas not utilized. 1 piece Sabicu or Horseflesh (do.) 1 piece Mahogany (do.) 1 piece Cedar (do.) 1 piece Satin Wood (do.) 1 piece Stopper Wood (do.) 1 piece Orange Wood (do.), not at present exported. 1 piece Lignum Vitæ (do.), exported to London. Nos. 12 to 22. Cl. **600, 601.**

Cl. 600, 601 **Dupuch, Joseph.** 65 Walking Canes, all manufactured out of woods growing in the Bahamas. 2 Crab Wood, each $1 25, can be supplied in Nassau from the tree at $12 per 100. 2 Red Crab Wood, each $1 25, in Nassau at $12 per 100. 2 Casava Wood, each $1, in Nassau at 4c. per foot. 2 Black Torch, each $1 25, in Nassau at $12 per 100 2 Lignum Vitæ, each 75c., in Nassau at $12 per ton. 2 Cocoanut Wood, each $1. 2 Mahogany, each $1, in Nassau at 4c. per foot. 2 Sabicu, each $1, in Nassau at 4c. per foot. 2 Satin Wood, each 75c., in Nassau at 4c. per foot. 2 Iron Wood, each $1 25, in Nassau at $12 per 100. 2 Green Ebony, each $1 25. 2 Red Stopper, each $1, in Nassau at 4c. per foot. 3 White do., each 50c., in Nassau at 4c. per foot. 2 Mastic Wood, each 75c., in Nassau at 4c. per foot. 2 Saffron do., each 50c., in Nassau at $12 per 100. 2 Cascarilla, with Bark, each 50c., in Nassau at $12 per 100. 2 Crab Wood do., each 50c., in Nassau at $12 per 100. 1 Prince do., do., each 25c., in Nassau at $12 per 100. 3 Red Stopper do., each 25c., in Nassau at $12 per 100. 1 White Stopper do., each 25c., in Nassau at $12 per 100. 6 Hercules Club do., set $4, in Nassau at $10 per 100. 4 Wild Lemon do., each 25c., in Nassau at $12 per 100. 2 Tamarind do., 25c., in Nassau at $8 per 100. 2 White Torch do., 50c., in Nassau at $12 per 100. 2 Black Torch do., 50c., in Nassau at $12 per 100. 2 Guava do., 25c., in Nassau at $12 per 100. 2 Wild Coffee do., 25c., in Nassau at $12 per 100. 3 Wild Cane do., 25c., in Nassau at $4 per 100. 2 Lemon do., 25c., in Nassau at $15 per 100. No. 23, letters A to Z, AA to AC.

Cl. 600, 601. **Wallace, Alexander C.** Walking Canes, viz.:—4 Crab Wood, with heads, $2 50. 2 do., without heads, $1 50. 2 Green Ebony, $2 50. No. 24, letters BC to BE.

Cl. 600; 601. **Armbrister, James A.** 18 Walking Canes, viz.:—12 Green Ebony, $1 25. 6 Satin Wood, $1 25. Manufactured at Long Island, Bahamas. No. 25, letters CD, CE.

Cl. 600, 601. **Dupuch, Joseph.** 1 Card Tray, $4, manufactured out of 9 different woods. 5 Bread Platters, $1 50, manufactured out of various woods. 3 Bread Platters, to be presented to Cornell University, Ithaca, N.Y., do. Nos. 26 to 28.

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SPONGES.

Sawyer, R. H. & Co. 1 string Sheep Wool Sponge, 1 Velvet do., 1 Yellow do., 1 Grass do., 1 Reef do. To be sold to the highest bidder. Largely exported to London and the United States. Nos. 29 to 33. Cl. 650.

SHELLS AND SHELL WORK.

Sawyer, R. H. & Co. 6 King Conch Shells, 6 Queen Conch do., 6 Common Pink Conch do., 3 Lamp Conch do. To be sold to the highest bidder. Largely exported to London. Nos. 34 to 37. Cl. 645, 254.

George, John S. 7 Queen Conch Shells. No. 38. Cl. 645, 254.

Saunders, Samuel P. 1 case containing about 100 varieties small shells, $100. The shells in this case were all collected in the Bahamas. No. 39. Cl. 645, 254.

Treco, P. A. 1 case containing Bahama Shells, $100. The shells were collected and arranged by J. R. Saunders. No. 40. Cl. 645, 254.

Evans, Ellen G. E. Cases containing 1 Shell Cross, $100; 1 Shell Basket, $60; 1 Bridal Wreath, $30. Manufactured out of Bahama Shells. Nos. 41 to 43. Cl. 645, 254.

Symonett, Mrs. Mathew. Cases containing 1 Palm Tree, $12; 1 Watch Stand, $25. Nos. 44 to 45. Cl. 645,

Eldon, Mrs. James. Case containing 1 Orange Tree, $25. No. 46. Cl. 645, 254.

Garner, Mrs. Maria E. Cases containing 1 Basket, $60; 1 Fruit Basket, $60; 1 Bridal Wreath, $20; 1 Spray, $4; 1 do., $3; 1 do., $3. Nos. 47 to 49, letters A to D. Cl. 645, 254.

Robertson, Mrs. S. E. Case containing Epergne, $500. No. 50. Cl. 645, 254.

Atwell, Misses. Cases containing Memorial Wreath, $140; Cornucopia, $45; 1 doz. sets Brooches and Earrings, $3 each or $35 the lot. Nos. 51 to 53. Cl. 645, 254.

All manufactured out of Shells and Fish Scales.

TORTOISE SHELL AND SHELL WORK.

George, John S. 6 pieces Tortoise Shell; obtained from Hawksbill Turtle, largely exported to London. 1 lot Loggerhead Shell; Cl. 645, 254.

obtained from Loggerhead Turtle, largely exported to London. Nos. 54, 55.

Cl. 645, 254. **Centennial Exhibition Committee, Nassau.** 1 Tortoise Back, cleaned and polished entire, $75. Cleaned and polished by J. R. Saunders, Nassau. No. 56.

Cl. 645, 845. **Minns, Albert C. J.** 1 case containing tortoise shell ornaments, viz., Lady's set consisting of Necklace, Pin and Earrings, Bracelets, Solitaires and Studs, $140; Gentleman's set consisting of Albert Chain and Charms, Scarf Ring, Solitaires and Studs, and Vest Button, $50; Lady's Necklace and Locket, $30; 1 Spoon 1, Paper Knife $10. All the tortoise shell work is manufactured by hand and is warranted genuine. No. 57, letters A to D.

MIMOSA BEAN WORK.

Cl. 605, 254. **Grant, Misses Julia & Mary.** 1 case containing Mimosa Bean Work, viz., Set of Lady's Ornaments $5, 1 Card Tray $4 50, 1 pair Watch Cases $2 50, 1 pair Mats $1, 1 case containing Cross $12. Nos. 58 and 59, letters A to D.

Cl. 605, 254. **Centennial Exhibition Committee, Nassau.** 1 case Mimosa Bean ornaments, viz., 1 Card Basket $4 50, 2 Bags $4, 2 pairs Bracelets, each $1 50. Manufactured by Messrs. Jarrett, Nassau. No. 60, letters A to C.

The Mimosa grows wild in the Bahamas.

FIBRES, ROPES, AND PALMETTO WORK.

Cl. 600, 666, **Centennial Exhibition Committee, Nassau.*** 1 case containing specimens of Fibres, viz., Fibres of the Pita Plant, Plaintain Tree, Banana do., Pine Apple Plant, Aloe, Esparto Grass; 1 case containing specimens of Fibres viz., Wool made from Leaf of Forest Pine, Pita Plant, Banana Tree, and Plaintain. None of the Bahama Fibres are at present utilized; could, however, be obtained and exported in large quantities. No. 61, letters A to F; No. 62, letters G to J.

Cl. 600, 666, 287. **Knowles, Joseph A.,*** Long Island. Specimens of wild Fig Tree (Bark), very durable when manufactured into rope; Rope & Net made out of above; Palmetto Rope. Nos. 63 to 65.

Centennial Exhibition Committee, Nassau.* Specimens of Palmetto Rope, 3 sizes. Nos. 66. Cl. 287.

Knowles, Joseph A.,* L.I. Specimens of Palmetto Baskets (3), ditto Mat. Nos. 67, 68. Cl. 289.

Carroll, Richard E.,* L. I. Specimens of Rope made out of Fibre of Aloe. Cl. 287.

Not exported but extensively used in the Bahamas. No. 69.

George, Jno. S.* Specimen of Palmetto Leaves. Indigenous to the Bahamas can be extensively exported. Cl. 600.

* For presentation to the Smithsonian Institution, Washington. No. 70.

Centennial Exhibition Committee, Nassau. 1 case containing Palmetto Work, viz., 6 Fans each $1 50, 3 Pearl Edge Hats, $3, 3 Edging Hats, $2. Manufactured by Mrs. Jno. Taylor, Inagua. No. 71, letters A to C. Cl. 254.

SUNDRIES.

Meadows, Jno. G., Inagua, **Sargent, D.,** Inagua, 1 case containing, viz., specimens of Salt and jar of Table Salt. This salt is largely exported to U. S. and Brit. N. America. No. 72. Cl. 200.

Sawyer, R. H., & Co.,* Saunders, S. P., Brice, D. A.* Specimens of Cotton, produced principally at Long Island and exported to London. No. 73. Cl. 665.

Saunders, Saml. P.* Specimen of Cave Earth (Fertilizer), exported to United States. No. 74. Cl. 681.

* For presentation to the Smithsonian Institution, Washington.

Sawyer & Co., R. H. Specimens of Bark (Canella Alba and Cascarilla), to be sold to highest bidder. Exported to United States, and London. Nos. 75, 76. Cl. 600.

George, Jno. S. Specimens of Bark (Cascarilla and Canella Alba, exported to United States and London; Arrow Root and Casava Starch, Bahama manufacture; Bees Wax; Wax made from Myrtle Berry, exported to London. Nos. 77 to 82. Cl. 600. 654. 658.

Sawyer & Co., R. H. Wax made from Myrtle Berry, to be sold to highest bidder, exported to London. No. 83. Cl. 654.

Saunders, Saml. P. Specimen of Mammee Sapota or Vegetable Sponge, excellent for bathing purposes; cost about 3c. each. No. 84. Cl. 604.

Cl. **623.** **Boyd, Adam.** Specimens of Tobacco and Coffee, cultivated in New Providence. Nos. 85, 86.

Cl. **102.** **Dupuch, Joseph.** 1 Block Building Stone, to be presented to Cornell University. No. 87.

Cl. **102.** **George, Jno. S.** 2 Blocks Building Stone, to be presented to Cornell University. No. 88.

Dorsett, Thomas. 1 Dripstone manufactured out of Lime Stone, for filtering water. No. 89. Cl. **224.**

Centennial Exhibition Committee, Nassau. 18 bottles of assorted preserved fruits, each $1 50; 4 assorted Pickles $1 50; 1 Pimento $1 50, manufactured out of native fruits by Daphne Fife. Nos. 90 to 92. Cl. **656.**

BERMUDAS,

Or Somers' Islands, a cluster of about 100 small islands, situated on the western side of the Atlantic Ocean, in lat. 32° 15′ N. and long. 64° 51′ W., at a distance of about 580 miles from the nearest land, viz., Cape Hatteras in North Carolina.

Fifteen or sixteen of these islands are inhabited: the rest are of inconsiderable size, the largest, or Bermuda proper, containing less than 20 square miles of land, and nowhere exceeding three miles in breadth.

The islands extend from N.E. to S.W. in a curved line for about 20 miles, bending inwards at both extremities, so as to enclose spacious and secure harbours.

Besides the main island, on which the town of Hamilton, the present seat of Government, is situated, the principal islands are St. George's, where the ancient town of St. George, the former capital, stands; Ireland Island, where the dockyard is established; Boaz and Watford Islands, occupied entirely by a military detachment, formerly a convict establishment; Somerset, St. David's, Smith's, Cooper's, Nonsuch, Godet's, Port's, and River's. With the exception of one break between Somerset and Watford Islands, there is continuous communication by bridges from St. George's to Ireland Island.

The climate has been long celebrated for its mildness and salubrity. The islands produce arrowroot of a fine quality, and an indigenous cedar of great durability, well adapted for ship-building and house-timber.

A few whales are occasionally taken in the neighbouring waters. Turtle are common.

The islands derive their name from Bermudez, a Spaniard, who sighted them in 1527. The earliest account of them is given by Henry May, who was cast away upon them in 1593. They were first colonized by Admiral Sir George Somers, who was shipwrecked there in 1609, on his way to Virginia. On his report, the Virginia Company claimed them, and obtained a charter for them from James I. in 1612. This company sold their right for 2,000*l.* to an association of 120 persons, who obtained a new charter in 1616, incorporating them as the Bermuda Company, and granting them very extensive powers and privileges.

Representative government was introduced in 1620. In 1621 the Bermuda Company in London made a code of Ordinances for the Government of the Colony. During the civil war, great numbers of emigrants, from England were attracted thither by the favourable reports of the climate and soil. Towards the end of the reign of Charles II., grave complaints were made by the inhabitants of the misgovernment of the plantation by the Company; and its charter was annulled by process of *Quo Warranto*, at Westminster, in 1684–85. Since then the Governors have been appointed by the Crown, and laws for the Colony enacted by a local legislature, consisting of the Governor, Council, and Assembly.

The lands belonging to the company were forfeited to the Crown on the annulment of their charter, and with the exception of some reserved for public uses, were granted in 1759 to purchasers on small quit-rents, extinguishable on the payment of a fixed sum of money.

During the revolutionary war in North America the inhabitants suffered great privations from the scarcity of food; and although they export largely certain articles of agricultural produce, especially potatoes, onions, tomatoes, and arrowroot, they are still dependent on foreign supplies for all the flour and most of the meat consumed.

In 1784 a printing-press was introduced.

Early in the present century the importance of the Bermudas as a naval station came to be recognized. Ireland Island was purchased exclusively by the Government, and a Dockyard established there. By Order in Council, dated June 23, 1824, the Bermudas were declared a place where male convicts might be kept at hard labour on the public works; but these islands never were made a penal settlement, strictly speaking, where convicts might be discharged. The establishment was broken up in 1863.

On the abolition of slavery in 1834, the system of temporary apprenticeship of the emancipated slaves. permitted by the Act of Parliament in the slave-holding colonies, was dispensed with by the local legislature of Bermuda, so as to entitle the slaves to their absolute freedom six years sooner than was required by Parliament. They and their descendants now form more than a numerical half of the entire population.

In 1846, a lighthouse, visible at more than 30 miles' distance, was erected on the highest land in the Colony; the light being 362 feet above the sea. A public library was established in 1839. In 1871 the Island of St. George's was connected with the main island by a causeway and road two miles in length, commenced in 1866, and completed at a cost of nearly 30,000*l*. An iron girder swing-bridge still permits the passage of vessels.

Revenue and Expenditure.

	£	£
1865	24,946	35,627
1866	26,637	25,148
1867	24,268	23,219
1868	36,110	37,231
1869	30,040	32,039
1870	33,073	33,302
1871	34,969	33,700
1872	33,256	32,235
1873	33,030	35,146
1874	29,066	29,800

Public Debt in 1874, 13,234*l*.

Imports and Exports.

	£	£
1865	200,983	40,238
1866	192,123	31,842
1867	200,817	22,832
1868	199,929	33,873
1869	103,962	23,391
1870	232,387	36,756
1871	231,618	48,405
1872	149,842	66,877
1873	128,065	64,887
1874	252,435	81,585

1875–6, Parliamentary Grant, 2,200*l*. (Governor's salary).

Population, Census 1851, 10,982.

		White.	Coloured.
„	1861, 11,461.		
„	1871, 12,121.	4,725.	7,396.

Total tonnage of vessels entered 1874, 72,212; cleared 1874, 71,935.

(*From "Colonial Office List*, 1876.")

Cl. **102.** **Ness, Ph.** An assortment of Building Stones of various qualities. A. Hard Stone containing some fossil shells, chiefly used in Military works, and for Road-making. B. Bastard Stone, less hard. C. Soft Building Stone, such as is commonly worked with a hand-saw, but hardens a little on exposure. They only differ in the degree to which the grains of sand are cemented by the infiltration of carbonate of lime in solution.

Cl. **662.** Bermuda Potatoes raised from Irish or American Seed, but much modified by Climate.

Cl. **621, 624.** Bermuda Tomatoes. American Seed.

Cl. **622.** Bermuda Onions, chiefly from Madeira Seed, modified by climate.

Cl. **611.** **Committee, The.** Bananas and other Fruits. To be forwarded at the proper season.

Cl. **656.** **Hugh, J. B.** Dried and Preserved Fruits.

Cl. **700** to **707.** **Bermuda, Gov. of.** Flowers, Ferns, and Ornamental Plants.

Cl. **600.** **Several Contributors.** Sections and Specimens of Woods.

Cl. **601.** **Astwood, Mrs.** Birds-eye Cedar, and other ornamental Woods.

Cl. **200, 272.** **Hugh, J. B.** Medicinal Herbs and Drugs.

Cl. **666.** **Peniston W.** Fibre prepared from the leaves of Fourcroye gigantia.

Cl. **645.** **Bermuda, Gov. of.** Conch Shells (strombus gigas) used by Cameo Cutters. An Extinct Land Shell of relatively large size. Sp. of Hyalline.

Cl. **650.** **Bermuda, Gov. of.** Corals, Sponges, Nullipores, and Corallines, Sea Fans (Gorgonias), Sea Rods, (Plexaura).

Cl. **658, 622,** **Tucher, Tho. Fowle.** Arrowroot.

Cl. **658, 622.** **Bertram, J. T.** Arrowroot.

Cl. **658, 622.** **Bertram, J. T.** Tous les Mois.
(To be sent at the proper season.)

Cl. **600, 254.** **Trimingham, J.** Palmetto Plat, and articles made from the Palmetto leaf.

Cl. **251.** **Trimingham J.** Bermuda Straw Plat, Bonnets, &c.

Cl. **252.** **Middleton, T. D.** Articles in Point Lace. Somerset Island.

Cl. **252.** **Smith, Mrs. R. T.** Fine Point Lace.

Cl. **252.** **Ness, Miss.** Point Lace Sleeveless Basque.

Cl. **252.** **Ness, Miss C.** Point Lace Sofa Pillow.

Cl. **252.** **Lines, Mrs.** Point Lace.

Cl. **254.** **Trimingham, J.** Wreath of Shell Work.

Cl. **254.** **Bermuda, Gov. of.** Walking Canes from the exterior of the Grú-gru Palm (Astrocaryum Auream (Cedar and other Walking Canes.

Cl. **217.** **Bermuda, Gov. of.** Two inlaid Tables Bermuda Wood and Workmanship.

Bermuda, Gov. of. Tools used in freeing the ground of the Roots of Sage and Wild Mimosa. Cl. **672.**

Hinson, Dr., M.D. Model of a Bermuda Yacht, Cutter-rigged, length of keel 4ft.; scale about $\frac{1}{8}$th. Cl. **594.**

Admiralty, Lords of the. Model of Her Majesty's Floating Dock at Bermuda. Cl. **596.**
Sectional Drawing of Ditto.

Education, Board of. School Map of the Bermudas. Cl. **300.**

Bermuda, Gov. of. Large General Map of the Bermudas, details by Royal Engineers and Major Crawford, R.A. Cl. **300.**

Bermuda, Gov. of. Diagram showing the Monthly Mean Temperature of Bermuda compared with other places of Winter resort. Drawn by Lieut. Col. Bland, R.E. Cl. **300.**

Thorpe, Mrs. W. "Afternoon in Bermuda." Cl. **306.**

Wilkinson, Major H. J. "The Sand Hills." Cl. **306.**

Anon. Bermuda Flowers from Nature. Cl. **306. 709.**

Somerset, Col. Fitzroy, R.E. Photographs of Bermuda Scenery, by the Royal Engineers. Cl. **430.**

Hugh, J. B. Photographs of Bermuda Scenery. Cl. **430.**

HISTORICAL SECTION.

Bermuda, Gov. of. Examples of the Ancient Records of the Colony of Bermuda from 1616. Cl. **306.**

Title Deeds, or Original Grants of Land of the Bermuda Company, 1628–9.

Bermuda, Gov. of. Fac-simile of the earliest published Map of Bermuda, from Norwood's Survey of 1616. Cl. **306.**

MISCELLANEOUS.

The top of a Pillar of Stalagmite, taken from the floor of a Submerged Cave about $2\frac{1}{2}$ feet below low-water mark. Cl. **100.**

A small Stalactite taken from the roof of the same cave, where the top was also submerged below low-water mark.

These are exhibited in evidence of the gradual subsidence by operation, of which the floors of nearly all the caves are somewhere below low-water mark

BRITISH GUIANA.

This Colony is a portion of the South American Continent, extending from east to west about 200 miles. It includes the settlements of Demerara, Essequebo, and Berbice. It is bounded on the east by Dutch Guiana, from which it is divided by the River Corentyn, on the south by Brazil, on the west by Venezuela, and on the north and north-east by the Atlantic Ocean.

This territory was first partially settled by the Dutch West India Company in 1580. It was from time to time held by Holland, France, and England. It was restored to the Dutch in 1802, but in the following year retaken by Great Britain, to whom it was finally ceded in 1814.

It is impossible to determine the exact area of the Colony, as its precise boundaries are undetermined between Venezuela and Brazil respectively, but it has been computed to be 76,000 square miles.

Under the Dutch, Demerara and Essequebo constituted one Government, and Berbice another, which arrangement indeed continued in force under the British Administration down to the year 1831.

Revenue and Expenditure.

	£	£
1865	379,392	300,894
1866	304,817	310,878
1867	275,209	307,061
1868	290,881	297,349
1869	311,377	293,636
1870	354,131	325,855
1871	379,647	338,053
1872	449,060	391,219
1873	361,932	399,990
1874	475,885	485,893*

Public Debt, 426,030*l.*

Amount invested for Sinking Fund at close of 1874 *or otherwise secured*, 400,666*l.*

Total Value of Imports and Exports.

	£	£
1865	1,359,292	2,089,639
1866	1,530,675	2,170,967
1867	1,498,524	2,365,777
1868	1,618,378	2,232,212
1869	1,572,275	2,164,014
1870	1,572,275	2,164,015
1871	1,897,183	2,748,720
1872	2,013,553	2,462,703
1873	1,764,571	2,217,432
1874	1,873,219	2,761,837

Population in 1871, *total* 193,491.

Natives of British Guiana.	West India Islands.	Madeira and Azores.	Other places.
113,570	13,385	7,925	9,635

Estimated present Population, 1875, 212,000.

Immigrant Population, 1874, *on Estates.*

	Under Indenture.
Indians - - -	33,360
Chinese - - -	3,875
Africans - - -	362
Total -	38,597

* The revenue and expenditure here is exclusive of the sums raised for and expended on immigration by the planters.

† It is a strange coincidence that the total value of the imports in 1869 and 1870 were precisely similar, whilst there was only the difference of one pound between the exports of the same years.

The aboriginal Indians were estimated in 1851 at about 7,000; but Mr. M'Clintock, Superintendent of Rivers and Creeks, an undoubted authority on the subject, carries the number as high as 20,000 or 21,000, but the numbers of the tribes within the British territories vary, and are at all times very uncertain.—*From "Colonial Office List*, 1876."

Samples of Sugar, Rum, and other Articles contributed by various Sugar Estates and private Gentlemen.

7 samples Vacuum Pan Sugar, by plantation Great Diamond.
3 do. do., by plantation Met-en-Meerzorg.
2 do. do., by plantation Bel Air.
2 do. do., by maceration, by plantation La Bonne Intention.
1 do. do., by plantation Ogle.
2 do. do., by plantation Tuschen de Vrienden.
1 do. do., Molasses, by plantation Tuschen de Vrienden.
2 do. do., by plantation Uitvlugt.
1 do. do., by plantation Greenfield.
2 do. do., by plantation Hope.
1 do. Common Process Sugar, by plantation Columbia.
No. 1. Samples Best White Vacuum Pan Sugar, by maceration, by plantation Leonora.
No. 2. Samples for Copenhagen markets, by maceration, by plantation Leonora.
No. 3. Samples shipping for the English markets, by maceration, by plantation Leonora.
2 samples Rum, by plantation Great Diamond.
1 do. do., by plantation Lusignan.
1 sample Rum, by plantation Hope.
2 do. do., by plantation Leonora.
2 do. do., by plantation Tuschen de Vrienden.
1 sample Rice, Creole, by plantation Great Diamond.
1 specimen Greenheart Wood, nearly 100 years old, by T. H. Mackey, Esq.
1 do. Plantain Fibre, Musa Paradisiaca, by B. J. Godfrey, Esq.
1 do. Silk Grass Fibre, Bromelia Karatas, by B. J. Godfrey, Esq.
1 do. Mahoe Fibre, Hibiscus Elatus, by B. J. Godfrey, Esq.
1 do. Sweet Briar Fibre, Acacia, by B. J. Godfrey, Esq.
1 do. Monkey Apple Fibre, by B. J. Godfrey, Esq.
Rice Straw Ornaments, by plantation Great Diamond.
Also a collection of Starches, Drugs, and other Medicinal productions of the colony, prepared by William Fresson, Esq.
Feb. 25th.—Received this day two samples of Common Process Sugar from plantation Vreed-en-Hoop; and two samples of Vacuum Pan Sugar from plantation Versailles.

CEYLON AND STRAITS SETTLEMENTS.

CEYLON.

An island situated in the Indian Ocean, off the southern extremity of Hindostan; lying between 5° 55′ and 9° 51′ N. lat., and 79° 41′ and 81° 54′ E. long.; its extreme length from north to south, *i.e.*, from Poin Palmyra to Dondera Head, is 266 miles; its greatest width 140½ miles from Colombo on the west coast to Sangemankende on the east.

The climate for a tropical country is comparatively healthy; the heat in the plains, which is nearly the same throughout the year, being much less oppressive than in Hindostan. Along the coast the annual mean temperature is about 80° Fahr.; at Kandy, 1,465 feet above sea level, it is 76° (average of 10 years); at Colombo the annual variation is from 76° to 86°; at Galle 70° to 90°; and at Trincomalee 74° to 91°. In the mountain ranges there is of course a great variety of climate, the thermometer at the hill station, Nuwara Eliya which is some 6,000 feet above the level of the sea, falling at night as low as 32°.

Ceylon was visited in early days by the Greeks, Romans, and Venetians; in 1505 the Portuguese formed settlements on the west and south of the island; in the next century they were dispossessed by the Dutch, In 1795–6 the British took possession of the Dutch settlements in the island. They were annexed then to the Presidency of Madras, but five years later, in 1801, Ceylon was constituted a separate Colony. In 1815 war was declared against the native government of the interior; the Kandyan King was taken prisoner, and the whole island fell under the rule of the British.

By letters patent under the Great Seal, April 1831, a Council of Government was appointed, and by a supplementary commission to the then Governor (March, 1833) the form of Government almost as now existing was established.

	Revenue and Expenditure.			*Value of Imports and Exports.*	
	£	£		£	£
1864	867,728	843,292	1864	5,526,964	3,111,268
1865	978,492	838,193	1865	5,022,179	3,565,157
1866	962,873	917,669	1866	4,961,060	3,586,452
1867	969,936	927,932	1867	4,504,338	3,530,224
1868	925,265	974,950	1868	4,403,177	3,786,721
1869	946,494	881,373	1869	4,635,023	3,631,065
1870	1,091,606	1,026,871	1870	4,634,297	3,803,731
1871	1,121,679	1,064,184	1871	4,797,952	3,634,853
1872	1,174,698	1,062,994	1872	5,169,524	3,139,060
1873	1,290,918	1,176,258	1873	5,574,538	5,439,591
1874	1,324,328	1,184,192	1874	5,691,860	4,687,388

Public Debt, 600,000*l.* *at* 6*l. per cent.*

From "Colonial Office List, 1876."

Armitage Brothers, Columbo, Ceylon. Samples of Raw Products of Island of Ceylon.

STRAITS SETTLEMENTS.

Singapore is an island about 25 miles long by 14 wide, situated at the southern extremity of the Malayan peninsula, from which it is separated by a narrow strait about $\frac{3}{4}$ of a mile in width. There are a number of small islands adjacent to it which form part of the settlement.

The seat of Government is the town of Singapore, at the southern point of the island, in lat. 1° 16′ N., and long. 103° 53′ E.

Penang is an island about 20 miles long and 9 broad, containing an area of 107 square miles, situated off the west coast of the Malayan peninsula in 5° N. lat., and at the northern extremity or entrance to the Straits of Malacca. On the opposite shore of the mainland, from which the island is separated by a strait from 2 to 10 miles broad, is Province Wellesley, a strip of territory forming part of the settlement, averaging 8 miles in width, and extending 45 miles along the coast, including 10 miles of newly acquired territory to the south of the Krean (*vide infra*).

The chief town is George Town, in 5° 24′ N. lat. and 100° 21′ E. long.

Malacca is situated on the western coast of the peninsula between Singapore and Penang, about 120 miles from the former and 240 from the latter, and consists of a strip of territory about 42 miles in length, and from 8 to 24½ miles in breadth. The principal town called Malacca, is 2° 10′ N. lat., and 102° 14′ E. long.

Malacca is one of the oldest European settlements in the East, having been taken possession of by the Portuguese under Albuquerque in 1511, and held by them till 1641, when the Dutch, after frequent attempts, were successful in driving out the Portuguese. The settlement remained under the Government of the Dutch till 1795, when it was taken possession of by the English, and held by them till 1818, at which date it was restored to the Dutch, and finally fell into our hands in pursuance of the treaty with Holland, the 17th March 1824, in exchange for the East India Company's settlement at Bencoolen, on the west coast

of Sumatra. By that treaty it was arranged that the Dutch should not again meddle with affairs or have any settlement on the Malayan peninsula, the British Government agreeing at the same time to leave Sumatra to the Dutch.

	Revenue.	*Expenditure.*
	£	£
1866 - -	260,000	233,000
1868 - -	276,642	254,391
1874 - -	309,991	317,726

From "Colonial Office List, 1876."

Behn Meyer & Co., Singapore, East Indies. Samples of Raw Products of Straits Settlements.

JAMAICA.

An island situated in the Caribbean Sea, and to the southward of the eastern extremity of the Island of Cuba, within N. lat. 17° 40′ and 18° 30′, and W. long. 76° 10′ and 78° 30′. It is the largest of the British West Indies, being 140 miles in length, and 50 in extreme breadth, and containing about 4,200 square miles.

Jamaica was discovered by Columbus on the 3rd May, 1494. He called it St. Jago. It remained in the possession of the Spaniards for 161 years, when it was attacked by a force sent by Cromwell, under Admirals Penn and Venables, against Hispaniola. It capitulated, after a trifling resistance, on the 3rd May 1655. After the capture of the island, until the Restoration of Charles II., Jamaica remained under military jurisdiction. In 1660 the first establishment of a regular civil government was made by Charles II., who appointed Sir D'Oyley Governor-in-Chief, with an Elective Council. In 1670 peace was made with Spain, and the title of England to Jamaica was recognized by the Treaty of Madrid. In 1807 the Slave Trade was abolished, at which time there were 323,827 slaves in Jamaica. During the last eight years of the trade 86,821 slaves were imported. On the abolition of slavery in 1833 Jamaica received 6,161,927*l.* of the 20,000,000*l.* granted by the Imperial Government as compensation to the slave-owners; being rather more than 19*l.* a head on a slave population of 309,338.

Climate.

"There is great variety of climate; the medium heat at Kingston is about 80°, and the minimum 70° Fahrenheit throughout the year. At an elevation of from 4,000 to 5,000 feet, the average mean range is 60° to 70°, the minimum in winter being 44°. On the Blue Mountain Peak ice of some thickness has been found in March. Owing to the lofty mountains which run down the middle of the whole island, it is possible, in a few hours, to get to a climate resembling that of Europe. From Kingston, the capital, a change of 30° in temperature can be attained by a ride of three hours. In the St. Andrew's mountains the variation is never more than 10° between night and day, and the same between summer and winter, the hottest days in summer being never above 80°, and the coldest nights in winter never below 60°. Jamaica is singularly free from hurricanes and earthquakes. The rainy seasons are in May and October, and last for about three weeks, with intervals of fine weather. The May seasons are irregular, but the October seasons seldom fail. The rainfall varies throughout the island from about 50 inches to 150 inches during the year.

Revenue and Expenditure.

	£	£
1865	295,398	314,296
1866	327,359	395,597
1867	393,441	333,125
1868	368,101	358,795
1869	441,439	387,724
1870	440,523	410,497
1871	460,024	426,910
1872	494,563	477,807
1873	514,766	523,458
1874	541,798	537,261

Public Debt, 665,536*l.*

Imports and Exports.

	£	£
1865	1,050,984	912,004
1866	1,030,976	1,152,898
1867	859,186	1,045,093
1868	1,024,565	1,138,804
1869	1,224,413	1,162,768
1870	1,300,212	1,283,026
1871	1,331,185	1,196,531
1872	1,559,601	1,418,443
1873	1,733,121	1,226,011
1874	1,762,817	1,442,080

Population.

	Coloured.	White.	Black.	Total.
1871 - -	100,346	13,101	392,707	506,154
1861 - -	81,065	13,816	346,374	441,254

From "Colonial Office List, 1876."

Cl. **623.** **Soutar & Co.** Tobacco in leaf, Cigars and Cigarettes.

Cl. **254.** **Nunes Bros.** Lace Bark.

Cl. **660.** Rum.

Cl. **217.** **Martin, James, jun.** Furniture.

Cl. **254.** **Nash, Francilla.** "Dagger Plant" Ornaments.

Cl. **659.** **Espent, W. B.** Sugar.

Cl. **660.** Rum.

Cl. **623.** Tobacco and Cigars.

Thomson, Robert, Superintendent of the Government Botanic Gardens, Gordon Town, Jamaica. Island Vegetable Products.

Cl. **203.** Perfumes.

Cl. **254.** Sticks.

Cl. **258.** Paper Materials, &c., &c.

Cl. **272.** Drugs, Quinines.

Cl. **387.** Ropes, Sails.

Woods. Cl. **600, 601.**

Dyewoods, Tanning materials, Dye extracts. Cl. **602.**

Gums. Cl. **603.**

Wax moulds of Fruit, &c., &c. Cl. **611.**

Coffees, Cocoas, Spices, Tobaccos, Cigars. Cl. **623.**

Seeds. Cl. **624.**

Fruits (preserved). Cl. **651.**

Food products. Cl. **656.**

Meals. Cl. **657.**

Starches. Cl. **658.**

Sugars. Cl. **659.**

Rums, Liqueurs. Cl. **660.**

Oils. Cl. **662.**

Fibres. Cl. **666.**

Frith & Murphy, Messrs., Salt Merchants. Salt. Cl. **200.**

Reynolds, John Ney. Salt. Cl. **200.**

GOLD COAST COLONY, WEST AFRICA.

The Gold Coast Colony, which comprises the British Settlements on the Gold Coast, and at Lagos, was constituted by a Charter under the Great Seal, bearing date the 24th day of July 1874.

THE GOLD COAST PROPER.

The Gold Coast is the name generally given to a portion of Upper Guinea, between 5° and 4° 20′ E. long., stretching along the Gulf of Guinea from the River Assini on the west to the River Volta on the east,

between which points are the settlements of Axim, Dixcove, Secondee, Elmina, Cape Coast Castle, Anamaboe, Accra, and Addah. In 1672 a Company was formed, called the Royal African Company, which built forts at Dixcove, Secondee, Commendah, Anamaboe, Winnebah, and Accra, besides strengthening Cape Coast Castle, which was already in existence. This company was succeeded in 1750 by the African Company of Merchants, constituted by Act of Parliament, with liberty to trade and to form establishments on the West Coast of Africa, between 20° N. and 20° S. lat. This company was dissolved in 1821 by Act of Parliament, and the forts transferred to the Crown, by whom they were placed under the Government of Sierra Leone.

Revenue and Expenditure.

Gold Coast.

	£	£
1869	24,127	18,836
1870	30,851	35,609
1871	28,609	29,094
1872	40,165	42,785
1873	65,706*	61,207
1874	74,868	47,796

Lagos.

1869	40,438	39,431
1870	41,683	42,379
1871	45,612	45,611
1872	41,346	41,346
1873	52,240†	52,255
1874	39,350	37,296

Debt—Gold Coast, nil; Lagos, 11,631*l.*

Imports and Exports.

Gold Coast.

1869	213,491	281,913
1870	253,397	378,239
1871	250,672	295,207
1872	260,101	385,281
1873	225,525	330,624

1874 no trustworthy returns.

Lagos.

1869	416,895	689,598
1870	400,558	515,365
1871	391,653	539,302
1872	366,256	444,848
1873	258,883	406,986
1874	348,636	486,227

Population.

Gold Coast - - -	400,000‡
Lagos - - - -	62,021

* Exclusive of 40,000*l.* voted by Parliament. † 20,999*l.* proceeds of loans. ‡ Estimated and including the Protectorate.

(*From "Colonial Office List*, 1876.")

NATURAL PRODUCTIONS, ARTS, MANUFACTURES, &c.

Country Cloths, &c.

1 Whydah Cloth.
2 Aguey Cloths.
1 Cape Coast Cloth, made entirely of native Cotton and Dyes.
1 Akim Cloth.
1 Ashantee Cloth, native printed.
1 Ashantee Silk Cloth.
1 ditto Sash.
1 King Kofi Calli's Cloth.
1 Krobboe Cloth.
1 Check Nupè Tobe
1 ditto Man's.
1 Woman's Upper Cloth
1 Igbo Cloth, open work
} Niger, per Bishop Crowther.
1 Grass Cloth, Niger.
1 Bida Cloth, „
1 Agra Cloth, „
1 Linzo Grass Cloth, Niger.
1 small variegated Cloth, Wassaw.
2 Native Looms with cotton spinner, samples of Yarn and specimens of Cloth in the loom.
4 Specimens of Wool Knitting per Colonial School, Cape Coast.
2 Native Tanned Sheep or Goat Skins.
2 Pair Yellow Slippers, Niger.—Per Bishop Crowther.
5 Pairs Lagos Sandals.
1 „ Gold Coast Chiefs Sandals ornamented with Gold.
1 Leather Satchel of native tanned leather.
4 Goat-skin Fans, ornamented with leather work.
10 Knife Sheaths.
1 Tranverse Section of Odoom Wood, showing the diameter of the tree which furnishes the Building Wood of the Country from the Gold Coast to Lagos,—hard and durable.
1 Plank of Ditto, polished, with specimens of Panelling by native workmen of Engineer Department.
1 Desk and Envelope case of Ditto, also made by native workmen—the Lock also of native workmanship.

A collection of specimens of Native Woods and 1 Stick Ebony.

8 Variously Carved Native Stools, each made from a solid Block of Wood.

1 Warree Board, carved ditto, ditto, for a game much in use on the West Coast of Africa.

3 Models of Canoes and Paddles.

1 Block of Native Granite, cut and polished by native workmen.

1 Sword of State with Carved wood handle, plated with Gold.

1 Ditto, ditto, two blades, ditto plain.

1 Carved Wooden Mask. Lagos.

2 „ „ Figures, God and Goddess of Twins from Abeokuta.

7 Carved Ladles.

2 „ Figures, Male and Female.

1 „ Image, exhibited at native Funerals.

5 „ Specimens of Natural History.

2 Wooden Combs.

1 Toy Doll.

4 Wooden Fans.

1 Fan.

26 Carved and Plain Calabashes.

3 Black Bowls, used for washing Gold.

1 Black Monkey Skin, an Article of Export.

2 Leopard Skins.

1 Light-Coloured Snake Skin.

4 Niger Mats (2 per Bishop Crowther).

5 Accra Baskets.

Earthenware.

1 Goldsmith's Furnace and Crucibles.

A Variety of Domestic Articles.—Cooking Pots, Plates, Water-pots and Bottles, Palm Wine Pot, Bowls, Hearths, &c., also some curiously shaped and Ornamented Black Bottles and Lamp from Wassaw.

An assortment of Ashantee Clay Pipes.

Arms.

2 Niger Swords in Ornamented Leather Scabbards.

1 Iron War Dagger from the Niger, per Bishop Crowther.

2 Lagos ditto, in Leather Sheaths.

1 Bow and Quiver of Arrows from the Houssa Country near the Niger.

Musical Instruments, &c.

1 Large Drum.

1 Small ditto.

2 Arm ditto.

1 Ditto, with black cord and sash.

3 Wooden ditto, with snake skin tops used at the Amusements and Feasts of the natives.

2 Adenkos—long Calabashes, carved.

1 Fiddle and Bow.

1 Guitar.

1 Kroo-boys Harp.

1 Knife-box Guitar, Lagos.

1 bundle and 1 coil Strings for Musical Instruments.

1 Flute.

1 Signal Horn.

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1 Warrior's Hat, Lagos.

3 Palm Leaf Hats, Whydah.

1 Accra Fisherman's Rainy Season Hat.

1 Market Net.

4 Net Bands for tying Calabashes, &c., and head loads.

1 Gold Book, used for keeping Gold Dust, with Scales, Weights, Shovels, &c.

White Clay, used in Medicine and to "chalk" divorced wives; also in law suits and palavers those who are successful, and at marriage ceremonies as an indication of purity.

2 Ropes with bands, for ascending Palm Trees.

1 Large Pot for boiling Palm Nuts for Oil.

1 Palm Oil Ladle.

1 Rope Net and Squeezer.

1 hank Pine-apple Fibre.

1 „ Bine Fibre, used for washing purposes.

1 „ Bamboo Fibre in leaf.

1 „ Rope.

8 Rolls String.

Oils.

Specimens of Oils made at Cape Coast from African Nuts and Seeds, by W. Melton, &c., viz. :—

1 glass barrel Palm Oil.

Palm Oil, cold drawn.

Ditto „ „ refined.

Ditto for domestic use by boiling.

Palm Kernel or Black Oil, native make.

„ „ Oil, cold drawn, refined.

Bennie Seed Oil.

Egusi or Bitter Gourd Seed Oil.

Physic Nut Oil.

Ground Nut Oil.

Cocoanut Oil.

Palm Oil Nuts.

Palm Oil Nut Kernels.

Sessamum. Bennie Seed.

Egusi or Bitter Gourd Seeds.

Ground Nut Kernels.

Jatropha Curcas. Physic Nuts.

Palm Nut Rings, made from the shell of the Palm Nut.

1 barrel Palm Kernels.

Colas.

Sterculia Acuminata. Ordinary Red.

„ Marcrocarpa (?) Bitter.

(*Vide* "Athenæum," Nos. 2,209 and 2,249.)

Guinea Grains, or Grains of Paradise.
Aromatic Pepper from the Niger.
Edible Red Beans.
Coffee, grown in 8 months after planting the seed, by Mrs. Davison, Colonial Schoolmistress.
Kreppee, or Bitter Oil Nuts, the oil a remedy against the Tetse Fly, and all other insects.
One Bowl containing two masses Fragrant Gum, used for polishing and perfuming the skin after washing.
Two Cakes Bees Wax.
"Mahogany" Nuts, containing a very oleaginous kernel.
One fine Specimen of Gum Copal, Accra, and specimens of ditto.

Starch.

Cassada Starch.
Arrowroot, grown at Cape Coast by Mr. Nugent, pensioner.
Five Specimens of Coloured Powder Starch, a Novelty for the Laundry, by W. Melton.
One Pair Manillas, or solid Metal Ring Bracelets.
Two Brass Grease Pots, Niger.
Shells of the Snail of the country, abounding in the forests, and largely consumed as an article of food at Cape Coast and Lagos.
One bundle Candlewood.

Gold Dust and Gold Ornaments.

95 Rings (assorted).
17 Crosses.
37 Brooches.
35 pair Ear-rings (assorted).
1 Breast Plate.
4 Lockets.
1 Basket.
1 Stag's Head and Horns.
1 Breast Pin, bull's head.
1 Water Bottle.
1 Palm Wine Bottle.
1 Drinking Cup.
1 Wine Glass.
1 Fish.
1 Country Stool.
1 Gridiron.
1 Corkscrew.
1 Musket.
1 Lion.
1 Hairpin.
4 sets Shirt Studs, 4 each.
3 plain Collar Studs.
1 pair Sleeve Links.
1 solid Breast Plate.
1 „ Comb.
2 braided Bracelets.
2 „ Chain Pattern, with Pendants.
1 Bead Necklace, with Heart.
1 „ ditto.
1 Albert Chain.
„ „
1 Albert Chain, cable pattern.
10 { 7 braided Short Chains. / 1 „ Long „ / 1 „ Stout „ / 1 „ Fine Long. }
2 Queen's Bracelets, elaborate work.
2 Open Zodiac.
1 Solid ditto.
1 Braided „ with pendants.
2 Zodiac Brooches, Green Beetles.
3 Brooches, flower pattern.
1 Pair Beetle Ear-rings.
3 „ Small do.

MAURITIUS.

An island lying in the Indian Ocean, between 57° 17′ and 57° 46′ E. long., and 19° 58′ and 20° 32′ S. lat. It is 400 miles east of Madagascar. It comprises an area of 676 square miles.

The Mauritius was discovered by the Portuguese in 1507. They claimed possession of it during nearly the whole of the 16th century. The first who made any settlement in it were the Dutch in 1598, who named it Mauritius, in honour of their Prince Maurice. It was abandoned by them in 1710, and afterwards taken possession of by the French. Mauritius was for a long time during the war a source of great mischief to our merchant vessels and Indiamen, from the facility with which sorties might be made from it upon our traders by French men-of-war and privateers. The British Government determined on an expedition for its capture, which was effected in 1810. The possession of the island was ratified by the Treaty of Paris, 1814.

Mauritius pays 45,000*l.* per annum to the Imperial Government as military contribution, but this amount is subject to reduction when the garrison is below the standard fixed upon as necessary for the defence of the colony.

Total police force, 849.

Revenue and Expenditure.

	£	£
1864	638,067	602,279
1865	646,730	667,716
1866	639,576	700,048
1867	534,992	642,602
1868	577,686	641,272
1869	595,024	575,180
1870	608,166	591,579
1871	616,952	600,961
1872	703,159	650,327
1873	693,081	657,110
1874	720,130	727,063

Imports and Exports.

	£	£
1865	2,141,350	2,629,519
1866	2,048,000	2,501,000
1867	1,720,000	2,003,800
1868	2,000,069	2,321,243
1869	1,619,906	2,601,657
1870	1,953,993	2,049,987
1871	1,807,382	3,054,054
1872	2,437,512	3,177,301
1873	2,165,400	3,238,700
1874	2,427,813	2,697,892

Public Debt, 895,600*l.*, bearing interest 6 per cent.

Estimated Population, exclusive of Military and Shipping, 31*st December* 1874.

General Population.	Indian Population. Male.	Female.	Total.
106,054.	150,008.	83,309.	3331,371.

(*From "Colonial Office List*, 1876.")

Cl. **656.** **Mauritius.** Flore Mauricienne. 24 bottles preserved fruit, &c.

Cl. **600** to **602.** **Horne, J.,** Mauritius Botanical Gardens, Mauritian Woods:—

Marks.

I.—Syzygium glomeratum (Bois de Pomme).
II.—Cupania lævis (Bois Sagaye).
III.—Boutonia Mascariensis.
IV.—Acacia Lebbeck (Bois Noir).
V.—Labourdonaisia revolutia (Bois de Natte).
VI.—Monimia ovalifolia (Bois Tambour jaune).
VII.—Olea lancea (Olivier Sauvage, Bois Cabris, Bois Cerfs, &c.)
VIII.—Tambourissa quadrifida (Bois Tambour).
IX.—Calophyllum spurium (Takamaka petite feuille).
X.—Labourdonaisia glanea (Bois de Natte grand feuille).
XI.—Sideroxylon cinerum (Moaglier).
XII.—Mimusops Erythroxylon (Makak, Bois de Natte).
XIII.—Sideroxylon Boutanianum (Tambalacoque).
XIV.—Prockia theæformis (Fandaman, Bois Goyave).
XV.—Tambourissa amplifolia (Bois Tambour, Pomme Jacot, Pot de Chambre Jacots).
XVI.—Diospyros melanida (Bois d'Ebène marbré).
XVII.—Calophyllum Sps. (Takamaka blanc).
XVIII.—Erythrosperum verticillatum (Bois gros coco).
XIX.—Calicadaphne species (Bois de Cannelle).
XX.—Nuxia verticillata (Bois Maigre).
XXI.—Fropiera Mauritiana (Bois Bigaignon).
XXII.— ? (Bois Banane).
XXIII.—Colophania Mauritiana (Bois de Colophane).
XXIV.— ? (Bois Lallo).
XXV.—Syzygium species (Bois de Pomme grande feuille).
XXVI.—Calophyllum spectabilis (Bois de Takamaka, ou Takamaka grande feuille).
XXVII.—Quisivia oppositifolia (Bois Café).

XXVIII.—Tabernæmontana Mauritiana (Bois de lait à fleurs jaunâtres).
XXIX.—Hernandia ovigera (Bois Blanc).
XXX.—Myrtracæ Sps. (Bois de fer).
XXXI.—Erythroxylon laurifolium (Bois de Ronde).
XXXII.—Anthirhea verticillata (Bois Lousteau).
XXXIII.—Elæodendron orientale.
XXXIV.—Terminalia catappa.

Cl. **200.** **Lemière, H., Esq.** Salt. One Sample.

Cl. **623.** **Bouton, Messrs. H. & E.** One sample of Mauritius Coffee.

Cl. **623.** **Flore Mauricienne.** One sample of Vanilla.

Cl. **306.** **Boulton, L., Esq.** Three Copies of a book on the Medicinal Plants of Mauritius, with 50 Specimens of these Medicinal Plants.

Cl. **305.** Eight copies Transactions of the Royal Society of Arts and Sciences of Mauritius, from 1870 to 1875.

Cl. **666.** **Horne, J.,** Mauritius Botanical Gardens. List of Fibres:—Dracæna species, Cordia mixta, Hibiscus liliflorus, Pandanus utilus, Alpinia magnifica, Sanseviera zebrina, Livistona Mauritiana, Agave Americana, Theobroma cacao, Musa species, Rapolocarpus lucidus, Dracæna Mauritiana, Strelitzia regina, Pterospermum acerifolium, Ficus sp., Ficus p., Musa textilis, Latania aurea, Sanseviera Zeylanica, Ficus sp., Musa paradisiaca, Sagus Ruffia, Colocasia antiquorum, Agave Americana variegata, Sida glutinosa, Musa violacea, Agave Mexicana, Bœhmeria nivea, Heliconia gigantea, Sanseviera latifolia, Sanseviera cylindrica, Urania (Ravenala) Madagascariensis, Carludovica palmata, Sterculia species, Hibiscus sp., Guazuma ulmifolia, Fourcroya gigantea, Square fruited Banana, Ficus species, Ixora corylifolia, Melochia liliacefolia, Musa var (Otaheite), Paritium tiliaceum, Caladium species, Morus tartarica, Caladium purpurescens, Malvaviscus arboreus, Sagus saccharifera. 6 Walking Sticks, 2 Bottles Nutmegs, 1 Parcel Red Bark (Cinchona succirubra).

L. de Brugada & E. de Boucherville. Cl. **666**
Two Specimens of Ramie Fibre (Bœhmeria nivea).

Wiehe, Mr. J. 15 samples of Sugar:— Cl. **659.**
1. "Rose Belle" (Ceylon Company, Limited), White Vesou Sugar manufactured for Bombay and Australian markets; 2. "Astræa" (Ceylon Company, Limited), White Vesou manufactured for Bombay and Australian markets; 3. "Astræa" (Ceylon Company, Limited), White Syrup Sugar for Bombay and Australian markets; 4. "Medine" (Mme. Vve. Kœnig), fine White Vesou manufactured for Australian market; 5. "Medine" (Mm. Vve. Kœnig) fine White Syrup manufactured for Australian market; 6. "Constance" (Heirs Pellegrin) fine White Crystallized for Bombay and Australian markets; 7. "Constance" (Messrs. Manes & Co.) finest White Sugar for Australian market; 8. "Constance" (Messrs. Manes and Co.), fine White Syrup for Australian market; 9. "Plaisance" (Messrs. Hart and de Bissy), Brewers Crystal manufactured for Australian market; 10. "Plaisance" (Messrs. Hart and de Bissy) fine Brewers Crystal manufactured for Australian market; 11. "Sebastopol" (Mr. E. Montocchio), Raw Sugar, fine Crystallized for European market; 12. "Hewetson" (Mr. W. Hewetson) Raw Sugar, fine Crystallized, manufactured for European market; 13. "Chamouny" (Mr. N. Tourrette), Raw Sugar, refining quality for European markets; 14. "Walhalla" (Mr. C. de Lannux), Yellow Grocery for Australian market; 15. "Mon Repos" (Mr. Nozaïc), Yellow Sugar for Australian market.

Marie, Mr. François. Sample of Arrow-root. Cl. **658.**

Foucaud, Mme. Vve. Articles made from Palmiste (Oreodoxa Regia) leaves; 2 pairs Slippers, 1 Cigar Case, 2 small Baskets, 1 large Basket, 10 Napkin Rings. Cl. **254.**

Kyshe, J., Esq. Two copies Mauritius Almanac 1874 and 1874. Cl. **306.**

Moco, Mr. S. Photographs:—40 Views of Landscapes in Mauritius; 36 Types of the Chinese, Indian, Malagash, and Mozambique inhabitants of Mauritius. Cl. **430.**

NEW ZEALAND.

Situation and Area.

The colony of New Zealand consists of three principal islands, called respectively the North, the Middle, and the South (or Stewart's) Island. There are several small islets (mostly uninhabited) dependent on the colony; the chief of these are the Chatham Isles and the Auckland Isles. Tho entire group lies between 34° and 48° S. lat., and 166° and 179° E. long. The three principal islands extend in length 1,100 miles, but their breadth is extremely variable, ranging from 46 miles to 250 miles; the average being about 140 miles.

	Sq. Miles.	Acres.
The total area of New Zealand is about	100,000 or	64,000,000
Ditto of North Island	44,000 or	28,000,000
Ditto of Middle Island	55,000 or	36,000,000
Ditto of Stewart's Island	1,000 or	640,000

It will thus be seen that the total area of New Zealand is somewhat less than Great Britain and Ireland.

Climate.

From its healthy and salubrious climate, from its great extent of coast line, and from its position with regard to the neighbouring continent of Australia, New Zealand is often called "the Great Britain of the Southern Hemisphere." The temperature is, however, much more equable than in the British Isles. While the summers are as cool as those of England, the winters are as warm as those of Italy. The mean annual temperature at Auckland is nearly the same as at Rome; at Wellington, nearly the same as at Milan; at Dunedin, nearly the same as at London. The official reports of the Medical Department show that whereas the annual mortality from all diseases out of every 1,000 British soldiers quartered in the United Kingdom was 16, it was only five out of every 1,000 in the troops quartered for more than 25 years in New Zealand.

History.

New Zealand was discovered in 1642 by the Dutch navigator, Tasman, who, however, did not land upon its shores. In 1769 it was first visited by Captain Cook, who in that year, and during subsequent voyages, explored its coasts. The country subsequently became a resort for whalers and traders, chiefly from Australia, as well as a field for the labours of the Missionary Societies. In 1840, the native chiefs ceded the sovereignty of New Zealand to the British Crown by the Treaty of Waitangi, and the islands were erected into a British colony.

The aborigines, called Maoris, are a remarkable people—a branch of the Polynesian race. According to their own traditions, their forefathers came about 600 years, or 20 generations ago, from Hawaiki, which was probably Hawaii in the Sandwich Islands, or Savaii, in the Navigator or Samoa group. They are divided into about 20 different clans, analogous to those of the Highlands of Scotland. There have been two Maori wars; the first lasted from 1845 until 1848; the second lasted from 1860, with little intermission, until 1870. But fully half the clans have always been friendly to the English; and many of them have fought on the side of the Colonial Government against their own countrymen. Permanent tranquillity appears to have been established in 1871 throughout the country. It was estimated, on 1st June 1874, that the Maoris (including half-castes) amounted to 46,016, all of whom dwell in the North Island, with the exception of 2,608 scattered over the other islands.

The control of native affairs, and the entire responsibility of dealing with questions of native Government were transferred in 1863 from the Imperial to the Colonial Government. In 1864, the seat of the general Government was removed from Auckland to Wellington, on account of the central position of the latter city.

Revenue (*Ordinary and Territorial*).

	£		£
1865	1,525,827	1870	1,384,639
1866	1,978,711	1871	1,342,116
1867	1,864,155	1872	1,967,854
1868	1,620,835	1873	2,753,181
1869	1,454,995	1874	3,063,811

Public Debt of New Zealand on 30 *December* 1874, was 18,000,000*l.*, of which 4,208,463*l.* had been expended on Native and Defence purposes.

Imports and Exports.

	£	£
1864	7,000,655	3,401,667
1865	5,594,977	3,713,218
1866	5,894,863	4,520,074
1867	5,344,667	4,644,978
1868	4,985,748	4,429,198
1869	4,976,126	4,224,860
1870	4,639,015	4,822,756
1871	4,078,192	5,282,084
1872	5,142,951	5,190,665
1873	6,464,687	5,610,371
1874	8,121,812	5,251,269

(*From "The Colonial List*, 1876.")

(Cl. **101.**

COAL.

1. *Parapara Iron and Coal Company, Nelson.*—Block of coal taken from a 3-foot seam. A fair specimen of the general quality of the field. The coal occurs in a rugged mountain range on the north bank of the Aorere River, and is tapped by a drift or tunnel in the side of the hill between 800 and 900 ft. above the level of the sea. By actual survey the field has been proved of considerable extent, and, in the drift alluded to above, five seams have been cut, varying in thickness from 18 in. to 3 ft., out of which 6 ft. of workable coal is found. It is unsurpassed in the colonies for gas purposes, is an excellent household coal, and very superior for steam use.

2. *Kennedy Brothers, Nelson.*—Block of coal from the Brunner Mine, situated on the Grey River Neilson, seven miles from the port of Greymouth. The seam now being worked is of a uniform thickness of 16 ft., all pure clean coal, and has been worked on a small scale during the past 12 years. The output for the year ending July 1875 was 20,000 tons. A railway is being constructed by the Government to connect the mine with the port, and harbour improvements whereby a larger class of vessels than at present will be enabled to enter are in progress. The Company can now produce 2,000 tons per week. Present price free on board at Greymouth is 15*s.* per ton. The small quantity of this coal hitherto obtainable in the New Zealand and Australian markets has been eagerly bought up for gas-works and iron foundries, who generally pay for it from 10 to 20 per cent. more than for any other coal. Engineers of local steamers esteem it 20 per cent. better than the best New South Wales coal for steam purposes.

3. *Kennedy Brothers, Nelson.*—Coke, made from No. 2. Value, 3*l.* per ton.

4. *Albion Coal Company, Nelson.*—Block of coal, from Ngakawau, Seam 10 feet thick, ascends from the sea level to 1,400 in Mr. Frederic Range, 20 miles North of Westport with which the Mine is connected by Railway.

5. *Nelson Committee.*—Block of coal from Coalbrook Dale, Mount Rochfort, Nelson. Two seams of 8 ft. and 18 in. respectively, at an elevation of 2,200 feet above the sea level. Estimated area of field, 12 square miles.

6. *Nelson Committee.*—Block of coal from Reefton, Nelson.

7. *Alexander W. Reid, Canterbury.*—Altered brown coal from Kowai Pass, 3 ft. seam. Area of field, 108 acres. Value at pit's mouth, 1*l.* The pit is 6 miles from a railway, and 50 miles from port of shipment.

8. *Dr. Hector, C.M.G., F.R.S., Director of the Geological Survey of New Zealand.*

TYPE SPECIMENS ILLUSTRATING THE CLASSIFICATION OF NEW ZEALAND COALS.

A. Bituminous Coal (caking):

Specimen from Brunner Mine, Nelson. Much jointed, homogeneous, tender, and friable; lustre pitch-like, glistening, often iridescent; colour black, with a purple hue; powder brownish; cakes strongly; the best variety forming a vitreous coke with brilliant metallic lustre. Average evaporative power of several samples, 7½ lbs. of boiling water converted into steam for each pound of

coal. Occurs with grits and conglomerates of upper Mesozoic age. Buller, Grey, and Collingwood Coal Fields on the West Coast of Nelson. In seams from 2 to 20 ft. in thickness.

B. Semi-bituminous Coal:

Specimen from Pakawau, Nelson. Compact, with laminæ of bright and dull coal alternately; fracture irregular; lustre moderate; cakes moderately, or is non-caking. Occurs in thin, irregular seams in sandstone of upper Mesozoic age. Kawa Kawa and Wangarei, Auckland; Pakawau, Nelson; Mount Hamilton and Waikava, Otago. Rarely cakes strongly. Evaporative power commonly 6½ lbs.

C. Glance Coal:

Specimen from Hill's Drive, Selwyn, Canterbury. Glance coal is non-caking, massive, compact, or friable; fracture cuboidal, splintery; lustre glistening or metallic; structure obscurely laminated; colour black; does not form a caking coke, but slightly adheres. A variety of brown coal, altered by faulting or by igneous rocks, and presenting every intermediate stage from brown coal to an anthracite. Preservation Inlet and Malvern Hills.

D. Pitch Coal:

Specimen from Upper Buller, Nelson. Structure compact; fracture smooth, conchoidal, jointed in large angular pieces; colour brown or black; lustre waxy; does not desiccate much on exposure, nor is it absorbent of water; burns freely, and contains resin disseminated throughout its mass. Waikato and Wangaroa, Auckland; West Wanganui, Nelson; Shag Point, Otago; Morley Creek, Southland. Evaporative power 4·2 lbs.

E. Brown Coal:

Specimen from Kaitangata, Otago. Rarely shows vegetable structure; fracture irregular, conchoidal, with incipient laminations; colour dark brown; lustre feeble; cracks readily on exposure to the atmosphere, losing 5 to 10 per cent. of water, which is not re-absorbed; burns slowly; contains resin in large masses. Occurs generally throughout the Islands. Evaporative power 4·2 to 5·6 lbs. Saddle Hill, Otago; evaporative power 5 lbs.

9. *J. J. Oakden, Canterbury.*—Anthracitic coal from Lake Coleridge, Canterbury. Two seams of 5 feet each. Supposed extent of field 100 acres. Contains 90 per cent. of carbon. Pit is distant 28 miles from a railway and 70 miles from port of shipment.

10. *Taranaki Committee.*—Lignite from Urenui North Taranaki.

11. *Rowley Wilson & Company, Otago.*—Block of coal from Shag Point, Palmerston, Otago. Value per ton at pit's mouth, 12*s*.

GOLD, MINERALS, AND ORES.

Cl. **100.** **Gold.**

YIELD OF GOLD IN NEW ZEALAND UP TO 30TH SEPTEMBER 1875.

	Quantity.	Value.
North Island (This gold is obtained by lode-mining in igneous rocks belonging to the Neozoic epoch)	986,750 ozs.	£3,520,782
South Island (chiefly obtained from the metamorphic rocks, by alluvial washing)	6,888,926 „	£27,152,052
Total Yield	7,875,676 „	£30,672,834

GOLD SPECIMENS EXHIBITED BY THE NEW ZEALAND GOVERNMENT.

Cl. **100.** **Alluvial Gold from the Province of Nelson and County of Westland.**

1. Alluvial Gold from Moonlight Creek, Nelson, procured by washing the beds of creeks.

2. Alluvial Gold from Waimea, Westland, obtained by washing beds of creeks. Samples taken from district through which the proposed Great Waimea Water Race would run.

3. Fine Sea Drift, Okarito, Westland, obtained by washing and sluicing the sea beaches.

4. Alluvial from Ross, Westland, obtained by deep sinking, where the use of steam machinery is found to be necessary.

5. Equal parts of coarse and fine Alluvial from the Lyell, Nelson, obtained by washing the beds of water-courses.

6. Alluvial from Grey Valley, Nelson, obtained by sluicing.

7. Alluvial Sluiced, from Duke of Edinburgh Terrace, Greenstone Creek, Westland. The locality whence this sample came is traversed by the extensive Greenstone and Eastern Hohonu Water Race.

8. Alluvial from the Ho-ho, Westland, obtained by sluicing ground that had been previously worked by shafts and tunnels.

9. Fine Alluvial Gold from iron-sand cement, Charleston, Nelson. This sample of gold is usually saved by amalgamation with mercury, and is most difficult to obtain in its present form.

10. Ruby Sand from Charleston, Nelson. This sand is found in granite, and the gold it contains is heavier and of better quality than that in cement.

11. Gold-bearing Black Sand from the Black Lead, Charleston, Nelson.

12. Auriferous Cement from Mokihinui River, Nelson. Obtained 50 feet below surface of river terrace.

13. Auriferous Cement from Black Lead, Charleston, Nelson.

14. Auriferous Sand from Addison Flat, Nelson.

15. Alluvial Gold. Wahamarino River, Marlborough.

16. 5 ozs., washed from the ocean beach below high-water mark.

17. 5 ozs., obtained from a black sand lead about 50 yards inland from high-water mark.

18. Sample of the ordinary obtained from sluicing claims about 12 miles inland.

19. Sample nuggetty gold obtained from Moonlight Creek, rising in high ranges about 20 miles inland.

Quartz specimens are from the Inangahua district. The gold being fine is not easily seen in the stone.

Enterprise Company, Registered.—These specimens were taken from the middle tunnel, at a distance of 110 feet from the mouth of the drive, at a depth of 85 feet from the surface.

Energetic Company, Registered.—The stone was taken—(1) from a shaft sunk 85 feet below a tunnel and 210 feet below the surface. A trial crushing in February 1872 of ten tons of this stone gave a result of 43 oz. 1 dwt. retorted gold. (2) From No. 2 tunnel, 265 feet below the surface, and at a distance of 298 feet from the mouth of the drive, at which place the reef is 4 feet 6 inches thick, and very solid.

Rainy Creek Company, Registered.—The width of the reef where discovered is 30 feet, and it carries this extraordinary width for 900 feet. Gold appears to be well distributed throughout the reef, and at the lower level it is heavier than at the surface.

Thompson's Claim, Boatman's Inangahua.—Shows a width of from 2 to 5 feet, and will yield from 1 to 2 oz. to the ton.

El Dorado Company, Registered.—Several small specimens. The reef where first opened was 3 feet in width. Further south it was cut 5 feet in width. The gold is fine, and well distributed throughout the stone. Zircons, garnets, cubical pyrites, manganese, and sulphides of antimony are also found.

Just-in-Time Company, Registered.—The reef is 3 ft. 6 in. wide. Specimens taken 15 feet below the level of the tunnel.

Victoria Company, Registered.—Reef averages 3 feet in thickness. The specimens are taken from a level 360 feet below the highest point proved.

All Nations.—This reef is making to the south-west and has an average thickness of 2 feet.

United Band of Hope Company, Registered.—Specimen 1 was taken from the surface where the reef first opened. From this about 100 tons of stone crushed gave a return of 2 oz. 6 dwts. per ton. From this level to a depth of 140 feet, about eighty tons crushed gave at the rate of 18 dwts. per ton. No. 2 is from a depth of 160 feet. From this last 31 tons crushed at Westland machine gave a gross yield of 41 oz. melted gold.

Golden Hill Company.—The reef varies from 4 feet to 1 foot 6 inches, average 2 feet 6 inches. About 480 tons of stone crushed at the Westland machine gave a yield of ½ oz. to the ton.

North Star Company, Registered.—The specimen was taken from a level of 50 feet from the surface, a foot on the reef. The reef is 5 feet in width, bearing about E. and W.

Invincible Gold Mining Company, Registered.—This specimen is from the surface, at a width of 2 feet on the reef, which is here 4 feet 6 inches thick.

Wealth of Nations Company, Registered.—Two large bodies of stone have been intersected, each about 10 feet thick, showing gold similar to that in the outcrop.

(Cl. **100.**

Alluvial Gold from the Province of Otago.

1. *Skipper's, Queenstown.*—From upper terraces, Skipper's Creek, Shotover River, about 1,400 ft. above sea level. The creek empties itself into the Wakatipu Basin. Produce of sluicing claim.

2. *Arrowtown.*—From Arrow River, about 1,200 feet above the sea level. The river empties into the Wakatipu Lake Basin. Produce of sluicing claim.

3. *Queenstown.*—From gullies adjoining and emptying into Wakatipu Lake, which is 1,000 feet above sea level. Produce of sluicing claim.

4. *Naseby (Mount Ida).*—Produce of sluicing claim at foot of Mount Ida, on northern side of Maniototo Plains, about 1,400 feet above sea level.

5. *Palmerston.*—Produce of sluicing claim in Shag Valley, 50 to 100 feet above the sea level.

6. *Nevis.*—Produce of sluicing claim about 1,400 feet above sea level.

7. *Teviot.*—Obtained by dredging the River Molyneux, about 350 feet above sea level. Coarser gold is also got at different parts of the river.

8. *Blue Spur, Lawrence.*—From sluicing claim. The hill or spur is about 150 feet high, and is an outlier of the Pliocene gravels.

9. *Manuherikia.*—Sluicing claim about 500 feet above sea level.

10. *Teviot.*—Near the spot where these two nuggets were got, another weighing 18 oz. was lately obtained. Produce of sluicing claim at an elevation of 600 to 700 feet above the sea.

11. Specimen of Blue Spur Cement impregnated with gold.

List of Gold Specimens collected for the New Zealand Commissioners by the Bank of New Zealand.

Cl. **100.**

GOLD FROM AUCKLAND.

Locality.	Weight.	Estimated Gold.	Cost price per ounce.	Remarks.
		ozs. dwts. grs.	£ *s.* *d.*	
Coromandel - -	106–200 ozs.	29 0 2	3 1 0	From the Union Beach Gold Mining Company. 2 specimens.
Grahamstown -	103 ozs.	12 0 0	2 15 6	From Caledonian mine. Found 260 feet from the surface in the No. 5 reef, composed of alternate bands of sandstone and quartz-reef 5 feet thick This reef runs nearly parallel to a reef which gave 585,000*l.* in division within two years. 3 specimens. Silver, 32 per cent.
Grahamstown -	85 ozs. 16 dwt.	11 0 0	2 15 0	From the Cure Mine. Same reef as Caledonian, claim adjoins and at same level. 4 specimens. Silver, 32 per cent.

GOLD FROM OTAGO.

No. on Map.*	No. of specimens.	Locality.	Weight.	Cost price.	Average assay (decimally expressed) 9167 British Standard Gold.	Average loss per cent. in melting.	Remarks.
			ozs. dwts. grs.	£ *s.* *d.*			
I.	1	Queenstown, Moke creek.	1 0 0	3 15 6	- - -	- -	*Terrace* claim, tunnel work. Has paid 3*l.* 10*s.* per man per week for past 12 months.
	2	Queenstown, Moonlight creek.	1 0 0	3 15 6	- - -	- -	*Terrace* claim, tunnel work. At work for seven years averaging almost 4*l.* per man per week.
	3	Queenstown, branches of Upper Shotover.	1 0 0	0 15 6	9,475 alloy silver	2·16	Ground sluicing.
	4	Queenstown, Moonlight creek.	1 0 0	0 15 6	- - -	- -	Do. do.
	5	Queenstown, Twelve Mile, side of Lake Wakatiper.	1 0 0	3 15 6	- - -	- -	Do. do.
	6	Queensland, Big Beach, Shotover.	1 0 0	3 15 6	- - -	- -	Ground sluicing claim worked by 40 Chinamen, the weekly average yield being 25 ozs.
II.	7	Arrowtown - -	7 0 12	26 11 7	9,545 „	1·97	Large sized nuggets, characteristic of the yield of the district.
	8	Macetown - -	1 0 0	3 15 6	9,540 „	2·25	Large sized nuggets, characteristic of the yield of the district.
	9	Cardrona - -	0 17 12	3 6 1	5,600 „	1·75	Large sized nuggets, characteristic of the yield of the district.

* The Map referred to is a small Geological Map with localities marked.

No. on Map.*	No. of specimens.	Locality.	Weight. ozs.	dwts.	grs.	Cost price. £	s.	d.	Average assay (decimally expressed) 9167 British Standard Gold.	Average loss per cent. in melting.	Remarks.
III.	10	Cromwell, Nevis and the Kawarau Gorge.	4	2	18	15	12	5	- - -	- -	
	11	Cromwell, Nevis and the Kawarau Gorge.	1	0	0	3	15	6	- - -	- -	Obtained by *cradling*, banks of the Clutha river.
	12	Cromwell, Brown's flat.	1	0	0	3	15	6	- - -	- -	Obtained by *sluicing*, Brown's Flat, Kawarau river.
	13	Cromwell, Brown's flat.	1	0	0	3	15	6	9,560 alloy silver -	3·18	Obtained by *sluicing*, the Ten Mile, Tynewell creek.
	14	Cromwell, Brown's flat.	1	0	0	3	15	6	- - -	- -	Obtained by *sluicing* Doctor's Flat, Bannockburn.
	15	Cromwell, Gentle Annie.	1	0	0	3	15	6	- - -	- -	Do. do.
	16	Cromwell, Lowburn -	1	0	0	3	15	6	95,60 „	3·18	Obtained by *sluicing*, Creek Terrace workings.
	17	Cromwell, Bannockburn.	1	0	0	3	15	6	- - -	- -	Do. do.
IV.	18	Alexandra - -	0	15	0	2	16	8	9,635 „	2·47	Obtained by *sluicing*, River River workings.
V.	19	Roxburgh - -	0	10	0	1	17	9	9,530 „	2·64	
VI.	20	Naseby, Spec Gully -	1	0	0	3	15	6	- - -	- -	Do. do.
	21	Naseby, Surface Hill	1	0	0	3	15	6	9,800 „	3·14	Do. do.
	22	Naseby, Kyeburn -	1	0	0	3	15	6	The rare metal iridium is occasionally associated with the gold from the Naseby field.	- -	Do. do.
VII.	23	St. Bathan's -	1	0	0	3	15	6	- - -	- -	Obtained by *sluicing*, River River workings.
VIII.	24–33	Palmerston - -	10	0	0	37	15	0	9,565 alloy silver -	3·88	See description on bottles.
IX.	34	Lawrence - -	1	0	0	3	15	6	- - -	- -	Ordinary yield of the district.
	35	Do. - -	2	15	0	10	7	8	9,665 „	3·36	Large nuggets.
	36	Do. - -	1	0	0	3	15	6	- - -	- -	From the stamper boxes of the Otago Gold Mining Company, obtained from cement.
X.	37	Waitahuna - -	1	0	0	3	15	6	9,685 „	3·75	Ordinary yield of the district.
	38	Do. - -	1	0	0	3	15	6	- - -	- -	Obtained from auriferous cement sluicing claim. Nuggetty Hill.
XI.	39	Tapanui - -	1	0	0	3	15	6	9,810 „	3·40	Obtained from auriferous drift, under 6 feet of clay or a large flat. Waikaka diggings.
XII.	40	Tokomairiro -	1	0	0	3	15	6	9,580 „	4·15	Ordinary yield of the district.
XIII.	41	Oamaru - -	1	0	0	3	15	9	9,755 „	3·99	Ordinary yield of the district. Maruwhemea gold field.

* The Map referred to is a small Geological Map with localities marked.

42. Auriferous quartz from the Phœnix Claim skipper's. Width of lode 8 feet; sample taken from a depth of 240 feet. The battery used for crushing is one of 30 stampers, driven by a turbine wheel. Proprietors, Messrs. F. and G. T. Bullen. Manager, Mr. F. Evans. A first crushing of 40 tons of this stone yielded 239 ozs. gold.

43. Auriferous quartz from the Nugget and Cornish Quartz Mining Company Width of lode from 12 to 18 feet; sample taken from a depth of 80 feet. The mine is worked by adits running into the hill and back sloped. Machine for crushing consists of 12 head of stampers, the motive power being a turbine wheel (Whitelow and Kerrat's patent). Manager Mr. T. F. Roskrye.

Gold as Exported.

1. One Bar of Melted Gold from West Coast, Kokitika, Westland—

			oz.	dwts.	grs.
Assay—Gold	·9627	= Fine Gold	9	14	16
Silver	·0363				
Copper	·0010				

Weight, 10 oz. 2 dwts. 6 grs.

2. One Bar of Melted Gold from Thames District, Province of Auckland—

			oz.	dwts.	grs.
Assay—Gold	·6565	= Fine Gold	6	12	18
Silver	·3390	= Silver	3	8	13
Copper	·0045				

Weight, 10 oz. 2 dwts. 6 grs.

3. One Bar of Refined Gold, as extracted by Chlorine Refining Process, and as exported by the Bank of New Zealand, Auckland—

			oz.	dwts.	grs.
Assay—Gold	·9942	= Fine Gold	9	19	20
Silver	·0058				

Weight, 10 oz. 1 dwt.

4. One Bar of Chloride of Silver. The gold having been separated by the Chlorine Refining Process, the chloride is reduced to metallic silver by the galvanic action of iron plates and acidulated water. Weight, 8 oz. 2 dwts. 6 grs., containing 6 oz. of silver.

5. One Bar of Silver, extracted from Thames gold, Province of Auckland, by Chlorine Refining Process. Very nearly fine silver, only a trace of gold left. Weight, 10 oz. 4 dwts. 18 grs.

6. Model representing a Bar of Gold, weighing 375 oz., as exported by the Bank of New Zealand, Auckland.

Cl. **100.** **MINERALS AND ORES.**

Parapara Iron and Coal Company, Nelson.—Brown Hæmatite Ore, found in vast quantities on the surface of the ground at Parapara, in practically unlimited quantities. In close proximity to an extensive coal field. Yields 50 per cent. of iron.

2. *Johnstone Brothers, Nelson.*—Hæmatite Iron Ore, similar to No. 1; easily convertible into the best steel. Brown and red paints are made from this ore. *See Paints and Dyes, p.* 328).

3. *Nelson Committee.*—Chrome Iron Ore from the Dun Mountain, Nelson. Obtainable in unlimited quantities.

4. *Nelson Committee.*—Iron Ore from Bedstead Gully, Collingwood, Nelson.

5. *T. B. Louisson, Nelson.*—Iron Ore as found in the Parapara District, Collingwood.

6. *T. B. Louisson, Nelson.*—Iron Ore, calcined. From this ore an excellent pigment is made, being composed of pure peroxide of iron. (*See Paints and Dyes, p.* 328).

7. *Nelson Committee.*—Plumbago from Pakawau, Nelson.

8. *Nelson Committee.*—Galena from Bedstead, Gully, Collingwood.

9. *Nelson Committee.*—Galena and Zinc blende from Parapara Valley.

10. *Nelson Committee.*—Zinc blende and Galena from Bedstead Gully, Collingwood.

11. *Nelson Committee.*—Copper Ore from the Dun Mountain at Nelson.

12. *Nelson Committee.*—Sulphuret of Copper from Parapara Valley.

13. *Nelson Committee.*—Antimony Ore from Inangahua.

14. *Nelson Committee.* — Antimony from Rainy Creek, Reefton.

15. *W. E. Washbourn, Nelson.*—Argentiferous Lead Ore from Richmond Hill, Parapara. Value, 50*l.* per ton.

16. *Taranaki Committee.*—Titanic Iron Sand.

17. *A. Ross, Poverty Bay, Auckland.*—Two jars of Petroleum.

18. *Taranaki Committee*—

Geological Specimens:

Older Tertiary Marl, North Tarendir.
Trachyte Pebble.
Trachyte with crystals of hornblende.
Trachyte cast from a well in New Plymouth, ancient sea beach, 500 yards inland of present beach.
Older Tertiary Marl, white cliffs.
Horn blende.
Obsidian.
Nephrite.
Tarakanite.
Carnelian, found on beach, New Plymouth.

Cl. **100.** **MINERALS, &c.**

Dr. Hector, Colonial Museum, Wellington—

Magnetic Iron Ores:

Magnetic Iron Ore, Dun Mountain, Nelson. From a vein 16 in. thick in serpentinous slates.

Magnetic Iron Ore, Wakatipu Lake, Otago. From a vein in mica schists.

Magnetic Iron Ore, Maramara, Frith of Thames. From a vein in ferriferous slates; contains also oxides and titanium of manganese.

Iron-Band Ore, Nelson. Contains 70 per cent. of iron. Also Wyndham River, Otago, and Manukua, Auckland —formed by the black sand-layers becoming cemented with hæmatite. This would be a most valuable ore if obtained in large quantities.

Black Iron Sand, from beach at Taranaki.

Compound of Iron Sand, Ferruginous Earth, and Ground Charcoal.

Iron Sand cemented by heat.

Bloom of Iron.

Bar of Crude Metal as from the blast furnace.

Bar of Crude Titanic Steel.

Bar of Workable Steel.

Hæmatites :

Specular Iron Ore, Dun Mountain, Nelson. Occurs in irregular veins in greenstone rocks; contains 63 per cent. of metallic iron.

Specular Iron Ore, Maori Point, Shotover, Otago. A six-foot vein in mica schist, equally rich with the above; extent unknown. This ore forms the large heavy pebbles known as Black Maori in the auriferous gravels of the diggers.

Compact Iron Ore, D'Urville Island, Nelson. Vein, thickness unknown, in diorite slate, with serpentine and chrome, yields 63 per cent. of iron.

Concretionary Hæmatite or Limonite, Mongonui, Auckland. Occurs strewn on the surface from the decomposition of clays, associated with lignite seams; a common ore.

Hæmatite (about 40 per cent. of iron), Collingwood, Nelson. Occurs intermixed with quartz pebbles in a stratum 100 ft. thick, exposed over several acres.

Hæmatite. Exhibited by W. Lodder, Auckland.

Hæmatite, Collingwood. Exhibited by Johnston and Louison, Nelson.

Hæmatite Pigment. Exhibited by Johnston and Louison, Nelson.

Ironstone (two specimens). Exhibited by E. Ford, Christchurch, Canterbury.

Ironstone, Malvern, Canterbury. Exhibited by W. Wilson Christchurch, Canterbury.

Bog Iron Ore, Spring Swamps, Auckland. Forms thick layers at the bottom of swamps. Though rich in iron, the ore is inferior, on account of the sulphur and phosphorus it usually contains.

Reniform Iron Ore, or Hydrous Hæmatite, Mongonui.

Carbonaceous Iron Ore with coal seams, Collingwood.

Chrome Ores—

The pure ore contains 50 per cent. of the chrome oxide, and is worth from 11*l.* to 20*l.* per ton, according to the state of the market. Used for manufacture of pigments and dye salts.

Massive Chromic Iron.

Crystallized Chromic Iron. From irregular lodes in serpentine bands. Dun Mountain, Nelson.

Dunite, interspersed with crystal of chrome ore. Dun Mountain, Nelson.

Copper Ores—

Copper Pyrites. Mixture of sulphides of copper and iron. From a lode 3 to 5 ft. thick in mica schist, Moke Creek, Wakatipu Lake. The ore is very pure, and contains from 11 to 55 per cent. of metallic copper; the usual average of such ore in Cornwall being only five per cent. There is limestone in close vicinity to the lode; so that there would be no difficulty in reducing the ore to a "regulus," in which state it would save cost in shipment.

Grey Sulphide, Wangapeka, Nelson. Contains 55 per cent. of copper, together with a little silver and gold.

Cupreous Iron Ore, in Serpentine, Dun Mountain. Interesting from its being slightly auriferous. The present value of crude (unrefined) copper is 30*l.* per ton.

Copper Ore. Decimal Company's Mine, Collingwood, Nelson.

Graphite. Collingwood, Nelson.

Lead Ores—

Galena, Wangapeka, Nelson. Sulphide of lead, with quartz that contains also sulphides of iron, and antimony with gold, in veins in felspathic schist. The Galena contains 26 oz. of silver per ton. The gold is only in those parts of the ore that contain Iron pyrites.

Galena with Zinc Blende, Perseverance Mind, Collingwood, Nelson. Occurs in a band 2 to 5 ft. thick, parallel with auriferous quartz veins. These two ores are both pure, but so intermixed in the lode that they could not be reduced separately. 100 tons has been sent to Great Britain to test the value of this ore.

Zinc Ore (Yellow or Honey Blende)—

This ore occurs in the Perseveance Mine, Collingwood, Nelson, and in small quantity in Tararua Creek, Thames, in white cement with auriferous veins. It contains 60 per cent of metallic zinc, which is worth about 15*l.* per ton.

Manganese Ores—

Uses : For generation of chlorine for bleaching purposes; also for calico printing, &c. The value of these common ores is 3*l.* to 4*l.* per ton.

Rhodonite (silicate of manganese), Dunstan Otago. As rolled masses. Percentage of manganese about 40.

Wad (hydrous oxide). Port Hardy, D'Urville Island, Nelson. Percentage of manganese about 45.

Braunite or Manganese, on Malvern Hills, Canterbury. Exhibited by E. Ford, Christ Church, Canterbury.

PETROLEUM ROCK OIL—

Oozes from cracks in trachyte breccia, Sugarloaf Point, Taranaki. Wells have been bored to the depth of many hundred feet, but no steady supply of oil has been obtained. Crude oil has a specific gravity of 962·7 at 60°, and yields by fractional distillation oils having the following gravities :—

2	per cent.	of oil	of sp. gr.	-	·874
10	„	„	„	-	·893
8	„	„	„	-	·917
60	„	„	„	-	·941
80					

The kerosene oil of commerce has a density of ·810 to ·820.

This oil is therefore quite unadapted as a substitute for kerosene, but might be used with great advantage as a lubricant.

PETROLEUM—

Waiapu, East Coast of Auckland Province. Crude oil has a specific gravity of ·872 at 58° Fahr.; boiling point, 290° Fahr.; flashing point, 230° Fahr. This oils yields, when distilled, as follows :—

Fine lamp oil	-	11·20 per cent. of sp. gr.	·820
Inferior lamp oil	-	37·75 „ „	·853
Lubricating oil	-	25·69	
Parafine	-	16·00	
Bituminous residue	-	9·36	
		100·	

By repeated rectifications this oil would probably yield 20 per cent. of lamp oil adapted for consumption in common kerosene lamps. A small sample of oil from the same district had specific gravity ·866, and gave, when twice rectified, 10 per cent. of lamp oil of specific gravity ·819, or at proof, 40°.

PETROLEUM OIL—

Waipawa River, Poverty Bay, Province of Auckland.

STEATITE—

Collingwood, Nelson. Occurs in a large mass or dyke in the Parapara Valley.

MARBLE—

Collingwood, Nelson. Forms a large part a mountain range, and could be quarried and shipped with facility in blocks of any size.

Cl. 102, 104. BUILDING STONE, FIRECLAY, &c.

1. *Parapara Iron and Coal Company, Nelson.*—Limestone. Occurs in quantity at a considerable distance beneath the outcrop coal measures. Intended to be used as a flux in the reduction of the brown hæmatite ore which is found in great quantities in the district.

2. *W. Wilson, Christchurch.—a.* White limestone; *b.* yellow limestone. Obtainable in blocks of from 1 to 10 tons.

3. *Nelson Committee.*— Marble from Ruatanuka, Golden Bay.

4. *Nelson Committee.*—Porcelain clay from Pakawau.

5. *Nelson Committee.*—Clay from Pakawau.

6. *Nelson Committee.*—Clay from Ruatanuka, Golden Bay.

7. *Taranaki Committee.*—Potter's clay from Urenui.

8. *Kennedy Brothers, Nelson.*—Fireclay from a seam of 8 ft., underlying the coal at the Brunner Mine.

9. *Kennedy Brothers, Nelson.*—Fireclay, same as No. 8, ground ready for brick-making or other fire goods. Is sold at 60*s.* per ton at Greymouth.

10. *Kennedy Brothers, Nelson.*—Fire-bricks, manufactured at the company's works at the Brunner Mine. Value, 6*l.*–7*l.* per 1,000 at Greymouth.

11. *Nelson Committee.*—Steatite from Golden Gully Collingwood.

Cl. 202, 602. PAINTS, DYES, AND TANNING BARKS.

1. *T. B. Louisson, Nelson.*—Hæmatite Paint, made from the ore found in unlimited quantities at Parapara, Nelson. Being a pure peroxide of iron, it is the best preservative of that metal. Wood coated with this paint is comparatively uninflammable; it is, therefore, much used in painting shingled roofs. Value 25*l.* per ton.

2. *Johnstone Brothers, Nelson.*—Umber Pigment, made from the raw hæmatite ore found at Parapara.

3. *Johnstone Brothers, Nelson.*—Red Pigment, made from calcined hæmatite ore found at Parapara.

4. *W. S. Grayling, Taranaki.*—Bark of the Hinau (*Elæocarpus dentatus*), and sample of *Phormium* fibre dyed therewith by the Maoris.

5. *Taranaki Committee.*—Bark of the Atauhero (*Rhabdothamnus solandri*). Produces a red dye.

6. *Taranaki Committee.*—Bark of the Pukatea (*Atherosperma novæ-zealandiæ*). The inner bark contains a powerful anodyne.

7. *W. S. Grayling, Taranaki.* — Extract of Kamai or Towhai (*Weinmannia racemosa*). A forest tree abundant in many parts of New Zealand. The bark has been successfully applied as a tanning agent. It is also used by the Maoris in producing their red and brown colours. The dye obtained from this gives a very fast class of shades upon cotton. It can be sold at the same price as gambier and catechu.

Bark of the Towhai, from which the extract is obtained.
Timber of the Towhai.

8. *W. S. Grayling, Taranaki.*—Two samples of Extract of *Hinau*.

The *Hinau Elæocarpus dentatus* is a large forest tree, abundantly diffused throughout most parts of New Zealand. The bark has been successfully used in tanning operations. The natives also use it in producing the beautiful black dye for their flax work, for which purpose the bark is first bruised and boiled for a short time. When cold, the flax if put into the mixture, where it is left for two days, after which it is taken out and steeped thoroughly for two days in red swamp mud, rich in peroxide of iron, when it is removed and dried in the sun. The *Hinau* can be used in the manufacture of ink, by dissolving a small quantity of the extract in water, and adding a little rust of iron. As it contains neither corrosive acid nor gum, the pen is neither injured nor clogged. The extract of *Hinau* can also be used instead of logwood.

The extract of *Towhai* is much more astringent than that of *Hinau*, and needs only to be introduced to be accepted by tanners.

9. *Westland Committee.*—Bark of the Tawai or Red Birch (*Fagus menziesii*), suitable for tanning purposes; also a sample of the extract fluid.

10. *W. S. Grayling, Taranaki.*—Blue earth, supposed to be vivianite or a phosphate of iron. Used by the Maoris, mixed with shark oil, as a deep and brilliant blue paint.

11. *Dr. Hector, Colonial Museum.*—

Tan Barks, native to New Zealand:

Wood of *Fuchsia excorticata*, native name *Kotukutuku*; percentage of tannin, 5·3.

Bark of *Eugenia maire*, native name *Whawhako*; percentage of tannin, 16·7.

Bark of *Elæcarpus hookerianus*, native name *Pokako*; percentage of tannin, 9·8.

Bark of *Coriaria ruscifolia*, native name *Tutu*; percentage of tannin, 16·8.

Bark of *Knightia excelsa*, native name *Rewarewa*; percentage of tannin, 2·7.

Bark of *Elæcarpus dentatus*, native name *Kiri-Hinau*; percentage of tannin, 21·8.

Bark of *Weinmannia racemosa*, native name *Tawheri*; percentage of tannin, 12·7.

Bark of *Myrsine urvillei*, native name *Mapau*; percentage of tannin, 1·4.

Bark of *Phyllocladus trichomanoides*, native name *Kiri-Toa-Toa*; percentage of tannin, 23·2.

Bark of *Hoheria populnea*, var. *augustifolia*.

Hirneola auriculæ-Judæ, Ear Fungus; exported largely to China by Chinese emigrants.

Leaves of *Celmisia coriacea*, native name *Tikapu*; hills of South Island.

12. *Taranaki Committee.*—Earth used by Maoris as a mordant for dyes.

Cl. 620. **GRAIN AND AGRICULTURAL PRODUCE.**

W. D. Wood, Christchurch, Canterbury.—

1. 25 lbs. Tuscan Wheat, weighs 68 lbs. per imperial bushel.
2. 25 lbs. Rough Chaff Wheat, weighs 66 lbs. per imperial bushel.
3. 25 lbs. Velvet Chaff Wheat, weighs 65½ lbs. per imperial bushel.
4. 25 lbs. Red Chaff Wheat, weighs 64¼ lbs. per imperial bushel.
5. 50 lbs. of Flour.

P. Cunningham & Co. Christchurch, Canterbury.—11 ordinary samples of Wheat, grown in the province of Canterbury.

6. ¼ bushel Pearl Wheat.
7. „ Hunter's White Wheat.
8. „ Tuscan „
9. „ Hunter's White „
10. „ Velvet Chaff „
11. „ Red Chaff „
12. „ Purple Straw „
13. „ Velvet Chaff „
14. „ Pearl „
15. „ Red Chaff „
16. „ Tuscan „

John G. Ruddenklau, Addington, Canterbury.—

17. 1 bag Champion White Wheat; yield, 45 bushels per acre; value, 4*s.* 6*d.* per bushel.

18. *Robert Wilkins, Christchurch Canterbury.* Half-bushel of Perennial Rye Grass Seed (*Lolium perenne*), grown by Rev. T. R. Fisher, Selwyn District; soil, sandy loam; yield, 30 bushels per acre value, 6*s.* 6*d.* per bushel of 20 lbs.; weight, 18 lbs. or 36 lbs. per bushel.

19. Half-bushel Cocksfoot Seed (*Dactylis glomerata*), grown by executors of Ebenezer Hay at Banks Peninsula. Soil, volcanic hills. The seed was sown on cleared bush land, but not ploughed or cultivated in any way; yield not known; value, 7*d.* per lb.; weight, 10 lbs. or 20 lbs. per bushel.

20. *E. H. Banks, Christchurch, Canterbury.* Rye, grown in Ashburton District. Soil, fine black loam, shingle bottom, formerly covered with native flax (*Phormium*); sown in May; 2 bushels of 60 lbs. per acre; crop average, 40 bushels per acre; value, 4*s.* per bushel.

21. Malt, made in Christchurch, from Barley grown in Selwyn District. Soil, rich black loam, formerly laid down with English grasses; sown in September; 2¼ bushels of 50 lbs. per acre; value, 8*s.* per bushel of 40 lbs.

22. Barley, grown in Leeston District. Soil, light porous, made rich by sheep feeding upon turnips and mangolds, and by

artificial drainage; sown in October; 2 bushels of 50 lbs. per acre; crop average, 45 bushels; value, 5*s*. per bushel.

23. Broad Beans, grown in Lincoln District. Soil, old flax (*Phormium*) swamp, with stiff clay subsoil; sown in July; 1¾ bushels of 60 lbs. per acre; crop average, 30 bushels; value, 4*s*. per bushel.

24 Canadian Oats, grown in Rolleston District. Soil, very light, formerly a sheep run; sown in August. Two bushels of 40 lbs. per acre; crop average 45 bushels; value 2*s*. 10*d*. per bushel.

25. Black Tartarian oats, grown in Ashburton district; soils, alternate down and flax (*Phormium*) swamp, at present an extensive sheep-breeding station; sown in August, 2¼ bushels of 40 lbs. per acre; crop in 1875 about 30,000 bushels, three fourths of which are crushed and consumed on the station, feeding long wool sheep and horses. Value, 2*s*. 6*d*. per bushel.

26. Horse beans, grown in Kaiàpoi district soil, very heavy swamp land, strong clay bottom, covered by a silt deposit caused by a periodical overflow of the Waimakariri river; sown in July, 2 bushels of 60 lbs. per acre; crop average, 35 bushels; value, 5*s*. per bushel.

27. Field peas, grown in Prebbleton district. Soil, light loam, shingle bottom; sown in July, 2 bushels of 60 lbs. per acre; crop average, 40 bushels; value, 4*s*. 6*d*. per bushel.

28. Chaff from oaten hay, grown in Heathcote District, cut by a Buncle (of Melbourne) patent cutter, screen and packer combined, packed and pressed ready for shipment to the different gold diggings, in bales of 5 sacks, weighing about 3¼ cwt. and measuring 17 ft.; value, 5*l*. 10*s*. per ton.

29. Field peas, grown in Templeton district. Soil, very light, well drained, mostly shingle bottom. Sown in July, 2 bushels of 60 lbs. per acre; crop average 30 bushels; value, 4*s*. 6*d*. per bushel.

The above are intended to show the produce of the different districts in the province of Canterbury.

The quantity per acre given in the actual result in these particular cases. The price is what each exhibit would command free on board at Port Lyttelton, in large parcels, nett cash.

30–57. Twenty-eight samples of grain, &c., a fair average of farmers' delivery at exhibitors' store. All grown within 50 miles of Christchurch. Season, 1875.

58. Four sheaves of prime Tartarian white oats, cut green for fodder.

59. *Hooper and Dodson, Nelson.*—Hops, picked in March, 1875. Crop off 5 acres, 106 cwt.

60. *John Gilmour, Christchurch, Canterbury.*—One ham, clothed; one ham, bare weight each, 12 lbs.; value, 1*s*. per lb.

61. One side of bacon, clothed; one side, bare weight, each 26 lbs.; value, 1*s*. per lb.

Cl. 667. WOOL.

1. *W. S. Peter, Anama, Ashburton, Canterbury.*—Merino, male, 12 months old, not previously shorn, first combing, in grease. Average weight, 6 lbs. Average price of previous clips, 1*s*. 1*d*. all round except locks, sold at Christchurch privately.

2. *Samuel Bealey, Canterbury.*—10 Fleeces, second cross from Merino ewe by Romney Marsh or Kent ram; ewes and wethers, 14 months old, not previously shorn, first combing, in grease. Average weight, 10·3 lbs. Average price of previous clips in London, 1*s*. 3*d*. in grease, and 1*s*. 10*d*. to 2*s*. 6*d*. cold water washed.

3. *A. W. Rutherford, Mendip Hill, Amuri, Nelson.*—Merino, ewe hoggetts, 14 months old, not previously shorn, dipped in February 1875 in lime and sulphur for ticks, greasy super first combing. Average price of previous clips in London 1873 greasy fleece, 1*s*. 4*d*. to 1*s*. 5*d*.; 1874 greasy fleece, 1*s*. 5*d*. to 1*s*. 6*d*.

4. *George A. Anstey, Canterbury.*—Merino, bred by John Hartland, of Mount Parnassus, Amuri, Nelson, four-year old rams; date of previous shearing, 25th November 1874, months growth, dipped in November 1874 in lime and sulphur, first combing in grease. Average price of previous clips in London, 1874 portion of clip (without rams), 1*s*. 1¾*d*.; 1875 portion of clip, without rams, 1*s*. 3¾*d*.

5. *J. Cathcart Wason, Corwar, South Rakaia, Canterbury.*—Merino, 6 tooth wethers, 12 months' growth, greasy. Average price of previous clips in London, 9*d*. to 1*s*. 5*d*.

6. *J. Cathcart Wason, Corwar, South Rakaia, Canterbury.*—Lincoln, full-mouth ewes, bred by Thomas Kirkham, of Beresthorpe and Dudding, of Pantin, Lincolnshire, England, imported in March 1874 from England, being then 4 tooth 12 months' growth, in grease.

7. *J. Cathcart Wason, Corwar, South Rakaia, Canterbury.*—Cross between Lincoln and Merino, 2-tooth ewes, 12 months' growth. Average price of previous slips in London, 1*s*. 1*d*. to 1*s*. 4*d*. in grease.

Cl. 666. PHORMIUM TENAX, OR NEW ZEALAND FLAX, RAW AND MANUFACTURED.

Cold-water Dressing.—The leaf of the *Phormium Tenax*, or New Zealand Flax, is fed to a machine called a "stripper," at the rate of 100 to 120 feet per minute. The drums of these stripping machines are driven at the rate of 1,000 to 2,000 revolutions per minute, their diameter being from 14 to 20 inches. After passing

through the strippers, the partially-cleaned fibre is hand-washed in bundles of about 20 leaves; these bundles are then suspended in water and allowed to soak for about two hours; the fibre is then spread out on the bleaching ground for a time, which varies according to weather, and then hung on lines to dry; it is then either scutched or hackled, or both, packed in bales, and pressed for shipment. When the stripper is in good order and the fibre has been fairly cleaned, the loss in scutching amounts to from 3 to 5 cwt. per ton, and in hackling from 2 to 3 cwt.

Warm-water Dressing.—After passing the leaf through the stripper, as in cold-water dressing, the fibre is washed and placed to soak from 6 to 24 hours in tanks filled with warm water, which is kept heated either by means of a fire or a steam pipe; when taken out it is scutched or hackled, or both these operations are performed.

Maori or Native Dressing.—The Maoris only use a portion of the fibre on one side of the leaf, the leaves being selected with great care. They scrape the leaf with a mussel shell, or a piece of hoop iron, on the thigh; it is then soaked in cold water and dried.

Some of their very fine samples are obtained from particular varieties of the plant, and then only the youngest and best leaves are used, particular attention being also paid to the manipulation.

1. *Charles Chinnery, Addington, Canterbury.*—1 bale, machine dressed, washed, bleached, scutched, and hackled. Valued by exhibitor at 30*l.* per ton free on board.

2. *Taranaki Committee.*—1 bale, machine dressed.

3. *Edward Moyle, Taranaki.*—3 samples of cord.

4. *Thomas Bevan, junior, Otaki, Wellington.*—1 hank of native-dressed fibre. The Maoris only use a portion of the fibre on one side of the leaf, the leaves being selected with great care. They scrape the leaf with a mussel shell or a piece of hoop iron. The fibre is then soaked in cold water and dried.

5. *Thomas Bevan, junior, Otaki, Wellington.*—Rope manufactured from native-dressed fibre, 2 fish lines, horse halter, lead-line, twine, double twine.

James Cook, Nelson.—Mats and matting.

7. *Mrs. Richard Taylor, Wanganui, Wellington.*—Ornamental satchel and table mat.

Bevan and Sons, Wellington.—Assortment of Cords and Twines. Manufactured from Native-dressed Fibre by Exhibitors.

Kinross and Company, Hawke Bay.—Nine exhibits of Cordage and Twines, made from Maori-dressed fibre.

Grant and Company, Otago.—Assortment of Cordage. Manufactured by Exhibitors.

Auckland Patent Steam Rope Company, Auckland:—

1 coil 6 inch 4 strand White Rope.
1 „ 6 „ 4 „ Oiled „
2 coils 5 inch 4 Strand Oiled Rope.
2 „ 4 „ 4 „ „ „
2 „ 3½ „ 4 „ „ „
2 „ 3 „ 3 „ „ „
2 „ 2½ „ 3 „ „ „
1 coil of White Rope.

Canterbury Flax Association, Christchurch, Canterbury.—Assortment of Cordage, tarred and untarred. 7 exhibits.

T. Lennon, Christchurch, Canterbury.—Assortment of Cordage, Ropes, and Twines. Manufactured by Exhibitor.

W. Cook, Nelson.—12 exhibits, all manufactured by Exhibitor, viz.:—2 Hearth-rugs, 2 Parlour Mats, 2 Bedroom Mats 4 Hall Mats, 1 Railway Mat, and 1 Carriage Mat.

Simons and Malcolm, Nelson.—2 Door Mats.

Colonial Museum, Wellington.—10 Maori Mats, viz.:—
1 Flax and Kaka Feathers.
1 Flax and Pigeon Feathers (*Kereru*).
1 Flax and Kiwi Feathers (*Eheruheru*).
3 Parawai Mats.
1 Piu Piu.
1 Korowai.
1 Pota.
1 Pureke.
Shoes, Apron, Bag, Dyed Fibre, of Maori Manufacture.

Tarahora.—1 fancy Mat, Maori manufacture.

J. B. Armstrong.—Phormium Seeds. Varieties.

MANUFACTURES.

Cl. **656.**

1. *New Zealand Provision and Produce Company, Christchurch, Canterbury.* 4 tins Ox Tongues; 5 tins Sheep Tongues; 4 tins Corned Beef; 3 tins Boiled Beef; 4 tins Corned Mutton; 4 tins Boiled Mutton. All hermetically sealed and preserved so as to keep good for years.

2. *David Nairn, Addington, Canterbury.* Tomato Sauce; value, 16*s.* per pints; 8*s.* per half-pints.

3. *John Horler, Woolston, Canterbury.* 56 lbs. Soap; value 28*l.* per ton.

Cl. **659.** 4. *John Horler, Woolston, Canterbury.* 40 lbs. Mould Candles; value 4½*d.* per lb.

Cl. **656.** 5. *Trent Brothers, Christchurch, Canterbury.* Chicory in two stages of preparation. Can be put free on board at Port Littelton at from 5*d.* to 6*d.* per lb., according to package. Photographs of the works and descriptive pamphlet.

Cl. **660.** 6. *James Smith, Nelson.* 12 sorts of Fruit Wines.

Cl. **660.** 7. *Henderson and Farran, Wanganui, Wellington.*—6 bottles Ale (No. 1). Prepared from malt and hops both grown and made in Nelson. Value 8*s.* per dozen. Brewed 18th June 1875; bottled 18th July 1875.

Cl. **660.** 6 bottles Ale (No. 2). Prepared from malt grown and made in Canterbury, and from hops grown in Nelson. Brewed 21st August and bottled 14th September 1875. Value 8*s.* per dozen.

Cl. **660.** 6 bottles Porter (No. 1). Prepared from malt and hops both grown and made in Nelson. Brewed 21st June and bottled 22nd July 1875. Value 10*s.* per dozen.

Cl. **660.** 6 bottles Porter (No. 2). Prepared from malt grown and made in Canterbury, and from hops grown in Nelson. Brewed 24th August and bottled 21st September 1875. Value 10*s.* per dozen.

Cl. **660.** 1 keg of Bulk Ale, prepared from malt grown and made in Canterbury, and from hops grown in Nelson. Brewed 15th October 1875. Value 5*l.* per hogshead.

Cl. **652.** 8. *Thomas Wilson, Woolston, Canterbury.* Saddle and Harness Leather. 1 side black Harness; 1 side brown Harness; 1 side black Rein; 1 side fair Skirt; 1 side fair Saddle Seat; 1 side Thong Hide; 1 side stained Stirrup; 1 side stained Bridle; 1 side stained Bag; 1 stained Hogskin; 1 fair Hogskin.

Shoemakers' Leather: 1 side waxed Kip; 1 side grained Kip; 1 waxed Calf Skin; 1 grained Calf Skin; 2 Kid Skins; 1 black grained Goat Skin; 2 black Basils; 1 sole Butt. Cl. **652.**

Fancy Coloured Skins for Shoemakers and Bookbinders: 1 strained Basil; 1 soft Basil; 3 dyed Sheepskins; 5 dyed Goatskins; 7 coloured Mats of various colours.

9. *Armitage, Taranaki.*—Dressed Kip and Calf Leather prepared with bark of *Acacia decurrens.* Cl. **652.**

10. *Thomas Morris, Oamara, Otago.*—Improved Gentleman's Town Saddle. The improvement consists of the skirt being joined together and fitted all round the cantle. Value in New Zealand, with furniture complete, 10*l.* 10*s.* Cl. **296.**

11. *Webley Brothers, Nelson.*—3 samples of Nelson Tweed, made from New Zealand wool. Price 5*s.* 6*d.* per yard. Cl. **235.**

12. *Webley Brothers, Nelson.*—1 case of samples of Nelson Tweed, made from New Zealand wool. Cl. **235.**

13. *James Cook, Nelson.*—Woollen Rugs woven and dyed at Nelson. Cl. **237.**

14. *James Cook, Nelson.*—Woollen Mats woven and dyed at Nelson. Cl. **237.**

15. *W. M. Innes, Port Chalmers, Otago.*—3 half-pint bottles of Cod Liver Oil. Cl. **200.** Cl. **272.**

MISCELLANEOUS.

Cl. **300.** 1. *P. W. Tatton, Nelson.*—Map of the Province of Nelson, showing localities of mineral deposits.

Cl. **709.** 2. *J. Henry and Company, Taranaki.*—Dried Ferns.

Plate 1. Davallia novæ-zealandiæ; Lindsæa tricho manoides; Asplenium falcatum; Polypodium regulosum.

Plate 2. Alsophylla colensoi; Asplenium sp.; Pteris macilenta.

Plate 3. Adiantum cunninghamii; Pteris incisa; Nephrodium hispidum; Trichomanes reniforme.

Plate 4. Marattia salicina.

Plate 5. Dicksonia lanata; Doodia caudata; Asplenium hookerianum; Hymenophyllum densum; Hymenophyllum; Lomaria fluiratilis.

Plate 6. Aspidium coriaceum.

Plate 7. Davallia novæ-zealandiæ; Lindsæa tricho anoides; Lomaria nigra.

Plate 8. Hymenophyllum dilatatum; Hymenophyllum æruginosum; Lomaria fluiratilis.

Plate 9. Cyathea medullaris; Asplenium obtusatum; Pteris macilenta.

Plate 10. Pteris incisa; Aspidium cystostegia; Lomaria bulbiferum; Hypolepis distans.

Plate 11. Asplenium umbrosum.

Cl. **709.**

Plate 12. Lomaria lanceolata ; Cyathea dealbata.

Plate 13. Nephrodium hispidum ; Lomaria elongata ; Polypodium lillardicrii.

Plate 14. Hymenophyllum æruginosum ; Hymenophyllum pulcherrimum ; Polopodium grammitidis.

Plate 15. Leptopteris superba ; Dawsonia superba.

Plate 16. Polypodium pennigerum.

Plate 17. Polypodium billardieri.

Plate 18. Cyathea medullaris ; Cyathea dealbata ; Asplenium umbrosum ; Lomaria nigra ; Trichomanes reniforme.

Plate 19. Pteris macilenta ; Cyathea smithii.

Plate 20. Nephrodium hispidum.

Plate 21. Gleichemà cunninghamii ; Millefolium distans.

Plate 22. Lamaria bulbiferum ; Aspiduim richardii ; Nephrodium hispidum ; Pteris scaberula.

Plate 23. Asplenium falcatum.

Plate 24. Lomaria bulbiferum.

Plate 25. Asplenium obtusetum ; Pteriscaberula ; Pteris esculenta ; Lomaria fluvias tilis.

Plate 26. Leptopteris hymenophylloides.

Cl. **709.**

Plate 27. Pteris tremula ; Cyathea dealbata ; Aspidium cystostegia ; Hymenophyllum densum ; Hymenophyllum pulcherrimum ; Lomaria nigra.

Plate 28. Lomaria elongata ; Aspidium richardi.

Plate 29. Lomaria vulcanicum ; Hymenophyllum æru ginosum ; Lomaria bulbiferum ; Cyathea dealbata ; Asplenium umbrosum.

Plate 30. Polypodium, several sp.

Plate 31. Trichomanes elongata ; Hymenophyllum æruginosum ; Hymenophyllum pulcherrimum.

3. *Taranaki Committee.*—Fungus (*Hirneola polytricha*) used as food by the Chinese. Largely exported from the colony. Grows principally on the Tawa.

4. *Taranaki Committee.* — Esculent Fern Root. Will germinate if crushed and planted in rich soil in a shady place.

5. *Taranaki Committee.*—Bird's Nest Fungus and curious Parasite.

6. *Greenfield and Stewart, Wellington.*—Door made of Rimu (*Dacrydium cupressinum*) Red Pine of settlers.

Cl. **430.**

PHOTOGRAPHS.

Taranaki Committee.

1 and 2. Panoramic Views of New Plymouth and surrounding scenery, looking N. and S.

3. Mount Egmont, from New Plymouth.

4. Pukearuhe, White Cliffs, Taranaki.

5. Paritutu, the Great Sugar Loaf, Taranaki.

6. Sugar Loaf Islands.

7. Forest Scenery near the Waiwaikaiho River.

Photographs by D. L. Mundy—

Mostly consisting of North Island Scenery.

1. Patuka, or Store Honse, at Waihi, head of Lake Taupo.

2. A Digger's Home, Ponga Flat, Thames Gold Fields.

3. Wellington, from the Cemetery.

4. Government House, Wellington.

5. River Bed Scene on the Waipawa River, Poverty Bay.

6. Flax Mills at Hokianga Heads.

7. A Geological Study at Opoke, Hokianga, on the seashore (measures 40 ft. round).

8. Carved Panel from the Maori House, Colonial Museum, Wellington.

9. Victoria, Bay of Islands, where the Treaty of Waitangi was signed in 1842.

10. Momona Bay, Kawau, the Island Home of Sir George Grey, K.C.B.

11. Kororareka, or Russell, Bay of Islands.

12. Study of a Flax Bush (*Phormium tenax*) on the Waikiri River, Hokianga.

13. The Interior of a Native Pa at Kaitereria, Rotokakahi.

14. Teheki, head of the Waima River, Hokianga.

15. The Great Fern Trees of New Zealand, at Gnoke, Hokianga (40 ft. in height).

16. A Forest Scene, showing the Nikau Palms at Onoke, Hokianga.

17. A Study of the Great Mamuka or Ponga Tree Fern, on Ponga Flat, 1,200 ft. above the Thames Gold Fields, the River Thames in the distance.

18. Ohinemutu Rotorua, the commencement of the Hot Springs District, with Native Village or Kainga.

19. Rotokakahi, near Rotomahana.

20. Roto Tarawera, near Rotomahana.

21. Tokanui, head of Lake Taupo, showing the Geysers.

22. Roto Pounamu, Rotomahana, or Cold Green Lake, showing the steam holes in the Hot Taupes.

23. Fumaroles, or Boiling Mud Cones, Rotomahana.

24. General View of Rotomahana, looking east.

25. General View of Rotomahana, looking west.

26. The Te Tarata Geyser, Rotomahana.

27. The Otukapuarangi or Pink Terrace, Rotomahana.

28. Side View of the Te Tarata Terraces, Rotomahana.

29. Side View of the Pink Terrace, Rotomahana, showing the Great Stalactite Terraces.
30. The Te Tarata Terrace, Rotomahana, looking down on the Lake from the Crater.
31. The Crystal Slope of the Te Kiwi Geyser, Rotomahana.
32. Captain Cook's Bay, where he took the transit of Mercury, November 9th, 1769.
33. Cabbage Tree Palms, Governor's Bay, Canterbury.
34. Dyer's Pass Road, Head of Lyttleton Harbour.
35. Government Buildings, Christchurch, Canterbury.
36. Craigieburn Cutting, West Coast Road, Canterbury.
37. Study on the Otira River, Southern Alps, Canterbury.
38. The Bealey River Bed, Canterbury.
39. The Rolleston Range, with Glacier, Arthur's Pass, Canterbury.
40. Summit of Arthur's Pass, Westland, looking west.
41. Summit of Arthur's Pass, Westland, looking east.
42. Looking through the Forest on the Teremakau River.
43. On the Teremakau River Bed, Westland.
44. In the Kahikatea, or White Pine Forest, Westland.
45. An Hotel on the Gold Fields near Fox's Diggings, Westland.
46. White Pine Forest, West Coast Road, Canterbury.
47. Thames Gold Field, from top of Moanataiari Tramway, 1,200 ft. above the sea.
48. Akaroa Bay, Banks' Peninsula, Canterbury.

MAPS AND PLANS.

Cl. **300.**

Collection made by Dr. Hector for the Commissioners :—

1. Official Maps of the Colony of New Zealand. Published by E. Ravenstein.
2. Geological Map of New Zealand, by Dr. Hector, MSS.
3. Geological Map. Small scale. Published by E. Ravenstein.
4. Model of New Zealand in Relief.
5. Plans and Diagrams of Gold Fields, &c.
6. Physical Map of New Zealand, by Dr. Hector.

TIMBER.

Cl. **600, 601.**

Taranaki Committee :—

1. Dodonæa viscosa, Native name, Akeake, 2 specimens.
2. Atherosperma nova zealandiæ, Pukatea.
3. Eugenia maire, Maire tauhake.
4. Podocarpus ferruginea, Totara.
5. „ dacrydioides, Kahikatea.
6. Dysoxylum spectabile, Kohekohe.
7. Podocarpus spicata, Matai.
8. Weinmannia racemosa, Towhai.
9. Knightia excelsa, Rewarewa.
10. Elæocarpus dentatus, Hindu.
11. Alectryon excelsum, Titoki.
12. Sophora tetraptera, Kowhai.
13. Nesodaphne tawa, Tawa.
14. Metrosideros robusta, Rata.
15. Dacrydium cupressinum, Rimu.
16. Vitex littoralis, Puriri.
17. Hedycarya dentata, Kaiuhiria.

W. B. Black, American Coach Factory, Wellington :—

18. Alectryon excelsum, Titoki, 2 specimens.
19. Eugenia maire, Black Maire.
20. „ White Maire.
21. Leptospermum sp., Manuka.
22. „ „ sap wood.
23. Vitex littoralis, Puriri, 2 specimens.
24. Sophora tetraptera, Kowhai.
25. Dodonæa viscosa, Akeake.
26. Podocarpus ferruginea, Miro.
27. Metrosideros robusta, Rata.
28. Podocarpus totara, Totara, knot.

J. D. Cruickshank, Upper Hutt Saw Mills, Wellington :—

29. Plank of Rimu (*Dacrydium cupressinum*), Red Pine of Settlers.

W. James, Wellington :—

30. Podocarpus totara, Totara, 2 specimens of knots.
31. Elæocarpus dentatus, Hinau.
32. Knightia excelsa, Rewarewa.
33. Dammara australis var., Mottled Kaurī.

Westland Committee :—

34. Metrosideros robusta, Rata, iron wood.
35. Podocarpus totara, Totara.
36. Podocarpus spicata, Matai, Black Pine.
37. „ ferruginea, Miro.
38. „ dacrydioides, Kahikatea, White Pine.
39. „ ditto var. Yellow Pine.
40. „ colensoi Silver Pine.
41. Libocedrus doniana, Kawaka.
42. Dacrydium cupressinum, Kimu, Red Pine.
43. Phyllocladus trichomanoides, Toatoa, Celery-leaved Pine.
44. Leptospermum scoparium, Manuka.
45. Fagus fusca, Tawai, Black Birch.
46. Fagus menziesii, Red Birch.
47. „ cliffortioides, Dwarf Birch.
48. Elæocarpus dentatus, Hinau.
49. „ hookerianus, Pokaka.
50. Weinmannia racemosa, Towhai, Red Wood.
51. „ sylvicola, Tauhero, White Wood.
52. Griselinia lucida, Pukatea, Broad leaf.
53. Fuchsia excorticata, Kotukutuku Fuchsia.
54. Hoheria augustifolia, Houhere, Ribbonwood.
55. Aristotelia racemosa, Makomako, Currant Tree.
56. Melicytus ramiflorus, Mahoe or Hinehine.
57. Sambucus novæ zealandiæ, Hauhau.
58. Panax crassifolium, Horoeka, Lance Wood.
59. Coriaria ruscifolia, Tutu.
60. Drimys colorata, Horopita, Peper Tree.
61. Olearia avicenniæ folia, Mikemike Yellow Wood.
62. Caprosma, Karamu, White Wood.

Cl. 312. **GARMENTS, ORNAMENTS, WEAPONS, &c., OF THE MAORIS.**

COLLECTION MADE FOR THE COMMISSIONERS BY R. W. WOON, R.M.

1. *Haimona Te Aoo te Rangi*, chief of Ngatipanioaua tribe.—A patuparaoa, whalebone weapon, called "Pai a te Rangi," handed down from ancestor named Kahunui, four generations back. Has been used in many battles, in which several chiefs and heroes "were made to lick the dust."

2. *Horima Katene.*—A whalebone weapon called "Nga Kanae a Titokowaru," lately the property of the celebrated chief Titokowaru, who devastated the West Coast Settlements in the war of 1868. Is an heirloom of ancient date.

3. *Thakara Tukumaru.*—A Tewatewa-wooden weapon.

4. *Uranga Kaiwhare.*—A Kakati-carved whalebone weapon called "Kaikanohi" (face eater) handed down for 12 generations.

5. *Takarangi Mete.*—A patuparaoa-whalebone weapon called "Tohiora." This is much prized, having been used by Te Maro, a member of the native Contingent in "knocking on the head, and despatching" the great prophet and leader of the Hauhau forces at the battle of Moutoa, in May 1864.

6. *Hohaia.*—A patuparaoa-whalbone weapon.

7. *Te Reimana.*—A patuparaoa-whalebone weapon.

8. *Te Reimana.*—A patu-stone weapon called "Kororariki."

9. *Te Koroneho.*—A patuparaoa-whalebone weapon.

10. *Reihana.*—A patu Kohatu, a stone weapon.

11. *Aperaniko Tamaite.*—A patu kohatu, a stone weapon.

12. *Captain Wirihana.*—A patuparaoa, whalebone weapon, small size.

13. *Keepa Rangitawira.*—A tewatewa, wooden battle-axe.

14. *Keepa Rangitawira.*—Taiaha Kwra, ornamented spear.

15. *Epiha Aokokiri.*—Taiaha, plain wooden spear.

16. *Mete Kingi.*—Taiaha, wooden spear ornamented with feathers.

17. *Mete Kingi.*—Tewatewa, wooden battle-axe with feathers.

18. *Poutini.*—Tewatewa, wooden battle-axe.

19. *Rewi Raupo.*—Taiaha, wooden spear.

20. *Te Reniana.*—Taiaha, wooden spear.

21. *Paora Kahuatua of Ranana.*—Taiaha kura, ornamented wooden spear

22. *Kiritakama.*—Taiaha, plain wooden spear.

23. *Taianhus.*—Taiaha, plain wooden spear.

24. *Tamihana te Aewa.*—Taiaha, wooden spear.

25. *Peina.*—Tewatewa, battle-axe.

26. *Paora Patapu.*—Taiaha, spear.

27. *Paora Patapu.*—A long Spear, taken as spoils of war at a battle in the Taupo country in 1869, lately the property of Te Heuheu.

28. *Major Keepa.*—A Pouwhenua ancient Spear, much prized, called "Aketaurangai." This was used by the Wanganui chief Amarama in killing the great Ngapuhi chief Tuwhare in 1830, on the Whanganui river when the Ngapuhi invaded that part of the island.

29. *Te Mawae.*—Tewatewa, a wooden battle-axe.

30. *Hoani Maramara.*—Korowai, flax (*Phormium*) mat

31. *Hoani Maramara.*—Flax Mourning Cap and Shark's Tooth Ear Ornament.

32. *Uranga Kanihare.*—Motumotu, ornamented flax mat. Much prized by Maoris.

33. *Rini Remoata*, chief and assessor.—Kakahu Kura, flax mat ornamented with the red feathers of the Kaka or mountain parrot. Much prized.

34. *Menehira.*—Parawai, flax mat with rich border.

35. *Reneti Tapa.*—Flax Mat, interwoven with Feathers of the native wood pigeon, called Waitahuparai; *intended as a gift to the President of the United States.*

36. *Hori Te Roka.*—Ugare, flax mat.

37. *Major Keepa.*—Dyed flax Cap.

38. *Captain Wirihana Puna.*—Kakahu Kura, ornamented flax and feather mat; *intended as a gift to the President of the United States.*

39. *Captain Mei Hunia.*—Parawai, ornamented mat.

40. *Pehira Turei*, Queen's pensioner.—Toi Mat made from Toi plant found at foot of Tongariro, or the burning mountain.

41. *Pehira Turei.*—Dyed flax Mourning Cap.

42. Maori Adze, called an Aronui. Two ancient Fish-hooks, tipped with human bone. Wooden Flute, called a Koauan, used for warbling love ditties.

43. *Aperahama Tahunuiarangi.*—Carved Image from front of ancient Maori house, called "Tamahaki," descended from ancestors 10 generations back.

44. Carved Pipe, made of reta, called "Takirau," and specimen of Dyed Flax.

45. *Hakaria.*—Hei Tiki, ancient greenstone neck ornament.

46. *Pehuinana.*—Carved calabash Top, called "Toka Taha."

47. *Hami.*—Two carved Wooden Implements, used in planting Kumaras (sweet potato), called "Ko Kumara."

48. *Te Hira.*—Specimens of Flax, plain and dyed black.

49. *Karaitiana.*—Hatchet, with carved handle. Patiti.

50. *Poari Wharehuia.*—Hei Tiki, greenstone neck ornament.

51. *Hiri Te Roha.*—Ancient Paddle for steering a canoe.

52. Shark's Tooth Ear Orament and a Fish-hook (made of Pawa shell) used as a bait to catch the fish called Kahawi.

53. *Te Hira.*—Skin of the Huia (*Heteralocha gouldi*). A chief's head ornament.

Te Hira.—A Pounamu (greenstone) Ear Pendant of great lustre.

54. *Pikikotuku.*—Pounamu Ear Ornament.

55. *Hine Maaka.*—Native Comb, called a karau.

56. *Hine Maaka.*—Greenstone Ear Pendant.

57. *John Mark.*—Two Whale's Teeth Garment Fasteners and a Greenstone Ear Ornament.

58. *Major Keepa.*—Greenstone Adze, called an aronui, very ancient.

59. *Major Keepa.*—Skin of the Huia (*Heteralocha gouldi*). Head ornament of a chief.

60. *Rev. B. K. Taylor, Wanganui.*—Hat made of Kiekie (*Frycenitcia bauksii*). Manufactured by Hori Mutumutu. Flax for the Waist.

61. *R. W. Woon, R.M., Wanganui.*—Ancient Stone Axe of 10 generations back.

62. *Hori Kingi Mawae.*—Paddle with carved top.

63. *Te Mawae.*—Stone Hatchet of 10 generations back.

64. *Reupea Tauria.*—Paddle.

65. Maori Image with head dress and ear ornament of Toroa feathers called "Rakeikuroa."

66. *Hereatara.*—Whakakai Greenstone Ear Ornament.

67. *Turahui.*—Pigeon Feather Mat, Eheruheru, with Greenstone Ear Pendant attached.

68. *Taranaki Committee.*—Hei Tiki, greenstone image, worn round the neck; 2. Ancient Axe Heads of stone.

69. *Taranaki Committee.*—Taiaka oramented with Kaka (parrot) feathers.

QUEENSLAND.

Queensland, the north-east section of Australia, is a colony of vast size, and indeed, if we bear in mind that the most of it is available land either for pasture, agriculture, or mining, it may be called the largest in the Australian group. In area it is nearly three times that of the vast territory of Texas, in North America, and its seaboard equals in length, and greaty resembles in shape, that of the United States, from Maine to Louisiana, the Florida peninsula corresponding to that of Cape York, and the Gulf of Mexico to that of Carpentaria. To give a sketch of the features of so grand an area, one must be content with a mere outline, in a work like the present. The most southerly point in Queensland consists of the highlands of Stanthorpe, the seat of the rich tin mines; a granite table-land, with an average elevation of some 2,800 feet, and a climate resembling that of the south of England. The splendid black and amber crystals of tin oxyd are lavishly scattered in this district. Immediately adjoining, and on the north, lie the far-famed Darling Downs, at a general altitude of 1,600 feet above sea level, with the climate of Southern France, and one of the finest pastoral districts in the world. Open lagoons (so to speak) of rich, treeless herbage are bounded, as it were by shores of sheltering, open-timbered land, with jutting capes of forest here and there running out and dividing the grassy spaces into imaginary bays and lakes of verdure; and the natural herbage, being grown on decomposed volcanic soil, is so rich that, in nutritive power, it equals the best corn and hay combined. These Darling Downs lie on the western escarpment of the great Australian Cordillera, which runs parallel to its east coast for 1,800 miles, and at about 70 miles back from the sea, and which separate the Darling Downs from the Moreton and Logan districts, a country rich in the finest cannel coal, and with good soil, well watered. The Wide Bay and Burnett district follow next, as we go northward, and in addition to their rich pastoral and agricultual capabilities, here lie the lucrative gold and copper fields of Gympie, Kilkivan, and Mount Perry, of which more hereafter. Gympie is famous for its rare mineral developments, such as walls of glittering calcspar, with rich imbedded gold all through them, and this gold and copper in any other part of the world, nearer to civilisation and capital, would be centres of attraction and busy population to one hundred times the extent of their present census. The rivers of Queensland, in the part we have at present described, consist chiefly of the Brisbane and the Mary, both as wide as the Thames, and fairly navigable for sea-going vessels for miles up from the mouth. Immediately to the north of the district last described, comes that of which Rockhampton is the shipping port. Here we cross the tropic, and nature begins to show on a vaster scale—larger rivers, larger plains, and larger animals are found. The two rivers, Fitzroy and Burdekin, drain a country larger than the ancient kingdom of France, and the great Australian alligator, 25 feet long, is found in them. Here, again, we have the gold and copper in abundance; gold, silver, lead, and copper all being visible at once in one piece of quartz in many of the lodes hereabout. The zamais and other tropical palms begin to appear, as well as those gorgeous "scrubs" which obtain throughout the whole colony, and in whose

oist, cool, green aisles the sun can seldom intrude, and the bush fire never, and where the giant fig-tree *macrophylla*) towers like a cathedral cupola above all its fellows.

Still passing northward from the country which makes Rockhampton its centre, the constant westerly trend the Queensland coast becomes more noticeable, and soon the rich sugar plantations on the Pioneer River are ached, spread over almost treeless plains with rich soil of measureless depth; and then come more rich mines gold, plenteous coal and copper, with countless interpersed lead and silver lodes, carrying associated gold, t all quite neglected and unnoticed amid so much other wealth. Tracts of country near the Burdekin iver as large as some English counties are covered with networks of mineral reefs, made up of richly golden undic, whose untold wealth could only yield fully to the scientific efforts of an army of chemically-skilled iners, and which is all lost to the present rough operators. We have not said much hitherto of the pastoral ealth of the colony, but the whole of it is, none the less, abounding in sheep, cattle, and horses, whose terests all the minerals and sugar tend to keep going instead of interfering with. The Cloncurry copper ines are abundantly rich in the beautiful clear red crystals of the famous ruby oxide—the most valuable and asiest-smelted copper ore known. They lie on the Cloncurry River, which runs into the Gulf of Carpentaria, does also the Gilbert, which, besides the universal gold, affords some of the most superb oriental agates and rdonyxes in the world, fully rivalling, if not surpassing, the best deposits of Uruguay and Brazil in the size, ansparency, and brilliant colouring of the stones. It would simply be monotonous to follow the description the colony northward and to describe the golden wealth, in reef and alluvial, which stretches away into the ape York Peninsula, so we will be content, and work our way back and south to the opal mines of Western ueensland, after a farewell glance at the coralline beauties of the Great Barrier Reef on our north-eastern a frontier, which ably bears the palm as premier coral bank of the world, 1,200 miles in length. Western ueensland introduces us to the great watershed of the Warrego, Thomson, and Barcoo rivers, which mostly nd their final outlet in the Murray River system of South Australia. This part of Queensland is so open and vel that many a watershed is imperceptible in dry weather, and it is often not until the heavy monsoon rains f the wet season send the water along in a wide and almost inevitable wall on to the unwary traveller that e perceives, for the first time, that there is a depression and a watershed under his feet at all. In Western ueensland lie the trachytic conglomerates which form the matrix of that gleaming and gorgeous gem, the riceless opal, in its varied hue and shades of purple, green, ruby, amber, blue, orange, and other florescent res. This stone, with the large, clear, glowing red chrysolites of the Burnett River, and the delicate aqua-arine of Stanthorpe, are the leading gems of Queensland. The sapphires are small, so are the diamonds; ne true ruby is no larger than a grain of sand, and the emerald is absent altogether. All this vast western ountry is rapidly being filled up with the sheep and cattle it so well can carry, its distance from the eastern a coast being atoned for by river navigation on the Darling to South Australia.

This notice of the topography of Queensland would be all incomplete if no mention were made of the ngthy seaboard which mark its giant frontiers on the east, and the equally vast rolling prairies of the west, which either Germany or Austria might be comfortably placed, and with plenty of room all round the edges spare. The coast of Queensland is dotted with some of the most beautiful islets in the world, grassy and ertile to the water's edge; some being low, open, park-like, and clean-beached, and some being high, woody, nd grand of aspect. They lie chiefly between the 18th and 22nd parallels of latitude, inside the Great Barrier Reef, in the smooth shallow sea which is enclosed between it and the mainland. The east coast of Queensland, therefore, is distinguished by many picturesque beauties of reef, island, mountain, and river, and he sunset of the tropics sheds its glory on many a tranquil scene by the shore where a new Robinson Crusoe night meet with romantic adventures to eclipse even the old time-hallowed escapes in Defoe's original and charming tale. And for the vast western plains of the Warrego and Thomson, the Barcoo and the Bulloo, who shall measure the limit of their pastoral and productive wealth in the future?

The foregoing description is copied from the "Queenslander" newspaper in its special edition for the

Philadelphia Exhibition. How far the language is justified it will be for the visitor to the Queensland Court, after inspection of its representative exhibits and the statistics of the colony, to decide.

The general arrangement of the Queensland Court at Philadelphia has been carried out with the view of showing at a glance the physical character and natural products of the colony. The physical character is shown by a series of photographs illustrating the various geological formations of the country, and beneath the photographs the natural products of such formations are presented to view in specimen cases.

One side of the Queensland Court is devoted entirely to a delineation of the colony from a geological point of view; the other is illustrative of its mining, pastoral, agricultural, and other industries, and over each division will be observed is a tablet of information.*

Division 1.—Alluvial.

From the illustrative tablet in this division we learn that :—

Soil.—Rich vegetable mould on scrub land. Various composition, otherwise, according to rock débris forming it. Generally adapted to agricultural purposes.

Products.—Cotton, sugar-cane, maize, &c. in perfection; cereals where climate suitable. Alluvial gold in auriferous districts.

These facts, as given in the descriptive tablet, indicate that in the alluvial districts valuable agricultural products can be freely grown, and that gold exists in other parts.

Photograph No. 1 is a view near Brisbane, showing a small villa residence on the alluvial banks of Breakfast Creek. Every kind of garden produce can be easily raised on any of the tributary creeks of the Brisbane river.

No. 2.—A view of a portion of the Mary river, considerably north of the township of Maryborough. The left bank shows the thickness of the alluvium which, so far as cultivation is concerned, is apparently inexhaustible.

No. 3.—Also a view of a Queensland river, showing a dense growth of scrub on the one side, and open forest country on the other.

No. 4.—A view of Maryvale Creek, lat. 19·30 north. On the banks of this creek the older alluvia of the country are rather extensively developed, and in them the remains of extinct marsupials abound, such as enormous kangaroos, the extinct dyprotodon, &c.

No. 5.—This is a characteristic view of mining for gold in the deep alluvial drifts. Here the miners are seen working in the alluvium the depth of which varies from 50 to 120 feet. Handsome returns of gold are yielded at the latter depth. Such deep sinking, however, is rather rare in Queensland, as nearly all the alluvial gold is found in shallow drifts, rarely exceeding 20 feet in depth.

No. 6.—This may be taken as a fairly representative view of the coast country in Queensland. The alluvial deposits are generally very extensive, and the country ordinarily flat from the absolute coast line to the first inland range.

No. 7.—Another view of Maryvale Creek, presenting the same characteristics as Photograph No. 4. The bones of some of the extinct animals are shown in the immediate foreground.

No. 8.—Here is depicted a rough method of sluicing the beds of creeks for the extraction of gold in the mountainous parts of the colony.

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* Most of these photographs were taken by Mr. R. Daintree whilst travelling in Queensland, by a "dry process," in which the gum resin of one of the Australian Eucalypti was used as the "preservative" mixture; they were afterwards enlarged by the autotype process, and coloured in oil.

No. 9.—This Photograph shows another method of working the beds of creeks for the extraction of alluvial gold. In the foreground are shown the operations of the well-known Californian pumps, as employed in throwing out the water from ordinary alluvial claims.

No. 10 is intended to illustrate the style of building adopted at a new "rush" on the gold fields. Here, in the first instance, bark stripped from the Eucalypti, the common tree of the country, is made to serve all kinds of building purposes, so far as the exterior of the habitations are concerned. At a later date, if the promising character of the diggings warrants a more permanent settlement, comfortable buildings of wood and stone are substituted.

No. 11 represents ordinary alluvial mining in Queensland. In the foreground the puddling tub employed in soaking the auriferous drift (if of a clayey character), and the cradle for finally extracting the gold from the concentrated débris will be observed.

The table cases ranged under the above photographic views contain the variety of soils found in various alluvial districts in Queensland. Here, also, are specimens of the products, comprising cassava, arrowroot, taro, sweet potato, flour, maizena, silk cocoons, wheat, maize, barley, tobacco, &c. The larger cases on the table contain samples of the soils with analyses attached, and there is one case entirely devoted to the fossils found in the older alluvia.

The annexed table of analyses of characteristic alluvial soils from various districts in Queensland is a summary of the contents of the alluvial soils exhibited in the table cases. They were mostly chosen by the Director of the Botanical Gardens, Brisbane, as characteristic of large areas in the various districts from which they were taken.

TABLES of ANALYSIS of ALLUVIAL SOILS from various AGRICULTURAL DISTRICTS, on the East Coast of QUEENSLAND.

MECHANICAL ANALYSIS.

——	Latitude.	Longitude.	Specific Gravity.	Water lost at 112° F.	Organic Matter.	Clay Oxides of Iron and Alumina.	Fine Sand, Quartz.	Total.	Organic Matter contains	
									Nitrogen.	Equal to Ammonia.
No.										
1. Best scrub soil, Yellowwood Plantation, Albert River.	27° 42′	153° 14′	1·999	5·994	10·623	81·723	1·660	100·000	0·457	0·554
2. Best forest soil, Yellowwood Plantation, Albert River.	27° 42′	153° 14′	1·915	6·705	11·834	78·456	3·005	100·000	0·343	0·416
3. Forest soil, Yellowwood Plantation, Albert River.	27° 42′	153° 14′	2·375	3·676	7·907	75·050	13·367	100·000	0·214	0·259
4. Morayfield, Caboolture -	27° 9′	153° 0′	2·228	3·338	6·559	89·093	1·010	100·000	0·226	0·274
5. Iindah Estate, Maryborough.	25° 30′	152° 41′	2·185	2·660	5·202	81·588	10·550	100·000	0·236	0·286
6. Top soil, Alexandra Plantation.	21° 11′	149° 10′	2·177	2·950	5·075	70·036	21·939	100·000	0·306	0·371
7. Subsoil, Alexandra Plantation.	21° 11′	149° 10′	2·280	2·734	3·384	69·091	24·791	100·000	0·082	0·099
8. 30 inches deep - -	21° 11′	149° 10′	2·308	2·354	1·831	72·282	23·533	100·000	0·022	0·026
9. Gairlock, Lower Herbert River.	18° 37′	146° 10′	2·180	2·070	4·867	91·243	1·820	100·000	0·128	0·155
10. Nind's Camp, Johnstone River.	17° 32′	146° 3′	2·394	3·618	7·470	84·052	4·860	100·000	0·288	0·349

Chemical Analysis.

—	Soluble in Water.								Soluble in Acid.		
	Water at 212° F.	Organic Matter.	Oxides, Iron, and Alumina.	Lime.	Magnesia.	Chlorine.	Sulphuric Acid and Alkalies.	Silica, finely divided.	Water of Constitution.	Organic Matter.	Equal to Nitrogen.
No.											
1. Best scrub soil - -	5·995	0·152	0·051	0·057	0·029	0·007	0·050	0·011	3·610	10·741	0·457
2. Best forest soil - -	6·705	0·193	0·086	0·035	0·021	0·005	0·022	0·137	4·493	11·641	0·343
3. Forest soil - -	3·676	0·100	0·055	0·033	0·019	0·012	0·016	0·063	2·204	7·797	0·214
4. Morayfield - -	3·338	0·200	0·040	0·072	0·033	0·107	0·158	0·050	4·189	6·359	0·226
5. Iindah - -	2·660	0·181	0·050	0·152	0·054	0·003	0·130	0·080	2·837	5·022	0·236
6. Top soil, Alexandra -	2·950	0·250	0·095	0·084	0·038	0·0022	0·1358	0·085	3·464	4·825	0·306
7. Subsoil, „ -	2·734	0·100	0·014	0·067	0·030	0·0019	0·1521	0·015	3·973	3·284	0·082
8. 30 inches deep, „ -	2·354	0·080	0·020	0·078	0·034	0·0012	0·1518	0·025	3·422	1·751	0·022
9. Gairlock -	2·070	0·180	0·060	0·117	0·029	0·005	0·109	0·072	2·634	4·687	0·128
10. Nind's Camp - -	3·618	0·118	0·013	0·037	0·017	0·030	0·041	0·006	4·482	7·352	0·288

(*continued.*)

—	Soluble in Acid—*continued.*										
	Oxides of Iron.	Alumina.	Lime.	Magnesium.	Potash.	Soda.	Sulphuric Acid.	Carbonic Acid.	Phosphoric Acid.	Silica, soluble in alkalies.	Insoluble Silicious Residue
No.											
1. Best scrub soil - -	6·937	7·021	1·259	1·043	0·453	0·119	0·206	0·241	0·301	8·912	52·986
2. Best forest soil - -	8·369	11·270	0·522	0·302	0·269	0·317	0·175	0·101	0·221	4·377	50·739
3. Forest soil - -	6·009	6·991	0·566	0·158	0·130	0·401	0·161	0·102	0·193	3·210	68·092
4. Morayfield - -	6·361	9·823	0·281	0·207	0·491	0·119	0·178	0·012	0·149	17·554	50·299
5. Iindah - - -	3·831	5·361	0·696	0·252	0·352	0·036	0·145	0·029	0·129	9·967	68·133
6. Top soil, Alexandra -	3·843	8·124	0·380	0·372	0·311	0·046	0·254	0·180	0·144	8·705	65·712
7. Subsoil, „ -	4·955	9·320	0·326	0·286	0·285	0·002	0·237	0·080	0·082	7·781	66·314
8. 30 inches deep, „ -	4·612	10·030	0·253	0·492	0·263	0·088	0·226	0·100	0·081	8·550	67·388
9. Gairlock - - -	3·372	6·986	0·230	0·211	0·241	0·046	0·121	0·010	0·109	13·181	65·532
10. Nind's Camp - -	7·823	11·380	0·458	0·555	0·344	0·196	0·082	Trace	0·236	12·265	50·947

No. 1 is an *alluvial scrub soil* from "Yellowwood" plantation on the Albert River in the Moreton District of Queensland, and was selected as a typical sample of the *best* scrub land in that district.

No. 2 is an "*alluvial soil*" considered of second quality from the same plantatation.

No. 3 is marked "best forest soil," also from "Yellowwood."

No. 4 is from the "Morafield Plantation." Caboolture lat. 25° 30′, long. 152° 28′, the estate of Messrs. Raff & Co., one of the earliest formed sugar plantations in Queensland. It may be considered a characteristic sample of scrub soil on the Caboolture River.

No 5 is from "Iindah Plantation" Maryborough, the estate of Messrs. Ramsay Brothers, lat. 25° 30′, long. 150° 41′. It was selected as a characteristic "scrub soil" from the banks of the Mary River, along the

course of which for many miles sugar cane is now being cultivated; 40 tons of sugar were made from 10 tons of Bourbon cane on this estate, equal to a gross return of 120*l.* per acre.

Nos. 6, 7, 8 are the top, sub, and 30 inch deep, soils taken from the estate of J. E. Davidson, Esq., Alexandra Plantation, Mackay, lat. 21° 11′ S., long. 149° 10′ E. These are characteristic alluvial soils of a considerable area in the Mackay district; they are underlaid by a course pebble drift affording excellent natural drainage.

The crop of sugar from 200 acres on this estate for the season 1873 was 395 tons, the gross money value would be about 11,000*l.*, or 55*l.* per acre.

No. 9. is the surface soil from the estate of Messrs. Mackenzie Brothers, Gairlock Plantation, Lower Herbert River, lat. 18° 37′ S., long. 140° 10′ E. The crops taken from this estate for season 1873 yielded 2½ tons sugar per acre of a gross money value of 70*l.*

No. 10 is a sample of "alluvial scrub soil" from the junction of the north and south branches of the Johnston River, known as Nind's Camp, lat. 17° 32′ long. 146° 3′, and may be accepted as a typical sample of the "jungle covered alluvium" of that river, of which there are large areas, both on it and the Daintree River, as yet unoccupied by planters.

Of these soils Dr. Voelcker, the eminent chemist, thus speaks :—

"All these soils are distinguished by remarkable fertility, and are naturally well adapted for the cultivation of the sugar cane. A glance at the analytical tables giving their composition clearly shows that they contain all the more important mineral elements of fertility in considerable proportions, as well as a large amount of organic matters capable of producing by their gradual decomposition, and finally by oxidation, a constant supply of nitrates which, in my opinion, are the combinations in which nitrogen is assimilated by plants."

"Thus it will be seen that the soil marked No. 1, 'best scrub soil, Yellowwood Plantation, Albert River,' contains nearly a half per cent. of nitrogen in the shape of readily decomposable organic matters or a larger proportion than was found in any of the remaining soils.

"It is very interesting and practically important to notice in the analytical tables that the large proportion (comparatively speaking) of nitrogen in the best scrub soil, No. 1, is associated with corresponding large proportions of available potash, phosphoric acid, and lime."

"The best alluvial scrub soils are not only richer in nitrogen (organic plant food) but also in the more important mineral plant constituents. The scrub soil, No. 1 shows a remarkable similarity in composition, and I may add, in appearance, to the celebrated prarie soils of Illinois, several of which I had occasion to examine some years ago."

"I gather from the report and notes accompanying these soil analysis that most of the alluvial scrub soils are of great depth. They therefore contain, practically speaking, inexhaustible stores of plant food, and with deep cultivation, and the occasional application of appropriate top dressings no fear need be entertained that they will become gradually less and less productive, and finally be rendered infertile."

There can be no question indeed that the "alluvial scrub lands" of the East Coast of Queensland, are admirably adapted for the growth of *any* agricultural product, but such products must be adapted to the climate of the district where the settler is located.

The ordinary alluvial land not covered with scrub is also of good quality for agriculture, but of course requires the application of manure at an earlier period in the cropping than the "scrub land."

On all the eastern rivers there is more or less alluvial soil, the greatest extent near the embouchures of the largest rivers, the Herbert, Burdekin, Fitzroy, Mary, Brisbane, &c., but this, though fine pasture land, is only in parts suitable for the agriculturalist on account of its liability to periodical inundation.

The cause of this comparative absence of large tracts of alluvial soil, free from partial inundation on the coast, is that the whole coast of Queensland is one of subsidence.

At no great distance back in time the barrier reef formed the eastern coast line of the colony, and the outlet of the Fitzroy and Burdekin on that old coast line are as marked a feature as are their outlets on our present shore.

Had elevation taken the part of depression vast alluvial deposits, now covered by the sea of the Inner passage, would have been available for agriculture; as it is there remain only those which border the present streams of the country, and where those streams passing through them have cut such broad and deep channels as to carry away with ease the storm waters which may be swept down them.

Large tracts, however, of such alluvials still await the plough of the agriculturalist and the planter.

In the Moreton district on the Brisbane, Bremer, and Logan.

In the Wide Bay district on the Mary and Burnett.

In the Kennedy district on the Mackay and Herbert.

In the Cook, on the Johnson and Daintree.

Such lands are classed as agricultural, and are sold at 15*s.* per acre payable in equal instalments over a period of 10 years.

Division II.—Cainozoic.

The information given on the tablet under this head is as follows :—

Rock.—Sandstone and conglomerate.

Soil.—Coarse sand valueless for pastoral or agricultural purposes locally termed, "Desert Country."

Products.—Gold has been found at the "Cape" and "Charters Towers." Diggings at its junction with the auriferous metamorphic rocks, suggesting great possible value in other districts where similar conditions are found.

Extent.—Approximate, 150,000 square miles.

This division is devoted to the illustration of a geological formation which has, doubtless, at one time covered the whole of Queensland, and it may be the whole of Australia, and which, had not subsequent denudation removed it over enormous areas, would have left the entire continent-island a desert waste. This has been by the geologist who described it (Mr. Daintree), termed "desert sandstone," and is supposed to represent one of the lower members of the Cainozoic group, the Eocene or Lower Miocene Tertiary of European geologists. The map showing the area in colour represents how much of Queensland still remains covered with this inhospitable formation.

The results of the late expeditions undertaken and carried out in the face of immense difficulties by Colonel Warburton and Mr. Forrest in Western Australia tend to prove that a vast proportion of Australia seems still to be covered by this desert sandstone, thus rendering it entirely useless for pastoral or other settlement.

Photographs 12, 13, 14, 15, 16, and 17 furnish admirable ideas of the appearance and peculiarities of the desert sandstone. On photograph 18 are shown the so-called "paintings" of the Australian natives. These, as is abundantly apparent, are works of art of the most primitive description, being simply negatives in ochre of hands, feet, boomerangs, shields, &c. on the surface of the sandstone rock. The object is placed upon the rock and masticated ochre forcibly ejected from the mouth of the native artist leaves the imprint as described. The blacks are very active in adorning the interior of their caves, where the atmosphere does not destroy the work, with these rude designs.

No. 19 is sufficiently illustrative of the way in which denudation has rendered the country suitable for settlement. The huts in the foreground form the township at the Gilbert diggings, the flat-topped hills in the distance being capped with the outliers of the desert sandstone which at one period covered the entire district.

No. 20. Here we have the abrupt edge of the desert sandstone; it can be frequently followed for 20 or 30 miles without a break.

No. 21 shows the ordinary character of the creeks traversing the Cainozoic formation. It may here be remarked that during the summer season water is only to be found in this sandstone country at rare intervals.

No. 22. A cave in the sandstone used by a prospecting party of diggers. These caves are favourite camping places for the Australian natives, the sandstone districts containing as they do abundance of wallaby, a small species of kangaroo, and opossums, thus form capital hunting grounds.

The table cases, which, in this as in the other divisions will be observed beneath the photographs, contain specimens of the soils and the rocks from which they have been derived. The only useful products, as may be seen, are varieties of bark used in tanning, and gum resins taken from the Eucalypti.

Division III.—Mesozoic.

The information given on the tablet is as follows:—

Mesozoic (Cretaceous.)

Rock.—Calcareous shales and sandstones with bands of argillaceous limestone.

Soil.—Marls and light calcareous sands form the vast plains of the "Western Interior," covered with saline plants and rich herbage in favourable seasons. Excellent pastoral country where water is available.

Products.—Beef, mutton, wool, and tallow, opals, coprolites, hydraulic limestone, gypsum.

Extent.—(Approximate) 200,000 square miles.

Mesozoic (Carbonaceous.)

Rock.—Sandstone, conglomerate, shale, ferruginous limestone.

Soil.—Varied, generally poor sandy, rarely fit for agriculture, grows scrub and fine timber; where not covered with scrub, yields grasses on which cattle thrive, but do not fatten readily.

Products.—Coal, iron ore, hydraulic limestone, fine timbers.

Extent.—(Approximate) 10,000 square miles.

This division is devoted to two separate geological formations, which are, however, embraced in the same main group by European geologists as the mesozoic. The first four photographs, Nos. 23 to 26, illustrate the cretaceous portion of the system, and the succeeding seven the carbonaceous, a part of the Mesozoic group which is probably oolitic. Their fossils, and the relative extent of each are shown upon the map and in the cases of the division.

Photograph 23 is a view of Betts' Creek, Northern Queensland, about lat. 20 deg. 40 min. S. It affords an excellent illustration of the horizontal character of the Cretaceous series, over the enormous area of quite 200,000 square miles, which it occupies in Western Queensland, and at the same time describes the character of the strata composing it, viz., interstratified bands of sandstone and shale, with occasional beds of calcareous lime-stone intervening.

No. 24 gives a faithful picture of the great prairie country in Western Queensland as taken from Marathon station on the Flinders River in about lat. 20 deg. 20 min. S. The soil in these plains is in every way suited for the growth of all kinds of agricultural products if the climate were only suitable. At present they are sparsely covered with native grasses and herbs of the most fattening characters, and the district is noted in all the Queensland markets for the excellent qualities of the meat they yield. Cattle are taken from these downs to as great a distance as Melbourne, where the fat bullocks find a ready market. The splendid condition of the prairie-fed stock may be estimated from the fact that frequently two thirds of the beasts after travelling nearly a thousand miles are still saleable in the Melbourne markets as fat cattle.

A very small extent of this formation is found on the eastern side the dividing ranges, and this in the vicinity of Peak Downs, in the Leichardt district, and in certain portions of the East Cook. Its soil corresponds in character with the chalk marls and greensands of Cambridgeshire and adjoining counties, and is

very fine for agriculture or for the growth of natural grasses. Whilst, however, the extent on the east coast is very insignificant, on the western portions of the colony in the Burke and Maranoa districts it is the prevailing feature.

Here it forms those almost boundless plains which may be called the Western Prairies of Queensland, the value of which for pastoral purposes are becoming more and more appreciated.

An analysis of a sample of the soil from these prairies of the Upper Flinders River is attached.

(This soil was taken from a point on the prairies about three miles west of Hughenden Station on the Upper Flinders).

Mechanical Analysis.

Water lost at 212° F.	5·114
Organic matter	2·175
Clay, including oxide of iron, and carbonate of lime	92·526
Pure sand (quartz)	·185
	100·000
Specific gravity	2·445
Containing nitrogen	·081
Equal to ammonia	·098

Chemical Analysis.

Water lost at 212° F.		5·114
Portions soluble in water :—		
„ Organic matter	·030	
„ Lime	·070	
„ Oxides of iron and alumina	·002	
„ Magnesia	trace	·181
„ Chlorine	·002	
„ Alkalies, sulphuric acid, and carbonic acid	·071	
„ Finely divided silica	·006	
Portions soluble in acid :—		
„ Water of constitution		3·097
„ Organic matter		2·145
„ Oxides of iron (chiefly peroxide)		5·491
„ Alumina		10·311
„ Lime		11·685
„ Magnesia		1·088
„ Potash		·714
„ Soda		·305
„ Sulphuric acid		·117
„ Carbonic acid		7·089
„ Phosphoric acid		·200
„ Soluble silica (set free by Alkali)		18·193
„ Insoluble silicious matters		34·270
		100·000

Ammonites, Belemnites, and the remains of extinct Saurians are scattered over the surface of all these "Western Prairies" of Queensland.

Mesozoic (Carbonaceous).

Nos. 27, 28, 29, and 30 represent this formation of the mesozoic carbonaceous age. It is very largely developed in the colony of Queensland. In photograph 30 a coal seam appears cropping out at the foot of a cliff on Pelican Creek in Northern Queensland, and many such natural sections of coal have been observed through the carboniferous districts but have as yet received little attention for economical purposes. Several coal mines have, however, been opened in the southern portion of the colony, chiefly on the Darling Downs and in the West Moreton district. The coal obtained from them has been chiefly used for satisfying local requirements; but when the railway is completed to the coast there can be no doubt that an export trade will arise. It is a well-established fact that coal in almost any quantities can be obtained within no great distance from the capital, Brisbane. The quality of the coal may be judged by an inspection of the samples and analyses attached to them which are exhibited in the Court.

In photographs 31 and 32 we have a good idea of the character of the forests usually met with on the areas occupied by the coal formation. Dense scrubs, and timber inviting the axe-man, are the common accompaniments of the coal formation of the whole of Queensland.

Occasionally, however, this general feature is varied by open forests, of which photograph 33 is an example, and it may be as a rule assumed that these districts are very suitable for pastoral pursuits. In addition to the fossils, soils, and products, there are shown in the cases samples of gypsum and septaria. The latter are eminently suitable for the manufacture of hydraulic lime; in fact most of the limestones occurring in the cretaceous rocks of the country are suitable for that purpose.

DIVISION IV.—PALÆOZOIC (CARBONIFEROUS).

The tablet attached to this division gives the following information:—

Palæozoic (Carboniferous).

Rocks.—Sandstone, shale and limestone, generally horizontally stratified.

Soil.—Various, according to composition of strata. Locally, where much limestone and shale occur, the soil is good, but as sandstone and grit prevail, the soil is generally sandy, and rarely suitable for agriculture, except in the alluvial flats. Most of the carboniferous areas in Queensland are covered with dense scrubs of brigalow &c. Second-class pastoral sold for 5*s.* per acre.

Products.—Coal, fire-clay, iron ore, hydraulic limestone, building stone.

Extent.—(Approximate) 20,000 square miles.

This division is devoted to the carboniferous group of the Palæozoic age, and the photographs are 12 in number.

No. 34 depicts the outcrop of a coal seam about 8 feet thick on Rosetta Creek, Bowen River, Northern Queensland. The Bowen River district may, as a rule, be described as one vast coalfield, numerous seams, varying in thickness and quality, having been observed in natural outcrops in various portions of its watershed.

No. 35 fairly illustrates the upper strata of this formation, which consists of sandstones and conglomerates, interstratified with occasional beds of shale. The lower members of the group consist more of limestones and shales, in which beds of fine iron ore are by no means infrequent.

No. 36 presents a remarkable example of the junction of two different geological formations at the base of the cliff. We have a series of slates and sandstones nearly perpendicular, in which are imbedded auriferous quartz strings and veins. On the denuded upturned edges of these slates occur horizontal sandstones and conglomerates of the carboniferous age. In these conglomerates, at the junction of the two formations, in certain localities of the Peak Downs, drifted gold has been found in the carboniferous conglomerates, distinctly proving that some gold, at all events, existed in the veins prior to the deposit of the carboniferous rocks.

One of the ordinary occurrences to be met with throughout the whole of the Bowen River district is delineated in photograph 37, namely, the intrusion of a dyke of volcanic rock, without any apparent movement of the adjoining strata, so common in the carboniferous rocks of England. It may be well, perhaps, to explain, for the benefit of unscientific readers, that the dyke is the feature of the picture over which a slight trickle of water is falling.

No. 38 shows the open forest country as the ordinary physical characteristic of the lower portion of the carboniferous series, and here it is that the decomposition of the rocks forms soil admirably adapted for either agricultural or pastoral purposes.

In Nos. 39, 40, 41, 42, 43, 44, and 45, we have other views of scenery characterising the upper group of the carboniferous series where sandstones are most predominant, and the soil is of inferior quality.

In No. 45 is depicted a group of cycadæ, representatives of which are found fossilized in the mesozoic group of the carboniferous rocks previously mentioned. Groves of palms, zamia, and cycas are quite common throughout most of the eastern coast country of Queensland. The fruit of the cycas, after being steeped in running water for 48 hours, is used by the Australian native as a substitute for bread. After being steeped in water it is pounded, dried, and converted into damper.

The chief objects in the table cases of soils, rock, &c., are the coal and iron ore, characteristic of the group intended to be pourtrayed in this division.

The prevailing rocks of both systems of carboniferous rocks in Queensland are sandstones, and coarse grits, yielding a barren soil, and usually covered with brigalow and other hard wood scrubs.

In some parts of the series, however, especially in the lower portions of both, shales and limestones occur, and there belts of fertile soil with rich alluviums are met with.

Such fertile belts in the coal measures make excellent selections for the farmer, as these rich alluvial bottoms can be utilized for the growth of maize, lucerne, &c., whilst the forest country affords good, sound, healthy pasture land for his stock.

The surface of fully one third of the Moreton, Wide Bay, and Burnett and Leicharddt districts on the east coast of Queensland is occupied by soils derived from the older and newer coal formations, and perhaps the area of both would not be less than 40,000 square miles.

The character of the scrub of the coal measures such as, for instance, on the road between Gympie and Brisbane, is shown in Photographs No. 31 and 32, and the character of the open forests in carboniferous districts is weli shown in Autotype No. 38.

These are the two descriptions of country the emigrant will principally meet with in the districts marked on the map as occupied by both systems of carboniferous rocks, and there can be no question that when the best coal seams are explored, and utilized for manufacturing purposes, and for export, and local mining communities are so formed, many fine farms will be formed in the coal mining districts to supply the miners with produce.

The coal-mining area of the Bowen River, in the Kennedy district, has some fine land for occupation, and coal, iron, and limestone are abundant, and in immediate proximity to each other.

Division V.—Palæozoic (Devonian).

The tablet attached to this division gives the following information :—

Palæozoic (Devonian).

Rock.—Crystalline limestone, slate, sandstone, conglomerate in highly inclined strata.

Soil.—Clay or sandy according as slate or sandstone predominates. Fair pasture, naturally unsuitable for agriculture, except in the alluvial flats.

Products.—Gold, copper, lead, and bismuth ores, especially where the strata are broken up by the intrusion of diorite, felsite, &c. Marble abounds in the lowest rocks of this series. Building stone, roofing slates.

Extent.—(Approximate) 50,000 square miles.

In this division we pass to a geological formation corresponding with the so-called Devonian of Cornwall and a portion of Devon. This is, in fact, the youngest formation in which metallic minerals of commercial importance are first met with in Queensland. The extent has been estimated at 50,000 square miles, and this is probably very much below the actual area. Already ores of almost all the valuable metals have been found in this formation in Queensland, but, as suggested in the tablet overhead, only those localities broken up by the intrusion of certain trap rocks, &c., were found worthy the attention of the miner. In the lower part of the series enormous masses of limestone and marble have been discovered. In one case, in the Clark River district, Northern Queensland, the writer has ridden along a barrier of solid marble for 80 miles, with an average thickness of one mile, without any break except such as have been forced by the natural drainage of the country. Illustrations of these natural breaks are shown in Photographs 46 and 48, and samples of the marble are exhibited immediately under in the table cases.

The trend of the rocks is admirably shown by these interstratified limestone barriers, and from the top of the hill on any of these districts there is no difficulty whatever in following the strike of the beds to the extreme horizon by the line of deep tinted vegetation. Trees growing out of the chinks of the marble add to the picturesqueness of the country, the foilage invariably exhibiting large, green, glossy leaves, and the entire landscape offering innumerable subjects for the pencil of the artist. The marble in some instances extends to the coast, or rather is found in some of the islands off the coast. In one of the Cumberland group it has been quarried and sent into the colonial market; it it of a delicate cream colour. A sample of this will be found in one of the cases beneath the photographs.

Photographs 47 and 49 are points on the Gilbert River selected to illustrate the intrusion of a greenstone dyke, at the junction of which, with the slates and sandstones of the district, an auriferous quartz vein may be observed in one of the pictures. This, indeed, is invariably the condition under which mineral veins of any consequence have been discovered in the Devonian rocks of Queensland. It will be seen in Photograph 47, that the sandstone rocks on which the figure in the foreground is standing are sharply cut off by the greenstone dyke between him and the river. On the opposite side of the river the horizontal strata of the desert sandstone series cap the palæzoic rocks of the river bed, and these are the general conditions of the mining district of the Gilbert, Palmer, and Cloncurry mining districts of Queensland.

No. 50 is a view of the mining township of the Gilbert River, and this will give a pretty correct idea of the general physical character of the Devonian formation as developed in Queensland, gently undulating, lightly timbered, and scantily grassed, but still forming country suitable for pastoral occupation for stock-breeding purposes.

No. 51 is a section illustrative of the rocks of the group and general angle of dip developed throughout the whole country. Sandstones, limestones, and slates interstratified make up the entire formation.

Nos. 52, 53, 54, 55 and 56 show the varied physical characters of the same district. In No. 53 mining on a line of reef on the upper Cape district in Queensland is portrayed, the hill in the distance being a massive dyke of porphyry, and the flat ground occupied by slates, &c. At the intersection of these the line of reef has been followed and was for a long time profitably worked.

In the table cases varieties of soil from the limestone districts and polished specimens of the limestones themselves are exhibited; also varieties of soil from districts where slates, sandstones, &c. abound, and the rocks from which the soils have been derived. There also may be seen illustrative examples of the different ores which have been exploited in the Devonian rocks. Here too are shown samples from the great Australian mine of the Conclurry River, a branch of the Flinders in Northern Queensland.

It will be found on examination that the ores from this "Great Australian" mine are of the richest possible character, exemplifying as they do the masses at the mine, of metallic copper, red oxide, and carbonate. This is only one of a number of most valuable copper lodes which have been discovered in the same district, but at the present time they remain unworked on account of the distance from a shipping port, a drawback

which time and increased facility of transit will ultimately remedy. It is asserted on the best authority that these are the most valuable mines of copper which have yet been discovered in Australia.

Adjoining these valuable specimens are to be seen samples from the Star River, in the Kennedy mining district, about 80 miles from the port of Townsville. This also is representative of one of a group of copper lodes recently discovered in the Star River district, and which promises to afford a large and permanent export of copper in the future.

There are further shown samples of copper ore from various outcrops in other parts of Queensland, for example, the Dee copper mine near Rockhampton, the copper mine near Nebo in the Broadside district, and other small outcrops in the south of the colony on which sufficient work has not yet been done to prove their value as permanent mines. Samples of manganese ore are shown in the same place; one of these, from the immediate neighbourhood of the township of Gladstone, contains according to careful analysis about 77 per cent. of peroxide of manganese.

Division VI.—Metamorphic.

The tablet over this division gives the following information :

Metamorphic.

Rocks.—Mica and hornblende, schist and quartz rock.

Soil.—Sandy or cold clay, unsuitable for agriculture except in the alluvial flats ; natural grasses have little or no flattening properties. All such country would be rated second-class pastoral, and would be sold at 5*s.* per acre.

Products.—Gold, tin, copper, lead, &c. Lodes of various kinds are found in all the areas in Queensland occupied by metamorphic rocks especially where penetrated by "Elvan Dykes."

Extent.—(Approximate) 50,000 square miles.

The character of this division is sufficiently indicated in the above compilation, and the photographs from 57 to 67 illustrate the physical character of the formation, which is a most important one to the future of Queensland. Lodes of all kinds of mineral have been discovered throughout its entire extent, and they are apparently not so much dependent on the intrusion of volcanic dykes as in other systems, such as the Devonian, to which a previous division was devoted. In addition to the copper and gold which are the chief materials found to be associated with the Devonian rocks, ores of tin, antimony, bismuth, and lead have been discovered in the Metamorphic, and fresh discoveries are being made almost daily.

Photographs 57, 58, 59, and 60 indicate the nature of the level country of the metamorphic districts which is usually covered with open forests containing valuable but by no means largely growing trees. The wood is very sound and good, but the timber is as a rule somewhat small in size.

In No. 61 we have an example of the desert sandstone resting immediately on the top of perpendicular cliffs of metamorphic schist.

In No. 62 a section of the ordinary mica and hornblende schists with their interlaminated quartz veins and strings are well shown. The view is taken from the junctions of the Copperfield and Lynd rivers, Northern Queensland. The distant peak on the left is a hill of porphyry, at the intersection of which with the mica schists, &c., mineral land is generally to be expected.

No. 63 is taken from the top of the Black Mountain of the Cape River district, and admirably exemplifies the mode in which the physical outline of the country is determined by the strike of the more or less indurated character of the rocks which make up the geological formation. On the left is a steep range formed by a barrier of extremely hard quartzite, the trend of which may be easily followed for quite a hundred miles. The valley between the two ridges has been easily denuded by the removal of very soft mica schists, abutting on much harder hornblende schists. These have been shown to resist denudation only in a degree somewhat inferior to that of the quartzites as exemplified in the mammilated ridge immediately on the right of

the picture. The artist himself is sitting on a hill which has been formed by a dyke of volcanic rock traversing these at right angles.

Nos. 64, 65, 66, and 67 are views taken promiscuously from various points of the metamorphic districts in Queensland.

The usual specimens of soils and rocks appear in the table cases, and in a series of small bottles there are stored varieties of alluvial gold from various Queensland diggings. In this collection there are also specimens of drift cinnabar, carbonate of bismuth, tin ore, garnets, zircons, rubies, topazes, &c. In other compartments there are samples of the different copper ores found in this formation in Queensland.

Amongst the soils, &c. in the table cases are samples of copper ore from the Mount Perry mine in the Burnet district. During last year this mine paid to its shareholders a dividend of 80 per cent. on the actual paid-up capital. It forms one of a group of lodes lying in the same locality, and they will all probably be worked with profit as soon as the railway is completed with the port of Bundiburg on the Burnet River, a scheme which is now under consideration by the Parliament of Queensland. Specimens from the Normanby, one of the mines of the same group, will be seen in the adjoinining case, and samples of black oxide, red oxide, and pyrites, ores from the Peak Downs mine. From this mine, copper to the value of one million pounds has already been shipped, and active work is still continued in that, and other mines of the same district. Ores from the Maxford mine in the Broadsound district are shown next to the compartment which holds the specimens from Mount Perry mine. Some very good ore was taken from the surface of this mine, but it has not been found to be productive at any depth.

Division VII.—Granite.

The illustrative tablet gives the following information :—

Granite.

Rock.—Granite, syenite, &c.

Soil.—Various, according to composition of rock, generally poor sandy; on the ridges sometimes of fair quality for agriculture in the alluvial flats, where syenite contains much hornblende soil of better quality.

Fair pasture on the whole, would be classed second-class pastoral, and sold at 5*s.* per acre.

Products.—Molyden, glance, tin ore, auriferous quartz, building stone.

Extent.—(Approximate) 70,000 square miles.

It is likely that the area given in the above tablet is excessive, as it has been found by recent exploration that much of the country supposed to be granite in the Cape York peninsula is occupied by metamorphic rocks, and is now being extensively worked for gold and other commercially valuable minerals.

Several of the photographs in this division furnish a characteristic outline of the weathering of granite. Nos. 72 to 79 illustrate the scenery of the comparatively level country. The natural grasses in the granitic districts of the colony are not ordinarily of a fattening quality; such districts are, therefore, mostly taken up by pastoral settlers who, in the breeding of cattle, have found the country to be of the most valuable kind, and the young stock enjoy a comparative immunity from pleuro-pneumonia. Where, however, granite country lies near the coast, so that stock depastured on it can have access to salt pans and the saline herbage around them, cattle fatten very rapidly.

The table cases afford the usual practical illustrations of what the granitic area produces. Most worthy of note are the specimens of tin ore from the Stanthorpe district, from which, during the last three years, tin ore equal in quantity to about one half the amount raised in Cornwall and Devon has been annually shipped to European markets. There are also to be seen specimens of the alluvial drift in which the tin ore occurs.

Division VIII.—Trappean.

The term trappean has been adopted to express that form of volcanic action which is represented by the pipes or cores of rock in connexion with which volcanic matter may or may not have reached and overflowed

at the surface. Certain forms of these trappean rocks have been found to be of the greatest importance in Queensland, with reference to the mineral lodes of the country especially throughout the areas occupied by the Devonian rocks. It is at the intersection of these with palæozoic, metamorphic, or granitic rocks that the most valuable minerals have been discovered in the colony.

Trapdykes are, commonly speaking, of two characters. The basic traps as influencing mineralization are usually hornblendic syenites or diorites; if acid, felsites or felspar porphyrys. The basic traps are usually associated with basic rocks; the acid traps with acid rocks; that is to say, the diorites are more commonly found in the Devonian rocks in which limestone and calcareous slaty beds abound, and the acid traps are usually to be found in gneiss, quartzite, and mica schist of the metamorphic series.

Photographs 81 and 82 afford characteristic views of the structure of these diorites as represented in the bed of the Gilbert River, near its junction with the Percy. This particular dyke is especially massive, and in some places half a mile broad; but at its junction with the metamorphic rocks of the district, it has been found on both sides to furnish auriferous quartz veins, and both the bed of the Gilbert and its smaller tributaries have yielded alluvial gold in paying quantities, in its immeditate vicinity.

The ordinary appearance of the country occupied by trap rocks is shown in Photographs 80 and 83. It is lightly timbered, possesses gently undulating ridges, and a stiff ferruginous clay suitable for both agricultural and pastoral purposes, and Photograph 85 shows that, where of sufficient extent, it is admirably adapted for the latter.

No. 86 is a trap dyke cutting through desert sandstone on the Gilbert River district. This dyke is a dolerite, and that is a type very common through both of the carboniferous systems of Queensland, but in no case have dolerite dykes been found associated with mineralising action there.

No. 88 is a view of the Black Mountain in the Cape River district, and is an instance of the intrusion of a dolerite dyke through the metamorphic schist of the district. Here, however, no mineralising action has occurred.

Nos. 89, 90, and 91 are illustrations of the intrusion of felsitic and felspar porphyry dykes. The peculiar dome-shaped appearance of the rocks depicted in these photographs is quite characteristic of this kind of plutonic disturbance which has extended over the entire eastern districts of Queensland.

No. 89 is a view of the well-known glasshouse mountain lying to the left of the road between Brisbane and Gympie; and No. 90 is an equally well-known land mark, Mount Wheeler, about 15 miles from Rockhampton at the base of which the Cawarral diggings have been and still are extensively worked. The intrusion of this Mount Wheeler felsite in fact seems to have been the parent of the auriferous veins so extensively worked at its base, but in rocks quite foreign to itself.

No. 91 represents the domite hills named Scott and Roper's Peak by the traveller Leicharddt in his first exploration of the Peak Downs district. They are eminently characteristic of the outline of numerous such hills on the eastern seaboard of Queensland.

Attention may be directed in the table cases to the set of polished serpentines, since serpentine of almost every known variety and tint can be obtained in any quantity in several Queensland districts.

Examples of the useful metallic ores found throughout the system will be found in the wall cases, *e.g.*, the chrome iron ore found near Ipswich is in a serpentine district, which is said to occur in almost inexhaustible quantities; this ore is exhibited by Mr. John Harris of Ipswich. The specular iron from the Gilbert River; this ore is found in all the diorite districts of Queensland in veins of more or less thickness and persistency, and is one of the troubles of the miners, who find it a difficult task to free their gold from the heavier metallic substances with which the more precious mineral is associated.

There are also samples of the extremely rich copper ore found in the serpentine district near Princhester, the assay of which gives 65 per cent. of metallic copper. Adjoining this are samples of copper ore from the Dotswood mine in the North Kennedy district of Queensland. The ore occurs disseminated in the form of metallic copper throughout a trap dyke, and also in quartz veins in the same, in a somewhat similar to that of

the copper ore of the Lake Superior district of Canada. Small bosses of metallic copper, weighing as much as 25 lbs., have been found in the exploration of this mine. Somewhat resembling this in its mode of occurrence is that of the Byerly mine about 40 miles south of Rockhampton. The assay of this ore is as high as 38 per cent.; lying as it does at the intersection of a trap dyke with the adjoining country, it was found on exploitation to be very difficult to follow; the lode which appeared solid on the surface, breaking up into numerous thin irregular veins when followed in depth. Specimens of hyalite and semi-opal are here to be seen from the neighbourhood of Bottletree Creek, near Springsure. Fine specimens of noble opal have, though rarely, been found in the district, and this form of silica is by no means uncommon in other acid dykes of this series.

From the rocks of this series also the natives of Australia have been accustomed to obtain most of their stone implements. They yield also most ornamental and durable building materials. The soils of the Basic traps are usually either black or red in colour. The latter is due to the excess of iron, and probaby in all cases to excess either of hornblende or olivine in the parent rock. The acid series, felsites, felspar, porphyry, &c., yield on disintegration soils of a comparatively inferior character for either agriculture or the pasture of stock.

On the whole, however, the trap country of Queensland may be said to be one of the best guides to the successful explorer, whether he be on the look out for mineral, pastoral, or agricultural settlement, for it is a guide to the volcanic districts which are most especially adapted to agricultural and pastoral occupations; to the miner it is an almost unerring finger-post to success.

Division IX.—Volcanic.

Volcanic.

Rock.—Dolerite, ash, tufa, &c.

Soil.—Rich black clay-marl very suitable for agriculture, also fine pastoral land.

Products.—On "Darling Downs," wheat and other cereals, vines and fruits of Southern Europe, cotton, cane, &c. Wool, beef, and mutton on both. Copper has been found as metal and ore in the Volcanic rocks of the Bowen River and Collaroy ranges; agates in large quantities, Agate creek, Gilbert River.

Extent.—(Approximate) 20,000 square miles.

Photographs 93 to 101 are typical of the volcanic districts of Queensland. For example, in No. 93, which is a view taken near the Lolworth Station in the North Kennedy district, we have the level richly grassed plains common in such districts surrounding an isolated pinnacle of granite which formed an island in the sea of lava that originally flowed around it. These conditions are common to all the volcanic districts in Queensland; the lava flows, filling up the old valleys in the neighbourhood of craters from which their material was derived.

No. 94 is a view illustrating nearly the same physical conditions as the above, near the township of Springsure.

No. 95, taken from near Bluffdowns Station on the Basalt River, illustrates the well-watered type of the volcanic districts.

No. 96 is a view from near the head of the same stream. It is frequently experienced that permanent springs of water are found at the heads of creeks in volcanic districts, capable of supplying a running stream throughout the whole of the year, and filling all the watercourses connected with them, for a long distance from the source of supply. Especially is this the case where beds of volcanic ash are interstratified with porous basalt, and the beds have a gentle inclination from the crater. Natural artesian springs are thus formed, supplying permanent water to the districts which, had all the lava flows been of a porous character, without the intervention of impervious beds, would have probably necessitated a waterless district during the dry season.

No. 97 (and also 99) is a portion of the Peak Downs, near the Wolfang station, with one of the before-mentioned domite peaks in the distance. This country has been admirably described by Leicharddt in his book of travels descriptive of his first passage through the country. On the Peak Downs the soil is of the richest

character, and the native grasses are of the most fattening description. About three-quarters of a million of sheep are at the present time depastured upon them.

No. 98, however, expresses in the most characteristic manner the ordinary appearance of the Downs country of ordinary volcanic areas in Queensland. The downs are usually those portions of such areas where the rock has been much more easily decomposed than the generality of the "basalt" of these which districts have been formed. The harder beds of lava and those more difficult of decomposition are covered with thinly timbered forest country; the soil being shallow and mixed up with rocky boulders, which, though suitable for pasturage, is comparatively unfit for cultivation.

No. 100. This view, which was taken from the Maryvale Station, in the North Kennedy district, is a good average illustration of the physical character of the open country in volcanic districts of the Upper Burdekin, Northern Queensland. It is in latitude 19 deg. 30 min. S., and at an elevation of 1,600 feet above the level of the sea. In the garden attached to the homestead were grown pumpkins, sweet potatoes, English potatoes, cabbages, lettuce, yams, maize, sorghum, beans, peas, pine apples, oranges, peaches, lemons, mulberries, vines, &c. Whilst this photograph is fairly characteristic of the Downs country adjoining the watercourses of the volcanic districts of Queensland, No. 101 is quite as representative of the rocky table lands.

Volcanic rocks and soils are sampled in the cases, and amongst the specimen products are those of agate, cornelian, and various kinds of silica. These are found in connexion with such rocks, and notably is this the fact on Agate Creek in the Gilbert district, where enormous quantities of agates freed from the matrix are scattered over the surface. Copper and copper ores are also found filling cavities in some localities notably in the Basalts of the Bowen River district.

An analysis of five samples of soils derived from basic volcanic rocks of Queensland, which are exhibited in the table cases in this division is appended.

No. 1. From the Government Penal Establishment, St. Helena, in Moreton Bay, is that in which experiments in cane growing has been for a series of years carried on successfully.

No. 2 is from the Ormiston Plantation, the property of the Honourable Louis Hope, the pioneer sugar planter of Queensland.

No. 3 is soil taken from near the Killarney Station on Darling Downs, and it and No. 5 may be considered as fair typical representatives of the "black soils" of the "Volcanic Downs" country in Queensland.

No. 4. From the "Queen's Park," near Ipswich is a "black soil," derived from the decomposition of a local intrusion of basalt near that town.

ANALYSIS of SOILS derived from the decomposition of Volcanic Rocks in Queensland.

—	Latitude.	Longitude.	Specific Gravity.	Water lost at 212° F.	Organic Matter.	Clay, Oxides of Iron, and Alumina.	Fine Sand Quartz.	Total.	Organic Matter contains	
									Nitrogen.	Equal to Ammonia.
Government Penal Establishment, St. Helena (red soil).	27° 24′	153° 15′	2·351	1·746	4·117	75·886	18·251	100·000	0·084	0·102
Ormiston Plantation, Cleveland (red soil).	27° 30′	153° 16′	2·445	2·639	4·446	92·095	·820	100·000	0·041	0·049
Wheat soil, Killarney, Darling Downs (black soil).	- -	- -	2·294	5·769	4·200	72·638	17·393	100·000	0·072	0·087
Queen's Park, Ipswich (black soil).	- -	- -	2·130	13·523	4·220	77·977	4·280	100·000	0·137	0·166
Near Jimbour Station, Darling Downs (black soil).	- -	- -	2·329	9·150	2·699	83·749	4·402	100·000	0·061	0·074

Chemical Analysis.

—	Soluble in Water.								Soluble in Acid.		
	Water at 212° F.	Organic Matter.	Oxides, Iron, and Alumina.	Lime.	Magnesia.	Chlorine.	Sulphuric Acid and Alkalies.	Silicas, finely divided.	Water of Constitution.	Organic Matter.	Equal to Nitrogen.
St. Helena - - -	1·746	0·110	Trace	0·084	0·023	0·0005	0·1635	0·020	2·564	4·007	0·084
Ormiston - - -	2·639	0·110	Trace	0·089	0·029	0·017	0·114	0·051	6·001	4·336	0·041
Wheat soil, Killarney - -	5·769	0·124	0·101	0·094	0·008	0·002	0·288	0·080	3·055	4·076	0·072
Wheat soil, Queen's Park -	13·523	0·158	0·046	0·056	0·036	0·005	0·054	0·047	7·696	4·062	0·137
Wheat soil, Jimbour - -	—	0·089	0·035	0·067	0·034	0·008	0·101	0·075	4·352	2·610	0·061

(*continued.*)

—	Soluble in Acid—*continued.*										
	Oxides of Iron.	Alumina.	Lime.	Magnesia.	Potash.	Soda.	Sulphuric Acid.	Carbonic Acid.	Phosphoric Acid.	Silica, soluble in Alkalies.	Insoluble Silicious Residue.
St. Helena - - -	20·366	14·628	0·117	0·070	0·100	0·191	0·082	Trace	0·073	13·719	41·936
Ormiston - - -	16·765	24·540	0·054	0·070	0·097	0·041	0·219	Trace	0·044	16·025	28·759
Wheat soil, Killarney - -	6·727	11·011	0·369	0·269	0·223	0·116	0·271	Trace	0·057	17·944	49·416
Wheat soil, Queen's Park -	9·553	11·934	1·368	2·128	0·099	0·077	0·042	0·129	0·060	26·236	23·691
Wheat soil, Jimbour - -	9·283	12·156	1·856	1·081	0·454	0·218	0·054	0·484	0·343	25·687	31·863

This table of analysis of volcanic soils does not give the determination of the portion insoluble in acid, and therefore hardly expresses their full value to the agriculturist.

The analysis of three varieties of Queensland "basalt" (for under this technical term the rock from which these soils has been derived is generally known in the colony) are therefore added to show what the comparatively unaltered rock is composed of, and how rich it is in all the mineral ingredients required for the perfecting of grain and grasses.

No. 1 is from the Black Mountain in the Cape River district, an enlarged microscopic section of which will be observed leaning against the table under Division IX., and is composed of a micro-crystallic felspathic and augitic base in which occur numerous isolated crystals and crystalline aggregations of augite, olivine, and magnetite.

No. 2 is from the "native cat-scrub" in the Rockhampton district, an enlarged microscopic section of which may be also seen leaning against the table under Division IX., and is composed of a micro-crystallic felspathic and augitic base, in which occur large crystals and crystalline aggregations of triclinic felspar.

No. 3 is from near Jimbour Station on Darling Downs, an enlarged microscopic section of which may be seen resting against the table under Division IX., and is composed of a base which was probably nearly all augite, but which from decomposition has become almost opaque, thickly studded with incomplete crystals of triclinic with some mono-clinic felspar.

All these so-called "basalts" are mixtures in varying proportions of triclinic, felspar, augite, olivine, and magnetite, in equally varying conditions of structure; sometimes the augitic portion is in excess, sometimes the felspathic; when the former, the rock is more basic, when the latter, more acid (that is, contains more silica), the quantity of magnetite in each rock of course modifying this deduction.

It may probably be held to be a fact that the *red* soils in volcanic districts derived are from the basalts containing a large proportion of olivine or augite or both.

The *black* soils originating from the more felspathic series.

ANALYSES of TYPICAL QUEENSLAND "BASALTS," from which the *Black* and *Red* Volcanic Soils of Queensland have been derived.

—	Black Mountain, No. 1.	Native Cat, No. 2.	Jimbour, No. 3.
Silica	44·801	55·801	57·870
Alumina	19·441	16·147	14·086
Ferric Oxide	4·902	2·265	1·801
Ferrous Oxide	8·413	6·818	9·450
Lime	9·632	7·466	6·160
Magnesia	5·694	3·149	2·902
Potash	1·505	1·756	1·408
Soda	3·878	4·305	3·429
Phosphoric Acid	—	0·448	0·832
Carbonic Acid	—	0·340	—
Sulphuric Acid	—	0·360	0·494
Loss on ignition	1·716	1·146	1·559

To show the action of atmospheric decomposition on these "basalts," and the value of their exposure to this influence, to the agriculturist, a comparative table of the analysis of the Jimbour rock and the soil derived from it is appended.

The water lost at 212° has been eliminated in the calculation of the analysis of the soil.

It will be observed from this that whilst only about one-fourth of the rock is decomposed by hydrochloric acid, two-thirds of the soil is in this condition.

That the main difference between the rock and the soil is the loss of alkaline earths and alkalies by the percolation of carbonated waters and the substitution of water in their places.

The felspars and augites of the rock passing into clays and zeolites in the soil.

The protoxides of iron in the augites and olivines of the rock passing into per-oxides in the soil, and determining by their abundance or otherwise the colour of such soil.

—	Jimbour Rock, soluble in Acid.	Jimbour Rock, insoluble in Acid.	Jimbour Soil, soluble in Acid.	Jimbour Soil, insoluble in Acid.
Soluble Silica (set free by alkali)	9·201	—	28·358	—
Silica	—	48·669	—	27·944
Alumina	2·608	11·478	13·419	1·469
Ferri Oxide	1·474	·336	10·218	—
Ferrous Oxide	4·651	4·799	—	·926
Lime	1·820	4·340	2·116	2·000
Magnesia	1·495	1·407	1·227	·881
Potash	·154	1·254	·499	·453
Soda	·156	3·273	·239	1·290
Phosphoric acid	·387	·445	·377	·000
Carbonic acid	Trace	—	·533	·000
Sulphuric acid	Trace	·494	·059	·231
Organic matter	Trace	—	2·971	—
Water of constitution	1·559	—	4·790	—
	23·505	76·495	64·806	35·194
	100·000		100·000	

DIVISION IXA.

This division is devoted mainly to the display of the geological map of the colony of Queensland, and on it are marked in distinctive colours the areas occupied by the various geological formations represented in Divisions I. to IX.

It can only of course be accepted as an approximate estimation of such distinctive areas, as very much remains to be done before any such delineation can approach the reality; it is hoped, however, that by its aid, and the description which has been given of Divisions I. to IX., and the specimens of rock soils and products arranged in the table cases, a fair idea of the geology, physical characteristics, and natural productions of Queensland may be arrived at by the visitor to the Queensland Court at Philadelphia.

Division Xa.

In this division the wall space is occupied by the general map of the colony, showing the position of the various gold, copper, and other mining districts, and detailed maps of some of these are exhibited under the general map.

On the table cases representative specimens of ores from these mining areas represented on the map will be found.

It will be observed on reference to the map that the gold fields of Queensland are very numerous, and have in fact been discovered at intervals on the slopes on either side the main dividing range which separates Eastern and Western waters, and also on spurs of the range which forms the watershed to the Gulf of Carpentaria.

The names of these gold fields are Talgai, Gympie, Kilkivan, Calliope, Canoona, Cawarral, Morinish, Peak Downs, Cape River, Charters Towers, Ravenswood, Star River, situated on streams running to the East Coast; and Etheridge, Gilbert, Palmer, Cloncurry, on tributaries of rivers falling into the Gulf of Carpentaria.

It is difficult to arrive at the produce of these gold fields either in detail or in the aggregate, as there is now no duty on gold in Queensland.

The banks, however, which buy most of the gold produced, always report the same when exported to the Customs.

The yield of gold alone from this source would in 1874 be about one million sterling, but in 1875 this amount would be greatly increased owing to the large produce from the Palmer diggings, which during 1874 exported from the port of Cookstown alone gold of the value of more than 500,000*l.*

The alluvial deposits in which gold has been found in Queensland have hitherto been very shallow, and therefore easily rifled of their contents; the river beds however which can only be worked during the dry season will probably for years afford subsistence wages to parties of miners, a portion of whose number may either be engaged opening auriferous quartz veins, or prospecting for more remunerative alluvial deposits in other portions of the same district.

It is to the auriferous quartz veins in fact in all these districts that the principal attention is now given, and there can be no doubt that these will afford remunerative employment to miners for centuries, especially when a more economical system of mining is adopted, and the facilities for conveying mining plant to the various mining centres are increased by railway communication.

The average yield from the auriferous quartz veins in the colony has always stood very high as compared with that of other Australian colonies.

The yield per ton of the Gympie quartz up to 1870 was at the rate of $2\frac{1}{2}$ ozs. per ton, and the statistical register for the colony gives the following as the average of some of the gold fields previously mentioned for 1873:—

Return of the Average Yield from Auriferous Quartz crushed, in 1873, on the several Gold Fields where Crushing Machines were in operation.

Total tons, 80,064; total produce, 139,527 ozs.; average yield per ton, 1 oz. 14 dwts. 20 grs.

The total quantity of gold raised at Gympie from the date of its discovery in 1867 to 31st December 1874, has been 380,825 ounces, which, valued at 3*l.* 10*s.* per ounce, gives a yield of 1,332,872*l.*

The following particulars respecting one of the quartz claims of Gympie was given in the "Queenslander" of February 20th, 1875.

"The half-yearly meeting of the shareholders of Nos. 7 and 8 Monkland was held on the 10th instant. This claim has now been formed into a company under the Limited Liability Act, with a capital of 75,000*l.* in 15,000 shares of 5*l.* each; 14,000 shares are allotted to the present shareholders and the remaining 1,000 are

kept as a reserve fund. From the balance sheet submitted we gather the following particulars:—Proceeds of gold for the half-year, 15,026 14*s.* 8*d.*; to amount paid away in dividends, 7,500*l.*; wages and working expenses, 3,186*l.* 8*s.* 3*d.*; carting, crushing, and assaying, 1,143*l.* 5*s.* 3*d.* From the manager's report we learn that the claim has crushed during the half year 1,818 tons of quartz for a yield of 4,257 ozs. of gold; the cost of raising the stone has been about 2*l.* 2*s.* 9½*d.* per ton, including dead work. The reef was struck in the company's deep shaft at 348 feet from the surface, and sinking was continued to the depth of 372 feet; levels were put in north and south at 360 feet, from which level 66 tons 5 cwt. of quartz obtained yielded 989 ozs. The main drive at the 247-feet level was broken through to the Nicholls' workings on the 8th January. There is a block of quartz left to stope out, which is expected will take from five to six weeks; the stone is considered good. Sinking was recommenced in the winze from the 247-feet level on the 4th December, and since then 26 feet (making the total depth from the 247-feet level 68 feet), have been sunk. The directors' report states that "although the dividends declared for the past half-year have not been so much as on previous occasions, "we consider there is no ground for discouragement, inasmuch as, when the machinery is completed, we expect "the lower levels to be highly remunerative. Had we not had the machinery to pay for, we should have been "able to divide 1,849*l.* more than what has already been paid in dividends. For the information of share-"holders, we may state that your secretary informs us that from the commencement of the claim there has been "raised and crushed 7,847 tons of quartz, for a return of 28,572 ozs. 11 dwts. 18 grs. of gold (melted), and "paid in dividends, 77,130*l.* 11*s.*" The following are the returns from the claim from May 1, 1872 to December 18, 1874, 7,028 tons, 24,496 oz.

Although the Gympie gold field has undoubtedly borne away the palm at present from the other Queensland gold fields for the extreme richness of some of its auriferous quartz, still others, especially in the North, are becoming quite as attractive to the miner, from the more uniform and yet highly remunerative returns from the auriferous lodes opened there; these are Ravenswood, Charters Towers, Etheridge, and Palmer.

Ravenswood

Has at present a population of about 700, and produces about 20,000 ounces of gold per annum, which could be very largely increased if the pyritous ores which are there associated with the gold were treated by the skilled metallurgist.

The present crushing power on the field is 64 stamps; the reefs occur in syenitic granite; their number and extent may be learned by consulting the mining map of Ravenswood, constructed by Mr. T. R. Hacket, the late resident Government Gold Commissioner, which is displayed in this division XA.

Charters Towers

Is distant from Townsville about 100 miles. Its present annual yield of gold is about 60,000 ounces; its population is between 2,500 and 3,000. The crushing power on the field is 79 stamps. The following return of crushings from the principal reefs during 1873, 1874, and to June 1875, will indicate the value of this field as a permanent mining district:—

Total crushings for the year 1873, 59,835; 1874, 50,212; to June 25, 1875, 22,601. By escort, 1873, 74,745; 1874, 62,345.

N.B.—The escort returns include alluvial gold collected on the gold field, and so give the total yield of the metal from all sources.

Etheridge.

The Etheridge gold field is distant from Townsville about 350 miles, from Cardwell 190 miles, and from Normanton 200 miles.

It draws its supplies chiefly from the latter port; the Government escort, however, conveys the gold produced on the field to Cardwell for shipment.

Its population is about 500; the production of gold is at the rate of 25,000 ounces per annum.

This might be increased to a large extent if the mines were worked with more capital, and some of the rock-drilling machines in such common use in America were substituted for the present hand drilling.

Indeed, no great increase in the production of gold can be hoped for from such fields as Ravenswood, Charters Towers and Etheridge, where the auriferous lodes are walled by granite or syenitic granite, unless drills driven by machinery are brought into play.

Palmer.

This gold field is distant from Townsville about 500 miles and from Cookstown 150 miles.

The population, of which about two-thirds are Chinese ; is estimated at 14,000.

Unlike the other gold fields of Queensland, its alluvial gold has not yet been all worked out, during 1875 the miners engaged on the Palmer and its tributaries secured some 150,000 ounces of gold, none of which was the produce of auriferous reefs.

Now, however, attention is being paid to the reefs of the Palmer district which are said to be numerous, especially in the neighbourhood of Maytown, and it is asserted that the field will afford permanent and remunerative occupation for quartz miners for many years.

The mining maps of Gympie, Ravenswood, and some other gold fields are exhibited in Division No. XA., and specimens of the auriferous lodes from most of the Queensland gold fields will be found either in the gold case in the centre of the Court, or in the table cases of Division No. X.

Tin Mining.

Early in 1872 discoveries of drift tin ore were made in the southern portion of Queensland near the borders of New South Wales, and since that period a supply has been obtained from this locality, which is known as the Stanthorpe district, at the rate of about 5,000 tons per annum, equal to about one half the English production for the same period, and about one-sixth of the total production of the world.

Although tin ore has only yet been worked in Queensland in the Stanthorpe district, it is known to exist in several other localities, for example on tributaries of the Star river and on the Western creek, and is especially plentiful in portions of the Palmer district.

The present low price of tin, and the cost of conveyance to a port of shipment from the last-mentioned locality, has, however, kept any of this ore being thrown on an already glutted market.

A map of the Stanthorpe district and full report on the same will be found in this Division XA., from which any further information required may be obtained.

Copper Mining

Has attracted great attentlon in Queensland for several years on account of the great success of the Peak Downs mine.

This mine commenced operations in 1865 and had in the outset great difficulties to contend with. The principal one was, that Rockhampton the port first used for shipping the copper, was 278 miles distant from the mine.

At the end of 1872, however, more than 1,000,000*l.* worth of copper had been smelted and sold, and more than 200,000*l.* had been paid in dividends.

Active operations are still being carried on there, and other centres for copper mining industry have since been discovered.

These are chiefly the Mount Perry (about 70 miles from Maryborough) and the Conclurry, from both of which districts large supplies of copper may be depended on as soon as cheap carriage to the seaboard is assured.

Specimens from these and numerous other copper lodes in all parts of Queensland will be found in the centre

of the Court opposite this division, and it may safely be asserted that Queensland may be depended on in the future for the continous supply of large quantities of this metal.

Coal Mining

Is quite in its infancy in Queensland, the colony however possesses a very large extent of the carboniferous rocks with interstratified coal seams of varied quality and thickness, which in future years will doubtless be one of her most reliable sources of wealth, and will afford remunerative employment for a large settled population.

The extent and position of her coal fields are shown in the mining map in this division No. A, and samples of the coal from the few mines at work will be found in the centre of the Court opposite this division.

Division X.—Mining.

It is only within the last few years that mining exploration has been systematically carried on in Queensland. Every month tends to show increasing activity in this direction, and increasingly satisfactory results. In 1864 the exports of all mining produce from Queensland amounted only to 87,000*l.*; in 1874 they amounted to more than a million and a half.

Photographs 102 to 112 are devoted to the illustration of some phases of mining life and mining operations in Queensland. In No. 102 we have depicted the ordinary rough accommodation of a prospecting party of diggers. Their hut, constructed in 48 hours, though sufficiently comfortable for the climate, is certainly not luxurious in appearance, nor indeed in reality, but the miners themselves give evidence that the toilsome and rough life which they have chosen does not injure their health or temper. They are representatives of the stalwart men who are found in thousands preferring this work to that of any other, and rejoicing in what many would consider unbearable hardships. The stock in trade of an ordinary alluvial miner is on view around the hut; viz., the pick, shovel, tin dish and cradle, and as cleanliness is said to rank perhaps before godliness with the Australian digger, his outfit is not complete without his bar of soap and rough jack-towel, as shown in the photograph.

No. 103 shows McGann's Flat on the Upper Cape diggings in Queensland, and illustrates at the same time one of those rare cases in Queensland where deep alluvial mining has been carried on. As has been before remarked, nearly all the alluvial diggings of Queensland are shallow and easily worked out. Here, however, the depth of mining in order to reach the bed rock on which the gold was found, varies from 30 to 120 feet.

No. 104 is taken from near the junction of the Lynd and Copperfield rivers, Northern Queensland. In the foreground is shown the outcrop of a copper lode which at a depth of 40 feet was known to be 20 feet thick, but as the ore did not average more than 10 per cent. the cost of cartage to the coast was an effectual bar to further exploration.

No. 105 is a view of the township of Ravenswood shortly after the discovery of the diggings there. The ore from the reefs is of a highly pyritous character, in some cases attaining as much as 30 per cent. of copper pyrites and occasionally yielding as much as 15 ounces of gold per ton. From the surface to the water level these ores were decomposed and assumed the form of oxides; there was in consequence no impediment to the satisfactory amalgamation of the gold by mercury, and so long as this surface work was carried on the miners were well content with the results, and the whole of the lodes were in consequence worked down to the water level.

No. 106 well represents the peculiar feature in Queensland gold mining, "ravine working." Here the gold is found among the rolled boulders of the creek bed, and imbedded between the crevices of the rock, sometimes to a depth of 6 or 8 inches. The tub, crable, and tin dish, the only machinery applied to this form of mining, will be duly noticed in the picture.

No. 107 shows the ordinary method of raising quartz from the mine until steam is introduced to the work. This photograph was taken in the early days of the Gympie diggings. Now, however, all the modern appliances of steam machinery, both for raising and crushing quartz, are in full operation. The quartz raised from some of the mines in these diggings has already been noted as perhaps the richest in Australia.

No. 108 is also a view in the Gympie mining district. The next picture (109) is an illustration of the method of conducting business in some cases on the diggings : a shoemaker wishes to purchase a cradle—(not to rock a baby,) but to separate the virgin gold from the dirt with which it is associated,—and he brings a pair of boots to effect his purchase. Such a primitive mode of conducting business has, however, ceased long ago ; gold in coin and in its native state are the circulating medium on the Queensland gold fields.

No. 110 represents the digger enjoying his *otium cum dig.* on that one day in the seven which even he sets apart for cessation from labour. The strictness in which Sunday is observed is in fact one of the features of life at the Australian diggings.

Nos. 111 and 112 are views of the rough plant erected for smelting on the Peak Downs copper mine. Here copper to the value of more than a million sterling has already been raised, smelted, and shipped to the European markets, and the mine is still in active operation. No ore has yet been raised from below the 40-fathom level.

Samples of auriferous quartz from various diggings and refuse tailings from the the stamping mills are to be seen in the wall cases, and it will be observed that the loss of gold from imperfect manipulation in the tailings is more than equal to the yield obtained ; with improved machinery and a more economical system of mining the auriferous quartz veins of Queensland offer endless remunerative employment to the enterprising miner.

Amongst the various mining products of Queensland arranged in the table cases are auriferous ores from various diggings ; lead ores from the Gilbert district, Cloncurry, Western Creek, and Stainton Harcourt in the Burnet district ; copper ore from Cloncurry, Peak Downs, Star River, Princhester, &c. ; antimony ore from St. John's Creek in the Burnet district ; bismuth ore from Cloncurry, silver ore from New Zealand gully in the Rockhampton district ; stream and lode tin from the Stanthorpe, Palmer, Star, and other districts, and a variety of ores a description of which will be found attached to the specimens themselves.

The regulations affecting the acquisition and holding of land for the purpose of mining for alluvial gold and those affecting the holding of auriferous reefs in Queensland are displayed in frames in this division. They are as follows :—

Regulations affecting the Acquisition of Land for the purpose of Mining for Alluvial Gold.—The holder of a "Miner's Right" (acquired by an annual payment of 10*s.*) is entitled to hold an ordinary alluvial claim of 50 by 50 feet, and a Company can hold 50 by 50 feet for every member : each block to be rectangular, and no side being less than 50 feet ; or, in wet alluvial claims, 50 by 100 for one person, 100 by 100 feet for two, and so in proportion for any greater number of a party ; or, in rivers or creeks, 50 lineal feet in the general direction of the stream.

Conditions.—To be continuously worked, but transferable.

Regulations affecting the Holding of Auriferous Reefs in Queensland.—The discoverer of a gold-bearing reef is awarded as follows :—

With 100 feet „ 150 „ „ 200 „ „ 300 „ „ 500 „	along line of reef if less than - -	400 yards one mile two miles ten miles over ten miles	distant from any line of reef worked.

The holder of a "Miner's Right" (which is acquired by an annual payment of 10*s.*) is entitled to 50 feet by 40 deep along the line of reef, or a Company is entitled to 50 feet by 400 deep each man.

Conditions.—Claim must have boundaries marked at right angles to base line; registered, and worked by half the number of miners to whom claims are allotted.

Leases of land not exceeding 25 acres may also be obtained for a term of 21 years, after a gold field has been two years proclaimed, at a rental of 1*l.* per acre per annum.

Divisions XI. and XII.—Agricultural.

Photographs 113 to 124 and 124A to 124L represent various phases of agricultural life in Queensland. In Nos. 113, 114, and 115, we have a view of selector's homesteads in the Mary river district. The clearing has here been effected on the river bank, formerly occupied by dense scrubs. This land, technically known as "scrub," is of the richest description, and has been found admirably adapted for the growth of any kind of agricultural produce, and notably where the climate is suitable, for the growth of sugar-cane. At present the banks of navigable rivers have chiefly been chosen for pioneer occupation on account of the facilities of sending the produce to market at a cheap rate.

No. 116 is a view of the Messrs. Raff & Co.'s sugar plantation, Moray-fields on the Cabulture river, in the Moreton district. The crushing plant is seen in the foreground, with the cane plantation behind.

No. 117 represents a sugar mill in the Mackay district; the type of a large number of mills erected on many thriving plantations in the same district.

No. 118 illustrates the means adopted to convey the sugar from the plantation to the wharf, where water carriage is not available.

No. 119 shows us the hut of an agricultural pioneer, a class of building probably not unknown, and not for the first time seen in the United States. It is a slab hut roofed with shingle; pigs, poultry, and children thrive naturally in all such settlements in Queensland, and in this picture representatives of each were present in force when the photographer happened to pass that way.

No. 120 is a view of a sugar manufactory in the Maryborough district, and is a type of plant sent out from England to the order of settlers in the Mary River district.

In No. 121 are shown the usual adjuncts of a sugar plantation, beds of pine-apples and groves of orange trees; throughout the whole of the coast district of Queensland the pine-apple flourishes most luxuriantly, yielding the finest and most full-flavoured fruit.

No. 122 is a view taken on the plantation of Mr. Davidson, a pioneer planter of the Mackay district. The luxurious growth of the cane is here unmistakably apparent.

No. 123 presents a view of the establishment of a sugar planter, and in No. 124 we have a satisfactory proof of the capacity of the alluvial banks of Eastern Queensland for the production of sugar-cane.

Division No. XII.

This division is also devoted to agriculture, and is illustrated by photographs from No. 124A to 124L.

No. 129A shows a clearing in the scrub for sugar plantation on the Herbert River in Northern Queensland.

Nos. 124B and 124C are views of the residence of a sugar planter on the Macnade plantation, Herbert River. These are examples of a considerable number of planters' residences situated on the same river; where a large area is taken up for the purpose of forming plantations, but the proprietors are at present engaged more at clearing their land than in building houses.

No. 124D is a view of the sugar mill erected on the same plantation.

No. 124F shows the means adopted by the planters on the Herbert River for forwarding their sugar to market by means of flat-bottomed punts suited to the navigation of the river.

No. 124G is a characteristic view met with on the banks of the Herbert River.

Nos. 124H, I, J, K, and L, are characteristic views of such areas in Queensland as could be selected at the rate of 15*s.* per acre in the settled districts of the Colony. These are classed as First Class for agriculture, and the payments are made by equal instalments, extending over 10 years. The richest alluvial scrub soils,

nd the volcanic districts of Queensland, are the only ones usually classed as agricultural, and as open for lection at the above-named rate.

Underneath the photographic illustrations in Divisions XI. and XII., are the usual table cases containing presentative samples of cotton, maize, wheat, barley, coffee, tea, sugar, arrowroot, tobacco, &c.

Also samples of cocoons and raw and manufactured silk; the production of silk is now receiving careful ttention in the colony.

Farming Statistics.

The Queensland farmer differs materially from his brother operator in other parts of Australia, in the kind climate, rainfall, soil, and crops he has to contend with. He has little frost and no snow to fear or provide gainst. He can, in some favoured localities—such as the Darling Downs—turn out a fair wheat at the rate from 20 to 30 bushels to the acre, and his bacon, hams, and butter, are here almost up to the mark of the ew Zealand, Tasmanian, Victorian, or Shoalhaven production in firmness and flavour. Gatton, too, near the pproaches of the great Main Range to the lower country of Ipswich has a specialty for potatoes, almost valling the far-famed Brown's River product of fair Hobart Town. The farmers in Queensland grow arrow-oot and sugar, and they make wine, but not raisins as yet. They raised enough wheat in 1873 to turn out 300 tons of flour, besides meal, &c; and there were, during the same year, 125,968 lbs. of arrowroot made in e colony. Maize is also greatly cultivated, and both it and arrowroot are grown to an extent nearly equal to l the home consumption. Tobacco to the amount of 8,568 lbs. was manufactured in the colony in 1873, as ell as 41,979 gallons of wine. The ordinary vegetables of domestic life, such as the carrot, turnip, cauliflower, paragus, artichoke, &c., can all be well grown in Southern Queensland, and the fruit of the hibiscus, known rosella, and that of the Cape gooseberry (*Physalus Capensis*) make a jam and jelly more suitable for invalids flicted in liver or lung than any other in the world. But ordinary farming is an avocation not followed up to e fullest as yet in Queensland, or the imports would never show nearly a thousand tons of hay per annum still rought into the colony, as is the case. The mountain slopes of the southern parts will support a fair propor-on of farmers; but fewer of them (in the general sense of the term) will take root in the North. Honey is entiful and delicious, as the native flowers are abundant and full of refreshing fragrance. In short, when e science of irrigation has been a little more mastered and matured than it is at present, and when a little storal is blended with the agricultural industry on each farm homestead in Queensland, then there will be few ppier or more independent men on the face of the earth than the yeomen of the southern parts of this colony. ool, cotton, silk, maize, oil, wine, honey, raisins, figs, olives, tea, coffee, oranges, lemons, citrons, pine-apple, nana, cheese, butter, ham, and bacon; and still more sources of profit are open to him, and, in a word, all e varied products of Spain, Portugal, France, and Italy are at the command of man's industry in this new rritory of Queensland. Operations are, however, chiefly confined to lands within 100 miles of the sea, for e rainfall steadily diminishes with every degree we recede from the coast.

Sugar-growing in Queensland.

This universally important article of commerce is destined to figure heavily and increasingly among the oducts of North-eastern Australia, or Queensland. In the year 1866 there was no sugar grown here at all. 1867 a modest 168 tons were made, the returns swelling to 619 tons in 1868, and increasing to 1,490 tons 1869. In 1870 the product had grown to 2,854 tons, and in 1871 to 3,762 tons; 1872 again saw this nearly ubled, in the shape of 6,266 tons; and in 1873, the latest year up to which full official returns have been ade, the quantity was 7,987 tons. The yield for 1874 is no less than 14,000 tons! And as the quantity has creased so has also the quality of the article; and the refined whites from Yengarie, and the splendid "raws" om Eaton Vale, are able to recall the palmiest days of glorious old Demerara, with its superb saccharine ystals, drawn from those measureless depths of rich vegetable soil in the great South American Savannah. e quantity of molasses, too, it is needless to say, has kept pace with the yield of sugar, and has gradually

crept up from 13,100 gallons returned in 1867, to 442,253 gallons in 1873. The sugar mills were six in number in 1868, and they had become 66 in number by 1873. There were 1,238 acres of cane crushed during the year 1869, and by 1873 there were no less than 5,380 acres of it put under the rollers. The rum of 1867 is *now* prized above any Jamaica for its rich mellowness, for in those inexperienced days they did not, in Queensland, stint the sugar in making it, as is now done in the more sophisticated West Indies. In that year they distilled only 12,045 gallons in Queensland, but in 1873 they made 164,413 gallons. Sugar-growing is carried on in all the Logan country which lies between the Brisbane River and the stupendous M'Pherson's Range, the southern boundary of the colony. This Logan district includes the Albert, the Pimpama, the Coomera, the Nerang, and other divisions of that agricultural community which is found on the south side of the metropolis of the colony. Another large centre of sugar-growth is found in the Maryborough district, where Messrs. Tooth and Cran's great refinery at Yengarie supplies a want in the way of costly machinery and finished appliances which other parts of Queensland do not enjoy. But the sugar country, *par excellence*, of North Australia is found on the Pioneer River, of which Mackay is the shipping port. The climate is here no longer a matter of doubt and question as it is at Maryborough and the Logan, in respect of its suitability for sugar growth. The absence of frost and the presence of rich depths of treeless soil put this at rest; and it is here that some of the heaviest returns per acre have been realised. The country at the back of Cardwell, still further north (and in the latitude of Jamaica), turns out a splendid article in sugar. One pleasing feature in the growth of it is found in the lucrative return made to the small working farmer, who, even more than the capitalist, has found fair profit yielded from his sugar-cane patch, which has put his maize and potatoes quite in the shade in his yearly balance-sheet.

The yield of sugar per acre of cane throughout the colony, although in some favoured cases it has reached as high as four tons to the acre, has averaged as follows :—In 1869 the return was $1\frac{1}{6}$ ton to the acre ; in 1870 it was $1\frac{1}{3}$ ton to the acre ; in 1871 it was $1\frac{1}{4}$ ton to the acre ; in 1872 it was the same; and in 1873 it *considerably exceeded a ton and a half* to the acre through the colony. We are just beginning to have sugar for export, and shall soon be able to pay Adelaide for her flour in something more satisfactory to ourselves than bank drafts ; and as with South Australia so with other places in which the balance of trade is at present decidedly against us. As before stated, in farming statistics, the operations are carried on near the coast, as the rainfall decreases as we go westward. Thus at Brisbane, 10 miles from the sea, it is 52 inches per annum; at Warwick, 90 miles from the sea, it is 32 inches per annum; and at Springsure, 160 miles from the sea, only 25 inches.

It is noticeable in connexion with this industry, and indeed with farming generally, that those engaged in it take a living interest in their business. In no country that we know of is information furnished more freely than by the farming classes of Queensland.

Divisions XIII. and XIV.—Pastoral.

Photographs 125 to 136 and from 136A to 136K illustrate various phases of pastoral life in Queensland.

Nos. 125 and 128.—Here we have a typical view of an Australian squatter's homestead. This is the kind of home formed by men who when once they have enjoyed the freedom and health-giving qualities of the occupation to which their lives are devoted, rarely return to the restraints of civilisation with pleasure, or without a continual longing to return to their Australian homes.

Nos. 126 and 127 show one of the principal means by which the wool is brought down from the stations to the coast for shipment. The bullock drivers are camped for their mid-day meal, and the beasts are turned out to rest for a short time from that pulling and hauling which is the normal condition of their existence. Hundreds of men find profitable occupations as teamsters on the road to supply the miners and settlers with stores, returning to the coast with collected produce.

No. 129 is a picture of a pioneer squatter's homestead. This, as may be supposed, is generally rather rough

nd built of the inevitable slabs and bark which the timber of the country everywhere affords in abundance, xcept on the great prairies of the West.

No. 130 is a wool shed on the Darling Downs, and under cover of such a building something more than a illion sheep are annually shorn on these downs alone.

No. 131 is a view of Westbrook Station, on the Darling Downs, one of the earliest formed in that district.

Nos. 132 and 133 are also views of station homesteads of the rougher description, such as are erected by the ioneer squatter.

No. 134. Sheep washing.

No. 135. Cattle branding.

Division XIV.—Pastoral.

This division is also devoted to the illustration of the pastoral districts of the colony, and is represented by hotographs running from No. 136A to 136M. Nos. 136A and 136B illustrate the usual mode adopted by olders of stations of delivering their wool at the port, and carting the stores to their stations. Although orse teams have latterly been very much in use, bullock teams are still found to be the most generally suitable or rough bush roads.

No. 136C depicts the tailing of cattle after a muster has been made on the stations by stock men.

No. 136D is a characteristic view of "coast country" in the neighbourhood of Maryborough.

No. 136E is a view of a portion of the "Peak Downs" with the Peak Range in the distance. The discovery this fine volcanic district was first made by the explorer Leichhardt, and no terms of admiration seemed to too great, in expressing his ideas of it, as a magnificent pastoral district if sufficient water supply could be btained.

Wells and dams have supplied this natural want, and now nearly a million sheep are depastured on the Peak owns proper.

Nos. 136F, G, H, I, are devoted to the illustration of the various descriptions of country which can be selected ther as first-class pastoral at 10*s.* per acre, or second-class pastoral at 5*s.* per acre over certain districts of the olony payment by equal instalments spread over 10 years.

In the table cases under Divisions 13 and 14 samples of some of the principal brands of wool produced the colony are exhibited.

Pastoral Statistics.

The great pastoral or "squatting" interest has the merit of having steered Queensland in safety through her rly primeval struggles towards the goal of her present prosperous existence, and it is still, though now ecoming ably rivalled by the mineral interest, and (now that the article of sugar has entered the field) by the gricultural and manufacturing ones also, the leading industry of the colony. The introduction of the paddock ystem has, however, in many places reduced the number of hands, and the field for the employment of labour, ut as no machinery for shearing sheep, driving bullocks, &c. has yet been patented, the squatting interest still ontinues to circulate much money in the colony. The number of horned cattle in Queensland at the close of 872 was 1,200,992, and at the end of 1873 the muster had increased to 1,343,093, showing an augmentation 142,101 for the year, or nearly 12 per cent., and if we take the same rate of increment to obtain for the ear 1874, it would give us on the 1st January 1875 something over a million and a half of horned cattle in the olony at that date.

With respect to the sheep, the close of 1872 saw 6,687,907 of them in Queensland, and by the end of 1873 at number had increased to 7,268,946, showing a gain of nearly 9 per cent. for the year, which rate, if taken represent the accession of numbers for the year 1874, would bring us up to nearly 8,000,000 of sheep in the olony of Queensland on the 1st January 1875. The stock in our territory is on the whole very healthy and ee from disease. Great mistakes were made at one time in stocking the far north country with sheep. They d not thrive there, and had all to be replaced with cattle, which do well up to the very Cape York itself. The umber of horses in the colony at the close of 1873 was 99,243, an increase of about 7 per cent. on the

preceding year; and the pigs increased from 35,732 to 42,884 in 1873. With respect to the income derivable from these vast pastoral resources, the exports of live stock borderwise for 1873 were—

265 horses, valued at	£2,385	Exported borderwise.
31,113 cattle, ,,	179,090	
510,284 sheep, ,,	205,238	
Making a total value of	£386,713	

Add to this—

Hides	£72,941	Exported seaward.
Tallow	50,809	
Wool	1,374,526	
Preserved meats	62,085	

And we have a total of £1,947,074

in exports derived from pastoral sources; and even this does not include the meat, hides, leather, &c., used for home consumption; these and sugar being some of the few items for which Queensland is not dependent on extraneous aid, as she is for clothing, breadstuffs, &c. On the vast array of storekeepers, agents, drovers, and banks, who thrive and fatten on all this teeming produce, we need not here enlarge. Suffice it that squatting still continues to be the leading industry of the colony, though of late years it naturally enough has not continued to grow with the same rapid strides which have marked the other and younger branches of our productive wealth.

The wool, in lbs., exported in 1873, was 19,763,113 lbs. The wool exported in 1874 was 20,859,346 lbs. of the value of 1,420,881*l.* The gross exports for 1874 were of the value of 3,750,048*l.*, which, reckoning population at 160,000, is 23*l.* 10*s.* per head per annum, unrivalled in the world. The above are official returns.

Division XV.

Is devoted to the illustration of Queensland towns and villages. The numbers of the photographs run from 137 to 144 and include views of Somerset, Rockhampton, Townsville, Cardwell, Gladstone, and Maryborough.

Division XVI.

Is also devoted to the illustration of Queensland Towns.

The numbers of the photographs run from 145 to 154 and include views of Maryborough, Brisbane, Ipswich, Toowoomba.

A short description of the rise and progress of some of these towns is taken from the "Queenslander."

Rise and Progress of Brisbane.

Brisbane, the metropolis of Queensland, occupies a fine hilly, bold site on the banks of the river of same name, which is here about 1,000 feet wide. It is neither the prettiest nor yet the ugliest capital in Australia; it lacks the noble harbour of Sydney, and the snow-capped background of Hobart Town; but still it has its distinguishing advantage, for none of the sister cities command anything approaching such a sweep of really grand view in every direction as Brisbane does, and extending 160 miles from north to south, and 100 from east to west—an area nearly equal to all Tasmania. On the south are visible Mount Lindsay, nearly 100 miles ride from Brisbane; also the great rainy M'Pherson's Range, a wall at right angles to the coast, and nearly 6,000 feet high in places; while, on the north, the eye commands the Kilcoy and other ranges which shed the distant head waters of the Mary and the Burnett rivers on their northern slopes. To the west, the dim blue peaks of the Main Range, serrated by the gaps of Koreelah and other passes, loom 70 miles away, and mark the site of Darling Downs; while, to the east, the sea view is shut in by the cypress pine hills and sandy cliffs of Moreton and Stradbroke islands, thirty miles away. Brisbane is built on a cape of land formed by a bend of the river, the said cape pointing to the south-east. On the north-east and south-west of

risbane is the river, 1,000 feet wide; on the south-east of the city lie the Botanical Gardens, and on the orth-west rise the Windmill Hill and Wickham Terrace Reserves, so there are fresh air and "lungs" in enty all round the pretty metropolis of Queensland. And speaking of fresh air we are reminded of fresh ater, with which no city in the world is better supplied in proportion to its population than Brisbane is. bout seven miles back from town, and at an elevation of 240 feet above the tidal river level, the waters of noggera Creek are dammed back to form a lake of about 200 acres in extent, and 40 feet in depth, and eating a water supply which, for volume and pressure, surpasses that of Sydney, with six times the popu- tion of Brisbane. The reservoir is thus constantly fed by the waters of a pure mountain stream which rises broken granitic country that surpasses in unfrequented wildness and difficulty of access even the loftier nges of the tin country, and so fortunately guarantees a continued freedom from any impurity. Beautiful llas—commanding extensive and picturesque views of mountain, sea, river, garden, farm, and forest, in ery shade of pleasing tint and sharp outline, under the clear sky of Australia—are found on all the surburban ads. The present population is about 25,000.

Rise and Progress of Ipswich.

This town, formerly called "Limestone," from its geological formation, was established as a branch penal ation in connexion with Brisbane, at the same time as the latter was, and being at the head of river naviga- on, and the spot where the steamers and bullock drays met and exchanged their respective loading, such as ool for station supplies, in the old days before railways were thought of, Ipswich soon became a thriving place ter the settlement of Darling Downs, and contained at one time no less than 30 "hotels;" and the boiling own of stock added still more to the bustle of its daily life. So great indeed were its vitality and growth, and e energy of its inhabitants, removed as they were from the enervating influence of the sea air, that at the me of Separation, its population and electoral roll being about equal to those of Brisbane, it disputed the right the latter place to be declared the seat of Government of the new colony. Since that time, however, swich has, owing to the advent of railways, and the cessation of boiling down of stock, and other causes, t progressed so rapidly as in the first few years of its existence. It is a neat, clean town, with some four or ve thousand inhabitants, a creditable volunteer force, numerous branch banks, Government offices, and ppends at present for its support on the magnificent agricultural district by which it is surrounded. The oundance of coal in its immediate vicinity gives promise of its being the seat of manufacturing industry in the ture, and there seems little doubt about its becoming ultimately a large and populous town. Its present ppulation is about 6,000.

Rise and Progress of Toowoomba.

This township was once the site of a grassy camping ground for the Darling Downs bullock teams in olden mes; and, it being a well-watered open dell near the edge of the Main Range, and some 2,000 feet above the a level, teams used to rest here both before making the descent and after accomplishing the ascent of the orderilla, especially as the grass was splendid, the soil a dark red, and the open timber of gigantic stringy ark and green wattle, rich in gum and bloom, bespoke a wholesome, pleasant country to dwell in. Two large wampy "sponges," separated from each other by a ridge, gradually converge, and unite to form the head of owrie Creek. This place, known once as "Drayton Swamp,—in honour of the ancient healthy and now most obsolete township of Drayton, of 1843–1857—is now the leading township of Darling Downs. It had 1854 but one house on it; in 1857 it was still inferior to Drayton; but by 1859 it had asserted itself, and e parent township had to take a secondary position. Since that time Toowoomba, nourished by the trade rising from pastoral and agricultural sources alike, and with some hope of minerals too looming in the future s continued to go ahead, its only check having been during 1866 and the following years. Its public ildings, stores, streets, shops, churches, chapels, and volunteer corps (captained by Sydney Smith, a Crimean ficer), all denote substantial prosperity and genuine public spirit, and a healthier, pleasanter, "pluckier" wnship does not exist in Queensland. It enjoys railway communication with Brisbane, Ipswich, Warwick, d Dalby, the two latter lines converging at Toowoomba. A powerful well-organised agricultural and

pastoral society holds its useful periodical show meetings here, and the mountain air, keen breeze, rich pastorage and the grand wine and wheat country around this favoured spot of earth, all help to impart a vigour to its denizens and doings which is thoroughly English in character, and the cheeks of the people are quite as rosy as their apples, which is, indeed, saying a great deal. The mean temperature is 62°, which is considered by physicians to be the happy medium furthest removed from undue heat and cold alike, and the one most suited to the human constitution. Its present population is about 4,000.

Rise and Progress of Warwick.

Warwick is situated on the southern part of Darling Downs, on the banks of the Condamine River, a gravelly dry site, and a very English-looking place altogether. There are fine farms and vineyards all round it, and the splendid pastoral properties which are close at hand, as well as the tin mines only fifty miles away from its railway station, give Warwick a comfortable status amongst the Queensland towns. Its present population is about 3,000.

Maryborough

Is a municipal township on the River Mary 60 miles from its mouth, about 180 miles north of Brisbane.

It is the port of shipment for the greater portion of the Wide Bay and Burnett district, and is in the centre of a large agricultural population settled on the banks of the Mary River, both above and below the town.

It will be seen from the panoramic view of the town exhibited in Division XV. that there is still plenty of room for the erection of buildings even in some of the main streets.

That these gaps will soon be filled up, however, there can be little doubt, since it is one of the soundest business towns in the colony, and has a large and increasing trade, from the mining, agricultural, and pastoral district of which it is the port.

The present population of the municipality is about 5,000, of the suburbs and the agricultural settlements in the neighbourhood about 4,000 more.

Rise and Progress of Rockhampton.

This town did not exist in 1857; when the announcement at the Surveyor-General's office in Sydney (by a Brisbane gentleman visiting there,) of the fact that there existed in Keppell Bay a navigable river called the Fitzroy, as wide and as deep as the Thames, caused a surveyor to be sent up and a township to be laid out at once, about 45 miles from the river mouth, and just below a reef of rocks which barred all further navigation upward for large vessels. The streets were judiciously planned, like those of Melbourne, two chains wide, and and Rockhampton is consequently a well-built and fine-looking town, and being the focus and shipping port of a vast rich mineral and pastoral belt of country on the Dawson, Mackenzie, Isaac, Comet, and other rivers, as well as of the Peak Downs country, it possesses a great trade, and will in time, when railways pierce the interior become a place of very considerable importance. The Athelstan Range, at the south of the town, rises to the height of about 150 feet, and on it are situated the suburban residences of the leading townspeople. Water is supplied from the Yeppen Yeppen and Crescent Lagoons, and there is steam communication with Yaamba, some distance further up the river.

Mount Berserker affords a rich field of research to the botanist and geologist. In fact, Rockhampton is the centre of a rich gold and copper district, and minerals are found in nearly every direction you can travel from it. The present population is about 5,500.

Rise and Progress of Gympie.

A wild and unfrequented spot on the banks of the Upper Mary River, and one of little use for pastoral purposes, and so, consequently, seldom traversed, was suddenly, towards the close of the year 1867, awakened to brisk life by the discovery, at the hands of a man named Nash, of a rich deposit of alluvial gold containing some 17,000*l.* worth of dust. He took it up very quietly, and sold some of it in Brisbane as "Cape River" gold; but the secret oozed out at last, and Gympie Creek was worked for alluvial digging. Strange and wonderful adventures befel the few citizens of Brisbane who essayed the perils by flood and field of an overland

) to that unexplored country (supposed in olden days to consist of mahogany swamps and sour grass ranges) ich lay between the metropolis and the golden creek (for the Moololah, Maroochydore, and other rivers with n soil banks were unknown to fame then). By and by, however, the alluvial was found to be a shallow myth, l rich reefs of quartz and calcspar traversing a greenstone or diorite rock were found to contain fabulous alth in gold, and the New Zealand, Lady Mary, Smithfield, Monkland, Caledonia, and other famous reefs gan to send forth their splendid specimens to astonish the metropolitans, and the machine crushings soon eed Gympie at the head of the world in the return of gold per ton of quartz; the *magnificent and unrivalled rage of nearly 2½ ounces to the ton having been maintained on this field up to the end of* 1870. The road Brisbane was put in order, and Cobb and Co. began to appear on the scene. A well-conducted newspaper n graced the new township, and Gympie from 1868 to the present time has continued to be one of the "great s" of Queensland. Like other large quartz-crushing centres of industry, it has been afflicted with one wback, and that is in the manner in which all the luck seems to flow into few hands, who became inordi-ely rich, and all the rest of the people correspondingly poor. This is the case at Gympie, where many a n, who never would have owned 100*l.* anywhere else in the world by his own exertions or brains, has found gold grow, as it were, wherever he went to dig. Some of the early crushings at Gympie were wonderful; re was really more gold than quartz in some of the veins, even in mere bulk, and the machine had to be pped sometimes, as the soft, malleable, ductile metal remained immovable and insensible under the stampers he action of the water, clogging like so much "toffy" or cobbler's wax, and so had to be cleared away ore the steel hammers could be effectually brought to bear on the ordinary quartz. Gympie continues to rish, and presents as fine an opening for capital as any gold field in the world. The present population of mpie and its suburbs is about 6,000.

Rise and Progress of Townsville.

That "trade makes the port," and not the port trade, cannot be better exemplified than in the case of wnsville.

This port is situated in latitude 19° 10′ south and 146° 58′ E. longitude, and is only about 80 miles from the n of Bowen, which enjoys one of the finest harbours in Australia, whilst every facility can be given to the pment of produce; yet Bowen has suffered a continued decadence since the formation of Townsville, the gress of the latter, (with not a tithe of its facilities for trade as far as the port is concerned,) having been tinuous, as the following comparison of exports and imports, between 1865 and 1875 will show :—

Port of Cleveland Bay. 1865, imports 570*l.*, exports 8,145*l.*, customs receipts 112*l.* 15*s.* 4*d.*; half-year ing 30th June 1875, imports 67, 116*l.*, exports 168,885*l.*, customs receipts 17,411*l.* 5*s.* 8*d.*

The agricultural resources of Townsville, and the immediate district around it, are not great; but extensive permanent gold fields, and a vast area of pastoral country, for which it forms the natural port, have bined to raise it into importance.

These gold fields are Star River, Ravenswood, Charters Towers, Cloncurry, Gilbert and Etheridge.

The copper mines principally awaiting the pushing out of a railway from Townsville westward before elopment, are situated on Star River, and Copperfield River.

The amount of gold exported from the port of Townsville is as follows, and there can be little doubt that mineral wealth of the district, for which Townsville is the port, is as yet only developed to a very small ent, and will be greatly increased in the future. Its population is about 1,800.

Total of gold exported since its discovery in 1866 to June 30th, 1875, 569,818 ounces; value 1,990,610*l.*

Although situated well within the tropics, the heat to be naturally expected at Townsville is tempered by influence of the south-east trade winds, and with properly constructed residences, and attention to keeping m cool, there seems no reason why the inhabitants should not enjoy as good health as those who reside in sbane or Maryborough.

Cardwell, its Rise and Progress.

In Rockingham Bay, some 90 miles to the north of Townsville, is the pretty little town of Cardwell. The bay which it faces is one of the most beautiful, as well as the finest harbour in Northern Queensland. Its picturesque situation at the foot of the loftiest mountains of the coast range, its elegant public buildings, and tropical scenery, render it a study for the painter. The difficulty of overcoming the coast range has hitherto presented an obstacle, not altogether insuperable, to its rapid progress; but this drawback, it is confidently expected, will shortly be overcome, as an accessible road has lately been discovered over the range. Its population, including that of the neighbourhood, is estimated at about 300. The gold escort from the Etheridge has its head-quarters here. The surrounding districts are pastoral principally, and large numbers of sheep and cattle are reared on its rich pastoral lands. Tropical fruits grow here in wild luxuriance. It is from this port that the squatters and Herbert River planters draw a large proportion of their supplies. A jetty, 2,000 feet long, extends into the bay. Cardwell contains a court-house, two hotels, two stores, a national school, a branch of the Bank of New South Wales, a telegraph office, a post office, and a dugong oil factory.

Should the Palmer River diggings approach Cardwell as closely as they at present promise to do, a great future is yet in store for this lovely town. A peculiarity of Cardwell is the springs of fresh water which are constantly running on the beach, even below high-water mark. A pilot, pilot cutter, and crew are stationed here. The steamers of the Eastern and Australian Company call here.

Cooktown.

A newly proclaimed mining township situated on the northern bank of the Endeavour River about 1,050 miles N.W. of Brisbane.

Though the town has been born in a day, it will most likely take its place as one of the most important centres of the colony, should the yield of gold continue from the Palmer River district for which it forms the port.

Already a large population has settled at Cooktown, and as the available sites for building are limited, it is likely that such sites will become very valuable.

Somerset

Is a small township situated at Cape York 1,550 miles N.W. of Brisbane.

It is a harbour of refuge and a place of call for the vessels engaged in the Bechè le mer and pearl shell fishery of Torres Straits, which is now employing a large fleet of ships.

At the present time there are fifty large boats engaged in the fishery.

As an instance of the profitable nature of this trade, it may be mentioned that a vessel made in one season no less a sum than 6,000*l.*

DIVISIONS XVII. AND XVIII.

Are devoted to miscellaneous subjects, photographs of public buildings, views on the railway lines of the colony, &c., and in the table cases are grouped,—miscellaneous products and manufactures.

A few statistics of a miscellaneous character selected from "Queenslander," will also be here introduced.

Climate of Queensland.

On this subject we must needs have a "chequered tale to tell," in traversing 19 degrees of latitude. One thing, however, is certain and universal, and that is, that there is a most decided and palpable yearly winter met with in every part of the great colony. First, we have the winter of Scotland, which obtains amongst the huge Aberdeen cairngorms, blue topazes, and smoky quartz crystals which head the gullies in the tin

earing mountains of Stanthorpe. Then we have the winter of Southern Queensland, which ranges intermediate in mean temperature between those of Madeira and Bermuda, and is most grateful to all lungs wearied f battle with the gales of New Zealand and Bass' Straits; calm, clear, equable, pure. No weather ever seen n England can recall it. A linen suit does not feel too cold to wear, nor a monkey-jacket too warm; the one eels just like the other to a new arrival in this elysium of an atmosphere. Back, however, from the sea and s equalising influences, the wintry cold, especially on the table lands of Darling Downs and the Burnett, anges from 15° to 35° on the nights of June, July, and August, and no matter how far north or west you ay go, the winter cold, either from its own actual thermometrical register or from its contrast with summer eats, is very marked and much felt, and enjoyed or dreaded, as the case may be, according to the constitution nd habits of the individual who experiences it. Thus in June, at Brisbane (the metropolis of the colony), he midday is that of a London June, while the midnight is that of a London February, owing to clear skies nd rapid radiation of heat from the earth; hence arises much rheumatism to those who neglect to change heir attire at nightfall. Strange to say, however, some people lose all their previous tendency to rheumatism y a visit to the climate of Brisbane, whose mean temperature is that of Madeira, 68°. Rockhampton is the ame as that of Algiers, and Stanthorpe the same as London is, the resemblance being carried out month by nonth, except that spring comes on six weeks or so earlier in Australia. In Northern Queensland, which is within the monsoon's influence, there are, of course, the wet and dry seasons yearly, almost without interuption; while in the southern parts of the colony the periods of flood and unusual wet are farther apart. The revailing winds in Southern Queensland are, north-east, from the sea, in summer, and south-west, over the and, in winter; the former being full of ozone and life, the latter, though bracing, is arid and irritating to elicate bronchials, unless in those cases where dryness is the object sought, and then Queensland is the very lace of all others. Further north, the south-east trade wind acts as the ordinary sea breeze, and finds its outhern limit at the tropic of Capricorn, as a rule; below which the sea breezes blow from the north-east uarter. The great feature, after all, of tropical Queensland and its climate is that it is the only country in the world, lying in the torrid zone, which is destitute of snowy ranges to feed rivers and make an artificial sanaorium (if we may so call it). South America, Africa, Asia, and even the Islands of Polynesia and the Malayan Archipelago, can show mountains carrying perpetual snow, affording in all cases a change of climate, nd in many cases a means of inland navigation, which Queensland is altogether destitute of.

The only considerable mountains, apart from the Cordillera, are Mount Lindsay, on the south boundary this is a wall-sided peak of some 5,700 feet, now inaccessible ever since a bush fire destroyed the vine ropes y which it used to be scaled); Mount Barney, a noble, graceful double peak, of 5,000 feet, near the Richmond River; and the famous Bellender Ker Mountain, which lies in the latitude of Tahiti, and looks out n the coral-broken waves of the Great Barrier reef from a height of 5,300 feet, and is clothed with thickets of wild bamboo, which hide many an ambushed precipice, within arm's length almost of the unsuspected climber, n its steep but richly-covered sides. The Main Range (as the Cordillera is called) averages 4,500 feet in its eaks and summits, and 2,000 feet in its gaps and passes. Snow is unknown in Queensland, except at the Stanthorpe Highlands, and very rarely falls even there. The mountains of Queensland, therefore, except in heir influence on the rainfall, are of little importance to her.

Eastern Queensland is an excellently watered country, almost every valley containing its deep pools of this vital necessary, and all beautified by the superb pale blue water-lillies and immense floating leaves of the Nymphæa gigantea, the loveliest water plant in the world.

Of the soil of Queensland it will be easier to judge by looking at the samples in the cases in Division No. 1 o 9 than any description; and in conclusion we would point to the vital question of water storage on a vast cale, and at high levels, which will yet have to be effected before Queensland will fulfil her destiny, and make lood years atone for drought years, as they are meant to do.

Population and Vital Statistics.

It is generally (but erroneously) supposed by many who reside out of Queensland, that its death-rate per thousand must be high every year as compared with those of other communities, and considering the risks to human life in a newly-settled country, where the natives on the frontiers are savage, where the rivers are mostly unbridged, and all the hazards inseparable from a bush life must be encountered in their full force, and this, too, in addition to the extreme heat of the climate—when we consider all these, the opinion formed by outsiders of Queensland in this respect, erroneous as it may be, is nothing more than natural after all; yet, on referring to the Registrar-General's official report, laid before Parliament, of deaths for the seven years extending from 1867 to 1873 inclusive (returns for 1874 are not yet made up), we find the average annual deaths per thousand to be 16·39, a result which will compare favourably with that of any country in the world, the more especially so when we take into consideration the latitude of Queensland, the number of new arrivals and consumptive persons who land in bad health, and the numerous resident South Sea Islanders, who generally refuse physic, and die, when ill. In short, when we have regard to the varied dangers to which people in a new country are exposed, the healthiness of the colony is little less than wonderful, and would be quite incredible if the evidence of it were not derived from official and reliable sources.

The deaths for the seven years named were respectively as follows:—

1867	- - -	17·80 per thousand people.
1868	- - -	17·36 „
1869	- - -	19·21 „
1870	- - -	14·59 „
1871	- - -	14.83 „
1872	- - -	14·97 „
1873	- - -	16·00 „
		7)114·76
Average	-	16·39 per thousand people.

The veritable true winter which prevails as far up as the latitudes 12° and 15° south, where the thermometer at sunrise in June, July, and August, even near the sea and at little above its level, goes down to 45°, is sufficient to account (at all events in part) for this exceptional salubrity, for considering the latitude, no such low temperatures are ever being met with so near the equator in any other part of the world, either north or south of the line, or in any portion, whether insular or continental.

Diseases yield readily to treatment, too, for of 2,658 cases treated in the various hospitals of Queensland, during the year 1873, only 208 deaths were recorded, thus showing 93 per cent. of cures, and at the various gaols, in 756 cases of sickness only five resulted in death, showing a percentage of 99·3 of recoveries. These returns are from the Registrar-General's report laid before Parliament, and prove conclusively either that the climate must be healthy, or else the doctors *very* skilful (one or the other, or possibly both) beyond a doubt.

Taking the population of Queensland, at the close of 1873, at 146,690 souls, and allowing the past average yearly increment by births and immigration, it would bring the population, on July 1st 1875, to as nearly as possible 168,700 people, exclusive of Chinese on the Palmer river; the average increase to the population, from all causes, during the last 10 years having been steadily kept up to 8 per cent. per annum. There are fully 15,000 white men, miners, at the gold fields, and about 6,000 Chinese. There are also some 2,000 Polynesians resident in Queensland, as more than half of those who arrive remain permanently in the colony. Taking the year 1873 for an example, we find 5,097 arrivals from Great Britain, against 78 departures; 2,502 arrivals from Germany, and no departures; 6,291 arrivals from other colonies, as against 5,090 departures; and 1,023

arrivals from the South Sea Islands, against only 288 departures. The births in Queensland for 1873, in a population of 146,690, were 5,720, or nearly 40 per thousand, against 2,250 (or 16 per thousand) of deaths.

The following table shows the official return of population in Queensland from 1860 to 1873 (inclusive) at the close of each year:—

1860	- - -	28,056	
1861	- - -	34,367	
1862	- - -	45,077	
1863	- - -	61,640	
1864	- - -	74,036	
1865	- - -	87,804	
1866	- - -	96,201	
1867	- - -	99,849	
1868	- - -	107,427	
1869	- - -	109,897	
1870	- - -	115,567	
1871	- - -	125,146	
1872	- - -	133,353	
1873	- - -	146,690	

To conclude this notice we may briefly observe that the average yearly births for 14 years are 43·5 per thousand of the population; the average yearly marriages are 10·6 per thousand of the population; or 21·2 people per thousand get married yearly; and the average yearly deaths per thousand for seven years are 16·39. These results we can fearlessly place by the side of those of most other places and colonies in the world, with every confidence that we shall not suffer by the comparison, taking all collateral matters into due consideration.

Revenue and Expenditure.

As the population of the great colony of Queensland was once very small, so were its revenues and expenses then very modest. In 1846, 13 years before Separation, it contained only 2,257 people, chiefly convicts, in all its length and breadth; in 1851 but 8,575 people were counted. Since 1856, its separate existence commenced, and its census will be found elsewhere. It is of the revenue and expenditure we would now speak, and (omitting loans and their disbursement) it stood as follows from 1859 to 1870, and inclusive of land-orders:—

	Revenue. £	*s.*	*d.*	Expenditure. £	*s.*	*d.*
1859 (three weeks) -	6,475	17	8	8,689	10	7
1860 „ -	178,589	8	5	180,103	9	0
1861 „ -	238,238	9	1	255,180	4	7
1862 „ -	295,286	8	1	317,026	10	3
1863 „ -	295,215	5	7	355,791	14	1
1864 „ -	369,425	6	3	439,034	18	6
1865 „ -	631,431	17	11	617,996	8	1
1866 „ -	592,968	10	10	594,130	0	1
1867 „ -	669,041	8	3	719,976	11	3
1868 „ -	780,117	6	4	797,470	0	7
1869 „ -	772,858	8	9	770,796	13	8
1870 „ -	787,100	2	6	768,948	9	10

The gross revenue for 1873 was 1,124,107*l.* 12*s.* 3*d.*, and the expenditure for the same year, 956,707*l.* 2*s.* 10*d.*, showing a very satisfactory state of progress as compared with its population, products, &c., as well as in the habit, too long neglected, of keeping expenditure within the bounds of revenue. The three great items of revenue in Queensland are customs, land revenue, and railway receipts; the first item furnished 480,913*l.* 0*s.* 4*d.* in 1873; the second one yielded 340,083*l.* 2*s.* 6*d.*; and the third amounted to 107,270*l.* 3*s.* 10*d.* The excise and license sources of income are on the increase, so is the postage one.

In the expenditure department, the Colonial Secretary heads the list with an outlay of 228,924*l.* 7*s.* 7*d.*; the Secretary for Works coming next, with 161,203*l.* 8*s.* 7*d.*; the Postmaster-General and Colonial Treasurer following in order, with 83,109*l.* 12*s.* 8*d.* and 74,560*l.* 15*s.* 7*d.* respectively. From the returns made it will

be seen that as the receipts from postage only come to 25,413*l.* 17*s.* 5*d.*, and those from the Electric Telegraph Department, 22,131*l.* 14*s.* 8*d.*, the Postal Service still costs the colony nearly 40,000*l.* per annum, which is after all very moderate, considering its vast area, and the immense convenience afforded to business operations in all departments of mercantile, mining, shipping, and pastoral enterprise.

Imports and Exports.

That Queensland has little need to be ashamed of her position with respect to her contributions to the general stock of the world's industrial products, is shown by her splendid list of exports, which now compares nobly with her imports. In 1863, New South Wales exported 15*l.* 17*s.* per head of population ; Victoria, 17*l.* 12*s.* 6*d.* per head ; South Australia, 15*l.* per head ; and Queensland, 17*l.* 9*s.* 2*d.* per head. In 11 years from this time, Queensland (which has been gradually drawing to the front, and has held the leading place for three or four years past) became able to export nearly 24*l.* per head per annum.

In the four years, 1867–1870 inclusive, Queensland stood as follows with respect to imports and exports :—

	Imports.	Exports.
1867 -	- £1,747,735	£1,989,600
1868 -	- 1,899,119	2,107,437
1869 -	- 1,804,578	2,166,806
1870 -	- 1,577,339	2,533,732

Thus swelling the balance of trade in her own favour in four years from a little over 200,000*l.* to nearly a million, and gaining the foremost place in exporting power per head of population over all the other colonies in Australia, and (we believe) over all the other countries in the world.

In 1873 the gross imports were 2,885,499*l.*, and the gross exports amounted to 3,542,513*l.* ; and when, in 1874, we come to add about half-a-million extra from the Palmer Gold Field to the ordinary yearly percentage of increase in exports, the position of our colony in this branch of her statistical annals is still more favourably illustrated.

Commercial panics and fluctuations of trade must all fall lightly upon a community with such a *vital vigorous producing power*. There terrors are reserved for those countries were there is more paper money than production floating about, and where the imports exceed the weekly item of exports. In four years, as we quoted, viz., 1867–70, while the population only increased 15 per cent., the exports grew by 25 per cent. It was then that we began to take our place in the foremost rank of the producers in the world, a position which, thanks to the discovery of the tin mines and the Palmer Gold Field, we still continue to maintain.

Natural History of Queensland.

In this department, Queensland, though strictly Australian in nearly every type, yet differs somewhat from her southern sisters. It is not our province here to enlarge fully on the field which Krefft, Diggles, Gould, Coxen, and others have made their valued researches in ; but we will endeavour merely to touch on those points where Queensland varies from the other colonies.

The alligator (so called), 25 feet long, 3 tons in weight, and with holes in the upper jaw, through which the two great teeth of the lower jaw protrude (and form a fatal "clench" indeed), is abundant in the Burdekin and other northern streams. This reptile is a speciality of Queensland. Its sight is not keen, but its hearing is very acute, and so it exaggerates all noise, and it is, consequently, easily terrified by splashing or shouting, &c.

The rifle bird of Cape York, with its black purple velvet plumage, and gold-green markings, is the handsomest bird of its class in Australia. The golden oriole of Queensland is far more beautiful than the duller plumaged ones of Manilla and China are; and although we have no parrots that can vie with the

immense and multi-coloured macaws of Guiana, and no bird of any class, perhaps, that could compete for beauty with the *calurus resplendens* of Guatemala, or the Impeyan pheasant, still our small ground parrot and some of our doves and cockatoos are very elegant. We are unable to state whether our wide-winged eagle is identical with the species which carries off lambs on the Lower Murray ; but we have some formidable owls, a cassowary, and a tiger-cat of fair size. Our snakes differ little from those down south ; and the death-adder, with its flat belly, triangular back, and mercifully repulsive shape, does duty for tic polonga, cobra, and rattlesnake, in Northern as in Southern Australia. Our pythons are somewhat larger than those of the south, and so are our butterflies and moths ; amongst the former the ornithoptera and papiliones are conspicuous for size and beauty. The lycœnedæ and uranidæ scarcely less so. In the quality of its fish, Queensland is behind the southern colonies. There is nothing here to approach the matchless "trumpeter" of Hobart Town in flavour, but our crabs and prawns can vie in point of size and relish with any known ones. Our inferiority in table fish simply arises from our position in latitude, which spoils fish for English palates all the world over. You cannot reasonably look for salmon, turbot, and soles in the tropics; but our snipe and wild pigeons, ducks, &c., are as good as need be wished for anywhere ; and of forest game, of the limited Australian *repertoire* in this line, we are as well off as any of our sister colonies.

In the body of the Court the exhibits are arranged in four groups, viz., "Mining," "Agricultural," "Pastoral," and "Miscellaneous" Products.

Opposite Divisions 10A and 10, the Visitor will find samples in bulk of the principal

MINING PRODUCTS, including—

Cl. **100.** **Gold.**

Large Nugget of Gold from Cawarral Diggings. Exhibited by Queensland Government.

Two other Gold Nuggets. Exhibited by Queensland Government.

18 specimens, Auriferous Quartz, Gympie Diggings. Exhibited by Queensland Government.

Gold specimens from Cloncurry Diggings. Exhibited by Queensland Government.

Auriferous Quartz from Ravenswood Diggings. Exhibited by Queensland Government.

Auriferous Quartz from Rockhampton Diggings. Exhibited by Queensland Government.

Nugget of Gold from Diggings near Bowen. Exhibited by Queensland Government.

Large collection of Auriferous Pyrites from Ravenswood. Exhibited by Queensland Government.

Copper.

Half ton Smelted Metal (ingots) from Mount Perry Mine. This mine paid in dividends last year a sum equal to two-thirds its working capital. Exhibited by Queensland Government.

Half ton Smelted Pure Metal (ingots) Peak Downs Mine. Copper to the value of more than 1,000,000*l.* sterling has been raised from this mine since it was first opened. Exhibited by Queensland Government.

One ton Smelted Pure Metal Peak Downs Mine (for sale) Exhibited by Peak Downs Company.

Copper Ore.

8 cwt. Native Copper. Cloncurry. Exhibited by Captain Henry; Great Australian Mining Company.

Malachite, Peak Downs Mine. Exhibited by Peak Downs Mining Company.

Large slab Copper Ore, showing thickness and character of Normanby Mine; Mount Perry District. Exhibited by Normanby Mining Company.

Varieties : Copper Ore, Mount Perry Mine. Exhibited by Mount Perry Mining Company.

Varieties of Copper Ore from Warroo, 45 miles from Stanthorpe. Exhibited by Queensland Government.

Four pieces of Copper Pyrites. Exhibited by Mr. Matthew Perry.

One piece of White Metal (copper sulphuret). One piece of Green Carbonate. Exhibited by Mr. Matthew Perry.

Tin

One ingot, Pure Tin, exhibited by J. Harris. Three ingots Pure Tin, Mount Marlay Smelting Works, Stanthorpe; 1 ton Pure Tin (Ingots) smelted by Bulimba Tin Smelting Company, from Stanthorpe Tin Ore. Exhibited by Queensland Government.

One ton Pure Tin (ingots), smelted by Bulimba Tin Smelting Company. (For Sale.) Exhibited by Bulimba Smelting Company.

Complete Collection of Tin Ores and rocks from the tin mining district of Stanthorpe. Collected and arranged by Walter C. Hume, Esq. Government Commissioner for Mineral Lands, Stanthorpe. Mr. Hume's Report and Map will be found on the top of this case for reference to the specimens. Exhibited by W. C. Hume, Esq.

Three half cwt. samples of Stream Tin, each coarse, middling and fine, from Stanthorpe District. Exhibited by Mount Marlay and Brisbane Tin Mining Company.

Wash dirt (rich), and Conglomerate, 1 cwt. Exhibited by Mount Marlay and Brisbane Tin Mining Company.

Twenty-four bottles, Tin Ore, each corresponding to number on Map of tin selections, prepared by J. De Fore Tyrell, Esq. Exhibited by J. De Fore Tyrell, Esq.

Thirty-six bottles of Tin Ore, Powder and Assay, 12 varieties from Stanthorpe District. Exhibited by J. De Fore Tyrell, Esq.

Trophy of Tin Ore, indications, &c. Exhibited by D. Aplin, Esq.

Glass case of Stratified Alluvium in which Tin Ore is found. Exhibited by Brisbane Tin Mining Company.

Cl. **101.** **Iron Ore.**

Chrome Iron Ore, from large lode, near Ipswich. Exhibited by Proprietors of Mine.

Chrome Iron, 1 cwt. Exhibited by Mr. Alfred Foote.

Iron Ore, Flagstone Creek, near Ipswich; contains 52 per cent. Metallic Iron. Exhibited by Proprietors of Mine.

Hæmatite from Pine Mountain, West Moreton District; contains 45 per cent. Metallic Iron. Exhibited by Proprietors of Mine. N.B.—Iron Ore of all kinds, and in unlimited quantity, occurs in all parts of Queensland, in greatest abundance in the older Coal Measures.

Bag of Iron Sand from Stanthorpe, as separated from Tin in last cleaning process.

Antimony Ore.

Block of Antimony Ore, from lode on St. John's Creek, in the Burnett Districts. Exhibited by Proprietors of Mine. N.B.—Lithographed copies of the Report of Carl Staiger, Esq., Government Geologist, are placed for reference near this specimen.

2 cwt. of Antimony Ore from St. John's Creek. Exhibited by A. C. Gregory.

Half ton Star Regulus of Antimony, prepared from Ore from St. John's Creek. Exhibited by A. C. Gregory.

Mercury Ores.

Cinnabar. From Kilkivan, about 50 miles from Maryborough. Exhibited by Proprietors of Mine.

Bismuth Ores. Cl. **101.**

Samples of Native Bismuth and Carbonate of Bismuth from the Cloncurry Mining District. Exhibited by Queensland Government.

Manganese Ore.

Samples of Manganese Ore from near Gladstone; contains 77 per cent. of Per Oxide of Manganese. Exhibited by Queensland Government.

Plumbago.

1 cwt. Plumbago, from mine opened in Stanthorpe District. Exhibited by Proprietors of Mine.

Kaolin and Fire bricks, as used in the smelting works of the Mount Marlay Company, near Stanthorpe, obtained in that district. Exhibited by Mount Marlay Company.

Building Stone.

From Brisbane and Warwick. Exhibited by Queensland Government.

Coal.

Sample of Coal from Aberdare Mine, which is situated five miles from Ipswich. Exhibited by Proprietors of Mine.

Sample of Coal from Tivoli Mine, situated two miles from Ipswich. Exhibited by Proprietors of Mine.

Sample of Coal from Allora Mine, situated about 1 mile west of Allora. Exhibited by Proprietors of Mine.

Sample of Coal from Flagstone Creek Mine. Exhibited by Proprietors of Mine.

Sample of Coal from Rosewood Mine. Exhibited by Proprietors of Mine.

Sample of Coal from Blackfellows Creek, near Gatton. Exhibited by Proprietors of Mine.

Sample of Coal from Bingera Mine. Exhibited by Proprietors of Mine.

1 Block Coal. Exhibited by Bland and Wright, Perseverance Mine, Ipswich.

Samples of Coal from Ipswich; three Collections, Coke prepared from same, with collection of Fossils. Exhibited by Queensland Government.

Samples of Coal, Fossils, Kaolin, and Glass Case, showing strata passed through at the Clifton Coal Mine. Exhibited by Proprietors of Mine.

1 block of Coal from Warwick. Exhibited by Queensland Government.

Precious Stones.

100 specimens of Opals from the Barcoo. Exhibited by Mr. Bishop.

Specimens of Calcedony, Agate, from Agate Creek, Gilbert River. Exhibited by Queensland Government.

Polished specimens of Serpentine, from near Marlboro, Queensland. Exhibited by Queensland Government.

Opposite Divisions 11 and 12 are ranged exhibits in bulk of

AGRICULTURAL PRODUCTS, including—

. 659. Sugar.

1 bag of Sugar. Density of liquor—9° to 10° Baume. Price crop—26*s.* to 27*s.* per cwt. Soil—Medium Clay Loam. Exbited by H. G. Grimes.

1 bag of Sugar, Gairlock Plantation, Albert River. Prerred in open battery, Wetzel Pan, from Salangore Cane, 15 onths old. Exhibited by McKenzie.

1 bag of Sugar, Herbert River. Exhibited by F. Neame Co.

1 bag of Sugar, Clydesdale. Prepared in open flat pans, ade by R. R. Smellie, Wetzel Pan, from Chicago cane, 10 onths old; 20 tons of cane per acre, yield 30 cwt. of sugar r acre; black soil, sandy subsoil, well drained. Exhibited by illiam Gibson and Sons.

2 bags of Sugar, Loganholm, Logan River. Exhibited by ryar and Strachan.

1 bag of Sugar, Moyea. Exhibited by J. M. Black.

1 bag of Sugar, Loganholm, Logan River. Exhibited by ryar and Strachan.

1 bag of Sugar, Alexandra Plantation, Mackay. Made from lack Java Cane, 15 months old. 8½ measured acres yielded tons 2 cwt. 2 qrs. dry sugar net, and 48 gallons of molasses er acre. Exhibited by J. E. Davidson.

1 bag of Sugar, Helenfield, Tingalpa. Exhibited by Johnson, rothers.

1 bag of Sugar, Ageston Plantation. Exhibited by W. H. auldery.

1 bag of Sugar, Antigua, Maryborough. Exhibited by A. H. rown.

2 bags of Sugar, Beenleigh. Exhibited by Davey and oody.

1 bag of Sugar, Benowa. Prepared in common pan, direct rom battery (no steam boiler, made from one year old Ribbon ane "Ratoons.") Exhibited by Robert Muir.

1 bag of Sugar, Government Penal Establishment. Exhibited y John McDonald.

1 bag of Sugar, Yengarie. Exhibited by Tooth and Cran.

Spirits distilled from Queensland Sugar and Molasses. Cl. **660.**

1 keg of Rum, Ageston. Exhibited by W. H. Couldery.

1 keg of Rum, Iindah. Exhibited by Ramsey Brothers.

1 keg of Rum, Caboolture. Exhibited by G. Raff.

1 keg of White Spirit, Ageston. Exhibited by W. H. Couldery.

1 keg of White Spirit, Iindah. Exhibited by Ramsey Brothers.

Wine.

12 bottles of Red Wine. Locality—Assmanshausen, Sandy Creek, Agricultural Reserve, Warwick. Date of vintage—1873. Name of grape—Black Spanish. Name of wine—Assmanshausen. Colour—Red. Character—Light-bodied wine, pure juice of the grape. Age of vine—10 years or less. Nature of soil—Gravelly loam, greyish colour, 10 acres cultivated. How cultivated—Land subsoiled and trenched yearly, 1 foot deep. How trained—Trained to stakes and wires.

12 bottles White Wine. Locality—Assmanshausen, Sandy Creek, Agricultural Reserve, Warwick. Date of Vintage—1873. Name of Grape—White Verdillo. Name of Wine—White Assmanshausen. Colour—White. Character of Wine—Light-bodied wine, pure juice of grape. Age of Vines—10 years and less. Nature of Soil—Gravelly loam, greyish colour, 10 acres cultivated. How cultivated—Land subsoiled and trenched yearly, 1 foot deep. Vines, how trained—Trained to stakes and wires. Exhibited by Kircher.

12 bottles of White Wine. Location—Silverburg, Agricultural Reserve, Swan Creek, Warwick. Date of Vintage—1873. Name of Grape—White Reisling. Name of Wine—White Silverburg. Colour—White. Character of Wine—Light-bodied wine, pure juice of the grape. Age of Vines—Six years. Nature of soil—Brown loam, 9 acres under cultivation. How cultivated—Land subsoiled, and trenched yearly. Vines, how trained—Trained to stakes. Exhibited by David Mauch.

12 bottles of White Wine. Location—Warrill Creek, Ipswich. Date of Vintage—1874, February 15th. Name of Grape—Verdeilho. Name of Wine—Warrilla. Colour—Golden Yellow. Character of wine—Liqueur. Age of Vines—3 years. Nature of soil—The soil is a shallow alluvial, resting upon a subsoil of argillaceous clay, the whole being thoroughly drained to a depth of from 4 to 5 feet. The aspect is southerly and the area under cultivation is 13 acres. How cultivated—The cultivation is mainly with horse labour, the implements used being the "Georgia Bull Tongue," and a "Cultivator" to stir the ground to a shallow depth. The soil more immediate to the vines and underneath the trellising being well dug with forks. Vines, how trained—The vines are planted 6 by 5 feet, and are trained to a 3-wire trellis. Exhibited by Irwin, Brothers.

Flour and Wheat Meal. Cl. **657.**

1 bag of flour, 56 lbs. Allora. Exhibited by Mr. F. Keates.

1 bag of Wheat Meal, 56 lbs. Allora. Exhibited by Mr. F. Keates.

Arrowroot. Cl. **658.**

1 case of Arrowroot. Exhibited by F. Lahey.

1 case of Arrowroot. Exhibited by G. O. S. Grimes.

1 case of Arrowroot. Exhibited by Lane.

1 tin of Arrowroot. Exhibited by W. Marks.

1 tin of Arrowroot Biscuit. Exhibited by Brokleman.

Cl. 623. **Tobacco.**

2 boxes of Tobacco. Exhibited by J. H. Hocker.

1 box of Cigars. Exhibited by J. H. Hocker.

1 small box of Cigarettes. Exhibited by J. H. Hocker.

7 varieties of Tobacco Leaf. Exhibited by J. H. Hocker.

Cl. 668. **Silk.**

1 sample of Silk (Raw Silk in Skein). Ipswich. Exhibited by C. F. Chubb.

1 sample of Silk (reeled in form of Tram and organised for weaving). Exhibited by C. F. Chubb.

1 sample of Silk (sample of manufacture, in form Scarf) Exhibited by C. F. Chubb.

Samples of Silk (cocoons and Japanese Varieties). Ipswich. Exhibited by Mrs. Hine.

Samples of Silk and Cocoons. The Penal Establishment. Exhibited by John McDonald.

Coffee. Cl. 623.

1 packet of Coffee Beans. Exhibited by F. E. Chubb.

Coffee Leaves dried as Tea. Redbank. Exhibited by W. R. Alexander.

Candied Fruits, &c. Cl. 656.

1 case of Candied Ginger. Exhibited by W. H. Hayes.

1 case of Candied Orange Peel. Exhibited by W. H. Hayes.

1 case of Candied Lemon Peel. Exhibited by W. H. Hayes.

1 case of Candied Pine Apple. Exhibited by W. H. Hayes.

1 case of Candied Rock Melon. Exhibited by W. H. Hayes.

1 case of Candied Citron. Exhibited by W. H. Hayes.

6 bottles of Chutney. Stanley's, South Brisbane. Exhibited by J. H. Borcham.

6 bottles of Tomato Sauce; 12 varieties of Chili Pepper; Rosella and other Jams. Exhibited by Mr. MacFarlane.

Opposite Divisions XIII. and XIV. are arranged the bulky Exhibits of

Cl. 667. PASTORAL PRODUCTS, including—

2 Fleeces *Clothing* Wool, from Ewes bred by Mr. Bertie le Parr Chiverton, lat. 28° 12′ S.; long. 152° 16′ E. Fed solely in paddocks on indigenous grasses. Eleven months' growth, shown in the grease.

Pure Australian Merino fleece. Exhibited by Bertie le Parr Chiverton.

1 Fleece *Clothing* Wool, washed, grown by Mr. Donald Gunn, of Pikedale, lat. 28° 43′ S.; long. 151° 38′ E. Flocks originally from Negretti. Fed in paddocks on indigenous grasses only. Geological formation, trap and slate. One of the most healthy sheep-runs in Queensland. The maximum price per lb. was forty-one and a half pence (3*s*. 5½*d*.) and the general average thirty-three and a half pence (2*s*. 9½*d*.) at last London sales, 1874. Exhibited by Donald Gunn.

1 Ram's Fleece *Clothing* Wool, grown by Mr. Donald Gunn, Pikedale. Shown in the grease from a three years' old ram; weight of fleece, 12½ lbs. Exhibited by Donald Gunn.

1 Ewe's Fleece *Combing* Wool, grown by Messrs. Gore & Co., Yandilla. Lat. 27° 50′ S.; long. 131° 35′ E. Sheep bred within their own blood for 21 years; fed in paddocks entirely on indigenous grasses; shown in the grease. Soil principally black volcanic. Exhibited by Gore & Co.

1 Young Ram's Fleece fine Combing Wool, grown by George Clark, Esq., East Talgai, lat. 27° 38′ S.; long. 151° 59′ E. Finest combing wool grown in Queensland. Sheep improved by Tasmanian merinos, bred pure for more than 50 years Shown in the grease. Exhibited by George Clark.

4 Fleeces pure Merino *Clothing*, 320 days' growth. Bred by C. H. Green, Esq., Goomburra, Darling Downs, lat. 28° 5′ S.; long. 152° 10′ E. Fed solely in paddocks of indigenous grasses. Shown in the grease. Exhibited by C. H. Green.

3 Ram's Fleeces, pure Australian *Clothing* Merino in the grease; bred by B. C. Parr, Esq., 11 months' growth. Exhibited by B. C. Parr.

1 Fleece from pure *Clothing* Merino, bred by Messrs. Marshall and Slade, Glengallan, lat. 28° 5′ S.; long. 152° 20′ E. From ram "Sultan," for two years champion clothing ram at the Agricultural Society's Show, Toowoomba (1874-5); eight years old; weight of fleece, 11¼ lbs. in the grease, with samples kept back for station. Exhibited by Marshall and Slade.

1 Fleece, pure *Clothing* Merino, from the ewe "Empress." Bred by Marshall and Slade. Weight in the grease, 9 lbs., with samples kept back. This ewe was champion at the Royal Agricultural Company's Exhibition in 1874. The brand of this clip, M. and D., has been long favourably known in the London market. Exhibited by Marshall and Slade.

1 Fleece, *Clothing* Wool, from ram bred by the North British Australian Investment Company (L. E. Lester, Manager), Rosenthal, lat. 28° 12′; long. 152° E. Flocks originally from Saxon merino; weight of fleece in grease, 12 lbs. at 11 months' growth. Exhibited by L. E. Lester.

1 Ewe Fleece *Clothing*, from a ewe belonging to same breeders; weight in grease at 10 months' growth, 8 lbs. 10 oz. Exhibited by L. E. Lester.

1 Ewe Fleece *Clothing*; same breeders; weight in grease, 6 lbs. 8 oz. Exhibited by L. E. Lester.

1 bale washed Wool, from Westbrook Station; grown by Messrs. Jennings and Shanahan, lat. 27° 40′ S.; long. 151° 24′ E. Pure Australian merino. Exhibited by Jennings and Shanahan.

3 Fleeces pure Merino *Combing* Wool, from two years old. Rams bred by C. B. Fisher, Esq., Headington Hill, lat. 27° 51′ S.;

. 151° 49′ E. This clip has been bred in Adelaide 40 years nd into their own blood, and have been acclimatised in eensland for seven years. The clip was pronounced by the lford Chamber of Commerce the most essentially combing no wool received in that market. Exhibited by C. B. Fisher.

Bale Washed Wool; Messrs. Shanahan and Jennings. Exhibited by Shanahan and Jennings.

Large Wardrobe with three fleeces wool from G. H. Davenport, Headington Hill. Darling Downs. Exhibited by G. H. Davenport.

SAMPLE CASE containing the following DESCRIPTIONS of WOOL.

No.	Description.	Condition.	Breed of Sheep.
1	Fine clothing - -	Cold Water Washed -	Pure Australian Merino.
2	Combing - - -	In the Grease - -	Leicester cum Merino, from a two-year old, the offspring of a pure Leicester Ram, and a pure Merino Ewe.
3	Fine Clothing - -	Cold Water Washed -	Pure Australian Merino.
4 to 12	Fine Combing - -	In the Grease - -	Ditto.
13 to 31	Fine Clothing - -	Ditto - -	Sheep descended from pure Saxony Merino.
32	Very fine Clothing -	Cold Water Washed -	Pure Australian Merino.
33 to 46	Fine Clothing - -	In the Grease, Lambs -	Same as 13 to 31.
47 to 49	Ditto - -	Ditto - -	Ditto.
50 to 52	Ditto - -	Ditto, Ewes - -	Ditto.

The exhibitors Messrs. Fenwick and Scott give the following ormation :—

Sheep in Queensland, 31st December 1874, 6,000,000 sheep thing wool produced, 15,000,000 lbs., washed; or say, 30,000,000 in Grease. $1\frac{1}{4}$,000,000 sheep; combing wool produced $3\frac{3}{4}$,000,000 lbs. washed, or say, $7\frac{1}{2}$,000,000 in grease. Total, $7\frac{1}{4}$,000,000 sheep, producing $37\frac{1}{2}$,000,000 lbs. wool in grease.

(Opposite Divisions XV., XVI., XVII., XVIII. are arranged exhibits of a

Miscellaneous character.

First in importance are the two collections, one in the rough the other polished, of

Timbers.

The first consists of 206 Slabs of the the most useful Queensnd timbers, 3 ft. long by 6 in. square with bark on.

(Ornamental Inlaid Table Top to illustrate the same.

About 2 cwt. squared Timber, 2 ft. long, from Warwick District.

Ornamental Inlaid Table to illustrate the same.

Timber from Lower Herbert, Daintree River Cedar, and Endeavour Gum.

A full description of these is attached to the specimens, and will be inserted in the second edition of this atalogue.

They have been collected and described by Walter Hill, Esq., the Director of the Government Botanical ardens, Brisbane.

The second collection of polished woods was also arranged by Walter Hill, Esq.; they were, however, when the rough subjected to long immersion in sea water, owing to the wreck of the ship in which they were eing conveyed to England, and on that account hardly do justice to their value to the cabinet maker.

Their description is as follows:

THE TIMBERS OF QUEENSLAND.

1. 600, 601. Coniferæ.

1. ARAUCARIA BIDWILLII, HOOK. *Bunya Bunya.* Diameter, 30 to 48 ins.; height, 100 to 220 ft.

1A. DITTO.

1B. DITTO.

2. ARAUCARIA CUNNINGHAMII, Ait. *Moreton Bay Pine.* Diameter, 36 to 66 inches; height, 150 to 200 ft.

2A. DITTO.

3. DAMMARA ROBUSTA, Moore. *Kawrie or Dundathu Pine.* Diameter, 36 to 72 in.; height, 80 to 130 ft.

4. CALLITRIS COLUMELLARIS, F. Muell. *Cypress Pine.* Diameter, 20 to 30 in.; height, 40 to 60 ft.

5. Callitris verrucosa, R. Br. *The Desert Cypress Pine.* Diameter, 12 to 24 in.; height, 50 to 70 ft.

6. Callitris Endlicheri, Parl. *The Mountain Cypress Pine.* Diameter, 9 to 18 in.; height, 40 to 50 ft.

7. Podocarpus elatus, R. Br. *She Pine.* Diameter, 20 to 36 in.; height, 50 to 80 ft.

Amentaceæ.

8. Casuarina tenuissima, Sieb. *River Oak.* Diameter, 18 to 22 in.; height, 40 to 70 ft.

9. Casuarina leptoclada, Miq. *The Erect She Oak.* Diameter, 9 to 15 in.; height, 20 to 30 feet.

10. Casuarina equisetifolia, Forst. *Swamp Oak.* Diameter, 12 to 20 in.; height, 50 to 70 ft.

11. Casuarina torulosa, Ait. *Forest Oak,* Beefwood. Diameter, 9 to 15 in.; height, 30 to 35 ft.

11a. Ditto.

12. Casuarina Cunninghamiana, Miq. *Fire Oak.* Diameter, 6 to 10 in.; height, 20 to 30 ft.

12a. Ditto.

Meliaceæ.

13. Cedrela Toona, Roxb. *Red Cedar.* Diameter, 24 to 76 in.; height, 100 to 150 ft.

13a. Ditto.

13b. Ditto.

14. Flindersia Australis, R. Br. *Flindosa.* Diameter, 36 to 48 in.; height, 80 to 100 ft.

15. Flindersia Oxleyana, F. Muell. *Light-Yellow Wood.* Diameter, 24 to 42 in.; height, 80 to 100 ft.

16. Flindersia Bennettiana, F. Muell. *Bogum Bogum.* Diameter, 18 to 26 in.; height, 70 to 90 ft.

16a. Ditto.

17. Flindersia maculosa, F. Muell. *Spotted Tree of the Colonists.* Diameter, 12 to 18 in.; height, 30 to 40 ft.

18. Owenia venosa, F. Muell. *Sour Plum.* Diameter, 12 to 24 in.; height, 40 to 65 ft.

19. Owenia cerasifera, F. Muell. *Sweet Plum.* Diameter 9 to 18 in.; height, 25 to 35 ft.

20. Amoora nitidula, Benth. Diameter, 18 to 30 in.; height, 70 to 90 ft.

20a. Ditto.

21. Synoum glandulosum, A. Juss. Diameter, 15 to 24 in.; height, 35 to 60 ft.

21a. Ditto.

22. Dysoxylon Muelleri, Benth. *Pencil Cedar.* Diameter, 20 to 35 in.; height, 70 to 90 ft.

22a. Ditto.

22b. Ditto.

23. Melia composita, Willd. Diameter, 15 to 20 in.; height, 50 to 60 ft.

23a. Ditto.

Simarubeæ.

24. Ailanthus imberbiflora, F. Muell. Diameter, 20 to 28 in.; height, 50 to 70 ft.

24a. Ditto.

Rutaceæ.

25. Bosistoa sapindiformis, F. Muell. Diameter, 6 to 12 in.; height, 15 to 20 ft.

25a. Ditto.

26. Citrus australis, Planch. *Native Orange.* Diameter, 6 to 14 in.

27. Citrus australasica, F. Muell. *Native Lime.* Diameter, 6 to 10 in.; height, 15 to 20 ft.

27a. Ditto.

28. Atalantia glauca, Hook. *The Native Cumquat.* Diameter, 2 to 6 in.; height, 8 to 15 ft.

29. Acronychia Baueri, Schott. Diameter, 6 to 12 in.; height, 16 to 24 ft.

30. Acronychia lævis, Forst. Diameter, 15 to 20 in.; height, 30 to 50 ft.

31. Zanthoxylon brachyacanthum, F. Muell. *Satin Wood.* Diameter, 6 to 9 in.; height, 20 to 30 ft.

32. Geijera parviflora, Lindl. Diameter, 6 to 12 in.; height, 20 to 30 ft.

33. Geijera Muelleri, Benth. *Balsam Capivi Tree.* Diameter, 12 to 18 in.; height, 40 to 60 ft.

34. Evodia micrococca, F. Muell. Diameter, 6 to 10 in.; height, 20 to 30 ft.

Celastrineæ.

35. Celastrus dispermus, F. Muell. Diameter, 3 to 5 in.; height, 12 to 16 ft.

35a. Ditto.

36. Denhamia pittosporoides, F. Muell. Diameter, 6 to 8 in.; height, 20 to 30 ft.

37. Denhamia obscura, Meisn. Diameter, 3 to 5 in.; height, 12 to 20 ft.

Rhamneæ.

38. Alphitonia excelsa, Reissek. *Mountain or Red Ash.* Diameter, 18 to 24 in.; height, 45 to 60 ft.

Pittosporeæ.

39. Pittosporum rhombifolium, A. Cunn. Diameter, 6 to 12 inches; height, 40 to 55 feet.

40. Pittosporum bicolor, Hook. Diameter, 6 to 21 inches; height, 20 to 40 feet.

41. Pittosporum phillyræoides, D.C. Diameter, 4 to 6 inches; height, 20 to 35 feet.

Sterculiaceæ.

42. Tarrietia argyrodendron, Benth. *Silver Tree.* Diameter, 24 to 34 inches; height, 70 to 90 feet.

43. Tarrietia actinodendron, F. Muell. Diameter, 18 to 30 inches; height, 60 to 70 feet.

44. Commersonia echinata, Forst. Diameter, 6 to 12 inches; height, 20 to 30 feet.

Sapindaceæ.

. Cupania xylocarpa, A. Cunn. Diameter, 12 to 24 ...s; height, 40 to 60 feet.

. Cupania serrata, F. Muell. Diameter, 8 to 14 inches; ...t, 20 to 30 feet.

. Diploglottis Cunninghamii, Hook. *Native Tamarind.* ...eter, 12 to 20 inches; height, 40 to 55 feet.

. Cupania semiglauca, F. Muell. Diameter, 10 to 20 ...s; height, 30 to 60 feet.

.. Ratonia pyriformis. Benth. Diameter, 10 to 18 in...; height, 30 to 45 feet.

.. Nephelium tomentosum, F. Muell. Diameter, 10 to ...ches; height, 30 to 40 feet.

.. Heterodendron oleæfolium, Desf. Diameter, 4 to ...ches; height, 20 to 30 feet.

.. Heterodendron diversifolium, F. Muell. Diameter, ...6 inches; height, 10 to 15 feet.

.. Harpullia pendula, Planch. *Tulip Wood.* Diameter, ...24 inches; height, 50 to 60 feet.

.. Dodonæa triquetra, Andr. *Hop Bush.* Diameter, ...4 inches; height, 10 to 12 feet.

Anacardiaceæ.

.. Rhus rhodanthema, F. Muell. *Dark Yellow Wood, K.* ...meter, 18 to 24 inches; height, 50 to 70 feet.

Rubiaceæ.

.. Sarcocephalus cordatus, Miq. *Leichhardt's Tree.* ...meter, 24 to 30 in.; height, 40 to 60 ft.

.. Ixora Pavetta Roxb. Diameter, 2 to 4 in.; height, ... 10 ft.

.. Hodgkinsonia ovatiflora, F. Muell. Diameter, 6 to ...n.; height, 12 to 20 ft.

.. Canthium lucidum, Hook. and Arm. Diameter, 6 to ...n.; height, 20 to 30 ft.

...a. Ditto.

.. Canthium oleifolium, Hook. Diameter, 4 to 10 in.; ...ght, 25 to 30 ft.

.. Canthium Latifolium, F. Muell. Diameter, 8 to 12 in.; ...ght, 25 to 30 ft.

.. Canthium vaccinifolium, F. Muell. Diameter, 2 to ...; height, 6 to 10 ft.

...a. Ditto.

.. Cœlospermum paniculatum, F. Muell. Diameter, 3 to ...; height, 100 to 150 feet.

Myrtaceæ.

.. Callistemon lanceolatus, D. C. *Bottle-brush Tree.* ...meter, 12 to 18 in.; height, 30 to 40 ft.

.. Callistemon salignus, D. C. *Broad-leaved Tea Tree.* ...meter, 18 to 24 in.; height, 40 to 60 ft.

.. Melaleuca linariifolia, Sm. Diameter, 20 to 24 in.; ...ght, 30 to 40 ft.

.. Melaleuca nodosa, Sm. *Tea Tree.* Diameter, 10 to ... in.; height, 30 to 40 ft.

68. Angophora subvelutina, F. Muell. *Apple Tree.* Diameter, 20 to 26 in.; height, 40 to 60 ft.

69. Eucalyptus pilularis, Sm. *Black-butt.* Diameter 24 to 40 in.; height, 60 to 80 ft.

70. Eucalyptus microcorys, F. Muell. Diameter, 18 to 30 in.; height, 60 to 80 ft.

71. Eucalyptus hemiphloia, F. Muell. *Yellow Box.* Diameter, 20 to 30 in.; height, 40 to 60 ft.

71a. Ditto.

72. Eucalyptus siderophloia, Benth. *Ironbark.* Diameter, 20 to 30 in.; height, 60 to 80 ft.

73. Eucalyptus melanophloia, F. Muell. *Silver-leaved Ironbark.* Diameter, 18 to 20 in.; height, 30 to 60 ft.

74. Eucalyptus maculata, Hook. *Spotted Gum.* Diameter, 20 to 30 in.; height, 60 to 80 ft.

74a. Ditto.

75. Eucalyptus saligna, Sm. *Grey Gum.* Diameter, 24 to 34 in.; height, 60 to 80 ft.

76. Eucalyptus Resinifera, Sm. *Red Mahogany.* Diameter, 20 to 30 in.; height, 60 to 70 ft.

76a. Ditto.

77. Eucalyptus corymbosa, Sm. *Bloodwood.* Diameter, 24 to 30 in.; height, 50 to 60 ft.

77a. Ditto.

78. Eucalyptus globulus, Sm. *Blue Gum.* Diameter, 30 to 48 in.; height, 70 to 90 ft.

79. Eucalyptus tereticornis, Sm. *Red Gum.* Diameter, 18 to 30 in.; height, 60 to 80 ft.

80. Eucalyptus Stuartiana. F. Muell. *Turpentine Tree.* Diameter, 24 to 36 in.; height, 60 to 80 ft.

81. Eucalyptus fibrosa, F. Muell. *Stringy Bark.* Diameter, 18 to 24 in.; height, 40 to 60 ft.

82. Eucalyptus tesselaris, F. Muell. *Moreton Bay Ash.* Diameter, 14 to 24 in.; height, 30 to 60 ft.

83. Myrtus acmenioides, F. Muell. Diameter, 12 to 18 in.; height, 30 to 40 ft.

83a. Ditto.

84. Eugenia Smithii, Poir. *Lilly Pillies.* Diameter, 12 to 18 in.; height, 30 to 40 ft.

85. Myrtus Hillii, Benth. *Scrub Ironwood.* Diameter, 6 to 12 in.; height, 20 to 40 ft.

86. Rhodamnia trinervia, Blum. Diameter, 10 to 18 in.; height, 20 to 30 ft.

87. Rhodomyrtus psidioides, Benth. Diameter, 12 to 20 in.; height, 30 to 40 ft.

88. Rhodamnia argentea, Benth. Diameter, 15 to 22 in.; height, 40 to 60 ft.

89. Tristania conferta, R. Br. *Box.* Diameter, 36 to 50 in.; height, 80 to 100 ft.

Proteaceæ.

90. Grevillea robusta. Cunn. *Silky Oak.* Diameter, 30 to 40 in.; height, 80 to 100 ft.

91. Macadamia ternifolia, F. Muell. *Queensland Nut.* Diameter, 30 to 40 in.; height, 30 to 50 ft.

92. Orites excelsa, R. Br. Diameter, 6 to 14 in.; height, 30 to 60 ft.

92. Ditto.

92. Banksia integrifolia, Linn. *Beef Wood.* Diameter, 8 to 12 in.; height, 20 to 30 ft.

94. Persoonia lucida, R. Br. Var. latifolia, A. Cunn. Diameter, 3 to 7 in.; height, 10 to 20 ft.

95. Grevillea Hilliana, F. Muell. Diameter 10 to 18 in.; height, 40 to 60 ft.

Thymeleæ.

96. Exocarpus latifolia, R. Br. *Broad-leaved Cherry Tree.* Diameter, 6 to 9 in,; height, 12 to 25 ft.

97. Exocarpus cupressiformis, R. Br. *Cherry Tree.* Diameter, 4 to 8 in.; height, 10 to 16 ft.

Santalaceæ.

98. Santalum lanceolatum, R. Br. *Sandal Wood.* Diameter, 3 to 6 in.; height, 15 to 25 ft.

98a. Ditto.

Myoporineæ.

99. Eremophila Mitchelli, Benth. *Bastard Sandal Wood.* Diameter, 6 to 12 in.; height, 20 to 30 ft.

100. Myoporum acuminatum, R. Br. var. parviflorum, Benth. Diameter, 4 to 6 in.; height, 12 to 15 ft.

Verbenaceæ.

101. Avicennia officinalis, Linn. *Mangrove.* Diameter, 19 to 20 in.; height, 20 to 30 ft.

102. Gmelina Leichhardtii F. Muell. *Beech.* Diameter, 24 to 36 in.; height, 80 to 100 ft.

103. Vitex lignum-vitæ, A. Cunn. *Scrub Lignum Vitæ* Diameter, 20 to 24 in.; height, 50 to 70 ft.

103a. Ditto.

Tiliaceæ.

104. Elæocarpus obovatus, G. Don. Diameter, 12 to 20 in.; height, 30 to 40 ft.

Leguminosæ.

105. Acacia falcata, Willd. Diameter, 6 to 12 in.; height, 20 to 30 ft.

106. Acacia glaucescens, Willd. Diameter, 12 to 18 in. height, 30 to 35 ft.

107. Same as 8 in a younger stage.

108. Acacia fasciculifera, F. Muell. Diameter, 10 to 16 in.; height, 30 to 40 ft.

109. Acacia salicina, Lindl. Diameter, 6 to 12 in.; height, 30 to 40 ft.

110. Acacia harpophylla, F. Muell. Diameter, 12 to 20 in.; height, 40 to 70 ft.

111. Same as 110 in a younger stage.

112. Acacia excelsa, Benth. *Brigalow.* Diameter, 20 to 30 in.; height, 50 to 80 ft.

113. Acacia neriifolia, A. Cunn. Diameter, 6 to 12 in.; height, 20 to 30 ft.

114. Acacia doratoxylon, A. Cunn. Diameter, 6 to 12 in.; height, 25 to 35 ft.

114a. Ditto.

115. Acacia pendula, A. Cunn. *Weeping Myall.* Diameter 6 to 12 in.; height, 20 to 35 ft.

116. Acacia stenophylla, A. Cunn. *Ironwood.* Diameter 15 to 24 in.; height, 40 to 60 ft.

116a. Ditto.

117. Acacia leptostachya, Benth. Diameter, 4 to 10 in. height, 20 to 25 ft.

118. Acacia uncifera, Benth. Diameter, 3 to 5 in. height, 6 to 10 ft.

119. Acacia decurrens, Willd. *Green Wattle.* Diameter 3 to 8 in.; height, 30 to 40 ft.

119a. Ditto.

120. Acacia amblygona, A. Cunn. Diameter, 6 to 10 in. height, 20 to 25 ft.

121. Acacia decurrens, Willd. var. mollis, Lindl. *Silver Wattle.* Diameter, 6 to 10 in.; height, 30 to 40 ft.

122. Albizzia thozetiana, F. Muell. Diameter, 12 to 3 in.; height, 40 to 60 ft.

123. Acacia linifolia, Willd. Diameter, 3 to 4 in.; height 10 to 15 ft.

124. Acacia penninervis, Sieb. Diameter, 2 to 4 in. height, 6 to 12 ft.

124a. Ditto.

125. Pithecolobium pruinosum, Benth. Diameter, 5 to in.; height, 40 to 50 ft.

126. Hovea acutifolia, A. Cunn. Diameter, 2 to 4 in height, 6 to 10 ft.

127. Barklya syringifolia, F. Muell. Diameter, 12 to in.; height, 40 to 60 ft.

128. Cassia Brewsteri, F. Muell. Diameter, 3 to 6 in height, 30 to 50 ft.

129. Jacksonia scoparia, R. Br. *Dogwood.* Diameter 3 to 8 in.; height, 10 to 15 ft.

Cornaceæ.

130. Marlea vitiensis, Benth. *Musk Tree.* Diameter 6 to 12 in.; height, 20 to 30 ft.

130a. Ditto.

Jasmineæ.

131. Olea paniculata, R. Br. *Native Olive.* Diameter 18 to 24 in.; height, 50 to 70 ft.

132. Notelæa ovata, R. Br. *Dunga Vunga.* Diameter 6 to 12 in.; height, 20 to 30 ft.

133. Notelæa microcarpa, R. Br. Diameter, 9 to 12 i height, 30 to 45 ft.

Laurineæ.

.. ENDIANDRA PUBENS, Meissn. Diameter, 18 to 24 in.; , 40 to 70 ft.

.. TETRANTHERA FERRUGINEA, R. Br. Diameter, 14 to ; height, 30 to 40 ft.

.. LITSÆA DEALBATA, Nees. Diameter, 18 to 24 in.; , 40 to 60 ft.

A. DITTO.

7. CRYPTOCARYA PATENTINERVIS, F. Muell. Diameter, 20 in.; height, 30 to 40 ft.

A. DITTO.

Ebenaceæ.

.. CARGILLIA AUSTRALIS, R. Br. Diameter, 6 to 12 in.; t, 30 to 40 ft.

Euphorbiaceæ.

). MALLOTUS PHILIPPINENSIS, F. Muell. Diameter, 6 to ; height, 30 to 45 ft.

). MALLOTUS NESOPHILUS, F. Muell. Diameter, 12 to ; height, 35 to 45 feet.

1. CROTON INSULARIS, Baill. *Cascarilla.* Diameter, 12 in.; height, 30 to 40 ft.

2. CROTON VERREAUXII, Baill. Diameter, 3 to 5 in.; t, 15 to 20 ft.

3. PETALOSTIGMA QUADRILOCULARE, F. Muell. *Crab* Diameter, 12 to 18 in.; height, 40 to 50 ft.

144. EXCÆCARIA AGALLOCHA, Linn. *River Poisonous Tree.* Diameter, 6 to 18 in.; height, 20 to 30 ft.

145. BRIDELIA EXALTATA, F. Muell. Diameter, 12 to 18 in.; height, 30 to 45 ft.

146. BRADLEIA AUSTRALIS, R. Br. Diameter, 12 to 18 in.; height, 13 to 50 ft.

Monimiaceæ.

147. DAPHNANDRA MICRANTHA, Benth. Diameter, 18 to 30 inches; height, 60 to 80 ft.

Sapotaceæ.

148. HORMOGYNE COTINIFOLIA, A. DC. Diameter, 6 to 9 inches; height, 20 to 35 ft.

149. CHRYSOPHYLLUM PRUNIFERUM, F. Muell. Diameter, 12 to 20 inches; height, 30 to 70 feet.

Urticeæ.

150. CELTIS PHILLIPPINENSIS, Blanco. Diameter, 4 to 12 in.; height, 20 to 40 ft.

151. MORUS CALCAR-GALLI, Cunn. *Cockspur Thorn.*

Saxifrageæ.

152. CERATOPETALUM APETALUM, Don. *Coachwood.* Diameter, 24 to 36 inches; height, 70 to 90 ft.

SECTIONS OF FOREST TREES.

ollected in the neighbourhood of Rockhampton, by Mr. P. A. O'SHANESY, and forwarded for exhibition.

INTRODUCTORY REMARKS.

ith the exception of two or three species, the following woods, indigenous to Rockhampton, have not erto been exhibited from that place, and are chiefly intended as an illustration of the richness of that dis- in useful and ornamental timber. In the neighbourhood of Rockhampton alone there are nearly 200 rrent species of woods available for every purpose from cabinet-work to ship-building, several of which, he eucalypti or gums, surpass all other known timber in strength and durability; and, as these con- ute the main bulk of vegetation in the open forest, the supply is inexhaustible.

Rutaceæ.

.. ACRONYCHIA IMPERFORATA, F. Muell. 10 to 15 ft. ACRONYCHIA BAUERI, Schott. 20 to 25 ft.

Rubiaceæ.

.. RANDIA DENSIFLORA, Benth. A middle-sized tree, with rregular trunk. 4s. IXORA PAVETTA, Roxburgh. 10 to . 4A. DITTO.

Burseraceæ.

. GANOPHYLLUM FALCATUM, Blume. 30 to 40 ft.

Myrtaceæ.

. EUCALYPTUS MELANOPHLOIA, F. Muell. Broad-leaved ilvery *Ironbark.* 25 to 30 ft. 7s. EUCALYPTUS CREBRA, F. Muell. Narrow-leaved *Ironbark.* An erect tree of 50 to 60 ft., often with a clear trunk of 25 to 30 ft. 8s. EUCALYPTUS POLYANTHEMOS, Schauer. Box. 40 to 50 ft. 9s. EUCALYPTUS TERETICORNIS, Sm. Gum. 80 to 100 ft. 9A. DITTO. 10s. EUCALYPTUS CORYMBOSA, Sm. Bloodwood. 11s. TRISTANIA SUAVEOLENS, Sm. Mahogany and Stringy-bark. 30 to 40 ft. 12s. EUGENIA EUCALYPTOIDES, F. Muell. 15 to 20 ft. 13s. BACKHSCIOUSIA ADOPHORA, F. Muell. 30 to 40 ft. 14s. MYRTUS ACMENIOIDES, F. Muell. Myrtle. 10 to 15 ft.

Ebenaceæ.

15s. MABA HUMILIS, F. Muell. Ebony. 10 or 15 ft. 16s. MABA FASCICULOSA, F. Muell. Ebony. 25 to 30 ft. 17s. MABA LAXIFLORA (?), Bentham. 15 or 20 ft.

Euphorbiaceæ.

18s. Mallotus tinctorius, F. Muell. 19s. Mallotus claoxyloides, J. Mull. 12 to 15 ft. 20s. Croton insularis, Baill. 25 to 30 ft. 21s. Croton acronychioides, F. Muell. 20 to 25 ft.

Loganiaceæ.

22. Strychnos psilosperma, F. Muell. Strychnine.

Celastrineæ.

23s. Celastrus dispermus, F. Muell. 15 to 20 ft. 24s. Denhamia obscura, Meissn.

Leguminosæ.

25s. Lonchocarpus Blackii, Benth. Bloody Bark.

Urticeæ.

26s. Ficus Fraseri, Miq. Fig Tree. 27s. Ficus macrophylla, Desf. Moreton Bay Fig. 28s. Morus Brunoniana, Endl. 25 to 30 ft. 29s. Epicarpurus orientalis, Blume. 40 to 50 ft.

Sapindaceæ.

30s. Nephelium divaricatum, F. Muell. 25 to 30 ft. 31s. Nephelium connatum, F. Muell. 35 to 40 ft. 32s. Nephelium tomentosum, F. Muell. 33s. Harpullia Hillii, F. Muell. *Tulip Wood.* 40 to 50 ft. 34s. Ehretia membranifolia, R. Br.

Santalaceæ.

35s. Santalum lanceolatum, R. Br. Sandal Wood. 15 to 20 ft.

Casuarineæ.

36s. Casuarina suberosa, Willd. Oak. 40 to 50 ft.

Araliaceæ.

37s. Panax elegans, Moore and Mueller. 30 to 40 ft.

Cornaceæ.

38s. Marlea Vitiensis, Benth.

Solanaceæ.

39s. Solanum verbascifolium, L. 10 to 12 ft.

Owing to its vast area, and the diversity of its soil, climate, and altitude, there is a greater variety of indigenous trees in Queensland than in the rest of the Australian colonies, and perhaps more than could be found within a similar extent of country in any other part of the world. The specimens of woods exhibited are from a collection that were easily procured, and were chiefly chosen for their economic value. The list, however, does not include one-fourth of the species that have already been described, and there are many which have not yet been classified. Each district of this immense territory is characterised by features in its vegetation peculiar to itself, and years must elapse before all are known and botanically arranged.

It will be for the practical builder, the shipwright, and the cabinet maker, to pronounce an opinion upon the utility of the woods represented in the Court; and it is probable that several of them will have a greater value put upon them in America than they receive in Queensland. It appears inseparable from the state of affairs in a young colony, that very little time or trouble is devoted to experiment, or to the improvement of existing processes. The same woods that the first settlers made use of are still employed, as a matter of course, for the same purposes; and timbers, probably of a superior description, are neglected, or used only as firewood.

The value of some descriptions of the Australian Eucalypti for building or railway purposes, has for some time past been fully recognised; and the number of species is greater in Queensland than in other parts of the continent. The case is the same with other woods, the variety of which is very great, that are remarkable for their strength, durability, fineness of grain, or ornamental appearance.

It is impossible to state, at the present period, the price for which all of the Queensland timbers can be placed in the market, for some of which there is no local demand. The cost, when placed on board ship, will not, however, be great, as most of our valuable woods grow on the coast or the banks of the rivers, or are found within reach of the facilities for transport provided by railway communication.

If persons in the trade are prepared to make definite offers for supplies of any of these woods, they are requested to notify the same to the Queensland Commissioners in the Court.

The following articles made from Queensland wood are exhibited:

2 Model Rum Hogsheads.
2 Model Tallow Casks.
2 Model Sugar Vats. Exhibitor, Mr. D. Hume, Brisbane.
8 Axe and Pick handles. Exhibitor, Mr. W. Peltigrew, Brisbane.

Fibres. Cl. **666.**

Near the collection of woods are arranged Samples of Fibre, prepared, from barks of trees of plants indigenous to Queensland, by Alexander Macpherson, Brisbane.

No. 1. Camersonia echinata.
„ 2. Sida retusa, Sida rhombifolia.
„ 3. Currygong Heterophyllus.
„ 4. Ficus Macrophylla.
„ 5. Kerandrinia Hookerianana.
„ 6. Arbutilon oxecarphus.
„ 7. Lyonsia reticulata.
„ 8. Hibiscus titiacus.
„ 9. Hibiscus mutabilis.
„ 10. Hibiscus rosa sinensis.
„ 11. Hibiscus surbifolia. Exhibited by Alexander Macpherson.

Another collection of Fibres, prepared by Walter Hill, Esq., consist of—

1. Queensland Hemp (Sidia retusa).
2. Queensland Hemp (scutched).
3. Queensland Rope (Sida retusa).
4. Bowstring Hemp (Sanseviera cylindrica).
5. Ceylon Hemp (Sanseviera Zeylanica).
6. Guinea Hemp (Sanseviera Guineerisis).
7. Guinea Hemp (Sanesviera latifolia).
8. Mexican Hemp (Furcrœa gigantea).
9. Pete Hemp (Agave Americana).
10. Cuba Hemp (Furcrœa Cubensis).
11. Jute Hemp (Corchorus capsularis).
12. Jute and Pete Hemp (Corchorus olstoris).
13. Bengal fibre (Crotalaria uncea).
44. Manilla Hemp (Musa textilis).
15. Plantain Hemp (Musa paradisiaca).
16. Rosella Hemp (Hibiscus sorbifolia).
17. (Hibiscus mutabilis).
18. Flax (Linum usitatissimum).

Collection of Botanical Specimens, full description attached to them.

Cl. **652.** **Leather.**

Collection leather from the Tannery and Curriers' Shops, Ebikin three miles out of Brisbane, and manufactured from Colonial hides and skins. They are tanned with the bark of the Acacia indigenous in Queensland, samples of which can be found in the wall cases of Division II.

2 sides of Black Grained Kip, 12 lbs.; 1 side of Plain Grained Kip, 6 lbs.; 1 side of Tweed Grained Kip, 6 lbs.; 2 sides of Waxed Grained Kip, 12 lbs.; 5 skins of Kangaroo, Waxed, 3 lbs.; 1 skin of Kangaroo, Tweed, 1½ lbs.; 1 skin of Kangaroo Plain Grained, 2 lbs.; 1 skin of Wallaby, Black, ¾ lb.; 1 skin of Wallaby, Waxed, ½ lb.; 2 skins of Goat, Plain Grained, 1 lb.; 3 skins of Goat, Black, 3 lbs.; 4 Black Grained Basils, 2 Plain Basils; 1 side of Brown Harness Leather, 16 lbs.; 1 side of Black Harness Leather, 27 lbs.; 1 side of Sole Leather, 19 lbs.; 1 side of Kip, Waxed, 8 lbs.; 1 side of Black Grained Kip, 7 lbs.; 1 Calf Skin, Waxed, 14½ lbs.; 1 Black Grained Kangaroo and 1 Flat Grained Kangaroo, 3½ lbs.; 3 Wax Wallaby Skins, 1½ lbs.; 2 Wallaby Skins dressed with fur on.

Furred Skins. Cl. **652.**

1 Kangaroo, 2 ditto, Mauve; 6 Rock Wallaby, 3 Forrest Wallaby, 1 Scrub Wallaby, 3 Mauve Wallaby, 1 Blue Wallaby, 1 Fox Wallaby, 5 Wallaroos, 1 Paddy Melon, 3 Seal Skins. Exhibited by T. B. Stephens.

The various Tanneries around Brisbane produce about 450 Hides or 900 Sides of Harness, Sole, and Kip weekly, whilst in 1871–2 they did not turn out more than 200; a number of inland Tanneries have also been started since then.

Kangaroo and Wallaby, especially the latter, can be obtained in great abundance, as the inland districts for 150 miles distant from Brisbane have been fenced in, and as the aboriginals and native dogs disappear, the Wallaby multiplies enormously, and are being killed in thousands to save the grass. As the demand for skins, however, is limited, not many of them, however, find their way to the Tanneries.

Miscellaneous Exhibits.

1 Case of Butterflies, collected in the Cardwell District. Exhibited by G. Richland.

Skull, Tusks, and Teeth of Dugong. Exhibited by John Ching.

4 dozen bottles of Dugong Oil. Exhibited by John Ching.

Dugong Calf in Spirit. Exhibited by John Ching.

Sample of Dugong Oil. Exhibited by Berkley and Taylor.

1 Hunting Saddle Bridle, Breastplate, Martingale, and Pouch.

1 Trooper's Saddle and Bridle, complete.

1 Stockman's Saddle and Bridle, complete.

1 Pack Saddle with Harness, complete.

Large Pair of Saddle Bags.

1 Pair of Leggings.

3 Maps of the Colony.

1 Telegraph Circuit.

2 Maps of Port Curtis District.

1 Geological Map of the Colony.

1 Map of Brisbane.

1 Map of Wide Bay.

2 Maps East and West of Moreton.

1 Map of Tin Selections.

1 Squatter's Map.

Books bound at the Government Printing Office:— Cl. **306.**

Ornithology of Australia.
Pugh's Almanac.
Sugar Cane, by Angus Mackay.
Simi-tropical Agriculturalist.
Hocking's Gardener.
„ Floriculture in Queensland.
Salter's Almanac.
Maryboro' Almanac.
Bailey's Ferns.

2 Volumes of Newspapers of Queensland to November, containing "Summary" description of each district.

500 copies of the "Queensland," with summary.

12 copies, Bound Catalogue of Queensland Exhibition, 1875.

1 Case of Almanacs, sent by Mr. Willmett, of Townsville, Northern Queensland.

Cl. **430.** **Photographs.**

12 large sized Views in and about Brisbane.

Panoramic Views from Wickham Terrace.
" " Bowen Terrace.
" " of Ipswich.
" " Warwick.

3 Bells, manufactured by Hopwood and Sutton, from Queensland tin and copper.

Packet of Castor Oil Seeds, from R. W. Alexander.

Catalogue of Seeds, by Clarke.
" " Hockings.

At the extreme ends of the Queensland Court are exhibited:

2 Life-size Photographs of Australian Natives. Exhibitor, Richard Daintree.

And numerous smaller ones. Exhibited by the Queensland Government.

The Queensland natives are by no means numerous in the unoccupied portions of the country; in the settled districts they are fast sharing the fate of the American Indian.

SEYCHELLES, ARCHIPELAGO OF.

The island of Rodrigues, the Seychelles Islands, Diego Garcia, and others, are dependencies of the Mauritius. Rodrigues is situated about 300 miles east of Mauritius. It is 26 miles in length by 12 in breadth. It is cultivated by colonists from Mauritius.

The Seychelles, or Mahé Islands, are situated between the parallels of S. lat. 4° and 5°; the total number of acres comprised in this group is 50,120; the distance from Mauritius 940 miles. These islands are under the superintendence of a Chief Civil Commissioner (assisted by a Board of Commissioners) at Mahé, who is appointed by the Secretary of State, but is subordinate to the Governor of Mauritius, from whom he takes instructions.

Cl. **600.** Cl. **601.** **Seychelles, Chief Commissioner of.** 67 varieties of Seychelles Woods, in vertical sections of 6 inches each; 7 samples, planks of superior kinds of woods.

Cl. **605.** **Briard, Mr.,** Praslin Island. 2 Coco de Mer Nuts, polished; 3 Coco de Mer Nuts, rough; 1 Cocoanut, large size.

Cl. **254.** **Bury, Mr. J. Ames.** 1 Coco de Mer wood walking stick, 1 Cocoanut wood stick, 1 dozen of hardwood sticks, 1 plum stick, 1 fancy hardwood stock, 5 fancy sticks.

Cl. **602.** **Briard, Mr.** 1 sample of Bark dye, black (Bois de Pomme), and sample of stuff dyed from same.

Cl. **623.** **Houareau, Mr. Sylvain.** 1 Roll of Seychelles tobacco.

Cl. **623.** **Madine, Mr.** 1 Parcel of Cigars, made from Seychelles tobacco.

Cl. **623.** **Lemarchand, Mr.** 4¼ lbs. Cacao, 1½ lbs. Cloves, 11 lbs. Coffee, 1 lb. Vanilla.

Cl. **665.** **Brooks & Dupuy, Messrs.** 1 sample Cotton from Dennis Island.

Briard, Mr. 1 sample of Cotton. Cl. **665.**

Beyron, Mr. F., 12 pieces, 5 lbs. Hawksbill Turtle Shell, 1 young Hawksbill Turtle Shell, whole. Cl. **652.**

Cauvin's, Mr., Distillery. 1 sample bottle Seychelles White Rum. Cl. **660.**

Nageon, Mr., La Digue Island. 1 sample bottle of Cocoanut Oil. Cl. **662.**

Bouquet, Miss. 9 Baskets, Fancy, Coco de Mer (*Lodoicea Seychellarum*) straw; 3 Hats. Straw, for girls (*Lodoicea Seychellarum*); 3 Hats, Straw, for men (*Lodoicea Seychellarum*). 1 Fancy Basket, Miniature; 1 bundle, 9 Baskets Coco de Mer (*Lodoicea Seychellarum*) Straw; 1 Nest 1 dozen Coco de Mer (*Lodoicea Seychellarum*) Straw; 1 pair Slippers; 2 Cigar Cases; 1 pair Watch Pockets; 2 Tea Cups and Saucers; 8 Fans, various patterns; 3 samples Coco de Mer Straw, plaited; 2 samples Coco de Mer Straw, rough. Cl. **254.**

Cayol, Mrs. Tony. 5 Bouquets of Shell Flowers. Cl. **254.**

TASMANIA.

[Extracted from the Official Report of the Victoria Exhibition, 1875.]

"Tasmania, the recognised sanatorium of Australia, was undoubtedly formed by nature in her kindliest mood. The whole island is replete with natural beauties. Mountains frown in majesty on peaceful valleys and extensive plains, framed as it were by sinuous rivers, the banks of which form a fit theme for the pen of the poet or the pencil of the artist. The prosperity which marked the progress of the colony in the year 1873 has in no way diminished, and the first half of the year 1874 will bear favourable comparison with the improvement in the condition of the colony which caused such general satisfaction at the date of the Intercolonial Exhibition. On the 7th February 1870, the population, according to the census then taken, numbered 99,328 souls, of whom 52,853 were males, and 46,475 were females. The estimated population on the 31st December 1874 was 104,176, the number of males being 55,117, and the number of females 49,059. The revenue for the year 1874 was 327,925*l.*, and the expenditure 318,278*l.* The amount expended for public works, roads, bridges, and railways, inclusive of the expenditure on the Launceston and Western District Railway, amounted during the year 1874 to 45,410*l.* The value of imports during the same period was 1,257,785*l.*, while that of exports was 925,325*l.*

"Education is compulsory, and of a most comprehensive character; there is scarely any remote district in which there is no school, and no loophole is allowed to the careless parent to permit him to let his children drift into ignorance. Numerous industries have been established, and those who were once content to observe the wool growing on the sheep's back are astonished at seeing how rapidly and beautifully the Hobart Town and Launceston mills convert the raw material into articles of luxury as well as of domestic consumption.

"The total area of the island of Tasmania is 16,778,000 acres, of which 3,982,003 acres are alienated from the Crown by grant and sale; 1,348,400 acres are held under depasturing licenses from the Crown. The total area under cultivation in the colony is 326,486 acres. Wheat takes first rank in extent and importance, 57,633 acres being allotted to this cereal; barley, 5,129 acres; oats, 32,704 acres. Consequent on the high duties enforced on agricultural produce by the other Australian Colonies, and the fluctuating state of the intercolonial markets, the attention of Tasmanian agriculturists has of late years been turned to the production of wheat for the English market, and this has become the most important article of strictly agricultural produce. The export of grain in the year 1874 was valued at 115,788*l.*

"Salubrity and comparative coldness of climate, owing to higher latitude; make Tasmania an excellent breeding station of stud stock for all the Australian continent, especially as regards animals whose features of excellence consist in that massiveness of form of muscular development, in the dewy mellowness of skin, and of that hardy constitution so requisite in the ox, the mutton sheep, and the draught horse. The number of horses in Tasmania in 1874 was 23,208, cattle 110,450, and sheep 1,714,168.

"The bulk of the wool produced is Merino. The export of wool during the year 1874 amounted to 5,050,920 lbs., which represented a value at this Port of 350,713*l.*

"The mining industry for many years past was confined to gold and coal, but during the past year tin, iron, and slate have attracted much attention. The yield of gold for the last twelve months, produced by 185 persons was—alluvial 850 oz., quartz 3,800 oz. 14 dwt. The quantity of quartz crushed was 3,452½ tons. The average yield per ton of stone was 1 oz. 5 dwt. 8½ grs. The average value of gold per ounce was 3*l.* 19*s.* 6*d.* for alluvial; quartz, 3*l.* 19*s.* 6*d.* The gold from Nine Mile Springs, where 2,398 ounces were produced, was valued at 4*l.* an ounce. The total value of the produce of gold for 1874 was 18,491*l.*

"The mineral which occupied the greatest share of attention was tin; the supply of ore being practically unlimited—the character at the deposits at Mount Bischoff admitting of no question. The total amount of tin raised in 1874 was 490 tons, valued at 78*l.* a ton. The only locality in which silver ore has been worked in Tasmania is Penguin Creek, but at present operations have ceased.

"With respect to the iron resources, it is stated that a small parcel of 27½ tons of ore was sent to the United Kingdom during the 12 months. The quantity raised during the year is set down as 1,400 tons; of this quantity 1,000 tons were raised at Lempriere, West Tamar, and 400 tons at Lewisham.

"The discovery made since the beginning of the present year of a lode of bismuth is regarded as one of the most important that has yet taken place, and it is alleged that if the lode should prove permanent it must become a source of considerable wealth to the colony.

"The island of Tasmania is intersected by many valuable coal measures. At present the output of Tasmanian coal is not extensive, and the island is mainly supplied from Newcasle, New South Wales, although, for domestic purposes, Tasmanian coal is used to a considerable extent.

"During the past two years attention has been directed to the slate deposits of Tasmania; the high prices ruling for English slates in the colonial markets has induced the Australian Slate Company to commence work on a fair scale. In 1874 a quarter of a million of slates were prepared for sale at Piper's River.

"At Ilfracombe Bay there is an extensive bed of pure white clay which seems very refractory, and which, when mixed with fine quartz (also abundant and close at hand) forms an admirable fire brick. Common clays are found in all directions, and the iron companies are now manufacturing bricks. Kaolin or porcelain clay is also found at Circular Head.

"In the West Tamar district limestone quarries have been worked for many years past. There is an immense mountain of blue limestone, situated about two miles from the township of Latrobe, on the River Mersey. At the River Don there are very large deposits of pure carbanote of lime, and the eastern districts, especially Fingal, abound with lime of various kinds and qualities.

"The principal timber trees of Tasmania,—such as Blue Gum, Stringy Bark, White Gum, or Gum-topped Stringy Bark, Swamp Gum, and Peppermint Tree,—furnish a hard close-grained, and strong timber. Huon Pine is very durable, and is employed for boat-building and for house-fittings, &c. Blackwood makes excellent billiard tables and furniture, naves and spokes, cask staves, &c. Myrtle is valuable for house-fittings. Swamp Gum yields the finest palings and other split-stuff in the world. Sassafras affords timber for house-fittings, bench screws, &c. Celery-topped Pine is chiefly used for masts and ships' spars. In addition to these, Silver Wattle is used for wood staves and treenails. Mallets, sheaves of blocks, and turnery are manufactured from Iron Wood, while the Native Cherry is used for tool handles, gun stocks, &c. White Wood is a fit wood for engraving purposes, while Pink Wood and Native Pear are suitable for turnery. Tonga Bean Wood and Native Box have both a pleasant odour, that of the latter being fleeting.

"Bark is largely exported to England and New Zealand for tanning purposes. The price of ground bark varies from 4*l.* to 6*l.* per ton at the ports. During the year 1874 about 4,870 tons were exported, valued at 22,123*l.* Hops also are largely cultivated. In 1874, 819,145 pounds weight were exported, valued at 42,284*l.*

"The principal animals are the kangaroo, wallaby, opossums, and bandicoots, the skins of which are all of avail for tanning purposes, the fur being highly valuable as rugs, &c. The devil and Tasmanian tiger are formidable beasts, and used to make great havoc amongst the flocks. The tiger is a low long-bodied animal, with powerful forequarters, and a dog-like head, weighing sometimes from 60 lbs. to 70 lbs. The devil, though not so large, is more hideous in appearance than the tiger.

"Of birds, 171 species have been observed, but of these only 20 species are supposed to be peculiar to Tasmania. The notes of many of the birds are very musical, the most remarkable being the reed warbler, the tones of which approach those of the nightingale, the black and white magpie, and the butcher bird. The principal edible birds are varieties of quail, duck, snipe, golden plover, and pigeons.

"There are many species of freshwater fish, the most valuable being the cucumber grayling. Amongst the estuary fish, those most appreciated as edible are the sole, whiting, gar-fish, and rock-cod. The best of the deep sea fish are the trumpeter and king-fish. During the last ten years the salmon trout and brown trout, the

tench and perch, have been established in many of the rivers and lakes. Salmon and salmon trout are supposed to have succeeded, as young salmonoids have during the last four years been seen.

"The chief industries are brewing, milling, jam making, fellmongering, tanning, and coopering. Most of the beer is excellent, and is fully appreciated in the other colonies. In 1874 ale to the quantity of 22,900 gallons was exported. The quantity of jam exported in the same year was 2,648,012 lbs., and 179,762 bushels of fruit valued together at 120,027*l.* Tasmanian leather is excellent, all varieties from kip to kangaroo being supplied of such quality that a great falling-off in the importation of inferior leather from European ports has taken place; and in 1874, 15,513*l.* worth was exported from Hobart Town.

"The exhibits from Tasmania will be found interesting in elucidating the vast natural resources and industrial progress of the colony." (*Extracted from the Official Record.*)

There is one remarkable feature distinguishing Tasmania from all other countries, whose statistics have been compared with hers, which ought not to be passed by unnoticed, namely,—the small mortality among children, particularly those under one year of age. Taking an average of five years the following results have been arrived at. Out of 100 infants born, there died within the first year in Tasmania, 9·45; in N. S. Wales, 9·57; in Queensland, 11·07; in Victoria, 11·86; in S. Australia, 14·24; the number in England being about 16; in Scotland about 12¼. The percentage of deaths of children under 5 years was—Tasmania, 20·08; N. S Wales. 42·14; Victoria, 45·50; Queenslamd, 46·33; S. Australia, 54·17. The proportion of children under 5 who died to 1,000 children of the same age living was—in Victoria (10 years), about 52¼; in England and Wales (30 years), about 67½; in Tasmania, *less than* 27. Thus it appears that the mortality of children under 5 years of age in Tasmania is little more than *half* that of the least healthy of the Australian Colonies. It is also considerably under that of New Zealand, which, as regards the general death rate, is the most healthy of all the Australasian group.—(*Nowell, Statistician.*)

TASMANIAN CONTRIBUTIONS TO THE INTERNATIONAL EXHIBITION AT PHILADELPHIA.

NOTES.—The letter *P* before the name signifies a Prizeholder for the same Exhibit in the Victorian Exhibition, 1875.
* This star denotes that the Exhibitor presents the objects to the Academy of Natural Sciences, Philadelphia.

DEPARTMENT I.

Cl. **100.** *P.* * **British and Tasmanian Charcoal Iron Company (Limited)**, T. H. Lempriere, Manager, 56, Queen Street, Melbourne.
1. Iron Ore from Ilfracombe on the River Tamar, a block.
2. Earthen Brown Hematite.
3. Iron Ore and Crystallised Brown Hematite.
4. Oxides of Iron from Anderson's Creek, Western Tasmania.

Cl. **101.** **Groom, Frederick,** Harefield.
5. Coal from Harefield, St. Mary's near Fingal.

Cl. **100.** **Hammond, W.,** Hobart Town.
6. Bismuth from Mount Ramsey.

Cl. **100.** *P.* **Harcourt, James,** Hobart Town.
7. Samples of Pig Iron.
8. Iron Ore, calcined and uncalcined.
9. Iron Ore, from Bruny Island.
10. Smelted Iron, from Derwent Iron Works, Hobart Town.

Harrap, A., Launceston. Cl. **101.**
11. Petrified Wood.

J. H. Innes, Hobart Town. Cl. **100.**
12. Tin Ore from Ringarooma and George's Bay.

P. * **Hematite Iron Works,** West Tamar. Cl. **100.**
13. Pig Iron.
14. Iron Ore, calcined.
15. Iron Ore, uncalcined.

16. Marble Limestone, Blue. Cl. **102.**
17. Marble Limestone, White.

* **Hull, Henry Jocelyn,** Hobart Town. Cl. **100.**
18. Tin Ore, from the deposit, George's Bay.

* **Just, Thomas Cook,** Journalist, Charles Street, Launceston. Cl. **100.**
19. Magnetic Iron Ore.

20. Oxide of Iron and Asbestos in Serpentine Rock.

Cl. **200.** * **Kermode, W. A.,** Mona Vale.

21. Salt, from Saltpan Plains, Mona Vale estate.

Cl. **102.** *P.* * **Lyell & Gowan,** 46, Elizabeth Street, Melbourne (Australasian Slate Company, Limited).

22. Slate from the Piper's River, on the North-east Coast, in the County of Lewisham, about 15 miles east of George Town.

23. Tin Ore and Ingots, from the Don Tin Mining Company, Mount Bischoff.

24. Marble Limestone, Black, Blue, and White, from the River Don.

25. Coal from the River Don.

Cl. **100.** *P.* * **Mount Bischoff Tin Mining Company.**

26. Tin in Ingots (a ton), from Mount Bischoff.

Cl. **102.** * **Rayner, E.,** Bridgewater.

27. Limestone, with large Fossils.

Cl. **100.** * **Smart, Dr.,** Hobart Town.

28. Gold in Quartz, from the City of Hobart Mine Fingal.

Cl. **100.** *P.* * **Smith, James,** Launceston.

29. Bismuth from Mount Ramsey.

Cl. **100.** * **Stanhope Company,** Tasmania.

30. Tin Ore.

Cl. **200.** * **Strachan, R.,** Cambridge.

31. Salt, from Salt Works, Cambridge.

DEPARTMENT II.

Cl. **620.** *P.* **Archer, W. H. D.,** Longford.

32. Wheat.

33. English Barley.

34. Linseed.

Cl. **620.** *P.* **Creswell, C. F.,** Hobart Town.

35. Wheat (*Red Tuscan*).

36. Wheat (*Golden Drop*).

37. Wheat (*Farmer's Friend*).

38. Wheat (*Goldsmiths*).

39. English Barley (*Malting*).

40. Oats (black) (*Black Tartarian*).

41. Oats (*Norway*).

42. Oats (*Poland*).

43. Rye.

44. Tares (*Golden Spring*).

45. Horse Beans.

46. Grey Peas.

47. Peas (*Blue and White*).

48. Red Dutch Clover.

49. Meadow Soft Grass Seed.

50. Perennial Red Clover Seed.

51. Sanfoin Seed.

52. Lucerne Seed.

53. Linseed.

54. Canary Seed.

55. Rape Seed.

56. Cocksfoot Grass Seed.

57. Italian Ryegrass Seed.

58. Evergreen Perennial Ryegrass Seed.

59. Seed of the Blue Gum (*Eucalyptus globulus*). Cl. **624.**

60. Seed of the Stringy Bark (*Eucalypta obliqua*). Cl. **602.**

61. Seed of the Blackwood (*Acacia melanoxylon*).

62. Forest Trees, 24 Varieties. Cl. **600, 620, 624,**

63. Ryegrass Seed.

64. Clover Seed (white).

P. **Dalgety, Moore & Co.,** Launceston. Cl. **620.**

65. Wheat (*Brown Velvet*).

66. Wheat (*Silver Drop*).

67. Wheat (*Purple Straw*).

68. Oats (*Tartarian*).

69. Oats (*Poland*).

P. **Gibson, William,** Hobart Town. Cl. **620.**

70. Wheat.

* **Graves, J. W.,** Hobart Town. Cl. **620.**

71. Native Bread (*Mylitta Australis*).

Gulliver, B., Hobart Town. Cl. **624.**

72. Blue Gum Tree Seed (*Eucalyptus globulus*).

73. Blackwood Seed (*Acacia melanoxylon*).

74. Black Wattle Seed (*Acacia molissima.*)

75. Silver Wattle Seed (*Acacia dealbata*).

P. **Harrap, Alfred,** Launceston. Cl. **620.**

76. Wheat, *Boucher's Velvet.*

P. **Hogarth, D.,** Launceston. Cl. **620.**

77. Wheat, Winter (*Braemar Velvet.*)

P. * **Hull, Hugh, M.,** Hobart Town.

78. Cubes of the following Woods of Tasmania :—Blue Gum (*Eucalyptus globulus*) ; Stringy Bark (*Eucalyptus obliqua*) ; † Huon Pine (*Dacydium Franklinii*) ; Peppermint Gum (*Eucalyptus viminalis*) ; † Curly Gum (*Eucalyptus*) ; † She-oak (*Casuarina quadrivalis*) ; † He-oak (*Casuarina stricta*) ; Honeysuckle (*Banksia Australis*) ; King William Pine ; † Oyster Bay Pine ; (*Callitrics Australis*) ; Swamp Gum (*Eucalyptus*) ; † Myrtle (*Fagus Cuninghami*) ; † Musk (*Eurybia argophylla*) ; Box (*Bursaria*) ; Tea Tree (*Leptos-permum*). Cl. **600, 601.**

† *Polished so as to show their value for veneers.*

Cl. 620. *P.* * **Kemp, George,** Upper Bagdad.
79. Wheat (*Armstrong's Prolific*).
80. Wheat (*Lamont's Prolific*).

Cl. 620. *P.* **Lipscombe, Frederick,** Sandy Bay.

Cl. 624. **81.** Seeds of the Blue Gum Tree, 50 lbs. weight. (*Eucalyptus globulus*).

Cl. 623. *P.* **Sharland, W. C.,** New Norfolk.
82. Box of Hops, grown at New Norfolk.

Cl. 623. *P.* **Shoobridge, Ebeneezer,** New Norfolk.
83. Box of Hops (*Golding*), grown at New Norfolk.

Cl. 620. * **Thomson, Mrs. John,** Cormiston.
84. Native Bread (*Mylitta Australis*).

Cl. 657. *P.* **Degraves, John,** Hobart Town.
85. Malt from Tasmanian barley.

Cl. 657. *P.* **Gracie, William,** Hobart Town.
86. Malt from Tasmanian barley.

DEPARTMENT III.

Cl. 681. **Anglo-Australian Guano Company.**
87. Guano from Bird Island, procured by a Company whose establishment is in Hobart Town.

Group 13.

Cl. 603. * **Edwards. G. W.,** Hobart Town.
88. Grass-tree Gum (*Xanthorhœa*), two samples.

Group 14.

Cl. 104. * **Coverdale, Dr. John,** Port Arthur.
Cl. 202. **89.** Earth for Paints, red ochre.
90. Earth for Paints, red ochre in powder, from Port Arthur.
91. Pipeclay from Port Arthur.

Laughton, James, Hobart Town.
Cl. 104. **92.** Earth for Paints, umber coloured.
Cl. 202. **93.** Earth for Paints, sienna coloured.

Cl. 662. *P.* * **Lunatic Asylum Commissioners of Tasmania.**
94. Oil from the Blue Gum tree (*Eucalyptus globulus*).

Cl. 603. **Mitchell, Mrs.**
95. Gum from the Oyster Bay Pine Tree (*Callitris Australis*).

DEPARTMENT VI.

Group 17.

Cl. 667. *P.* * **Silver Medal to Tasmanian Commissioners.**

Cl. 667. * **Archer, William Henry Davies,** Brickendon, Longford.
96. Fleece of Pure Merino Lamb's Wool, hot water washed.
97. Fleece of Pure Merino, ditto.
98. Fleece of Pure Merino Ewe, ditto.
99. Fleece of Wool in the grease.

* **Brock,** —, Campania. Cl. 667.
99a. Fleece of Pure Merino, which took the first prize at the Richmond Show.

* **Cameron, the Honorable Donald,** Cl. 667.
Burnside and Fordon.
100. Fleece of Pure Merino.
101. Fleece of Pure Merino.
102. Fleece of Pure Merino.

* **Gibson, James,** Belle Vue, Cleveland. Cl. 667.
103. Portrait of "Sir Thomas." Pure Merino Ram.
104. Fleece of Pure Merino Ram, in grease, 365 days' growth.
105. Fleece of Pure Merino Ewe, in grease, 365 days' growth.
106. Fleece of Pure Merino Lamb, about four months' growth.
NOTE.—Mr. Gibson is the breeder of "Sir Thomas," a Ram which was sold in Melbourne for 714*l.*

* **Gibson, William, & Son,** Scone, Perth. Cl. 667.
107. Fleece of Prize Merino Ram "The Duke" (in the grease).
108. Fleece of Pure Merino Ewe (in the grease).
109. Fleece of Pure Merino Ewe (washed).
110. Fleece of Pure Merino Hoggett (washed).
111 & 112. Portraits of "The Duke," a Prize Ram, and other Prize Merino Sheep; photograph by W. Gibson, jun.

* **Gibson, William Henry,** Fairfield, Cl. 667.
Snake Banks.
113. Fleece of Pure Merino Ram, 2-tooth.
114. Fleece of Pure Merino Ewe, 2-tooth.

* **Headlam, Charles,** Egleston, Macquarie Cl. 667.
River.
115. Fleece of Pure Merino.
116. Fleece of Pure Merino.
117. Fleece of Pure Merino.

* **Keach, George William,** Chiswick, Cl. 667.
Ross.
118. Fleece of four-year old Ram, 364 days' growth; weight of fleece, 9½ lbs.; combing Merino (in the grease).
119. Fleece of two-year old Ewe, 364 days' growth; weight of fleece, 8 lbs. when shorn; slightly skirted owing to scour; combing Merino (in the grease).

Cl. **667.** * **Maclanachan, the Honourable James,** Ballochmyle.

120. Fleece of Pure Merino Ram, in the grease, 11 lbs. weight.

121. Fleece of Pure Merino Ram, in the grease, 10 lbs. ditto.

122. Fleece of Pure Merino Ram, in the grease, 10 lbs. ditto.

Cl. **667.** * **Parramore, Thomas,** Beaufort, Ross.

123. Fleece of Pure Merino Ram (in grease), 14 months old.

124. Fleece of Pure Merino Ewe (warm water washed), 2½ years old.

125. Two Fleeces of Pure Merino Ewes (warm water washed).

126. Bale of 50 lbs. weight of Wool.

Cl. **667.** **Lindley, George Wm.,** Runnymede, Richmond.

127. Fleece of Leicester Wool.

Cl. **667.** * **Shaw, Frederick,** Redbanks, Swansea.

128. Fleece of Leicester Wool.

Cl. **667.** * **Sharland, William Stanley,** Woodbridge, New Norfolk.

129. Fleece of Pure Merino.

130. ditto. ditto.

Cl. **667.** * **Page, Samuel,** Belle Vue, New Town.

131. Fleece of Pure Merino, hot water washed.

132. ditto. ditto.

133. ditto. ditto.

Cl. **667,** * **Taylor, George,** Milford, Campbell Town.

134. Fleece from Stud Merino Ram.

135. ditto. ditto.

136. ditto. ditto.

137. ditto. ditto.

138. ditto. ditto.

139. ditto. ditto.

140. Two Fleeces from Breeding Ewes.

141. ditto. ditto.

Cl. **667.** * **Taylor, John,** Winton, Campbell Town.

142. Bale of Wool from yearling Merino Ewes, washed and skirted.

143. Fleece of yearling Merino Ewe, washed and skirted.

144. ditto. ditto.

145. ditto. ditto.

(*The bale of Wool to be forwarded after exhibition to Messrs. H. G. Ashurst & Co., Fenchurch Street, London.*)

Cl. **667.** * **Taylor, David,** St. Johnstone's, Macquarie River.

146. Fleece of pure Merino, in the grease.

147. ditto. ditto.

148. ditto. ditto.

Wilson, George, Huntsworth and Ashgrove, Oatlands. Cl. **667.**

149. Fleece of pure Merino.

150. ditto. ditto.

151. ditto. ditto.

Ralston, John, Logan, Evandale. Cl. **667.**

152. Fleece of pure Merino.

153. ditto. ditto.

154. ditto. ditto.

155. ditto. ditto.

DEPARTMENT VIII.

Group 20.

* **Coverdale, Dr. John,** Port Arthur. Cl. **650, 656.**

156. Gelatinous Sea-weed, said to produce a valuable jelly for the table.

157. Jelly made from the Sea-weed.

P. **Davies, R. H.,** Torquay. Cl. **645.**

158. Tasmanian Shells:—Haliotis albicans, Quoy, Voy, of Astrolabe III., p. 311; Haliotis nœvosa, Martyn; Cassis semigranosa, Lamk.; Cassis pyrum, Lamk.; Voluta fusiformis, Sw.; Voluta undulata, Lamk.; Dosinia grata, Reeve; Pupura textilosa, Lamk.; Fusus pyrulatus, Reeve; Fusus Tasmaniensis, Ad. and Aug., Proc. Zool. Soc., 1863, p. 421; Fusus Beckii (?), Reeve, Icon. VIII., 35; Natica Strangei (?) Reeve; Natica conica, Lamk.; Sigaretus zonalis, Gray; Fissurella macrochisma, Gray; Fissurella scurella, Gray; Modiola albicostata, Lamk.; Modiola Australis, Lamk.; Triton cutaceus, Lamk.; Triton subdistortus, Lamk.; Triton Barthelemyi, Bernard; Phasianella Australis, Gmelin; Phasianella ventricosa, Quoy and Gamard; Fasiolaria fusiformis, Phil.; Fasiolaria coronata, Lamk.; Nerita atrata, Lamk.; Lophyrus Australis, Sowerby; Lepidopleurus variegatus, Ad. and Aug., Proc. Zool. Soc., 1864; Mitra glabra, Swains, Exot. Conch., p. 21; Patella tramoserica. Martyn; Patella costata, Sowerby; Patella sp.; Patella Gealii; Ancillaria marginata, Lamk.; Emarginula Australis, Quoy; Zizyphinus armillatus, Wood; Myrtilus Menkeanus; Mactra rufescens, Lamk.; Conus Novæ Hollandiæ, A. Adams; Waldheimia Australis, Quoy; Risella melanostoma, Gmelin; Risella aurata, Quoy, Voy. Astrolabe; Risella nana, Lamk.; Turritella Tasmanica; Chitonellus Gunnii, Reeve; Stomatella imbricata, Lamk.; Scalaria granulosa, Sowerby; Amphibolina fragilis, Lamk.;

Uvanilla squamifera, Koch in Phil. Abbild., p. 4, f. 9; Bittium granarium, Kiener; Diloma Odontis, Woods; Cypræa angustata, Gray; Cypræa Comptoni, Gray; Siliquaria Australis, Quoy; Marginella muscaria; Mesodesma triquetra, Reeve; Mesodesma erycina, Dsh.; Mesodesma natida; Turbo undulatus, Chem.; Arca velata, Sow., Proc. Zool. Soc., 1833; Vulsella Tasmanica, Reeve; Eleuchus nitidus, Phil.; Eleuchus irrisodontes, Quoy; Siphonaria denticula, Quoy; Liittorina unifasciata, Gray; Nassa Pauperata, Lamk.; Venerufris carditoides, Lamk.; Venerufris Diemensis; Semele sp.; Murex triformis; Vermetus dentiferus, Quoy; Tellina albida, Lamk.; Trochocochlea striolata, Wood; Buccinum alveolatum, Kiener; Parmophorus Australis, Lamk.; Clanculus undatus, Montfort; Sanguinolaria livide; Auricula cornea, Swainson; Tapes sp.; Venus aphrodinoides; Venus gallinula, Lamk.; Venus roborata; Venus aphrodinoides, vara.: Venus lamellata, Lamk.; Venus gallinula var. a.

(*These Shells were named and arranged by the Rev. Julian Woods, M.A., and Mr. Le Grand.*)

Cl. **641.** *P.* * **Salmon Commissioners of Tasmania.**

159. Brown Trout, in spirits of wine.

DEPARTMENT IX.

Cl. **652.** *P.* **Tasmanian Commissioners.**

160. One large Black Opossum, Rug, made by *Omant*; one ditto, made by *Schmidt*; one large Grey Opossum Rug, made by *Omant*, one ditto, made by *Schmidt*; Grey Native Cat-skin Rug, made by *Schmidt*; Ringtailed Opossum Rug, made by *Omant*; Skins of the Kangaroo; Skins of the Wallaby; Skins of the Grey Opossum; Skins of the Black Opossum; Skins of the Wombat; Tiger Skins; Seal Skin; Skins of Albatross, Pelican, and Penguin; Skins of Platypus, Ringtail Opossum, Tiger Cat, Native Cat, Kangaroo Rat.

Cl. **652.** **Archer, W. H. D.,** Longford.

161. Large Forester Kangaroo skins (6); small Forester Kangaroo skins (6); Wallaby skins (6); Black Opossum skins (10); Grey Opossum skins (10); Black Native Cat skins (6); Tiger Cat skins (8); Grey Native Cat skins (4); Ring-tailed Opossum skins (2); Rock Opossum skins (3); Bush Rat skins (3); Tiger skins (3); Platypus skins (5); Penguin skins (6); Grebe skins (3); Flying Squirrel skins (3); Sea Hawk skin (1); Pelican skins (3); Wombat skins (2); Devil skins (2); Kangaroo Rat skins (2); Bandicoot skin (1); *one cream-coloured Opossum (*stuffed*); *one Platypus (*stuffed*).

* *These two Exhibits are presented by the exhibitor to the Academy of Natural Sciences, Philadelphia.*

Group 22.

P. **Holroyd, Kennedy & Co.,** Hobart Town. Cl. **656.**

162. Jams and Tart Fruits (5 cases).

DEPARTMENT XIII.

Group 34.

P. **Carlsen, P. O.,** Port Arthur. Cl. **218.**

163. Carved Ivory and Wood Egg and Cruet Stand.

DEPARTMENT IV.

Group 36.

P. **Coverdale, Dr.,** Port Arthur. Cl. **219.**

164. Spinning Jenny, made of Tasmanian Myrtle, carved and made by P. O. Carlsen.

P. **Blyth, Miss,** Hobart Town. Cl. **219.**

165. Ornamental Table Top, with wreath of Tasmanian flowers painted on top.

P. **Hope, Miss Mary,** Hobart Town. Cl. **219.**

166. Ornamental Table, with wreath of Tasmanian flowers painted on top.

P. **Graves, Mrs. John Woodcock.** Cl. **219.**

167. Table top, with Tasmanian Ferns.

DEPARTMENT XVIII.

Group 49.

*P.** **Moir, Joseph, & Co.** Cl. **269.**

168. Assortment (19 sizes) of Shot, made at Queenborough Shot Tower.

DEPARTMENT XXII.

Group 60.

* **Hull, Hugh M.,** Hobart Town. Cl. **306.**

169. "Hull's Hints to Emigrants," 200 copies, from the Author.

* **Tasmania, Commissioners of.** Cl. **306.**

170. Newspapers, 1,000 copies of "*Mercury*;" 50 copies of "*Christian Witness*."

171. Volume of Statistics, from the Government Statistician. Cl. **304.**

172. Volume of Legislative Council Journals for Session 1874, from Clerk of the Council.

173. Volume of the House of Assembly Journals for 1874, from Clerk of the House.

Cl. **306.** * **Walch & Sons,** Hobart Town.

174. "Guide to Tasmania."

"Walch's Tasmanian Almanac for 1875," from the Publishers.

Group 61.

Cl. **300, 301.** * **Cemetery Commissioners of Hobart Town.**

175. Chart of the General Cemetery, Hobart Town.

Cl. **300, 301.** * **Hull, Hugh M.,** Hobart Town.

176. Map of Tasmania, showing the alienated portions, the railways and roads, towns and villages.

Cl. **300, 301.** * **Moore, Hon. William,** Minister of Lands, Hobart Town.

177. Map of Tasmania, showing the gold, coal, iron, and tin deposits.

Cl. **300, 301.** * **Walch & Sons,** Hobart Town.

178. Chart of the City of Hobart Town, showing the electoral divisions.

179. Chart of the Town of Launceston, showing the electoral divisions.

Group 66.

Cl. **300, 301.** * **Royal Society of Tasmania.**

180. Meteorological Tables, published by the Society for 30 years.

Cl. **300, 301.** **Walch & Sons,** Hobart Town.

181. Tasmanian Postage Stamps.

Group 82.

Cl. **300, 301.** **Hull, Mrs. Hugh,** Hobart Town.

182. Pencil Drawing, "Avoca, in Tasmania, by Moonlight."

Group 83.

Cl. **300, 301.** * **Randall, A., C.E.,** Engineer to the Hobart Town Waterworks, Hobart Town.

183. Chart of the Hobart Town Waterworks.

Cl. **300, 301.** * **Dibbs, T. F.,** Launceston.

184. Chart of Launceston.

Group 84.

Cl. **430.** *P.* **Baily, H. H.,** Hobart Town.

185. Photographic Rembrandt Portraits.

186. Photographic Portrait Album.

187. Tasmanian Views, 2 books.

Cl. **430.** * **Corporations of Hobart Town and Launceston.**

188 & 189. Plates of Photographic Views of the City of Hobart Town and of the Town of Launceston.

Cl. **430.** **Hull, Hugh M.,** Hobart Town.

190. Portrait of last Tasmanian Aboriginal Man, "Billey Lanney," photographed from life by Charles Woolley. Framed in musk wood.

191. Portraits of Aboriginal Women, "Wapperty," and "Patty." Photographed from life by Charles Woolley. Framed in she-oak wood.

192. Portraits, "Lalla Rookh," the sole survivor of the Tasmanian Aborigines, and "Bessy Clarke." Photographed from life by Charles Woolley. Framed in myrtle wood.

Cl. **430.** **Tondeur & Lempriere,** Melbourne.

193. Photographs of the British and Tasmanian Charcoal Iron Company (Limited), Tasmania.

DEPARTMENT XXVI.

Group 88.

Cl. **304.** * **Tasmania, Commissioners of.**

194. Statistical Tables of Tasmania, 1870–74.

TRINIDAD

Is an island lying to the eastward of Venezuela, between N. latitude 10° 3′ and 10° 50′ W. longitude 61° and 62° 4′ of Greenwich. Its length is 65 miles on the southern and 53 miles on the northern side of the island, and its breadth, on the eastern and western sides respectively, 48 and 49 miles. It is separated from the continent of America by the Gulf of Paria, into which fall the northern mouths of the Orinoco. It was first discovered by Christopher Columbus, on the 31st July 1498, and first colonized in 1588 by the Spaniards. In 1676 the French gained possession of it, but it was soon restored to Spain.

On the 12th February 1797, a British expedition for the reduction of Trinidad sailed from Martinique, on the 14th it put into Carriacou, and sailed on the following morning with some additional transports. The naval command of this expedition was entrusted to Rear-Admiral Henry Harvey. The troops, numbering 6,750 men, were commanded by Sir Ralph Abercrombie.

The expedition resulted in the surrender of the island to His Majesty's arms, and on the 18th February 1797, the articles of capitulation being signed by Abercrombie, Harvey, and Chacon.

Abercrombie, after making the best arrangements that the confused state of the colony allowed, departed two months after, leaving his aide-de-camp, Lieutenant-Colonel Thomas Picton, as governor, whose first act was to institute a council of advice, consisting of five members.

On the 29th March, 1802, the definite treaty of peace between England and France, and her allies, viz. Spain and the Batavian Republic, was signed at Amiens. By the third article, all places taken during the war by Great Britain, were restored save Trinidad, and Ceylon.

The area of the island is 1,754½ square miles.

Port of Spain, the chief town and port of entry, according to the census of 1871, contains 23,561 inhabitants, of whom 11,065 are males, and 12,496 females.

The second town and port of entry is San Fernando, 26 miles south from port of Spain, with a population of 5,006 inhabitants. There are also the minor island towns of St. John, St. Joseph, Aronca, and Arima.

The harbour is the finest in the West Indies.

	Revenue. £	Expenditure. £
1850 - -	88,084	77,362
1860 - -	184,861	187,220
1864 - -	207,473	193,156
1865 - -	194,087	195,991
1866 - -	226,218	203,428
1867 - -	215,812	214,715
1868 - -	214,484	199,112
1869 - -	244,055	234,791
1870 - -	233,585	241,148
1871 - -	264,352	234,175
1872 - -	296,060	285,384
1873 - -	281,570	326,282
1874 - -	276,529	294,006

Public Debt of Trinidad.

100,000*l.* for railways.

47,550*l.* secured on general revenue, but recoverable by the Colony from other parties.

Value of Imports and Exports.

	£	£
1850 - -	476,010	319,394
1860 - -	829,304	714,603
1864 - -	883,940	1,101,510
1865 - -	810,347	820,109
1866 - -	878,157	1,022,338
1867 - -	859,389	1,086,901
1868 - -	987,796	1,116,198
1869 - -	920,607	1,118,695
1870 - -	1,042,678	1,227,574
1871 - -	1,218,024	1,492,811
1872 - -	1,233,771	1,439,904
1873 - -	1,324,432	1,733,615
1874 - -	1,342,992	1,412,260

Population, Census 1871, 109,638.

(*From "Colonial Office List*, 1876.")

Finlayson, Thos. A., Esq. Crude Asphalte, as taken from the Pitch Lake, Trinidad (1 box). Boiled Asphalte, known in commerce as Asphalte Epurée (1 box). Glance Asphalte, similar to *Bitumen Indiacum*, and commercially known as Greek Pitch (1 box).

André, L. A. F., Esq. Surface Coals from the Eastern coast.

Cumming, A., & Co., Port of Spain. Cocoanuts (2 bags).

Cl. **600, 601.** **Prestoe, Hy., Esq.,** Government Botanist. Samples of Native Woods (57), as follow :—

—	Common Names.	Botanical Names.	Specific Gravity.	Average Diameter of Trunk of Full Grown Trees.
No. 1A	Swamp Mahoe - - -	Pterocarpus Rohrii, V. - -	·524	2 feet 6 inches.
„ 1B	„ - - -	„ - - -		
„ 2	White Savonette - - -	Lonchocarpus latifolius, Kth. - -	·720	1 foot 6 „
„ 2A	Yellow do. - - -	„ violaceus, Kth. - -	—	—
„ 3	Locust or Courbaril - - -	Hymenea courbaril, L. - -	·929	5 feet.
„ 4.	Guatemare - - - -	Myrospermum frutescens, Jacq. -	·980	2 „
„ 5	Mora - - - -	Mora excelsa, Benth. - - -	1·029	5 „
„ 6	Purple heart - - -	Prioria, Sp. - - - -	—	1 foot 6 inches.
„ 7	Saman - - - -	Inga saman, Willd. - - -	—	6 feet.

Cl. **600, 601.**

—	Common Names.	Botanical Names.	Specific Gravity.	Average Diameter of Trunk of Full Grown Trees.
No. 8	Logwood	Hematoxylon campeachianum	·992	1 foot.
„ 9	Queen-wood	Bauhinia ungula, Jacq.	·940	1 „
„ 10	Angêline	Andira inermis, Kth.	·748	3 feet.
„ 11	Stink-wood	Acacia tortuosa, Willd.	—	1 foot.
„ 12	Cassia	Cassia spectabilis, D.C.	·684	2 feet.
„ 13	Yoke	Piptadenia peregrina, Benth.	1·229	3 „
„ 14	Balata	Mimusops globosa, Gært.	1·046	4 „
„ 15	Star-apple	Chrysophyllum cainito, Q.	·889	1 foot 6 inches.
„ 16	Sapodilla	Achras sapota, L.	—	2 feet.
„ 17	Galba	Calophyllum calaba, Jacq.	·655	4 „
„ 18	Mammee Sapote	Mammea Americana, L.	·879	2 „
„ 19	Cedar	Cedrela odorata, L.	·474	4 „
„ 20	Carap or Crapaud	Carapa guianensis, Aubl.	·689	3 „
„ 21A	Mahogany	Sweitenia Mahogani, L.	·806	3 „
„ 21B	„	„ „	—	—
„ 22	Black Poui	Tecoma serratifolia, Don.	1·215	3 feet.
„ 23	Yellow Poui	„ spectabilis, Pl.	—	2 „
„ 24	Chair-wood	„ leucoxylon, Mart.	—	2 feet 6 inches.
„ 25	Lezard, or Fiddle-wood	Vitex divaricata, Su.	·766	3 „
„ 26	Fiddle-wood	Citharexylon quadrangulare	·733	3 „
„ 26A		Jacaranda felicifolia	·652	1 foot 6 inches.
„ 27	Teak (East Indian)	Tectona grandis, L.	—	2 feet.
„ 28	Tapana	Drypetes, Sp.	·773	3 feet.
„ 29	Mahoe	Sterculia caribæa, R. Br.	·516	2 feet 6 inches.
„ 30	Almond (Tropical)	Terminalia Catappa	·699	2 feet.
„ 31A	Mangrove, Red	Rhizophora Mangle, L.	1·028	2 „
„ 31B	Do.	Ditto	—	—
„ 32	Do. White	Laguncularia racemosa, Sa.—Grise	·860	—
„ 33	Lechero	Sapium aucuparium, Jacq.	·489	1 foot.
„ 34	Olivier, or Olive-wood	Chuncoa obovata, Poir	·775	4 feet.
„ 35	Pimento	Myrcia acris, var pimentoides, Grise.	·990	1 foot.
„ 36	Caruto	Genipa Americana, L.	·873	1 foot 6 inches.
„ 37	Fustic, or Dye-wood	Maclura Xanthoxylon, Endl.	·711	2 feet.
„ 38	Laurier Cannelle, A. B. & C.	Oreodaphne strumosa	·515	1 foot 6 inches.
„ 39	Do. Blanc	„ leucoxylon, Gr.	·487	1 „ 6 „
„ 40	White Cypre	Cordia sulcata, D. C.	·580	2 feet.
„ 41	Black Cypre	„ gerascanthus, D. C.	·574	2 „
„ 42	Cork-wood	Ochroma lagopus, Sn.	·120	2 „
„ 43	Podocarpus	Podocarpus salicifolius, Kl.	·643	3 „
„ 44A	Guatecare	Lecythis idatimon.	·899	3 „
„ 44B	Do.	„ lævifoli, Grise	—	3 „
„ 44C	Do.	Gustavia augusta, L.	—	1 foot 6 inches.
„ 45	Cucumber Calabash	Crescentia cucurbitina, L.	—	1 foot.
„ 46	Calabash	„ cujete, L.	·624	1 „
„ 47	Gasparee	Esenbeckia attenuata, Grise	1·106	6 inches
„ 48	Soap-berry	Sapindus saponaria, L.	·720	3 feet.
„ 49	Guava	Psidium Guava, L.	·696	1 foot.
„ 50	Incense-wood	Amyris trinitatis	—	2 feet.
„ 51	Wild Grigri	Bactris cuesa, Creng.	—	—
„ 52	Pirajo	Guilielmia speciosa, Mart.	—	—
„ 53	Mountain Cabbage	Euterpe oleracea, Mart.	·918	—
„ 54	Palma-real	Œnocarpus Batava, Mart.	—	—
„ 55	Lancewood	Rollinia Sieberi, A.D.C.	—	1 foot.
„ 56		Licania, Sp.	—	—
„ 57	Acoma	Sideroxylon mastichodron, Jacq.	1·003	1 foot 6 inches.

Nos. 600, 601. **Devenish, Syl., Esq.,** Surveyor General. Samples of Woods,* (235), as follows :—

No. of Order.	Common Names. English.	French.	Spanish.	Scientific Names.	Families.
1	Acacia	Acacia	Aroma	Acacia Farnesiana	Mimoseæ.
2	Acoma or Mastic	Acoma	Acoma	Mimusops sp.	Sapotaceæ.
3	Allspice or Pimento	Bois d'inde	Pimientillo	Pimenta Vulgaris	Myrtaceæ.
4	Angelin	Angelin	Lombricero	Andira inermis	Leguminoseæ.
5	Balata or Bullet tree	Balata	Purgo	Achras balata vel mimusops Globosa.	Sapotaceæ.
6	Balsam Capivi	Copahu	Palo de Aceite	Copaifera officinalis	Leguminoseæ.
7	- - - -	Bois Côtelette	- - - -	Citharexylon quadrangulare.	Verbenaceæ.
8	- - - -	Bois pois blanc	C. de Burro	Swartzia pinnata vel cynometra cauliflora.	Leguminosæ.
9	- - - -	Bois gris	Case	Licania incana	Chrysobolaneæ.
10	Blood-wood	Bois sang	Lacre	Vismia Cayennensis	Hypericaceæ.
11	Bread-fruit	Arbre à pain	Pan del ano	Artocarpus incisa†	Artocarpeæ.
12	Crapo	Crapo	Carapo	Carapa Guianensis	Meliaceæ.
13	Calabash	Calebassier	Totumo	Crescentia Cujete	Crescenticeæ.
13A	Wild Calabash	Calebassier Sauvage	Totumo del Monte	Crescentia latifolia	Id.
14	Caracas tree	Zaman	Zaman	Calliandra Zaman†	Leguminoseæ.
15	Cedar	Acajou	Cedro	Cedrela odorata	Cedrelaceæ.
16	Cocoanut	Cocotier	Coco	Cocos nucifera	Pelmaceæ.
17	Cyp	Cyp	Pardillo	Cordia gerascanthus	Cordiaceæ.
18	Fustic	Bois d'Orange	Palo Naranjo	Maclura Xanthoxylon	Urticaceæ.
19	Galba	Galba	Palo Maria	Calophyllum Calaba	Clusiaceæ.
20	Gasparillo	Gasparil	Gasparillo	Esenbeckia castanocarpa	Diosmeæ.
21	Genipa	Genipa	Caruto	Genipa Americana	Rubiaceæ.
22	Gommier	Gommier	Carano	Icica carana	Terebinthaceæ.
23	Governor's plum	Prunier Gouverneur	- - -	Flacourtia Ramontchi†	Flacourtiaceæ.
24	- - - -	Chaconia ou Cacoa Marron.	Guacamaya	Warsceviczia Coccinea / V. calicophyllum Coccinea	Rubiaceæ.
25	Guatecare	Guatecare	Guatecaro	Lecythis idatimon	Lecythidaceæ.
26	Guava	Goyavier	Guayava	Psidium pyriferum	Myrtaceæ.
27	Hickory (Trinidad)	Bois pois noir	Palo de rosa	Brownea Coccinea	Leguminoseæ.
28	Hogplum	Mombin	Jovo	Spondias Monbin	Terebinthaceæ.
29	Laurel	Laurier	Laurel	Laurus	Laurineæ.
30	Laurel cyp	Laurier Cyp	Idem	- - - -	Id.
31	Letter, or Leopard wood	Gatia	Gateado	Brosimun Guianensis	Artocarpeæ.
32	Lignum Vitæ	Gaïac	Guayacan	Guaïacum Officinale	Xanthoxyleæ.
33	Lime tree	Citronnier	Limon	Citrus Limonum	Aurantiaceæ.
34	Locust	Coubaril	Algarrobo	Hymenæe Courbaril	Leguminoseæ.
35	Logwood	Campêche	Campêche	Hæmotoxylon Campechianum.	Id.
36	- - - -	Macata	Cascabelillo	Poinsettia Pulcherrima	Id.
37	Mammee Apple	Abricotier	Mamey	Mammea Americana	Clusiaceæ.
38	Manchineel	Mancenilier	Manzanillo	Hippomane Mancinella	Euphorbiaceæ.
39	Mangrove (button)	Mangle roche	Mangle botoncillo	Conocarpus erecta	Combretaceæ.
40	Monkey Balata	Balata Macaque	Purgo Macho	Connarus	Sapotaceæ.
41	Monkey Bones	Os Macaque	- - -	- - - -	Myrtaceæ.
42	Mora	Mora	Muro	Mora Excelsa	Leguminoseæ.
43	Moussara or Breadnut	Moussara	Musara	Brosimum Alicastrum	Urticaceæ.
44	Murraya	Murraya	Citronera	Murraya exotica	Aurantiaceæ.
45	Satin-wood	Noyer	Nogal	Xanthoxylum sp.	Terebinthaceæ.
46	Olivier	Olivier	Aceitunillo	Chuncoa obovata	Combretaceæ.

* Including a few not indigenous, but thriving well in the island.
† Not indigenous.

Cl. **600, 601.**

No. of Order.	Common Names. English.	French.	Spanish.	Scientific Names.	Families.
47	- - - -	- - - -	Pata de Vaca - -	Bauhinia grandiflora -	Leguminosæ.
48	Pouï (black) - -	Pouï - - -	Puï - - -	Tecoma serratifolia -	Bignoniaceæ.
49	Purdle heart - -	Sapater - -	Zapatero - -	Peltogyne paniculata -	Leguminoseæ.
50	Red Mangrove -	Mangle rouge - -	Mangle Colorado -	Rhizophora Mangle -	Rhizophoraceæ.
51	Red-wood - -	Bois rouge - -	Cabimbo - -	Trichilia Moschoxylon -	Meliaceæ.
52	Roble - - -	Roble - - -	Roble - - -	Platymiscium polistachium.	Leguminoseæ.
53	Sapodilla - -	Sapotillier - -	Nispero - -	Achras Sapota - -	Sapotaceæ.
54	Savana Yoke - -	Yoke Savane - -	Vapo da Savana -	Piptadenia peregrina -	Mimoseæ.
55	Savonette (yellow) -	Savonnette jaune -	Conure - -	Lonchocarpus latifolia -	Leguminoseæ.
56	Sea-side grape -	Raisinier du bord de Mer	Uva de playa - -	Coccoloba Uvifera -	Polygonaceæ.
57	- - - -	Surette des Grands Bois	Mureche ò mantequero	Byrsonima spicata -	Malpighiaceæ.
58	Tamarind - -	Tamarinier - -	Tamarindo - -	Tamarindus indica -	Leguminoseæ.
59	Tapana - -	Tapana - -	Tapanare - -	Stillaginella - -	Euphorbiaceæ.
60	- - - -	Tendre à Caillou -	Charo - - -	Mimosa lithoxylum vel Pithecolobium filicifolium.	Mimoseæ.
61	- - - -	Mahaut de Londres -	- - - -	Thespesia populnea -	Malvaceæ.
62	Wild Tamarind -	Bois Mulâtre - -	Palo Mulato, ò clavellino.	Pentaclethra Filamentosa	Leguminoseæ.
63	White Mangrove -	Mangle Blanc - -	Mangle Blanco -	Laguncularia racemosa -	Verbenaceæ.
64	Yoke - - -	Yoke - - -	Yopo - - -	Astronium obliquum -	Leguminoseæ.
65	Cashew tree - -	Pommier d'Acajou -	Merey - - -	Anacardium occidentale -	Anacardiaceæ.
66	Yellow Sanders -	L'Epineux - -	Mapurito ò Espina de bobo.	Xanthoxylum clava Herculis.	Xanthoxylaceæ.
67	Surinam, or Cayenne Cherry.	Cerisier de Cayenne -	- - - -	Eugenia Mitchelli -	Myrtaceæ.
68	Mango tree - -	Mangotier - -	Mango - -	Mangifera indica -	Terbinthaceæ.
69	- - - -	- - - -	- - - -	Jacaranda cerulea vel felicifolia.*	Bigniaceæ.
70	- - - -	Guatamare - -	Guatamare - -	Myrospermum frutescens	Leguminoseæ.
71	Guenepe - -	Guenepe - -	Màco - - -	Melicocca Bijuga -	Sapindaceæ.
72	Avocado pear - -	Avocatier - -	Aguacate - -	Persea gratissima -	Laurineæ.
73	Wild Angelin - -	Angelin de Grand Bois	Lombricero del Monte	Diplotropis brachypetala	Leguminoseæ.
74	Scotch friend - -	Matapalo, - -	Matapalo - -	Ficus - - -	Artocarpeæ.
75	Akee - - -	Ris de Veau Vegetal -	- - - -	Akeesia (Blighia sapida)*	Sapindaceæ.
76	Mammee sapote -	Sapote - -	Mamey Colorado -	Lucuma Mammosa -	Sapotaceæ.
77	Bitter ash - -	Quassia - -	- - - -	Quassia Amara - -	Simarubaceæ.
78	Rough leaf - -	Feuille rude - -	Chaparro - -	Curatella Americana -	Dilleniaceæ.
79	Blood-wood - -	Dois Sang - -	Palo de Sangre -	Croton gossypifolium -	Euphorbiaceæ.
80	Sandbox (white) -	Sablier blanc - -	Javillo Blanco -	Hura Crepitans - -	Id.
81	Contrevent - -	Contrevent - -	- - - -	Lucuma multiflora -	Sapotaceæ.
82	Frangipani - -	Frangipanier - -	Aleluya - -	Plumieria - -	Apocynaceæ.
83	Cassia (long) - -	Cassier puant - -	- - - -	Cassia brasiliensis -	Leguminoseæ.
84	- - - -	Quashy-quasha -	- - - -	Thevetia neriifolia -	Apocynaceæ.
85	Mallacca apple -	Pommier Malaque -	- - - -	Eugenia Malaccensis -	Myrtaceæ.
86	Pandanus - -	Pandane - -	- - - -	Pandanus candelabrum -	Pandanaceæ.
87	Bermuda Cedar -	Cèdre des Bermudes -	- - - -	Juniperus Bermudiana -	Conifereæ.
88	Fiddle-wood - -	Bois lézard - -	Totumo Guaray -	Vitex Capitata - -	Verbenaceæ.
89	Grugru - -	Grougrou - -	Corozo - -	Acrocomia sclerocarpa -	Palmaceæ.
90	Pois dux - -	Pois doux - -	Guámo - -	Inga vera - -	Mimosaceæ.
91	Mabolo - -	Mabolo - -	Mábolo - -	Diospyros Mabolo -	Ebenaceæ.
92	- - - -	- - - -	- - - -	Pisonia, sp. - -	Nyctaginæ.
93	White-wood - -	Poirier de la Martinique	Roble blanco - -	Tecoma pentaphylla -	Bignoniaceæ.
94	- - - -	Boia Canari - -	Cauto - - -	Hirtella silicea - -	Chrysobolaneæ.
95	Royoc - - -	Royoc - - -	Royoc - - -	Morinda - - -	Rubiaceæ.

* Not indigenous.

Cl. **600, 601.**

No. of Order.	Common Names. English.	French.	Spanish.	Scientific Names.	Families.
96	Beef-wood	Aguatapana	Aguatapana	Rhopala Montana Trinitensis.	Proteaceæ.
97	Grugru	Grugru	Corozo	Astrocaryum	Palmaceæ.
98	Incense tree	Bois d'encens	Curucay	Icica heptaphylla vel Amyris.	Amyrideæ.
99	Star Apple	Caïmitier	Cainito	Chrysophyllum cainito	Sapotaceæ.
100	Noyau	Noyau	- - -	Prunus occidentalis	Drupaceæ.
101	Sea-side almond	Amandier du bord de mer.	Almendron de playa	Terminalia, sp.	Combretaceæ.
102	- - -	Poirier	- - -	Id.	Id.
103	Black Mangrove	Mangle noir	Mangle Jari	Avicennia nitida	Id.
104	- - -	Pois doux marron	- - -	- - -	Leguminosæ.
105	- - -	Iacque des Grands Bois	- - -	Chrysobolanus pellocarpus	Chrysobolaneæ.
106	- - -	Bois Caraïbe	Cometure	Campomanesia aromatica	Myrtaceæ.
107	Stave-wood	Raisinier des Grand Bois.	Uvero del monte	Coccoloba latifolia	Polygonaceæ.
108	Wild nutmeg	Muscadier Sauvage	- - -	Rheedia lateriflora	Guttiferæ.
109	Garlic Pear	Tocque	Toco	Crataeva gynandra	Capparidaceæ.
110	Cocorite	Cocorite	Cucurito	Maximiliana insignis	Palmaceæ.
111	Rose apple	Pomme Rose	Poma rosa	Jambosa vulgaris	Myrtaceæ.
112	- - -	Bouix	- - -	Chrysophyllum glabrum	Sapotaceæ,
113	Mountain Cabbuge	Palmiste	Chaguaramus	Oreodoxa regia	Palmaceæ.
114	- - -	- - -	Pata de Vaca	Bauhinia veriegata	Leguminoseæ.
115	Savana Cyp	Cyp Savana	Alatrique	Cordia sulcata	Cordiacea.
116	- - -	Pain d'épice	- - -	- - -	Sapotaceæ.
117	- - -	Surette	- - -	Cicca disticha†	Euphorbiacæ.
118	Cloves	Giroflier	Clavo de especie	Caryophyllus Aromaticus*	Myrtaceæ.
119	Nutmeg	Muscadier	Nuez de Moscada	Myristica Aromatica*	Myristiceæ.
120	Queen of Flower	- - -	- - -	Lagerströmia reginæ*	Leguminoseæ.
121	Mahogany	Acajou St. Domingue	Caoba	Swietenia Mahogani*	Id.
122	Acacia	Acacia	Aróma, ò Guatero	Acacia tortuosa	Mimoseæ.
123	Corkwood	Bois Flot	Tacarigua	Ochroma Lagopus	Bombaceæ.
124	Elm (Trinidad)	Bois d'orme	Guázumo	Guazuma ulmifolia	Byttneriacæ.
125	Yellow Mangrove	Mangle jaune	Mangle Amarillo	Avicennia Tomentosa	Verbenaceæ.
126	Voavanga	Varvanguier	Voa Vango	Vangueria commersoni*	Cinchonaceæ.
127	- - -	Bois cendre	Cenizero, ò marejon	Peridium	Euphorbiaceæ.
128	- - -	Caco marron	Camellon	Amaiouia	Rubiaceæ.
129	- - -	- - -	- - -	Phoberos	Flacourtiaceæ.
130	Mahoe	Mahault	Mahagua	Heliocarpus Americana	Malvaceæ.
131	Fig tree	Figuier	Lechero ò Atagua	Ficus radula	Urticaceæ.
132	Custard apple	Cachiman	Corazon	Anona reticulata	Anonaceæ.
133	- - -	- - -	- - -	Rollinia Multiflora	Id.
134	- - -	- - -	- - -	Pereskia	Cactaceæ.
135	Black Sage	Bois Nègre	Cariaquita negra	Cordia, sp.	Cordiaceæ.
136	- - -	- - -	- - -	Stereospermum chelonides*	Bignoniacæ.
137	- - -	Pied poule	Cachicamo	Psychotria	Rubiaceæ.
138	Cannon Ball or Bomb-shell tree.	Arbre á bombes	Múco	Couroupita Guianensis	Lecythidaceæ.
139	- - -	Bâtard bois-cannon ou Lentille.	Higuereton	Panax maratatoni	Araliaceæ.
140	Fig tree	Figuier	Lechero	Ficus, sp.	Urticaceæ.
141	Almond tree	Amandier	Almendron	Terminalia Catappa	Combretaceæ.
142	- - -	Bois charbon	Rayo de Antigua	Diospyros, sp.	Ebenaceæ.
143	- - -	Moricyp Jaune	- - -	- - -	Cordiaceæ.
144	- - -	Bois rivière	Juáldo.	——	—

* Not indigenous.

Cl. **600, 601.**

No. of Order.	Common Names.			Scientific Names.	Families.
	English.	French.	Spanish.		
145	- - -	Bois Canique - -	Naranjillo - -	Maba inconstans -	Ebenaceæ.
146	Sea-side plum - -	- - - -	- - - -	Ximenia Americana -	Olacaceæ.
147	Cocoa plum or fat pork	Icaque - -	Icacos - -	Chrysobolanus icacos -	Chrysobolanæ.
148	Sea-side Mahoe -	Mahault du bord de Mer	Caigua - -	Paritium tiliaceum -	Malvaceæ.
149	Orange tree - -	Oranger - -	Naranjo - -	Citrus Aurantium -	Aurantiaceæ.
150	- - - -	Chaparro à feuille lisse	- - - -	Bunchosia - -	Malpighiaceæ.
151	Cocoa tree - -	Cacaotier - -	Palo de Cacao -	Theobroma Cacao -	Byttneriaceæ.
152	Débasse - -	Débasse - -	Canilla de Venado -	Calyptranthes sericea -	Myrtaceæ.
153	- - - -	Bois baguette - -	Punteral - -	Myginda - -	Rubiaceæ.
154	- - - -	Bois de Morue -	Siete capas - -	Machœrium - -	Leguminoseæ.
155	Wild Cocoa - -	Bois Cacao - -	Uvero del Monte -	Coccoloba, sp. - -	Polygonaceæ.
156	- - - -	Bois patate - -	Naure - - -	Calliandra, sp. - -	Leguminoseæ.
157	- - - -	- - - -	Almendron del Monte -	- - - -	Chrysobolaneæ ?
158	Piroa - - -	Piroa - - -	Pijiguao -	Guilelma, sp. - -	Palmaceæ.
159	- - - -	- - - -	Palma real ò Yagua -	Œnocarpus Batawa -	Palmaceæ.
160	Coffee tree - -	Cafier - - -	Café - - -	Coffea Arabica* - -	Rubiaceæ.
161	- - - -	- - - -	Naranjillo - -	Swartzia grandiflora -	Leguminoseæ.
162	- - - -	- - - -	- - - -	Podocarpus salicifolius -	Conifereæ.
163	Wild Chestnut -	Chataignier -	Castano - -	Pachira Aquatica -	Bombaceæ.
164	- - - -	- - - -	C. de burro - -	Saccoglottis Amazonia -	Styraceæ.
165	White Cedar - -	Acajou Marron -	Cayuca ò anakin -	Myristica, sp. - -	Myristaceæ.
166	- - - -	Bois baril - -	Pama - - -	Pisonia inermis - -	Nyctagineæ.
167	Bird-lime tree -	Bois lait - -	Lechero - -	Sapium Aucuparium -	Euphorbiaceæ.
168	- - - -	Campêche bord de Mer	- - - -	Pithecolobium vel calliendra, sp.	Leguminoseæ.
169	- - - -	Bois l'étang - -	Lagunero - -	Pterocarpus Draco -	Id.
170	- - - -	Coco Macaque -	- - - -	?	Sapindaceæ.
171	Laurel - -	Laurier Avocat -	Laurel - -	?	Laurineæ.
172	Wild Savonette -	Savonette Blanc -	Conure blanco -	Machœrium, sp. - -	Leguminoseæ.
173	- - - -	Bois caco - -	Cacao del Monte Macho	Isertia parviflora - -	Rubiaceæ.
174	Thorn of yellow sanders	Piquant de l'Epineux -	Espina bobo - -	Xanthoxylon Clava Herculis.	Xanthoxylaceæ.
175	Grigri - - -	Grigri - - -	Maraval - -	Martinezia caryothefolia -	Palmaceæ.
176	Arnotto -	Roucou - -	Onoto - - -	Bixa Orellana - -	Bixaceæ.
177	- - - -	Mahault Chardon -	Tumboal - -	Apeiba Aspera - -	Tiliaceæ.
178	Yellow Sandbox -	Sablier jaune - -	Javillo Amarillo -	Hara Crepitans - -	Euphorbiaceæ.
179	- - - -	Bois Anoli.	——	——	—
180	- - - -	Cacapoule - -	- - - -	Faramea guianensis -	Malpighiaceæ.
181	- - - -	Cupey - - -	Cupey - - -	Clusia rosea - -	Clusiaceæ.
182	- - - -	- - - -	- - - -	Ilex Macoucona - -	Ilicineæ.
183	- - - -	- - - -	Mamoncillo - -	Casearia - -	Samydaceæ.
184	- - - -	- - - -	Yema de huevo.	——	—
185	Mawbee stick - -	Bois Costière -	Bijaguara - -	Colubrina reclinata -	Rhamneæ.
186	Sugar apple - -	Pomme Cannelle -	Anon - - -	Anona Squamosa -	Anonaceæ.
187	Wild Coffee - -	Café Marron - -	Cafe del Monte -	Coffea, sp. - -	Rubiaceæ.
188	- - - -	- - - -	- - - -	Mollinedia - -	Monimiacæ.
189	- - - -	- - - -	Cauturo - -	Parinium Campestre -	Chrysobolaneæ.
190	- - - -	- - - -	Naranjillo de rio -	- - - -	Ebenaceæ.
191	- - - -	- - - -	Sardino Arima -	- - - -	Samydaceæ.
192	- - - -	Mabouya - -	- - - -	Capparis Cynophallophora	Capparidaceæ.
193	- - - -	Pouï Mme. Jean -	- - - -	Olyganthus Condensata -	Compositæ.
194	- - - -	Bois flambeau - -	- - - -	Tecoma Stans - -	Bignoniaceæ.
195	Olive-wood - -	Bois d'Olive - -	- - - -	Capparis jamaicensis -	Capparidaceæ.
196	- - - -	Petit baume - -	- - - -	Croton, sp. - -	Euphorbiaceæ.
197	- - - -	Bois Miel - -	- - - -	- - - -	Myrtaceæ.

* Not indigenous.

Cl. **600, 601.**

Nat. Order.	Common Names. English.	French.	Spanish.	Scientific Names.	Families.
998	- - - -	Noyer (Chacachacareo Island).	- - - -	- - - -	Samydaceæ.
999	- - - -	- - - -	Algarrobo - -	- - - -	Polygoneæ.
000	Cactus - -	Cactus - -	- - - -	Cactus heptagonus -	Cactaceæ.
001	Dividivi - -	Dividivi - -	Dividivi - -	Cæsalpinia Coriaria -	Leguminoseæ.
002	- - - -	Bois mal d'estomac -	Guallulo - -	- - - -	Piperaceæ.
003	- - - -	- - - -	Barbasco - -	Jacquinia armillaris -	Myrsineæ.
004	- - - -	- - - -	Inagua - -	- - - -	Myrtaceæ ?
005	- - - -	- - - -	Sardino blanco -	Miconia prosina - -	Melastomaceæ.
006	- - - -	Bâtard bois l'orme -	- - - -	Sponia - - -	Urticaceæ.
007	- - - -	- - - -	Maraquire - -	Ratonia Americana -	Sapindaceæ.
008	- - - -	- - - -	Aquirire - -	- - - -	Meliaceæ.
009	- - - -	- - - -	- - - -	Cordia sp. (red flowers)*	Cordiaceæ.
010	- - - -	Avocat Marron -	- - - -	Ruprechtia, sp. -	Polygonaceæ.
011	- - - -	Morieyp rouge.	——	——	—
012	Cherry Wood (from Chacachacareo Island.)	Cerisier - -	Cereza - -	Pholacilia trifoliata -	Meliaceæ.
013	- - - -	- - - -	- - - -	Aspidosperma - -	Apocynæceæ.
014	- - - -	- - - -	- - - -	Solanum Callicarpifolium	Solanaceæ.
015	- - -	Bois lesserre - -	Palo morocoi.	——	—
016	- - - -	Raisinier - -	Cuchape - -	Coccoloba, sp. - -	Polygonaceæ.
017	- - - -	- - - -	- - - -	Calliandra, sp. - -	Leguminoseæ.
018	Jackwood - -	Jacquier -	- - -	Artocarpus integrifolia* -	Artocarpeæ.
019	Chigoewood	Bois négresse - -	Mangle dulce - -	Bravaisia floribunda -	Acanthaceæ.
020	- - - -	- - - -	C. de verasco - -	Tabernaemontana -	Apocynaceæ.
021	- - - -	- - - -	- - - -	- - - -	Myrsineæ.
022	Supple Jack - -	Liane persil - -	Bejuco Mulato -	Seriana, sp. - -	Sapindaceæ.
023	- - - -	- - - -	- - -	Lagerströmia indica* -	Lythraceæ.
024	- - - -	- - - -	- - -	Citriosma - -	Monimiaceæ.
025	- - - -	Quinquina pays -	- - -	Coutarea speciosa -	Cinchonaceæ.
026	- - - -	- - - -	- - - -	Randia, sp. - -	Id.
027	- - - -	- - - -	- - - -	Melastoma, sp. - -	Melastomaceæ.
028	Mangotin - -	Mangotine - -	Mangotina - -	Mangifera, sp. - -	Terebinthaceæ,
029	- - - -	- - - -	- - - -	Ebenacea, sp., from Caroni and Chaguanas.	Ebenaceæ.
030	- - - -	- - - -	Quiebra hacha - -	Copaifera hyminifolia*	Leguminoseæ.
031	Immortel tree - -	Immortelle - -	Bucare or madre del cacao.	Erythrina - -	Papilionaceæ.
032	- - - -	- - - -	- - - -	Posoqueria Longiflora -	Cinchonaceæ.
033	- - - -	- - - -	- - - -	Alchorneo.	—
034	Timit - - -	Timite - -	Timite - - -	Manicaria saccifera -	Palmaceæ.
035	- - -	- - - -	- - - -	Casuarina Equisetifolia* -	Equisetaceæ.

* Not indigenous.

Cl. **603.** **Trinidad, Goverment of.** Balata Gum or Trinidad Gutta Percha, (Liquid) 2 Demi-johns; Solid 6, Cakes.

Cl. **605.** **Devenish, Syl., Esq.,** Surveyor General. 3 Razor Strops (made of Agave Vivipara); 1 Gourd Calabash.

Cl. **623.** **Needham, Sir Jos.,** San Antonio. Cocoa, (1 bag.)

Penco, Jos., Esq., La Merced. Cocoa, (1 box.) Cl. **623.**

Cleaver, C., Esq., Verdant Vale. Cocoa, (2 bags.) Cl. **623.**

D'Abadie, St. L., Esq., St. Pedro. Cocoa, (1 bag.) Cl. **623.**

Flament, Mrs. C. Snuff made of Native Tobacco. Cl. **623.**

Cl. **623.** **Prestoe, Hy. Esq.,** Government Botanist. Nutmegs, 1 bottle fresh, perfect fruits; do., 1 bottle prepared, do.; Cloves, 1 bottle fresh, flower buds; Cloves and Nutmegs, 1 bottle mixed, fresh; Mace, 1 bottle prepared.

Cl. **666.** **Somes & Co.,** Nariva Cocal. Sample of fibre extracted from the husks of the Cocoa-nut, adapted for making Brooms, Brushes, &c., value about $250 per ton; Sample of ditto, adapted for Upholstery and Bedding, value about $110 per ton; Coil of the above spun.

Cl. **666.** **Devenish, Syl., Esq.,** Surveyor General. Samples of fibre of Agave Vivipara and of Mats made thereof.

Cl. **666.** **Prestoe, Hy., Esq.,** Government Botanist. Fibres, various kinds, in 20 samples, as follow:—

No. 1. Sida carpinf olia, L. Malvaceæ.
„ 2. Urena lobata, L. „
„ 3. Sida rhombifolia, L. „
„ 4. „ linifolia, Juss. „
„ 5. Pavonia bracteata, Benth. Malvaceæ.
„ 6. Do. racemosa, „
„ 7. Malvaviscus indicus, L. „
„ 8. „ Sp. „
„ 9. Sterculia caribæa, R. B. Sterculiaceæ.
Bass from trunk.
„ 10. Hibiscus Rosa-simensis, Malvaceæ.
Bass from matured branches.
Fibre from young branches.
„ 11. Musa paradisiaca, L.
Fibre from outer leafstalks—uncombed.
Do. do. —roughly combed.
Ditto from inner leafstalks—uncombed.
Do. do. —roughly combed.
„ 12. Musa textilis,
„ 13. Sample—rough.
„ 14. Do. —combed.
„ 15. Musa sapientum.
„ 16. Do. do. variety "Yellow Fig."
„ 17. Do. cavendishii.
„ 18. Fourcroya gigantea, sample prepared in 1866.
do. do. in 1875.
„ 19. Bromelia karatas, L.
„ 20. Theoma brocacao, L.

Remarks.—These fibres—with one or two exceptions as specified—were all prepared in 1866.

They are to be regarded as of two classes:—

First.—Those obtained from the bark of the plant, as in Hemp, Flax, &c.; and

Second.—Those obtained from the substance of the leaves or leafstalks, as in "Manilla," Hemp, &c.

Nos. from 1 to 11, and No. 20 belong to the first class—the first four being obtained from the bark of the entire plant; 5, 6, 7, 8, and 20 are obtained from the younger branches; and No. 9 from the trunk of the tree.

Nos. 12 to 19 belong to the second—12, 13, 14, 15, and 16 being obtained from the leaf-stalks (forming the stem in the plantain), and 17, 18, and 19 being obtained from the leaves.

The colour and strength of the fibres depend much on the manner of preparing them, but with very ordinary care they can be brought out of extraordinary strength, and of snowy white, or golden yellow, by simple maceration.

The size, strength, and colour of the fibre appear not to vary in branches or stems of different ages in Nos. 1 to 4, but in Nos. 5 to 11 these characters vary in growths of different ages: being fine and silk-like in the younger, and coarse and easily separable in plaits as "bass" in the older branches and stems. In No. 9, the bark of the young branches reaches a maximum degree of coarseness, and is scarcely useful; but the bark of the matured branch or trunk furnishes an exceedingly fine and abundant "bass," well adapted for any purpose to which such an article is usually applied.

Of the foregoing, Nos. 1 to 6, and 9, 11, 17, and 20 are indigenous to Trinidad, and very hardy and abundant. The others are introduced plants, but all are completely naturalised; some, such as the variety of *Musa Paradisiaca*, known here as the "Jumbee Plaintain," and *Sansievera*, have become wild plants.

Colonial Company's Agency. Sugar (1 box) manufactured at Usine (central factory) St. Madelaine, Trinidad, W.I. the property of the Colonial Company, Limited, 16, Leadenhall Street, London. Manufactured direct from canes cut on the same day. The juice is first treated with temper lime in the clarifiers, sub- Cl. **659.**

sided, passed through animal charcoal, then evaporated to syrup in the "Triple Effet," passed a second time through the charcoal boiled to sugar in vacuum pan, and finally cured in Weston's (American) patent centrifugals.

Molasses sugar (1 box) manufactured at the same "Usine" from the molasses obtained from the above. The molasses is pumped as fast as it proceeds from the centrifugals into tanks, where it is heated and slightly reduced in density by means of open steam, and is then boiled in vacuum pans and cured in centrifugals.

Cl. **660.** **Siegert, Dr.**, Port-of-Spain. "Angostura Bitters," manufactured by Dr. J. G. Siegert at Port-of-Spain, Trinidad. (4 cases.)

Cl. **657.** **Trinidad, Government of.** Cassarip.

Cl. **657.** **Flament, Mrs. Ch.** Farine Manioc.

Jenny, Miss. Farine Manioc. Cl. **657.**

Flament, Mrs. C. Plaintain Flour; Cassada Starch. Cl. **657.**

Devenish, Syl., Esq., Surveyor General. Carap Oil. Cl. **657.**

Somes & Co., Messrs. Cocoanut Oil. Cl. **662.**

Devenish, Syl., Esq., Surveyor-General. Walking Sticks. Cl. **254.**

Trinidad, Government of. Collection of Baskets; 10 Indian Baskets; nest of six Fancy Baskets; Miniature Egg Baskets; Fans; "Guayares," miniature strainers as used for preparing Cassava; miniature "Guayares" used by men for carrying loads; miniature Cataures used by women for carrying loads; Mats; Rice and Coffee Fans. Cl. **254.**

McAdam, Miss Venus. Baskets made of the Towel Gourd. Cl. **254.**

VICTORIA, AUSTRALIA.

Victoria, the most populous colony in Australia, is situated on the southern extremity of the continent, and extends from the 34th to the 39th parallel of south latitude, and from the 141st to the 150th meridian of east longitude. Its extreme length from east to west is about 420 geographical miles, and its greatest breadth 250 miles. The extent of coast-line is nearly 600 miles. The area of Victoria is 88,198 square miles, or 56,446,720 acres, or the thirty-fourth part of the whole surface of Australia, an extent about equal to that of England, Wales, and Scotland, which contain 89,644 square miles. Victoria is therefore very much smaller than any of its neighbours on the mainland of Australia, although its population is very nearly as large as all the others put together. The highest mountain in Victoria, Bogong, has an elevation of 6,508 feet, and there are several ranging from 4,000 to 6,000 feet. The Murray runs along the northern boundary for 670 miles, but the Goulburn, with a length of 230 miles, is the longest river which flows throughout its course entirely in Victoria.

Owing to its geographical position Victoria enjoys a climate cooler and more invigorating than any other Australian colony. The mean temperature of the air in Melbourne, derived from a series of observations extending over a period of 14 years, is 57°·6. Upon examining a chart showing isothermal lines, it will be found that the Victorian capital is situated upon or near the line corresponding with that on which, in the northern hemisphere, Marseilles, Bordeaux, Bologna, Nice, Verona, and Madrid are situated. The difference between winter and summer, between the hottest and the coldest month, is less in Victoria than in any of the places mentioned, and the European city the climate of which most resembles that of Melbourne is Maffra, 38 miles north-west of Lisbon, and 700 feet above the level of the sea.

The three months from September to November are considered to be the spring quarter, from December to February the summer, from March to May autumn, and from June to August winter. January and February are the warmest months, June and July the coldest. The observations taken for 17 years show that on 61 occasions the thermometer has risen above 100° Fahrenheit, and that there are 52 instances of its having fallen to or below freezing point. The mean temperature of the air during the two hottest months has been 66°·7 in January and 65°·6 in February, while the coolest, June, shows 49°·0, and July 47°·7. The above figures give the temperature of Melbourne. Some of the districts in the interior, which enjoy an elevation of from 1,000

to 2,000 feet above the level of the sea, are rather cooler, while others are slightly warmer than the metropolis. The mean temperature of the air throughout the year at Ballarat, 1,438 feet above the level of the sea, is 53°·9′, as compared with 57°·6′ in Melbourne, while at Sandhurst it is as high as 58°·6′.

The rainfall at Melbourne differs very considerably in different years. The year of the greatest rainfall was 1849, in which 44·25 inches of rain fell; then 1863, with 36·42 inches, and 1870, with 33·77 inches. The year when least rain fell was 1865, with 15·94 inches. The rainfall is tolerably well distributed throughout the year, the mean number of days upon which rain fell during the past 35 years being 135·5, of which the spring quarter contributed 40·3, the summer 24·4, the autumn 28·9, and the winter 41·9. The mean annual rainfall is 27·58 inches, compared with 49·95 in Sydney and 21·36 in Adelaide.

The hot winds of Victoria form the peculiar feature of its climate which is most talked about in other countries and is most dreaded by new arrivals. They frequently set in about 9 a.m., and blow from the north with great violence, raising clouds of dust. Vegetation becomes parched up, fruit falls from the trees, and animals as well as human beings appear to be greatly oppressed. The time is a trying one for young children and invalids. The wind often changes to the south towards evening, but sometimes continues to blow from the north for two and even three days. When the welcome southerly wind sets in it frequently does so in a heavy squall, accompanied with drops of rain and thunder and lightning, and the thermometer sometimes falls as much as 20 or 30 degrees in half an hour. According to Neumayer, the average number of hot winds for the colony amounts to eight or nine per annum, but the average is different in different localities, according to the following classification :—

	Average Number of Days of Hot Wind per Annum.
Melbourne and Castlemaine - - - -	14
Sandhurst, Heathcote, and Portland - - -	11
Beechworth, Ararat, and Swan Hill - - -	8
Geelong and Ballarat - - - - -	6
Alberton and Camperdown - - - -	3

The hot winds are not, however, by any means unmixed evils. The intense dryness produced by them acts as a powerful disinfectant, and the dampness which in the south of Europe produces such prejudicial effects is entirely unknown in Victoria.

The present population of Victoria is in round numbers 820,000. The latest census, taken in 1871, gave 731,528, of whom 401,050 were males and 330,478 females, residing in 158,481 houses. The increase which has since taken place from immigration and the excess of births over deaths has done much to reduce the difference between the sexes, and the numbers may now be set down at 430,000 males and 390,000 females.

The various censuses which have been taken since the first settlement of Melbourne give the accompanying results.

Date of Enumeration.	Population.			Number of Houses.
	Persons.	Males.	Females.	
25th May 1836 - -	177	142	35	—
8th November 1836 -	224	186	38	—
12th September 1838 -	3,511	3,080	431	—
2nd March 1841 - -	11,738	8,274	3,464	1,490
2nd March 1846 - -	32,879	20,184	12,695	5,198
2nd March 1851 - -	77,345	46,202	31,143	10,935
26th April 1854 - -	236,798	155,887	80,911	—
29th March 1857 - -	410,766	264,334	146,432	102,001
7th April 1861 - -	540,322	328,651	211,671	134,332
2nd April 1871 - -	731,528	401,050	330,478	158,481

Of the present population of Victoria, about 17,000 are Chinese, and 1,330 Aborigines.

Victoria contains 8·268 persons to the square mile, or rather less than in the empire of Russia, which has 10, and much less than the United States, which has 14 inhabitants. The population is very unevenly divided Melbourne, the capital of Victoria, has with its suburbs a population of 240,000, rather less than Boston, U.S., or Sheffield, but more than Hamburg, while in the county of Weeah, in the extreme north-west of the colony, there was not a single inhabitant on the night upon

which the census was taken. Ballarat, the second city in Victoria, has 47,201 inhabitants, Sandhurst 28,577, Geelong, 21,459 ; then come Castlemaine with a population of 9,322, Clunes, 6,068, Stawell, 5166, and Daylesford, 4,696. The disproportion of the sexes is confined to the remoter districts, for in eighteen of the cities, boroughs, and towns, the females were in excess of the males.

The accompanying table shows the various nationalities of which the people of Victoria were comprised in 1871.

Where born.	Numbers.		
	Persons.	Males.	Females.
British Possessions.			
Victoria	329,597	165,573	164,024
Other Australasian Colonies	28,669	14,308	14,361
England	164,287	97,796	66,491
Wales	6,614	4,189	2,425
Scotland	56,210	31,475	24,735
Ireland	100,468	49,198	51,270
Other British Possessions	3,870	2,641	1,229
Foreign Countries.			
France and French Colonies	1,170	857	313
Germany	8,995	6,591	2,404
Austria	269	256	13
Other European countries	6,206	5,672	534
United States of America	2,423	1,776	647
China	17,857	17,826	31
Other countries	315	214	101
At Sea	2,064	1,095	969
Total specified	729,014	399,467	329,547
Unspecified	2,514	1,583	931
Total Population	731,528	401,050	330,478
Allegiance.			
British subjects	695932	369,228	326,704
Foreign subjects	34,854	31,415	3,439
Allegiance unknown	742	407	335

Of the whole population, 257,835 belong to the Church of England, 112,983 are Presbyterians, 170,620 Roman Catholics, 94,220 Wesleyans, 18,191 Independents, 16,311 Baptists, 10,559 Lutherans, 3,571 Jews, and 17,650 Chinese are returned as Pagans.

Of every thousand persons over five years, the number who could read and write was 804, and of those who could read only, 128, leaving 68 totally uneducated. Of the population over twenty-one, 871 could read and write, and 74 could read only, leaving 55 per 1,000 of the adult population wholly uneducated. Primary education in Victoria is now free, compulsory, and secular.

Victoria was first discovered by Captain Cook in 1770, but the first permament settlement did not take place until 1834, when the Messrs. Henty established a whaling establishment at Portland. In 1836 Batman and Fawkner crossed from Tasmania and took up their residence on the banks of the River Yarra near the site of the present city of Melbourne. The fact that, as throughout the greater portion of Australia, the land was well adapted for cultivation, that sheep and cattle could thrive upon the natural grasses of the country and could live in the open air throughout the year, attracted a large immigration ; and in 1851, when Victoria was separated from New South Wales and commenced an independent existence, the population numbered 76,000, the sheep 6,000,000, the cattle 380,000, the horses 21,000, and the land in cultivation 52,000 acres. In the preceding year the public revenue had amounted to 260,000*l.*, the public expenditure to 196,000*l.*, the imports to 745,000*l.*, the exports to 1,000,000*l.* The ships which arrived numbered 555, of an aggregate tonnage of 108,030, and the ships which departed numbered 508, of an aggregate tonnage of 87,087. The wheat grown amounted to 550,000 bushels, the oats to 100,000 bushels, the hay to 21,000 tons. The wool exported amounted to 18,000,000 lbs., and the tallow to 10,000,000 lbs.

The discovery of gold which took place in 1851 enormously increased the population and revenues of the Yarra colony. For many years the principal export was gold, but the production of this precious metal is now of less importance than that of the great staple wool. Of the exports in 1874, amounting altogether in value to 15,441,109*l.*, wool was valued at 6,373,641*l.* and gold at 4,053,288*l.*

The important position which the Australian colonies had obtained in consequence of the discovery of gold, and the influx of population consequent thereon, was the occasion of the Imperial Government determining in the latter end of 1852 that each colony should be invited to frame such a Constitution for its government as its representatives might deem best suited to its own peculiar circumstances. The Constitution framed in Victoria, and afterwards approved by the British Parliament, was avowedly based upon that of the United Kingdom. It provided for the establishment of two Houses of Legislature, with power to make laws, subject to the assent of the Crown as represented generally by the Governor of the colony ; the Legislative Council

to consist of thirty, and the Legislative Assembly to consist of sixty members. Members of both Houses to be elective and to possess property qualifications. Electors of both Houses to possess either property or professional qualifications, the property qualification of both members and electors being lower in the case of the Assembly than in that of the Council. The Council not to be dissolved, but five members to retire every two years and to be eligible for re-election. The Assembly to be dissolved every five years, or oftener, at the discretion of the Governor. Certain officers of the Government, four at least of whom should have seats in Parliament, to be deemed "Responsible Ministers." Any member of either House accepting a place of profit under the Crown to vacate his seat, but to be capable of being re-elected. This Constitution was proclaimed in Victoria on the 23rd November 1855, and with certain modifications is still in force. The most important modifications are the reduction of one-half the of property qualifications of both members and electors of the Council, the total abolition of the property qualifications for both electors and members of the Assembly, the increase of members of the Assembly from 60 to 78, shortening of the duration of their term of election from five years to three, and paying members both of Council and Assembly.

No Imperial troops are stationed in Victoria, the defence force consisting of 196 paid artillerymen, 4,100 volunteers of various arms, together with a monitor and line-of-battle ship with 52 heavy guns, and 340 officers and men for harbour defences.

The revenue for the year 1874 was 4,106,790*l.*, and the expenditure, 4,177,337*l.*, the revenue being 5*l.* 4*s.* 0*d.*, and the expenditure 5*l.* 5*s.* 10*d.* per head. Of the whole revenue, about 1,800,000*l.* is raised from Customs and Excise, 600,000*l.* from the sale and rents of Crown Lands, 900,000*l.* from the receipts from the railways which are the property of the State, and 200,000*l.* from the Post and Telegraph Offices. Of the whole expenditure, the interest upon the public debt of 12,485,432*l.* absorbed 726,142*l.*, the railways were worked at a cost of 442,624*l.*; 537,758*l.* was expended upon public instruction, 200,000*l.* upon railways, 579,500*l.* upon public works, and 272,289*l.* upon charitable institutions, such as hospitals, orphanages, and industrial schools.

The greater portion of Victoria is divided into municipalities, some urban, which according to their importance are styled cities, towns, or boroughs; the others rural, which are designated shires. Each municipal district is a body corporate with perpetual succession and a common seal, and is capable of sueing and being sued, holding and alienating land. The number of municipal districts is 60 urban and 110 rural, the population 773,711, the number of ratepayers 171,746, and the number of dwellings 166,124. The whole of the colony, with the exception of the mountains, is now included in these municipalities. The annual value of the properties taxed is set down at 5,995,477*l.*, and the municipal revenue from all sources at 985,014, including a subsidy from the Government. The greater portion of the expenditure is upon public works, the salaries only amounting to 95,569*l.*, or about 10 per cent.

The number of electors was, Council 27,930, Assembly 146,937. The only qualification for an elector of the Assembly, is, that he be either a natural-born subject of Her Majesty, or that, if an alien, he be naturalized and have resided in the colony for 10 years.

The system of transferring land, whereby a fresh title from the Crown is given to every purchaser, was inaugurated in Victoria in 1862 by the coming into force of the Real Property Act, and has since been perfected under other Statutes. All lands alienated from the Crown after the commencement of the Act named have come at once under the provisions of this law, and land alienated prior to its passing can be brought under it, provided a clear title can be produced, or a title containing only a slight imperfection. In the latter case, the title is given subject to such imperfection, which is noted on the deed. As the Government takes the responsibility of the title, and may occasionally, notwithstanding every care, pass properties in respect to which claims may arise at some future time, an assurance and indemnity fund, to secure the Government against possible losses, is formed, chiefly by the payment by each person bringing property under

the Statute of an amount equal to one halfpenny in the pound of the value of such property. One claim only, amounting to 250*l.*, has been paid out of this fund since the first introduction of the system. The balance to the credit of the fund at the end of 1874 was 29,119*l.* 1*s.* 4*d.*, of which amount 23,000*l.* had been invested in Government stock.

The number of insolvencies in 1874 was 776. 23,856 persons were taken into custody by the police, of whom 6,929 were discharged, 16,233 summarily convicted, and 694 committed for trial. 10,981 persons were arrested for drunkenness, and 5,058 for other offences against good order. 10 arrests were on charges of murder, 28 of manslaughter, and 3,000 for offences against property. Of the 694 persons committed, 436 were convicted.

The imports in 1874 were valued at 16,953,985*l.*, and the exports at 15,441,109*l.*, or 21*l.* 4*s.* 7*d.* per head of the population for imports and 19*l.* 6*s.* 8*d.* for exports. Of the whole exports, 11,352,515*l.* were the produce or manufacture of Victoria ; of the imports 8,369,523*l.* were from the United Kingdom, and 5,496,776*l.* from the other Australian colonies. Eighty per cent. of the imports are landed, and ninety per cent. of the exports are shipped, at the Port of Melbourne.

The number of vessels entered was 2,100, of an aggregate tonnage of 777,110 tons, while 2,122, of 792,509 tons, cleared. The nationality of the ships entering was colonial 1,714, British 289, foreign 97.

The number of post offices is 802 ; the number of letters despatched and received 15,738,888, newspapers 6,866,918. The income of the post office was 194,339*l.*, and the expenditure 288,574*l.* 216 post offices issue money orders. There are 148 telegraph stations, 4,464 miles of wire, and the telegrams despatched in 1874 amounted to 701,080.

The total number of miles of government railway opened is 967½, and of private railways 17 ; the total distance travelled in 1874 was 2,109,227, the number of persons travelling being 5,374,841, and the weight of goods 904,670 tons. The total receipts on government and private lines was 1,016,926*l.*, the rates charged varying from 1*d.* to 2*d.* per mile according to class.

Wages vary from 15*s.* to 20*s.* per week and rations to farm labourers, and 12*s.* to 15*s.* per week with rations for labourers employed on sheep stations, to 11*s.* and 12*s.* per day, without rations, for mechanics, and 7*s.* per day, without rations, for town labourers. Seamen receive from 6*l.* to 7*l.* per month, and female servants from 30*l.* to 60*l.* per annum with board and lodging.

The prices of the following articles are given as follows in the official returns :

Wheat, per bushel, 4*s.* 9*d.* to 7*s.* 3*d.*	Butter, 1*s.* to 1*s.* 6*d.* per lb.	Cabbages, 1*s.* per dozen.
Bread 6*d.* to 8*d.* per loaf.	Cheese, 9*d.* to 1*s.* per lb.	Horses, 5*l.* to 40*l.*
Flour from 12*l.* to 15*l.* per ton.	Milk, per quart, 6*d.*	Fat Cattle, 5*l.* 10*s.* to 12*l.* 10*s.*
Beef, 4*d.* to 6*d.* per lb.	Potatoes, 4*l.* 10*s.* per ton.	Fat Sheep, 5*s.* to 20*s.*
Mutton, 2½*d.* to 6*d.* per lb.		

The weekly rent of a dwelling suitable for a mechanic and his family ranges, in the suburbs of Melbourne, from 8*s.* to 15*s.* In other towns it is lower, and in country districts the erection, on Crown lands, of a cottage of sawn or split timber, with a shingle or bark roof, which can be accomplished at a trifling cost, often enables the man of small means to save rent altogether. In all the large towns, owing to the facilities offered by building societies and other financial institutions for obtaining advances of money on easy terms, numbers of labouring men possess freeholds of their own.

The mode of acquiring land from the Crown is under the Land Sales Act. 320 acres is the largest amount which any one person is allowed to select. The selection is held under license during three years, within which period the licensee must reside on his selection at least two and a half years, must enclose it, cultivate 1 acre out of every 10, and generally effect substantial improvements to the value of 20*s.* per acre. The rent payable

during this period is 2*s.* per acre per annum, which is credited to the selector as part payment. At the expiration of the three years' license, the selector, if he obtain a certificate from the Board of Land and Works that he has complied with these conditions, may either purchase his holding by paying up the balance of 14*s.* per acre, or may convert his license into a lease extending over seven years, at an annual rental of 2*s.* per acre, which is also credited to the selector as part payment of the fee-simple. On the expiry of this lease, and due payment of the rent, the land becomes the freehold of the selector. The Crown land sold in 1874 amounted to 531,538 acres, and the extent granted without purchase to 44 acres. Of the former, 49,656 acres were sold by auction. The remainder was selected under the various Land Acts. The total extent sold, from the first settlement of the colony to the end of 1874, was 9,929,388 acres, and the extent granted without purchase was 3,245 acres, making a total of 9,932,633 acres.

The fee-simple of the whole of this land had passed to the purchaser. A further extent of land, amounting, at the end of 1874, to about 5,650,000 acres, was in process of alienation under the system of deferred payments, and this too, should the legal conditions be duly complied with, will pass away from the Crown in the course of a few years. Then there is land occupied by roads, the sites of towns, State forests, auriferous pastoral, and timber reserves, and land which is at present useless owing to its mountainous character, or to its being covered with mallee scrub, lakes or lagoons. Deducting the whole of these lands from the area of the colony, estimated at 56,446,720 acres, the area available for selection at the end of 1874 is found to have amounted to nearly 15,000,000 acres.

Land, until selected, is held by persons called squatters, who are tenants of the Crown, but can be dispossessed at any moment to meet the wants of the agricultural selector. The rent paid by them is 4*s.* yearly for each horse or head of cattle that the run can depasture, and 8*d.* per head for the sheep. The amount received from these sources in 1874 was 125,938*l.*, or at the rate of about 1¼*d.* per acre.

The land under cultivation in 1875 amounted to 1,011,776 acres, of which 332,936 acres were under wheat, 114,921 oats, 129,505 barley, 35,183 potatoes, 119,031 hay, 254,329 green forage. The area under vines was not given. The production, excluding minor crops, was, wheat 4,850,165 bushels, oats 2,121,612 bushels, barley 169,896 bushels, potatoes 124,310 tons, hay 157,261 tons, wine 577,493 gallons. The value of the agricultural produce was estimated at 4,410,435*l.*, the average weight per bushel of the wheat being 61 lbs., oats 40 lbs., barley 51 lbs.

The live stock amounted to 180,254 horses, 241,137 milch cows, 717,521 cattle, 11,221,056 sheep, and 137,941 pigs, and the value of machinery and improvements upon squatting stations to 13,898,434*l.*

The statistics of the other producing interests show that the beer made amounted to 13,653,531 gallons, and that the number of persons employed in manufactures was, males 20,442, females 4,649, the value of the machinery, plant, and buildings being 4,750,000*l.*

The gold raised in 1874 was valued at 4,630,000*l.*, and the other minerals 35,453*l.* The gold coined in the Melbourne branch of the Royal Mint was, in 1874, 1,383,417*l.* The rates of discount vary at from 6 to 7 per cent. for bills under 65 days to 9 per cent. for bills beyond 120. The liabilities of the local banks were estimated in 1874 at 14,105,460*l.*, and their assets to 20,456,852*l.*, the average dividends paid being 11 per cent. The balance at the credit of the 64,014 depositors in the savings banks was 1,617,301, or an average of 25*l.* 3*s.* 4*d.* per head.

The number of marriages in 1874 was 4,925, or 6·27 per head, which is less than in England, where it is 8·24. The births were 26,800, and the deaths 12,222, or 15·30 per cent. of the population, as against 22·40 in England and Wales. About 12·5 per cent. of all children born die in their first year, as against 15½ per cent. in England and Wales.

Collection of Rocks, Minerals, and Fossils, illustrative of the Geology, Mineralogy, and Mining Resources of Victoria, exhibited for and on behalf of the Government, by R. Brough Smyth, F.G.S., F.L.S., Assoc. Inst. C.E., Secretary for Mines and Chief Inspector of Mines for the Colony.

Older Igneous or Plutonic Rocks. Granites, porphyries, &c.

Newer Igneous or Volcanic Rocks. Older Basalt. (Age between eocene and older pliocene tertiary).

Newer Basalt. (Age from pliocene tertiary to recent).

Aqueous Rocks. Lower Palæozoic. Lower Silurian. (Including rocks of this age metamorphosed by contact with granite and other igneous rocks).

Upper Silurian. (Including rocks of this age metamophosed by contact with granite, &c.

Upper Palæozoic.

Mesozoic—Carbonaceous.

Tertiary.

Collection of Mineral Specimens.

Economic Collection. Auriferous Quartz.

FAC-SIMILES OF GOLD NUGGETS FOUND IN VICTORIA.

The "Beauty" Nugget weighed 242 ozs. It was discovered at a depth of 9 ft. from the surface, in Kangaroo Gully, Bendigo, in the year 1858. The gold was 22·2⅞ carats fine.

The "Platypus" nugget weighed 377 ozs. 6 dwts. It was found in Robinson Crusoe Gully, Bendigo, in a pillar of earth in a deserted claim. The claim was situated in shallow alluvium, and the nugget was discovered in March 1861. The gold was 22·1⅛ carats fine.

The "Viscount Canterbury" nugget was found in John's Paddock, Berlin Diggings, at a depth of 15 ft. from the surface, on the 31st May 1870. It weighed 1,105 ozs. The gold was 23·3 carats fine.

The "Schlemm" nugget was found at Dunolly on the 11th July 1872, at a depth of 3 ft. beneath the surface. It weighed 538 ozs., and is estimated to contain 60 ozs. of quartz.

Nugget (not named) found in Broomfield's Gully, Creswick, on the 8th August 1872. It weighed 24 ozs. 3 dwts., and was got at a depth of 100 ft. below the surface.

The "Kum Tow" nugget weighed 718 ozs. 5 dwts. It was found on the 17th April 1871 in Catto's Paddock, Berlin Diggings, at a depth of 12 ft. 6 in. below the surface. It was found by a party of Chinamen. The gold was 23·3 carats fine.

The "Viscountess Canterbury" nugget was found on the 3rd October 1870 at Berlin. It was discovered at 6 ft. 6 in. beneath the surface, and weighed 884 ozs. 10 dwts. The gold was 23·2⅝ carats fine.

The "Crescent" nugget was found on the 2nd April 1872 at a depth of 2 ft. beneath the surface. It weighed 176 ozs. 8 dwts., and was discovered at Berlin.

Nugget (not named), found at Creswick, in the Key Company's mine. It weighed 32 ozs., and was found in January 1871.

The "Oldham" nuggets, found at Turton's Creek, in April 1873. They weighed respectively 2 ozs. and 36 ozs., and were got at a depth of 2 ft. beneath the surface. The gold was 23·⅜ carats fine.

The "Spondulix" nugget was found in November 1872, at Eureka Gulley, Jordan's, near Dunolly. It weighed 130 ozs., and was estimated to contain 29 ozs. of quartz. Discovered at 8 ft. beneath the surface in a quartz-vein.

The "Alma 1" nugget was found on the 14th April 1873, at Maryborough. It weighed 125 ozs. It was discovered at 120 ft. beneath the surface. The gold was 23·1 carats fine.

Nugget (not named) found in Broomfield's Gully, Creswick, on 12th August 1872. It weighed 46 ozs. 15 dwts., and was got at 100 ft. in depth.

Nugget (not named) found at Creswick in the Red Streak Lead, on the 31st August 1872. It was discovered at 180 ft. below the surface, and weighed 30 ozs. 1 dwt.

Nugget (not named) found at Buninyong, on the 21st July 1875. It was discovered at 73 ft. below the surface, and weighed 58 ozs. 5 dwts. The gold was 23·¼ carats fine.

Nugget (not named) found at Upper Boggy Creek, on the 9th September 1873. It was discovered at 4 ft. below the surface, and weighed 29 ozs.

The "Needful" nugget was discovered at 12 ft. beneath the surface, in Catto's Paddock, Berlin Diggings, on the 10th May 1871. It weighed 246 ozs. 16 dwts., and the gold was 23·3 carats fine.

The "Alma 2" nugget was found at Maryborough, on the 14th April 1873, at 120 ft. beneath the surface. It weighed 15 ozs. The gold was 23·1 carats fine.

The "Eldorado" nugget was found at Smythesdale on the 26th August 1873, at 155 ft. beneath the surface. It weighed 170 ozs.

The "Lothair" nugget found at Clunes, at 307 ft. beneath the surface, on the 11th July 1875. It weighed 77 ozs. 6 dwts. The gold was 23·2⅝ carats fine.

Nugget (not named) found at Sandhurst, in Crusoe Gully, on the 13th July 1875. It was discovered at 3 ft. beneath the surface, and weighed 46 ozs.

Nugget (not named) found at Creswick, at 150 ft. below the surface, on the 28th April 1874. It weighed 53 ozs. The gold was 23·3 carats fine.

Nugget (not named) found at Ballarat in the Golden Reef Claim, at 200 ft. beneath the surface. It weighed 31 ozs. 5 dwts.

The "Welcome" nugget was found on the 11th June 1858, at 180 ft. beneath the surface, Bakery Hill, Ballarat. It weighed 2,195 ozs.

Economic Minerals.

Acadia Catherine Gold Mining Company, Sandhurst.—Specimens of Golden Stone, from the Arcadia Catherine Mine.]

Bleasdale, Rev. J. L., D.D., St. Patrick's College, Melbourne.—Collection of Gems and Precious Stones, consisting of Diamonds, Blue Sapphires, Oriental Emeralds (the green sapphire), Rubies, Aqua-marines, Topazes, Spinels, Beryls, Opals, Garnets, Tourmalines, &c., &c. collected by exhibitor.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Fac-similes of Nuggets found in Victoria.

Costerfield Gold and Antimony Mining Company. Office, 52, Elizabeth Street, Melbourne.– Antimony Ore.

Hanckar, J. H. H., 52, Bourke Street East, Melbourne.—Block of Nickel Ore, from the Boa Kaine Mine, New Caledonia.

M'Gie, James, & Co., Melbourne.—Nickel Ore.

Shenandoah Gold Mining Company, Sandhurst.—Gold-bearing Quartz, from stope at the 390 feet level. Reef, 7 ft. wide. This specimen was in one block, and split up to disclose gold.

Smyth, R. Brough, Department of Mines, Melbourne.—Geological Maps.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Coal.

Mining Department of Victoria, Melbourne.—Coal.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Sawn Slate. Block of Granite. Specimens of Polished Marble.

Mansfield Shire Council, Mansfield.—Slabs of Polished Marble. Hewn Sandstone.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Limestone, from Major Plains.

Commissioners for Victoria for the Philadelphia Exhibition Melbourne.—Black Clay, Hoffman's Patent. Clay and Sand. Kaolin Clay.

Arthur and Dogherty, New Zealand.—Sample of Lithographic Stone.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Sharpening Stones from Wahgunyah.

Lewis and Whitty, Charles Street, Fitzroy.—Knife Polish.

Hattersley, J., Yackandandah.—Aërated Waters.

Lyon, George, Spring Creek, Beechworth.—Lemonade. Soda Water. Ginger Ale.

Rowlands and Lewis, Ballarat and Melbourne.—Tonic Water. Potass Water. Soda Water. Lithia Water. Seltzer Water. Ginger Ale.

Metallurgical Products—CLASS 113.—Lead, zinc, antimony, and other metals, the result of extractive processes.

Bright Brothers & Co., Little Flinders Street West, Melbourne.—Star Antimony in ingots.

Costerfield Gold & Antimony Mining Company: Office, 52, Elizabeth Street, Melbourne.—Sulphide of Antimony. Refined sulphide of Antimony. Crude Antimony of Commerce. Oxide of Antimony. Pure Regulus of Antimony, reduced from the oxide.

Hodgson, Richard, Noon Street, Collingwood.—Star Antimony. Pigs of Lead. Blocks of Tin, all smelted in the colony.

On the Continent of Europe the arborial, health-producing and medicinal products of the Eucalyptus globulus, or Blue Gum tree, have been so much enlarged upon in consequence of having only this species in cultivation, that the whole of the Eucalyptus products have been classified as emanating from this one species; it is necessary therefore to point out that such is not the case.

Bosisto, Joseph, Bridge Road, Richmond.—Chemical and Pharmaceutical Preparations obtained from the Eucalyptus and other Indigenous Vegetation, prepared and exhibited by Joseph Bosisto, Richmond, Melbourne, President of the Pharmaceutical Society of Victoria, by whom the Eucalyptus preparations were first introduced, both in Australia and in Europe :—

EUCALYPTUS VEGETATION.

Essential Oil, Eucalyptus globulus (Blue Gum). Tonic, stimulant, antiseptic, and anthelmintic. A small dose promotes appetite, a large one destroys it. In stronger doses of 10 to 20 minims, it first accelerates the pulse, produces pleasant general excitement (shown by irresistible desire for moving about), and a feeling of buoyancy and strength. Intoxicating in very large doses, but unlike alcohol, or opium, the effects are not followed by torpor, but produce a general calmness and soothing sleep. A strong cup of coffee will at once remove any unpleasantness arising from an overdose. Anthelmintic—By enema, 30 to 60 minims in mucilage of starch. Internally—Dose, 3 to 5 minims in gum mucilage, syrup, or glycerine.

Eucalyptol, Eucalyptus globulus (Blue Gum). For inhalation in bronchial and throat affections. Obtained from the Essential oil and is a homologue of camphor. Quantity employed :—From half to one teaspoonful with half a pint of hot water in the Inhaler.

Eucalyptic Acid, ordinary strength, Eucalyptus globulus (Blue Gum) Eucalyptic Acid, concentrated } Volatile obtainable by fractional distillation, most abundant in the Red and Blue Gum species.

Liquor Eucalypti globuli, Eucalyptus globulus (Blue Gum). Antiperiodic. The tonic or bitter principle obtained from the leaves of the tree in an amorphous condition. An ague remedy. It appears to counteract malaria without exerting the prejudicial effects of quinine on the nervous system. For Ague and Dengue Fever, 30 to 60 minims in half a wine-glassful of mucilage and water, or glycerine and water, with the occasional addition of two minims of Eucalyptol every two or three hours during the paroxysms of Ague. As a general Tonic, 20 to 30 minims three times a day. Incompatibles.....The Mineral Salts.

Tinct. Eucalypti Globuli. Stimulant, tonic, antiperiodic and antiseptic. Dose, 20 to 30 minims.

Pulv. Eucalyptus Globulus Folia. Antiseptic, Cataplasma.

Cigarettes, Eucalyptus globulus (Blue Gum). Disinfectant employed in bronchial and asthmatic affections.

Essential Oil, Eucalyptus amygdalina odorata (Peppermint Gum). Rubefacient and disinfectant. This oil is generally

nown as the "Eucalyptus Oil," employed externally in rheuatic affections, and in the manufactories chiefly for perfumery, oaps, &c. An excellent and very agreeable disinfectant if ixed with sawdust in the proportion of four ounces of oil to ne bushel.

Ointment of Eucalyptus odorata. Employed in fœtid suppuations and indolent wounds.

Red Gum. (From Eucalyptus rostrata of Victoria.) The elicate mucilaginous arstringent possessed by this species of e Eucalypti renders it more effective than the Acacia catechu all cases of dysentery, diarrhœa, and throat affections. enerally employed in the form of a syrup.

Essential Oil, Eucalyptus oleosa (Mallee Scrub). Employed iefly in the manufacture of oil and spirit varnishes. Varnish ontaining this oil in the place of spirits of turpentine is said ither to bloom nor crack. It is a perfect solvent of indiabber without heat.

India-rubber with the Essential Oil, Eucalyptus oleosa Mallee Scrub). Showing the two in combination.

Potash, Eucalyptus oleosa (Mallee Scrub). Obtained from e scrub after being deprived of its volatile oil.

Essential Oil, Eucalyptus rostrata (Red Gum of Victoria).

Essential Oil, Eucalyptus sideroxylon ronbark Gum)

Essential Oil, Eucalyptus persicifolia each Gum)

Essential Oil, Eucalyptus citriodora weet-scented Gum, Queensland)

Essential Oil, Eucalyptus fissilis (Messte)

Essential Oil, Eucalyptus Stuartiana pple tree Gum)

Essential Oil, Eucalyptus goniocalyx hite Gum)

} Specimen Samples showing the variety of aroma existing in the Eucalypti.

INDIGENOUS.

Essential Oil, Atherosperma moschatum (Native Sassafras), aphoretic, diuretic and sedative. Obtained from the bark, it rts a specific lowering influence on the heart's action.

Atherospermine, Atherospherma moschatum (Native Sassa-). An alkaloid obtained from the bark. Tonic.

Salts of Lime, Atherosperma moschatum (Native Sassafras). tained from the bark.

Bark, Atherosperma moschatum (Native Sassafras).

Essential Oil, Melaleuca ericifolia (Teatree).

Resin, Pinus callitris (Murray Pine). Obtainable in quantity n under the pines growing on ridges in the Mallee country.

Resin, Xanthorrhœa Australis (Grasstree of Australia). uble in spirit, of a deep amber colour, obtainable in large ntities; employed for staining wood to imitate cedar.

NON-INDIGENOUS.

pium, Papaver somnifera (Sleeping Poppy). Cultivated in toria, yielding ten per centum of Morphia.

Morphia, from the Victorian Opium.

Capsules, Papaver somnifera (Sleeping Poppy). Specimens of growth.

Essential Oil, Mentha piperita (English Peppermint). Cultivated in Victoria, and distilled by exhibitor four years ago.

Hood & Co., Elizabeth Street, Melbourne.—Pharmaceutical preparations.

Fitts, Charles, & Sons, 67, Cecil Street, Emerald Hill.—Neatsfoot Oil, Trotter Oil.

Kitchen & Sons, Little Flinders Street West, Melbourne.—Stearine Candles, Large Carriages Candles.

Borthwick, Alexander, 35, Market Street, Melbourne.—Varnishes, manufactured by the Victoria Varnish Company; Anti-fouling Composition for Ships' Bottoms, patented by exhibitor; Cast Iron Pedestal Pillars, enamelled by exhibitor's process; Anticorrosive Paint.

Bowman, John, S., 31, Russell Street, Melbourne.—Colonial Crayons, made principally from colonial clays, containing 600 shades.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Crayons.

Lewis & Whitty, Charles Street, Fitzroy.—Blacking.

Hogg, S. P., & Co., Collins Street West, Melbourne.—Curry Powder.

Lewis & Whitty, Charles Street, Fitzroy.—Perfumed Hair Oil, Culinary Essences, Curry Powder.

Perry, Hunter, & Co., Forest Street, Sandhurst.—Varieties of Safety Fuse.

CERAMICS, POTTERY, PORCELAIN, &C.

Birmingham & Lacy, Barkly Street, Brunswick.—Red Building Bricks, White Pressed and Moulded Bricks.

Nolan, Luke, Gillbrook Pottery, Brunswick.—Stoneware Draining Pipes.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Fireclay Crucibles, Encaustic Tiles, Trusses, Vases, &c.

Adams, R. T., Prince's Bridge, Melbourne.—Earthenware Household and Office Filters, 10 gallons, 6 × 3; Syphon Tank Filter, with 12 ft. of tube; High-pressure Copper Filter, inside silvered, self-cleansing, for public institutions, schools, &c., made expressly for the Yan Yean and other Waterworks.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Earthenware and Pottery.

Nolan, Luke, Gillbrook Pottery, Brunswick.—Bronze Vases. Stone Porous Jugs. Patent Damp-proof for floor ventilation.

Ferguson and Urie, Collins Street East, Melbourne.—Stained —Glass for windows.

Gledhill, Melbourne.—Glass Bottles.

Melbourne Glass Bottle Works Company, Emerald Hill. —Glass Bottles.

Mount & Co., Graham Street, Emerald Hill.—Assortment of Glassware.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.— Glassware.

Alcock & Co., Russell Street, Melbourne.—Blackwood Billiard Table with carved legs, Huon-pine twist mouldings and pannels. Billiard Cues, Rests, and Balls. Cue Stand. Combination Marking Board. Cue Stand, with specimens of spiral twist work in Australian wood. Console Table.

Carr and Sons, 128, *Spring Street, Melbourne.*—Inside Venetian Blind, with check action. Wire Blind. Spanish and Florentine Blinds. Spring Roller Blind. Dwarf Blind. Window Sash, with Venetian shutters, &c.

Davis, J., Richmond.—Davis's Patent Window Sash.

Hodgson Brothers, View Place, Sandhurst.—Patent Self-acting Venetian Blind. Spring Roller Blind. The special feature in this exhibit is the new and improved method of painting the Venetian Blind, it being superior and more lasting than the usual method of treating the mineral green used for painting.

McEwan, James, 361, *Spencer Street, Melbourne.*—Eight-feet Sideboard, made of Picked Richmond Cedar. The carving enrichments consist of nine carved figures, the centre ornament on glass back represents the head of Minerva.

Muschialli, Louis, 102, *Collins Street, East Melbourne.*—Pier Glass. Console Table.

Baker, John, Emerald Hill.—Baker's Patent Safety Steps.

Wiegmann, August, 45, *Post Office Place, Melbourne.*—Basketware Cradles. Basketware Perambulators. Basketware Chairs. Basketware Flower Stands. Baskets.

Walker, A. R., 40, *Latrobe Street West, Melbourne.*—Reflector Gas Cooking Stove. Reflector Gas Cooking Stove with Boiler.

Shaw, Alfred, & Co., 13, *Little Collins Street West.*—Millet Brooms and Whisks.

Guthrie, G. D., Epsom, Sandhurst.—Collection of Pottery Ware in cane, rockingham, brownware, granite, &c., consisting of bread pans, butter jars, cheese dishes and pans, cream pots, churns, jam pots, jelly jars, pudding bowls, baking dishes, jugs, jars, pipkins, wicker, jars and bottles, teapots, gallon bottles, gingerbeer bottles, kegs, water filters, blacking bottles, footpans, footwarmers, spittoons, fowl fountains, grate backs, &c.

Bogle, Andrew, & Co., 21, *Flinders Street East, Melbourne.*—The Household Help,—Bogle's Patent Boot and Shoe Brushing and Cutters' Polishing and Sharpening Machine.

Pausacker, Evans, & Co., 8, *Lonsdale Street West, Melbourne.*—Registered-edge Solid Leather Portmanteaus, of Colonial make, leather, and workmanship.

Draper and Sons, 83, *Bourke Street West.*—Patent Earth-closets and Fittings.

YARNS AND WOVEN GOODS OF VEGETABLE OR MINERAL MATERIALS.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—New Zealand Flax, in natural state, materials made from it.

Donaghy, Michael, Rope Works, Geelong.—Manila Flat Rope. Italian Lash Line. Deep Sea Line. Ham Twine.

Miller, James, & Co., 61, *Flinders Street, Melbourne.*—European and Manila Rope, Deep Sea and Whale Line.

M'Pherson, Thomas, 205, *Bourke Street West, Melbourne.*—Cornsacks. Woolpacks. Sugar Bagging.

Barwon Woollen Mill Company, Geelong.—Tweeds, manufactured at the Barwon Woollen Mill Company, Geelong.

Gray, Alexander, & Co., Albion Woollen Mills, Geelong.—Plain and fancy Tweeds, manufactured at the Albion Wollen Mills, Geelong.

Ballarat Woollen Company, Ballarat.—Shawls; Tweeds Blankets.

Barwon Woollen Mill Company, Geelong.—Blankets, manufactured by the Barwon Woollen Mill Company, Geelong.

Botanic Gardens, Director of, Melbourne.—Woollen Cloth and Silk, dyed with bark of Laportea gigas, the Tree Nettle, Queensland and New South Wales. Prepared by W. R. Guilfoyle (A 5). Woollen Cloth and Silk, dyed with husks of Sterculia diversifola, the Native Wattle Tree, Victoria. Prepared by W. R. Guilfoyle (A 6). Woollen Cloth; also piece of Silk, dyed with bark of Pimelia axiflora, Currijong of the aborigines, Victoria. Prepared by W. R. Guilfoyle (A 4). Woollen Cloth; also piece of Silk, dyed with bark of Dais continifolia, South Africa. Mordanted with acetate of iron. Prepared by W. R. Guilfoyle, Director of Melbourne Botanic Gardens.

Robertson, John, 39, *Lonsdale Street East, Melbourne.*—Dyed Angora Goat's Fleece, grown and prepared by the exhibitor.

Zoological and Acclimatisation Society, Melbourne.—Angora Goat's Hair, grown at Sir Samuel Wilson's Mount Bute Estate, shorn from the Angora flock belonging to the above Society.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Silk Cocoons, from the Acclimatisation Society, Victoria. Silk Cocoons, from Mrs. Bladen Neill. Cultivated Silk, in cocoons and hanks, also bleached, dyed, and worked upon llama.

Timbrell, Ann, Plenty Road, Collingwood.—Cocoons produced by silkworms from Japan, France, Italy, and Greece.

Victoria Ladies' Sericulture Company (Limited), Mount Alexander, Castlemaine.—Silk, desiccated and pierced Cocoons.

Timbrell, Ann, Plenty Road, Collingwood.— Silk (raw material in hank).

Timbrell, Ann, Plenty Road, Collingwood.—Victorian Silk worked on Brussels net.

Ford Brothers, 421, *King Street, Melbourne.*—Pith Hats, in Felt, Silk, Merino, &c.

Rosier, John, 46, *Swanstone Street, Melbourne.*—Boots and Shoes. Studies from the feet of the statues in the Statuary Gallery, Melbourne Public Library.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. -Myall Pipes; Rouleau Boxes, made of myall wood.

ord Brothers, 421, *King Street, Melbourne.*—Pith Sun-es for horses.

e Richelieu, Madam F., Union Street, Windsor.—Orna-s made from fish scales, &c.

ommissioners for Victoria for the Philadelphia Exhibition, ourne.—Address Case of Inlaid Leather. Made by J. W. as.

otanic Gardens, Director of, Melbourne. — Paper made bark, stems, and leaves of Trees, Plants, and Shrubs, d and growing in Victoria — Broussonetia papyrifera er Mullberry Tree); Salvia Canariensis; Dais con-olia; Eucalyptus obliqua (Stringybark); Eucalyptus is (Messmate); Abutilon mollis (Soft-leaved Abutilon); tilon venosum (Veined Lantern Flower); Pimelia axiflora rijong); Commersonia Fraseri, Queensland (Lye Plant); osporum crassifolium (Thick-leaved Pittosporum); Pipturus inquus (Queensland Grasscloth Plant); Melaleuca erici-(Common Tea Tree); Melaleuca genistifolia (Broom-d Tea Tree); Sterculia diversifolia (Victorian Bottle); Sterculia acerifolia (Flame Tree); Bœhmeria nivea nese Grasscloth Plant); Sida pulchella (Victorian Hemp); retusa (Queensland Hemp); Melaleuca squarrosa (Vic-n Nettle).

aper made from stems of Urtica incisa (Victorian Nettle); narta tenacissima; Carex appressa; Carex pseudo-cyperus; peis nodosa; Juncus pauciflorus (Few-flowered Rush).

aper made from stems and leaves of Gahnia psittacorum, erythrocarpum; Lepidosperma elatius (Tall Sword Rush); dyline indivisa (Tall Palm Lily); Phormium tenax (New and Flax); Gynerium argenteum (Pampas Grass); ndo conspicua (Plume Grass): Fourcroya gigantea (Giant); Cyperus sp.; Juncus maritimus (Coast Rush); Juncus natus (Small Sheathed Rush); Juncus vaginatus (Large thed Rush); Lepidosperma gladiatum (Coast Sword n); Typha angustifolia (Native Bulrush); Scirpus fluvia-; Marica Northiana; Xerotes longifolia (Native Tussock ss); Pandanus utilis (Screw Pine); Cyperus lucidus; erva sp. (Swamp Moss); Dianella latifolia; Caryota urens ggery Palm).

amsden, Samuel, Prince's Bridge, Melbourne.—Papers.

ommissioners for Victoria for the Philadelphia Exhibition, bourne.—Westley Richards' Breech-loading Rifle. Abori-l Weapon. Native Axe. Victorian Aboriginal Imple-ts and Weapons.

tanway, South W., Yarra.—Models of chairs for Invalids.

tanks, John, Bourke Street West, Melbourne.—Steam Valves. m Cocks. Check Valves. Suet Lubricators. Injectors. ce Valves. Roscoe's Lubricators. General Brass Foundry.

IcIlwraith, John, Little Collins Street East, Melbourne.— ed Composition Gas Pipe, hydraulic pressed. Pure Vic-n Tin Tube, hydraulic pressed.

otwell, Wade, 52, *Bank Street West, Melbourne.*—Lady's dle. Gentleman's Saddle. Set of Buggy Harness. Green Hide Girth. Lady's Riding Bridle. Gentleman's Hunting Bridle. Stock Whips, myall-wood handles.

Glenister, W. A., Mercer Street, Geelong.—1¼-in. Colling's Patent Axletree Arm. 1¼-in. Mail Patent Axle. 1¼-in. Improved Half-patent Axle. 1⅜-inch Common Nut Axle. Model of Colling's Patent Crank.

Stoneman, Alfred, Stephenson Street, Richmond.—Buggy Side Springs. Elliptic Side Springs. Spring-cart Side Springs.

Stevenson and Elliott, King Street, Melbourne.—Landau, with patent hood, patent steps, and patent fittings for inside seats.

Educational Department of Victoria, Melbourne.—Photographic Views of State Schools in Victoria, viz.: Golden Point, Ballarat; Mount Pleasant, Ballarat; Redan, Ballarat; Sebastopol, Ballarat; Golden Square, Sandhurst; Gravel Hill, Sandhurst; Sandhurst, Daylesford, Maryborough, North Clunes, Carisbrook, Mortchup, Talbot; Mount Doran, Cardigan, North Eaglehawk, Maldon, Beechworth, Buningyong Coburg, Sandridge, North Ashby, Geelong; Swanston Street Geelong; George Street, Fitzroy; North Fitzroy; Brighton Street, Richmond; Yarra Park, Richmond; Brighton, North Prahran, Hotham, Emerald Hill, St. Kilda, Gold Street, Collingwood; Latrobe Street, Melbourne.

Victorian Asylum and School for the Blind, Melbourne.—Objects, the work of the Pupils of the Victorian Asylum and School for the Blind.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Collection of books printed in Melbourne. Official Catalogues of the Victorian Intercolonial Exhibition of 1875. The Land Acts of Victoria 1869 to 1873.

Ferres, John, Government Printer, Melbourne.—Reports and Statistics from the principal Government Institutions of Melbourne.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Portfolios of Music, by W. H. Glen. Bell and Stand.

Kilner, Joseph, Bosisto Street, Richmond. — Pianoforte. Dulciana trichord instrument, full compass, with metal string plates, ivory-fronted keys, with perfect check repeater action, built on the soundest scientific theories, tone dolest; manufactured entirely from Colonial timber. Pianoforte. Full cottage, trichord throughout, three pedals, full metal plates, extended sound-board of Kauri pine, improved bass bridge, patent perfect repeater, check action, ivory-fronted keys, oval key pins, with the latest improvements. Colonial manufacture.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Maps of the Colony of Victoria. Map of Coalfield.

Surveyor-General of Victoria, Melbourne.—Maps and Plans of the Colony of Victoria.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne.—Maps and Geological Sketches.

Cl. **342.** **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Patent Ceiling Ventilator, with ornamental centre-piece. Model of Victorian Bush Residence, with Huts and various kinds of fencing used in Australia.

Cl. **344.** **Bank of Victoria,** Collins Street, East, Melbourne. Bank Notes, issued by the Bank of Victoria. Statistics of the Bank, and its branches.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Sovereigns and Half-sovereigns, coined at the Victorian Branch of the Royal Mint, Melbourne.

Commercial Bank of Australia, Melbourne. Specimens of Bank Notes issued by the Commercial Bank of Australia. Photographs and Statistics of the Commercial Bank.

National Bank of Australasia, Melbourne. Specimens of Bank Notes issued by the National Bank of Australasia. Statistics of the National Bank.

Cl. **345.** **Penal Department, Inspector-General of,** Melbourne. Warder's Uniform, Prisoner's Clothing, and Sundries.

Cl. **347.** **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Baskets, Mats, Trays, and Nets, made at Coranderrk Aboriginal Mission Station. Vocabulary of Victorian Aboriginal Dialects. Aboriginal Vocabulary and Treatise. Bluestone Tomahawk. Photographic Portraits of Victorian Aborigines.

Cl. **349.** **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Victorian Ensign, Blue, Local Naval Forces. Victorian Ensign, Red, Merchant Vessels. English Red Ensign.

Cl. **400.** **Summers Charles.** Hypermnestra and Lynceus Group.

Cl. **402.** **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Medals of the Victorian Intercolonial Exhibition, 1875. Seal of the Melbourne Public Library. Seal of the Melbourne University. Seal of the Melbourne Exhibition, 1862.

Campbell, O. R., Punt Road, Windsor. Cl. **410.** Crossing the Plains.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Specimens of Heraldic Painting on Panels, including a Viscount's, an Earl's, and a Baron's Coat of Arms.

Curtis, J. W., Bourke Street East, Melbourne. Track off the Point Nepean Road.

Guerard, E. Von, Gipps Street East, Melbourne. Pulpit Rock, Cape Schank. Phillip Island. Ballarat in 1873.

Johnstone, H. J., Bourke Street East, Melborne. "Summer Sunset—Lagoon near Seymour."

Whitehead, Isaac, Collins Street East, Melbourne. Dandenong State Forest.

Bowman, John S., 31, Russell Street. Cl. **420.** The Knob in the Australian Alps, Crayon—Miss Bowman. In the Australian Alps, Crayon—Miss Adams. Fall from the Omeo Plains, Crayon. Valley in North Gipps Land, Crayon. A Pool in the Otway Ranges, Crayon—F. Shaw. Bushy Park, Crayon.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Cl. **423.** Lithographs of Fossil Fruits and Seeds.

PHOTOGRAPHY.

Ararat, Shire Council of, Ararat. Cl. **430.** Photographic Views and Statistics of the Shire of Ararat.

Batchelder & Co., Collins Street East, Melbourne. Photographs of Persons born in the Colony of Victoria.

Bock, Henry, Sale, Gippsland. Photographs of Victorian Native Flowers.

Chuck, T. F., Royal Arcade, Melbourne. Photographs of Persons born in the Colony of Victoria.

Colac, Shire Council of, Colac. Photographic Views of the District of Colac.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Photographic Views.

Creswick, Borough Council of, Creswick. Photographic Views and Statistics of the Borough of Creswick.

Cl. 430. **Darebin, Shire Council of,** East Bourke. Photographic Views and Statistics of the Shire of Darebin.

Echuca, Borough Council of, Echuca. Photographic Views and Statistics of Echuca.

Emerald Hill, Borough Council of, Emerald Hill. Photographic Views of Emerald Hill.

Hotham, Town Council of, Hotham. Photographic Views and Statistics of the Town of Hotham.

Johnstone, O'Shannessy, & Co., Bourke Street, Melbourne. Photographs coloured in Oils.

M'Donald, D., High Street, St. Kilda. Photographic Views.

Noble, Timothy, Bourke Street East, Melbourne. Photographs of Theatrical Celebrities. Chevalier Blondin, Hero of Niagara.

Phœnix Foundry Co. (Limited), Ballarat. Photograph of Locomotives, Engine, and Tender, manufactured for the Victorian Government by the exhibitors.

Prahran, Town Council of, Prahran. Photographic Views and Statistics of the Town of Prahran.

Robertson Brothers, Colac. Coloured Photographs of Cattle bred by exhibitors.

Sandhurst, City of, Sandhurst. Photographic Views and Statistics of the City of Sandhurst.

Stewart & Co., Bourke Street East, Melbourne. Photographs of Persons born in the Colony of Victoria.

Surveyor-General of Victoria, Melbourne. Photographic Views of Botanical Gardens, Fitzroy Gardens, Carlton Gardens, Flagstaff Gardens, Melbourne (14).

Wangaratta, Shire Council of, Wangaratta. Photographic Views and Statistics of the Shire of Wangaratta.

Willett, G., Bridge Street, Ballarat. Coloured Photographs.

Wilson, Sir Samuel, Ercildoun. Photographs:—Team of Hereford Bullocks, bred by exhibitor. Residence of Exhibitor (2). Prize Sheep, bred by exhibitor.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Biographical Charts of the Schools of Venice, the Venetian States, Genoa, Cremona, Mantua, Milan, Ferrara, Modena, and Palermo. Tools. Imperial folio, morocco, extra gilt. Cl. 432.

Dowling, William, Emerald Hill. Centre Flowers. Trusses. Cl. 442.

Heathcote, T. S., Carlton. Painted Panels, Imitation Siena Marble. Painted Panels, Imitation Italian Pink Marble.

Murphy, Edward, Sandridge Road, Melbourne. Centre Flowers and Ventilators. Registered Ornamental Chimney Cap.

Paterson, Brothers, Carlton. Tablets of Imitation Wood. Tablets of Imitation Marble.

Pepper, George, Windsor. Plasterer's Models. Ceiling and Wall Patent Ventilators.

Morrison, L. K., Melbourne. Patent Abyssinian Tube Wells and Pumps, with Boring Apparatus. Cl. 501.

White, David, Stawell. Patent Model Safety Hook, to prevent accidents from overwinding in Mining Claims. Full-sized working Hook. Cl. 503.

O'Malley, Edmund, 100, Elizabeth Street, Melbourne. Ventilating Safety Cage, for Mines. This Cage acts as a ventilator to the mine, and should the rope break the cage will stick in the shaft; there is also a bolt attached to the rope which liberates the Cage on striking poppet heads. Cl. 504.

Harkness, A., & Co., Victoria Foundry, Shamrock Street, Sandhurst. Cliff's Patent Disc, fitted on screwed stamper shank. Inside Shell, showing principle of Disc. Cook's Patent Cam or Wiper, for lifting Revolving Stamps. Cl. 505.

Perry, Davis, & Co., Sandhurst. Stamper Gratings.

Cornish & Co., 2, Elizabeth Street, Melbourne. Seats for Railway Carriages. Cl. 571.

Stoneman, Edward, Stephenson Street, Richmond. Railway Truck Spring. Cl. 573.

Cornish & Co., 2, Elizabeth Street, Melbourne. Life Preserving Mattresses. Life Buoys. Combined Life Belts and Pillows. Cl. 590.

Model of Life Saving Raft. Seats and Couches for general use in Ships. Ordinary Mattresses.

Cl. 600. **Bass River Steam Saw Mills,** Bass River. Blue Gum Timber.

Botanic Gardens, Director of, Melbourne. Carpological collection.

Cl. 601. **Commissioners for Philadelphia Exhibition,** Melbourne. Boxes made of Victorian Woods.

Cl. 602. **Clark, John, & Sons,** Lonsdale Street, East, Melbourne. Wattle Bark for tanning purposes. Ground Wattle Bark, for tanning purposes.

Cl. 603. **Botanic Gardens, Director of,** Melbourne. Various Trees.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Myall Gum. Australian Rubber and Rubber Stamp. Grass-tree Gum, in its crude state.

Cl. 620. **Adams, James,** Wahring. White Tuscan Wheat.

Buckley, Edward, Newbridge, Loddon. Red Straw Wheat, from the Loddon district, grown in the county of Gladstone. Red Straw Wheat, grown in the county of Bendigo.

Connor, James, Allansford. Foxtail Oats, grown at Merunga, near Warrnambool.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Grass-tree Plant. Purple Straw Wheat.

Gilmour, Andrew, Colvinsky, Buangor. Oats, grown in the parish of Ballyrogan.

Jack, John, Oxley Plains, Ovens District. Frampton White Wheat, grown on chocolate soil after English grass.

Laidlay, John, Bundoora, Plenty-road. Wheat.

McNair, Angus, Bellerine East. New Fodder Pea; yield, 45 bushels to the acre.

Moncrieff, John, Tabilk, Goulbourn River. Purple Straw Wheat. White Wheat.

Myring, Joseph, Campbell's Creek, Castlemaine. Barley.

North-Eastern Pastoral and Agricultural Society, Murchison. Wheat grown by J. M'Nab, Tabilk.

O'Keefe, Andrew, Adelaide Vale, Clare Inn. Purple Straw Wheat. Cl. 620.

Polson, Angus, Chapman, Moyston. English Barley. Tartarian Oats. Purple Straw Wheat. White Wheat.

Rossi, Thomas, Dry Diggings, near Daylesford. Purple Straw Wheat.

Schmitt, Louis, Mornington. Wheat.

Scott, James, Indigo, Chiltern. Wheat grown by the exhibitor.

St. Arnaud Pastoral and Agricultural Society, St. Arnaud. Short Oats. Wheat. Barley.

Stewart & Ferguson, Indigo, Chiltern. Wheat, grown by exhibitors.

Taylor, John, Allansford. Adelaide Wheat, grown at Merunga, near Warrnambool.

West Bourke Pastoral and Agricultural Society, Romsey. White Tuscan Wheat, grown by the Hon. T. F. Hamilton, M.L.C., President of the Society.

Aboriginal Mission Station, Corranderrk. Victorian Hops, grown at the Corranderrk Aboriginal Mission Station. Cl. 623.

M'Kenzie, Jas. F., & Co., 3, Queen Street, Melbourne. Eagle-brand Coffee. Chicory, manufactured from root grown in Victoria. Mixed Spice. Ground Cinnamon. Homœopathic Cocoa, manufactured from Trinidad nuts. Chocolate, manufactured from Trinidad nuts. Vanilla Chocolate Sticks, manufactured from Trinidad nuts. Mustard, manufactured from seed grown in Victoria.

LAND ANIMALS.

St. John, F., 22, Chetwynd-street, West Melbourne. Australian Birds. Cl. 635.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Stuffed Water-fowl, by Chas. French.

Gaskell, Joseph, Elizabeth Street, Melbourne. Australian Snipe.

Grimwood, Thomas, Fern Tree Gully. Specimens of Quail, Snipe, Landrail.

Robertson, W. W., 52, Bridge Road, Richmond. Collection of Australian Native Birds.

Cl. 637. **Gaskell, Joseph,** 118, Elizabeth Street, Melbourne. Australian Wild Animals.

Godfrey, F. R., Melbourne. Australian Wild Animals.

M'Coy, Professor, Melbourne University. Australian Wild Animals.

Cl. 638. **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Manna, with the Insect producing it.

French, C., Botanic Gardens, Melbourne. Australian Longicorns, buprestidal, &c.—the majority destructive to Timber by boring. Australian Lepidoptera.

Timbrell, Ann, Plenty Road, Collingwood. Japan Black and White Silkworms, modelled in Wax.

Cl. 641. **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Brown Trout, preserved in Glass Globe.

St. John, F., 22, Chetwynd Street, Melbourne. Australian Fish.

Cl. 651. **Bird, George,** Inkerman, Lyndhurst. Colonial-made Cheese.

Pierce, G. G., Bourke Street East, Melbourne. Cheese from the Heidelberg factory.

Riddle, J., Lancefield. Cheese.

Cl. 652. **Brearley Bros.,** Geelong. Sole Leather.

Clark, John, & Sons, Lonsdale Street East, Melbourne. Sole Leathers. Kip Leather. Calf Skins. Kangaroo Skins. Wallaby Skins. Sheepskins. Harness Leather. Basils.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Rugs made from the Skins of Victorian animals, viz., Kangaroo, Wallaby, Opossum, Native Cat, Native Bear, &c.

Dunckley & M'Bride, 28, A'Beckett Street East, Melbourne. Lines.

Fink, M., Geelong. Skins of the Wallaby, Native Cat, Native Bear, and Opossum.

Fitts, Charles, & Sons, 67, Cecil Street, Emerald Hill. Glue.

Pearse Bros., Fremantle, Western Australia. Dugong Fish Hide. Black Harness Leather. Hides.

Penal Department, Inspector-General of, Melbourne. Skins of Leather. Calf, Kip, Harness, Black Leather, and Sole Leather. Cl. 652.

Quinn, H. S., Newton Street, Richmond. Dyed and White Wool Mats, consisting of bright canary, dark amber, roan, magenta, violet, and white. Kangaroo Glove Leathers.

Wallis & Co., Burnley Street, Richmond. Shoe Leathers and Furniture Leathers for jewel cases, &c. &c.

Boddy, Edward, Nagambie. Fine Flour. Cl. 657.

Hood, F. & J., 81, Elizabeth Street North, Melbourne. Victorian-made Malt.

Martin, P. J., Little Flinders Street East, Melbourne. Victorian Malt.

McKenzie, Jas. F., & Co., 3, Queen Street, Melbourne. Oatmeal, manufactured from colonial oats. Groats, manufactured from colonial oats. Brosemeal.

Myring, Joseph, Campbell's Creek, Castlemaine. Colonial Malt.

Perrin, William, Jun., Stephenson Street, Richmond. Victorian Malt, made from Victorian and New Zealand grown barley.

Bennett, T. K., Bourke Street, Melbourne. Cl. 656. Preserved Meats, consisting of Roast Beef, Boiled Beef, Corned Beef, Boiled Mutton, Roast Mutton, Ox-tail Soup, Mock Turtle Soup, and Potted Head.

Botanic Gardens, Director of, Melbourne. Jam made from Kaii Apples.

Comport, Henry, Cheltenham. Tomato Sauce.

Grant, Mrs., Bridge Road, Richmond. Tomato Sauce.

Lyon, George, Beechworth. Tomato Sauce.

Melbourne Meat Preserving Co., 56, Queen Street, Melbourne. Preserved Meats.

Stringer & Co., 43, King Street, Melbourne. Mixed Pickles. Sauces. Curry Powder.

Watson & Paterson, Bourke Street West, Melbourne. Hams. Middles of Bacon. Mess Pork.

Western Meat Preserving Co. (Limited), Colac. Preserved Meats, comprising

Cl. **656.** Roast Beef, Corned Beef, Roast Turkey, Ox-tail Soup, Brown Rabbit Soup, &c.

Wright, Payne, & Co., Chapel Street South Yarra. Jams made from Victorian fruits, consisting of golden drop, raspberry, green-gage, plum, damson, violet plum, magnum bonum plum, black currant, and gooseberry.

Zorn, Edward, Clayton's Road, near Oakleigh. Tomato Sauce. Zorn's Oakleigh Sauce.

ARARAT DISTRICT.

Cl. **660.** **Trouette & Blampied,** Great Western. Burgundy, 1871. Mixed Grapes, Claret, 1871. Riesling, Little Muscat, 1874.

Best, Joseph, Great Western. Hermitage, 1871.

BEECHWORTH DISTRICT.

Docker, F. G. & J. B., Wangaratta. Shiraz, 1869.

Evans, Henry, Beechworth. Shiraz, 1872.

CASTLEMAINE DISTRICT.

Mellon, Francis, Dunolly. Hermitage, 1871. Pineau, 1872.

Botten, William, Eddington. Burgundy, 1869.

Jung, Otto, Castlemaine. Hermitage, 1871. Roussette, 1871.

Schroeder, E., Castlemaine. Riesling and Pineau Blanc, 1870.

Crippa, Fabrizzio, Hepburn. Hermitage, 1871.

ECHUCA DISTRICT.

Greer & Co., Echuca. Shiraz, 1871. Shiraz, fruity, 1872. Shiraz, 1873.

Vettler, John, Echuca. Hermitage, 1870. Grenache, 1870. Verdeilho, 1872. Carbinet Sauvignon, 1871.

GEELONG DISTRICT.

Weber, Jacob, Geelong. Hermitage, 1874.

Deppeler, Jacob, Gheringhap. Hermitage, 1874.

Ritchie, John, Murgheboluc, Geelong, Hermitage, 1874.

GOULBURN DISTRICT. Cl. **660.**

Bear & Ford, Tabilk Vineyard, near Seymour. Riesling, 1872.

Egli, F., Tabilk. Hermitage, 1873.

MELBOURNE DISTRICT.

Schmitt, Franz, Berwick. Riesling, 1872.

Francis, Charles, Sunbury. Hermitage, 1871. Gouais, 1870.

St. Hubert's Vineyard Co., Yering, Riesling, 1869. Chasselas, 1869. Chasselas, 1871.

Johnston, J. S., Craiglie Vineyard, Sunbury. Riesling, 1872. Verdeilho, 1871. Hermitage, 1869. Riesling, Shepherd's, and German, 1871.

Maplestone, Charles, Ivanhoe Lodge. Heidelberg. Hermitage and Carbinet, 1870, Riesling, large and small, 1872. Riesling, 1870.

Brasche, Charles, Sunbury. Shepherd's Riesling, 1871.

Snowden, E. G., Boroondara. Riesling (large), 1871.

MURRAY DISTRICT.

Smith, G. S., Wahgunyah. Muscatel, 1869.

SANDHURST DISTRICT.

Pohl, Carl, Strathfieldsaye. Hermitage, 1870. Hermitage, 1871. Hermitage, 1873. Hermitage, 1874. Carbinet and Hermitage, 1868. Verdeilho, 1874.

Bruhn, Albert, Strathfieldsaye, Sandhurst, Verdeilho, 1872. Hermitage, 1874. Carbinet and Hermitage, 1873. Mataro, 1874.

Fuchs, Adolph, Strathfieldsaye, Sandhurst. Verdeilho, 1873. Hermitage, 1873. Carbinet, 1873.

Fischer, August, Shamrock Vineyard, Emu Creek, Strathfieldsaye. Verdeilho, 1874. Verdeilho, 1873. Hermitage, 1874.

Shaw, F. K., Goornong. Hermitage, 1871.

Grosse, Frederick, Strathfieldsaye. Hermitage, 1873. Carbinet, 1873.

Cl. 660. **Grosse, Frederick,** Toorongo Vineyard, Bendigo. Verdeilho, 1873.

Greiffenhagen, Wm., Strathfieldsaye. Riesling, 1871. Hermitage, 1872.

Brown, H. J., Australian Distillery, Melbourne. Geneva. Spirits of Wine.

Fuller, Alfred, Kew. Bottled Ale and Stout.

Henelly, James, 140, Latrobe Street West, Melbourne. XXXX Ale.

Latham, Edward, Carlton Brewery, Carlton. Ale. Porter.

Martin, P. J., Little Flinders Street East, Melbourne. Ale Brewed from Victorian Malt and Tasmanian Hops.

Reed, Henry, & Co., Chapel Street South Yarra. Vinegar, in bulk and bottle.

Stewart, James, Eaglehawk, Sandhurst. Ale. Bottled Ale.

Treacy, John, & Co., Geelong. Pale Ale and Stout, in bottle.

Warrenheip Distillery Company, Sturt Street, Ballarat. Whisky, 1874, 1875. Geneva, proof and o.p. Spirits of Wine.

Cl. 661. **Guest, T. B., & Co.,** William Street, Melbourne. Fancy Biscuits, consisting of Ginger Nuts, Victorias, Meal Crackers, Cracknells, Picnics, Lime Biscuits.

Smith & Son, Miller and Anderson Streets West, Melbourne. Fancy and Dessert Biscuits.

Swallow & Ariell, Sandridge and Melbourne. Fancy Biscuits. Cabin and Pilot Biscuits.

Cl. 665. **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Samples of Cotton, grown from New Orleans Seed on the Murray, Victoria.

Cl. 666. **Atkinson, William,** Camperdown. Teazles, one stave containing 300 head.

Longmire, Thomas, Kooroocheang, Smeaton. Two Samples of Flax Stalks, and Seeds thereon, Nos. 1 and 2. No. 1 sown on 20th May, 1874, No. 2 sown on 1st September, 1874. Both samples grown on similar land, the only difference being in time of sowing.

M'Pherson, Thomas, & Co., 205, Bourke Street West, Melbourne. Jute, in raw state. Cl. 666.

Armstrong, Alexander, Warramtine, Shelford. Merino Fleeces. Cl. 667.

Arnold, George, & Co., Market Buildings, Melbourne. Merino Fleeces.

Commissioners for Victoria for the Philadelphia Exhibition, Melbourne. Wool.

Currie, John Lang, Larra, Derimallum, Victoria. Lambs' and Merino Ewe Wool.

Degraves, C. & J., Coliban Park, Elphinstone. Washed Fleece Wool, Lambs'.

Elder, W. & N. G., Elder, Rookwood. Merino Wool.

Gilbert, Alfred Napoleon, Warwilla Station, Wanganilla, Deniliquin. Merino Wool.

Goldsbrough, R., & Co., Wool Warehouse, Bourke Street West. Wool.

Greeves, Edward G., Berriallock, Skipton, Victoria. Merino Wool.

Hastings Cunningham & Co., The Australasian Wool Stores, Collins Street West. Fleeces of Merino Wool from sundry breeders.

Henty, Edward, Portland. Wool.

Keynes, Joseph, Keyneton, South Australia. Wool.

Lang, William, Wargam, Wanganilla, New South Wales. Wool.

Moore & Co., Coorong, near Hay, N.S.W. Wool.

M'Vean, John, Wooloomoonoo, N.S.W. Wool.

Reeves, Isaac Godfrey, Footscray, Melbourne. Wool.

Russell, Thomas, Barunah Plains, Mount Hesse. Wool.

Routledge, William, Farnham Park, Warrnambool. Fleeces.

Rutherford, Andrew, Como, Kensington, Geelong. Fleeces, Wool.

Synnot, Monckton, Little Flinders Street, Melbourne. Wool.

Cl. **667.** **Synnott, George & Co.,** Geelong. Wool.

Thomas, C. Thomas, Bay Street, North Sandridge. Dressed Skin.

Timms Brothers, Mount Hesse, Beeac. Wool.

Watson, Alexander, Warribee. Merino Fleeces.

Wilson, Sir Samuel, Oakleigh Hall, East St. Kilda. Fleeces.

Wilson, John, Lismore. Merino Wool.

Cl. **688.** **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Silk Cocoons.

Howard, John, near Albury. Sample Cocoons, Floss Silk, &c.

Cl. **670.** **Lennon, Hugh,** Elizabeth Street North, Melbourne. Excelsior Double Furrow Plough.

Cl. **674.** **Bodington, Robert,** 4, Queensbury Street, Carlton. Sharp's Patent Sheep Support on Rollers, used in the washing of Sheep by Spouts or Jets.

Cl. **707.** **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne. Tree and Todea Ferns.

Cl. **709.** **Commissioners for Victoria for the Philadelphia Exhibition,** Melbourne:

The following *fac-similes* consist of specimens, the originals of which were selected during the past season, modelled and arranged for the Commissioners by Mr. Thos. M'Millan. They embrace most of all the important species cultivated, and in many cases such assortments of varieties as are calculated to sufficiently illustrate the orchard and other open ground fruit-producing capabilities of Victoria.

ARBORESCENT FRUITS.

Pomaceous Fruits, including the Apple and Pear and their Allies.

The Apple—Pyrus malus.
The Pear—Pyrus communis.
(2) The Quince—Cydonia vulgaris.
The Medlar—Mespilus Germanica.
The Loquat—Eriobotrya Japonica.

Stone Fruits, or Fleshy Drupes. Cl. **709.**

1. *Drupaceæ veræ.*

The Peach—Amygdalus.
The Nectarine—Amygdalus Persic a *var.*
The Apricot—Prunus Armeniaca.
The Plum—Prunus domestica.
The Cherry—Prunus cerasus.

2. *Oleaceæ.*

The Olea Europæa (Photograph).

Berried or Baccate Fruits and their Modifications.

The Grape—Vitis vinifera.
The Mulberry—Morus nigra.
The Fig—Ficus carica.
The Pomegranate—Punica Granatum.
The Orange or Citron tribe—Citrus.
The Kau Apple—Aberia Caffra.
The Gooseberry—Ribes Grossularia.
The Black Currant—Ribes nigrum.
The Red Currant—Ribes rubrum.
The White Currant—Ribes rubrum fr. Album.
The Raspberry—Rubus idæus.

Nuts and Dry Drupes.

The Almond, Walnut, and Hazel.

Annual and Perennial Herbaceous Fruits.

The Strawberry—Fragaria vesca.
The Tomato—Lycopersicum esculentum.
The Egg Apple. Melongena—Solanum melongena.
The Cape Goosebury—Physalis edulis.
The Capsicum—C. Annuum.

For Illustrations of the Melon, Cucumber, Squash and Gourd, see Photographs.

Book Collection of Phænogamous Plants, Shrubs, Trees, Herbs.

Commissioners for Victoria at the Philadelphia Exhibition, Melbourne. Citron or Orange Tribe, 17 species. Cherries, 25 species, 3 fruits each. Figs, 4 varieties. Pears. Strawberries. Plums. Apples. Apricots. Currants. Gooseberries. Walnuts. Peaches.

Gaskell, Mrs., 118, Elizabeth Street, Melbourne. Fac-similes of Victorian Bush Flowers.

Full Descriptions of the Victorian Exhibits are given in Catalogue sold in Victorian Section.

LONDON:
Printed by George E. Eyre and William Spottiswoode,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

THE INTERNATIONAL EXHIBITION OF 1876, PHILADELPHIA.

PART II.

EXHIBITORS' COMMERCIAL GUIDE.

[*Price 50 cents.*]

36247.

THE INTERNATIONAL EXHIBITION OF 1876, PHILADELPHIA.

EXHIBITORS' COMMERCIAL GUIDE,

CONTAINING, AMONG OTHER PAPERS, THE

UNITED STATES TARIFF OF IMPORT DUTIES

UPON

ARTICLES OF PRODUCE AND MANUFACTURES,

IN ENGLISH CURRENCY;

TOGETHER WITH

AN EPITOME OF THE AMERICAN LAWS RELATING TO PATENTS AND TRADE MARKS.

COMPILED, AND ARRANGED WITH INTRODUCTORY NOTES, FOR THE GUIDANCE OF EXHIBITORS AND MANUFACTURERS BY THE SECRETARY OF THE BRITISH COMMISSION.



LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1876.

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INTRODUCTION.

When the arrangements connected with the British Section of the International Exhibition of 1876, to be held at Philadelphia, were initiated, it became evident that very few British manufacturers were acquainted with the details of the American Tariff.

It appeared, therefore, to the authorities charged with the conduct of the Section, that a statement, showing in as lucid a form as possible the details of a somewhat cumbersome and intricate Tariff, could not fail to be useful to the British merchant already engaged in trading with America. And as an International Exhibition might be expected to develop new commercial relations in many directions between the United States and this country, it seemed that if this Tariff were rendered into English Currency, in those instances where the duties are not *ad valorem*, further advantages must be secured.

The following compilation is based mainly upon the exhaustive financial works of Heyl, Morgan, and Dr. Young, but other eminent authorities have been consulted, and the British Commissioners desire to acknowledge the courteous assistance rendered to them in the preparation of the work by Mr. Comly, the Chief Collector of the Port of Philadelphia, who readily afforded them the benefit of his experience in solving difficult questions, and by communicating the latest Treasury decisions where there were apparent discrepancies.

The compiler has been anxious to avoid entering into any discussion affecting a salient question of United States policy, concerning which American statesmen must be held to be the best judges. But one general inference may be suggested here, that in the long run it is the consumer and not the producer upon whom the imposts which are set forth in the fullest detail in the following pages really fall.

It may be useful to a British manufacturer who has not hitherto had commercial relations with an American customer, to state the regulations with which it is necessary for him to comply. Taking the case of a merchant in London, after three invoices of his goods have been prepared, stating quantities in weights, measures, and numbers, they must be taken by one of the partners in the firm, or by a duly authorised agent provided with a power of attorney, to the American Consulate, 53A, Broad Street, E.C., and the following declaration must be sworn to :—

I of make oath and declare that I am of the goods, wares, and merchandise in the annexed invoice mentioned and described ; that the said invoice is in all respects true ; that it contains a true and full statement of the time when and the place where the goods, wares, and merchandise therein mentioned, and which are subject to any ad valorem rate of duty, or to any duty regulated or directed by law to be estimated or based upon the value of the square yard, or of any other specified quantity or parcel, were purchased, and the actual cost and quantity thereof, and of all charges thereon ; that no discounts, bounties, or drawbacks are contained in said invoice, but such as have been actually allowed thereon ; that the currency in which said invoice is made out is the currency which was

actually paid, or is to be paid for said goods, wares, and merchandize, and that no different invoice thereof has been or will be furnished to anyone. I further declare that it is intended to make entry of the goods, wares, and merchandise mentioned in said invoice at the port of , in the United States of America.

Sworn at No. 53A, Old Broad Street, in the City of London, this day of 187 , before me

A Commissioner to administer Oaths in the Supreme Court of Judicature.

CONSULATE-GENERAL OF THE UNITED STATES OF AMERICA, LONDON.

I, ——— ———, Deputy Consul-General of the United States of America, for Great Britain and Ireland at London, do hereby certify that on this day of A.D. 187 , the within invoice numbered , in which are mentioned and described certain amounting, with the charges thereon, to the gross sum of £ , was produced to me by *in person*, the of the goods, wares, and merchandise therein mentioned, who thereupon declared in writing, in my presence, that it was intended to make entry of said goods, wares, and merchandise at the port of in the United States of America. I do further certify that I am satisfied that the person making the declaration hereto annexed is the person he represents himself to be; and that the actual market values, or wholesale prices of the goods, wares, and merchandise described in the said invoice, in the principal markets of the country, and at the time of exportation, are correct and true (or as set forth in the column of consular corrections of estimates).

In testimony whereof I have hereunto set my hand, and affixed the Seal of the Consulate-General, at London, in triplicate, this day and year next above written.

(*On back of Declaration.*)

LONDON.

No._____

Shipper_____

Ship_____

To M_____

Amount £_____

Date_____ 187 .

If sent on Consignment the following must also be added :—

Consigned to_____

For sale on_____ Account.

The Consul's fee amounts to $2·50 (10*s.* 4*d.*), together with 2*s.* 6*d.*, Commissioner's fee, in all 12*s.* 10*d.*, for *each consignment* of goods.

Under a Treasury regulation it is necessary that the invoices of all goods, imported into the United States, and subject to a duty *ad valorem*, shall be made out in the currency of the place or country from whence the importation is made, and shall contain a true statement of the actual cost of the goods, in such foreign currency or currencies

without any respect to the value of the coins of the United States, or foreign coins, which now are, or shall be by law, made current within the United States, in such foreign place or country.

It should be observed that all woollen, woollen mixed, and all other such goods the duty on which is estimated partly on weight and measure, must have *net* weight added.

Of these three invoices, one is retained by the Consul, another sent by him direct to the the Collector of Customs at the port of destination, and the third returned to the merchant, after authentication by certificate under Consular seal, who forwards it with his goods to the shipper, with instructions to insure and ship as per invoice. All disbursements, except insurance, such as Consul's fee, cost of wrappers, cases, &c. should be added at the foot of the invoice. Freights are usually charged forward, the consignee receives his certified invoice, liquidates his entry by paying the duties in gold, and receives the goods. Further information on American Consular Regulations relating to the authentication of invoices is given in detail at page 379.

When in 1874 the International Exhibition to be held at Philadelphia came under the consideration of the American authorities, the following regulations, based upon an Act of Congress dated June 18, 1874, were issued by the Secretary of the Treasury, to govern the importation of goods for that Exhibition :—

Treasury Department, Washington, D. C.,
November 1, 1875.

An Act of Congress, approved June 18, 1874, entitled " An Act to admit free of duty " articles intended for the International Exhibition of eighteen hundred and seventy-six," provides as follows :—

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all articles which shall be *imported for the sole purpose of exhibition* at the International Exhibition to be held in the city of Philadelphia in the year 1876, shall be admitted *without the payment of duty or of customs' fees, or charges*, under such regulations as the Secretary of the Treasury shall prescribe : Provided, That all such articles as shall be *sold* in the United States or *withdrawn for consumption* therein at any time after such importation shall be *subject to the duties*, if any, imposed on like articles by the revenue laws in force at the date of importation : And provided further, That in case any articles imported under the provisions of this Act shall be *withdrawn for consumption* or shall be *sold without payment of duty* as required by law, all the *penalties* prescribed by the revenue laws shall be *applied* and *enforced* against such *articles* and against the *person* who may be guilty of such withdrawal or sale.

In pursuance of the provisions of this Act, the following regulations are prescribed:

No duty, fees, or charges for customs' service will be exacted on any such importations, except in case of entry, as provided by Article 14 of these regulations.

The ports of Portland, Me., Boston, New York, Philadelphia, Baltimore, New Orleans, and San Francisco, on the seaboard, and St. Albans, Rouse's Point, Suspension Bridge, Buffalo, Detroit, Port Huron, and Chicago, as ports on the northern frontier, will constitute the only ports of entry at which such importations may be made.

Goods destined for such Exhibition imported through the above-named frontier ports may be forwarded in the same manner as now allowed by law and regulations for other importations.

Invoices showing the marks, numbers, character, quantity, and foreign market value of articles intended for such Exhibition shall be authenticated by the hand and official seal of the Commissioner for the International Exhibition appointed by the Government

of the country from which such articles are imported, and shall be made in triplicate and forwarded—one copy to the Collector of Customs for the port at which is intended such articles shall enter the United States, one copy to the Collector of Customs for the port of Philadelphia, and one copy to the consignee or agent of the shipper. In case it shall be impracticable to obtain the authentication of the Commissioner under official seal, verification by a consular officer of the United States may be accepted instead.

All packages containing such articles must be conspicuously addressed to the "Director-General of the International Exhibition of 1876, at Philadelphia."

Upon the arrival at any of the above-named ports, except New Orleans and San Francisco, of packages so marked and containing articles intended for such Exhibition, duplicate entry thereof, in form to be prescribed, may be made by the consignee or agent thereof, for immediate transportation to Philadelphia, by a duly authorised bonded route, but transportation bond will not be required.

The entry having being compared with the invoice received from the Commissioner, found correct, and numbered and registered in a book provided for that purpose, the Collector will issue a special permit for the transfer of such packages from the importing vessel to the cars for transportation, care being taken to fully identify the packages by the marks and numbers as described in the bill of lading, entry, and invoice, and will transmit the entry to the Surveyor, with proper directions for shipment.

Such transfer must be made by bonded cart or truck, and the packages must be accompanied by a customs' officer, detailed for that purpose, from the time they are removed from the importing vessel until they are placed upon the cars for transportation, and such officer will be required to superintend the lading, and secure the cars by customs' lock and seal.

Triplicate manifests for each car so laden, showing the marks, numbers, &c.of such packages as described in the entry, will be prepared and signed by the proper agent of the railroad company, by whom such articles are to be transported. Each of said manifests will be certified as correct by the shipping inspector, who will deliver one manifest to the conductor or agent of the railroad company, and return the other two with the entry, also certified by him, to the Collector.

The entry having been duly registered and certified, as herein-before required, the Collector will transmit the same by mail, with the invoice, bill of lading, and manifest, to the Collector of Customs at Philadelphia, the duplicate manifest to be retained on the files of the custom house at the port of entry.

At ports where there is a naval office the entries for transportation will be made in triplicate,—one copy for the files of that office, one for the Collector's office, and one for transmittal, as above required, to Philadelphia.

Upon the arrival of the cars containing such articles at the Exhibition buildings at Philadelphia, the conductor or agent of the railroad company will report such arrival by the representation of the manifest to the customs' officer designated to receive such manifests, who shall compare the same with the copy received by mail, and superintend the opening of the cars, taking care to identify the packages by marks and numbers as described in the manifests. In case of the non-receipt of the manifests, the unlading of the cars shall not, for that reason, be delayed, but the invoice will be used to identify the packages.

Immediate notice of such arrival of the goods shall be given by the Collector of Customs at Philadelphia to the Collector from the port of which such articles were shipped, and such notice will be numbered to correspond with the entry and the date of its receipt recorded in the register of entries prescribed, to be kept at ports where entries for transportation are made. The packages will be retained in the custody of the customs' officers at the Exhibition building, unopened, until special entry for warehouse, in form to be prescribed, is made by the owner, consignee, or agent authorised to make entry, but no warehousing bond will be required.

Upon the completion of the special warehouse entry, the packages will be opened and due examination and appraisement of the contents, with proper allowance for damage sustained on the voyage of importation, if any, will be made by the Appraiser at the Exhibition buildings, which shall, for that purpose, be regarded as a public store. The Appraiser will be furnished with the invoice of the articles to be appraised, and will endorse his report of appraisement and his allowance for damage, if any, upon such invoice in like manner as if such articles were regularly entered for consumption or warehouse. No allowance for damage, however, exceeding 50 per cent. will be made without the approval of the Department. The entry will then be liquidated, the full amount of duties ascertained, and the whole transaction entered upon a record to be provided for that purpose.

The articles may then be placed in the position provided for their exhibition, but will remain under the custody and control of the customs' officers, and will not be removed from the place assigned without a permit from the Collector of Customs or the officer who may be designated to grant such permit. In no case will such articles be removed from the Exhibition building, or released from the custody of the customs' officers, unless the same shall have been regularly entered at the custom house in Philadelphia for consumption, warehouse, or export.

In case of exportation of such articles, existing regulations requiring exports to be made in original packages will be waived.

Entry of articles designed for such Exhibition arriving at the ports of San Francisco or New Orleans must be made in the manner now prescribed by law and regulations on the importation of dutiable merchandise, either for warehouse and immediate transportation in bond, or for immediate transportation without appraisement. Upon the arrival of such articles at Philadelphia they will be received into the custody of the customs' officers, (whose certificate to that effect, in the form to be prescribed, shall be sufficient to cancel the transportation bond,) and thereupon special entry for warehouse without bond may be made as provided by these regulations.

When such articles arrive at Philadelphia by vessel direct from a foreign country, the entry for transportation will not be required, but a special entry for warehouse, in the manner herein-before provided, may be made, whereupon a special permit will be issued for the transfer of the articles from the importing vessels to the cars for transportation from the vessel direct to the Exhibition buildings; and the same proceedings as to identification of the articles, their transfer from the vessel to the cars, the preparation of manifests, and the careful and continuous supervision by a customs' officer over the whole transaction, will be required as at other ports.

Upon the arrival of such cars at the Exhibition building, after special warehouse entry of the packages is made, they will be opened and the contents of the packages examined and appraised as herein-before provided.

The special forms of entries, permits, manifests, and records to be used under these regulations will be prepared and furnished by the Treasury Department.

Collectors of Customs will report to the Secretary of the Treasury any case relating to an importation for such Exhibition in which they may regard these regulations as insufficient to secure the interests of the revenue, and special instructions will be given for their guidance in such case.

The regulations heretofore issued under the date of October 3, 1874, and May 18, 1875, are hereby superseded and annulled. Provided, however, that no rights or interests heretofore acquired thereunder shall be effected to the injury of the parties concerned.

B. H. Bristow,
Secretary.

It may further be interesting to record here the regulations referring to transportation of goods to the Exhibition and the terminal charges respecting them, which were finally approved and issued in November 1875 :—

The general reception of articles at the Exhibition buildings will COMMENCE JANUARY 5th, 1876, and CLOSE on APRIL 19th, 1876. Machinery and other heavy articles will be admitted as soon as the special foundations for them are prepared, and it is desirable that they should be in place prior to the reception of other exhibits.

In boxing goods for the Exhibition, screws should be used instead of nails.

Each package must be marked, "To THE DIRECTOR-GENERAL, INTERNATIONAL EXHI-"BITION OF 1876, AT PHILADELPHIA," and should be marked on TWO ADJOINING SIDES, giving the following information :—

Name of the exhibitor.

Siding at which to be unloaded.

Specific location allotted to the exhibitor.

Weight of the package.

Total number of packages sent by the exhibitor.

Serial number of the particular package.

Within each package should be a list of articles and a copy of the outside directions.

Each package should contain only articles intended for a single department.

NOTE.—To facilitate the delivery of packages so marked, there have been constructed within the Exhibition grounds several lines of railway. At convenient points on these lines are located sidings and platforms for the delivery of articles to be exhibited in the immediate vicinity. Each siding is designated by a number, and the address label or tag on each article or package must give the number of the siding at which it is to be delivered. The address label should also state the location in the building in which the article is to be exhibited in accordance with the system for designating localities, as follows :

"Each column within the building will be lettered and numbered; the letters designating the lines of column lengthwise, from east to west, and the number the lines crosswise, from north to south. Each exhibitor will have his location defined with reference to the nearest column, and the official directory of the building will give the positions according to this system."

The exceptional arrangements made by the United States Centennial Commission with transportation companies do not in any way affect the regular rules of such companies in regard to the classification of goods, or the conditions of receiving or transporting the same, except in requiring the pre-payment of freight. The rates for transporting goods for the Exhibition will be obtained from the agents of the TRANSPORTATION COMPANIES AT THE PLACE OF SHIPMENT and not at Philadelphia.

THROUGH BILLS OF LADING should be OBTAINED, so that goods will, WITHOUT any ATTENTION by the SHIPPER, BE SENT DIRECT TO THE EXHIBITION. They must show the precise route by which the articles or packages are to be transported, specifying in detail every road over which the freight is shipped, from the point of starting to Philadelphia, SO THAT IT MAY BE RETURNED BY THE SAME ROUTE AS RECEIVED. The line of steamers by which exhibits are sent must be named. A DUPLICATE COPY OF THE BILL OF LADING must be mailed by the shipper TO THE CHIEF OF THE BUREAU OF TRANSPORTATION, UNITED STATES CENTENNIAL COMMISSION, PHILADELPHIA; and LETTERS OF ADVICE SHOULD ALSO BE FORWARDED, GIVING INFORMATION OF THE SHIPMENTS MADE, AND FULL PARTICULARS IN REGARD TO ARTICLES OF BULKY DIMENSIONS OR EXCESSIVE WEIGHT.

The transportation, receiving, unpacking, arranging, re-packing, and re-shipping of the goods exhibited, also the storage and repair of empty cases, will be at the expense of the exhibitor.

For the purpose of making a complete record of all exhibits admitted to the Exhibition, and to secure efficiency, order, and despatch in their reception and installation, all packages on arrival at the Exhibition inclosure will be received by the Chief of the Bureau of Transportation. They will then be unloaded and placed on the space allotted to the exhibitor, and at the close of the Exhibition they will, when re-packed, be removed from the buildings. For this service, which the United States Centennial Commission will undertake especially for the accommodation of exhibitors, a terminal charge will be made which will be as follows :—

On each separate article or package weighing 500 lbs., or less - - $1.00.

On each separate article or package weighing over 500 lbs. - 20 cents per 100 lbs.

Articles weighing over 10,000 pounds, fragile articles, plate glass, &c., and works of art, may be subject to an additional charge after arrival at the Exhibition, to cover the extra cost of handling, if any. THERE WILL BE NO TERMINAL CHARGE ON EXHIBITS OF LIVE STOCK.

NOTE.—Ample provision will be made for the HANDLING and STOWAGE of EMPTY CASES, for those who may DESIRE to AVAIL themselves of such accommodation.

The charge for removing, storing, and returning empty cases and packing material for exhibitors who request it, will be as follows :—

For empty cases of dimensions,	27 cubic feet, or less	-	50 cents.
,, ,, ,,	between 27 and 75 cubic feet	-	75 cents.
,, ,, ,,	over 75 cubic feet, per cubic foot	-	1 cent.

For box-boards, strippings, etc.—only received when securely fastened in packages—

For packages weighing	50 lbs., or less	- - -	50 cents.
,, ,,	between 50 and 75 lbs.	- -	75 cents.
,, ,,	over 75 lbs., per pound	- -	1 cent.

Goods must be free from all charges incident to their transportation when received at the Exhibition enclosure, and the terminal charge must be pre-paid.

NOTE.—This regulation does not refer to foreign commissions, and the terminal charges may be paid by British exhibitors after the goods are placed in the Exhibition buildings.

The customs' regulations, issued by the Secretary of the Treasury of the United States, permit, after transportation entry has been made, the immediate transportation to Philadelphia, of goods imported from foreign countries. They will be transported by bonded line from the port of arrival to Philadelphia, and delivered to the Collector at that city, where warehouse entry is required in all cases. The customs' regulations for these goods must be strictly complied with.

IF NO AUTHORISED PERSON IS AT HAND TO OPEN AND ARRANGE THE GOODS IN THE EXHIBITION BUILDING, THEY WILL BE REMOVED AND STORED AT THE COST AND RISK OF WHOMSOEVER IT MAY CONCERN.

The Exhibition will CLOSE the 10th of NOVEMBER 1876. The REMOVAL of GOODS will NOT be PERMITTED PRIOR TO THAT DATE, and must be COMPLETED BEFORE the 31st of DECEMBER 1876. Goods then remaining will be removed by the Director-General and sold for expenses, or otherwise disposed of under the direction of the United States Centennial Commission.

Circular No. 107 is hereby cancelled.

The Centennial Commission reserves the right to explain or amend these regulations, whenever it may be deemed necessary for the interests of the Exhibition.

D. TORREY,
Chief of Bureau of Transportation.

A. T. GOSHORN,
Director-General.

Philadelphia, November 16, 1875.

An important concession with reference to the declaration before the Consul was made by the American Treasury, on the application of the British Executive Commissioner through the Foreign Office, in the case of goods intended bonâ fide for exhibition at Philadelphia.

Such goods, it was courteously held, need not be sworn to before the Consul, the Secretary of the Treasury agreeing to authorise in lieu thereof the acceptance by the American Customs authorities, of the signature and official seal to the invoice of the Executive Commissioner for the country from which the goods were despatched.

In the case of British goods this invoice when certified at the central office has been issued to the exhibitor, accompanied by a certificate of entry in duplicate, also signed and sealed, one copy being for the shipper and the other for the consignee.

To complete the foregoing statement it only remains to append the declaration required by the American custom house regarding passengers' baggage :—

Every passenger arriving at any port of the United States from a foreign port is required to make a brief statement of the number of his or her trunks, bags, and other pieces of baggage, of the contents of each, and of the articles upon his or her person. For convenience and uniformity, such statement must be made on a form similar to that annexed, designated "*Passengers' Baggage Declaration*," copies of which may be obtained from the British Executive.

To avoid detention in landing, such statement should be carefully prepared before arrival, so as to be promptly delivered to the revenue officer upon demand. The following information will aid in the preparation of the declaration :—

The numbers of the several pieces of baggage will be given in the proper place, and their contents entered under two heads :

1. *Baggage not dutiable*, which comprises the following classes :
   "Wearing apparel in the passenger's own use." "Other personal effects" (not merchandise), which are such as are usually carried with or about the person of a traveller, as trunks, articles of the toilet, stationery, a few books, one watch, jewelry, &c., &c., in actual use, and in reasonable amount, may be declared "*Personal Effects.*" "Professional books," "tools of trade," and "household effects," all of which have been used by the passenger abroad, the last named at least one year, may be severally declared as such.
2. *Dutiable Merchandise.*—Under this head must be entered all articles not included in "baggage not dutiable," as above set forth. Among these may be specially mentioned *new* wearing apparel in excess of that in general use ; excessive amounts of jewelry ; extra watches ; articles of *virtu* ; all presents ; piece goods ; and all articles purchased of other persons ; in short, all articles not essential to the personal comfort and convenience of the traveller.

Great care should be taken to make a full and accurate return, and to examine the certificate which the passenger is required to sign.

The columns headed "Appraisement" are not to be filled by the passenger, but left blank.

The senior member of a family, if sufficiently acquainted with the contents of the baggage of the whole party to make a sworn statement of the same, will be allowed to include all such baggage in one declaration, but such a course will not relieve him or the several members from liability to search of their persons in case of suspicion, nor from any penalties for attempts to defraud.

Upon arrival, the declaration will be delivered to the revenue officer. The baggage will be examined on board the vessel or wharf, and duties assessed, which are payable in gold coin.

Any piece of baggage containing over $500 worth of dutiable merchandise will not be delivered on board, but sent to the public store for examination and appraisement.

Packages containing merchandise exclusively will not be considered as baggage, but must be regularly entered at the custom house.

All baggage is subject to actual and thorough examination, and the persons of all passengers are liable to search.

Any fraud on the part of the passengers, any concealment of fact or secreting of articles in the trunks, &c., or on the person, or attempt to bribe a revenue officer, will render the baggage liable to detention and confiscation, and subject the owner to other legal penalties.

Any complaints against revenue officers in the discharge of their duties must be made to the Collector of the port, who will promptly investigate all charges made.

[Revised Statutes of the United States, Sec. 2799.]

ENTRY of BAGGAGE imported by _____, a passenger in the Steamer _____, whereof _____ is Master, from _____, Port of _____, 187 .

Marks.	Numbers.	PACKAGES AND CONTENTS.
		Trunks.
		Boxes.
		Bags.
		Parcels.
		Other packages, viz. :

PORT OF _____ : I do solemnly swear that this entry contains, to the best of my knowledge and belief, a just and true account of the contents of the several packages mentioned in the entry, and that such packages contain no merchandise whatever other than wearing apparel, personal baggage, or tools of trade specified in said entry; that they are all the property of myself, and members of my family, who have lately arrived in the vessel above-named, and are not, directly or indirectly, imported for any other person or intended for sale.

_____

SUBSCRIBED and sworn to before me, this _____ day of _____, 187 .

_____ Deputy Collector.

EXAMINED—No dutiable articles found, except as stated and entered.

_____ Inspector.

[Act of June 22, 1874, secs. 9 and 10.]

STATEMENT and ENTRY of DUTIABLE ARTICLES imported by _____, a passenger in the steamer _____, whereof _____ is master, from _____ Port of _____, _____, 187 .

Description of Articles.	Actual cost, or foreign market value.	Rate of duty.	Duties.

PORT OF _____: I do solemnly swear that it is impracticable for me to produce a certified invoice of the articles mentioned in this statement and entry for the reason that they were purchased at different times and places whilst travelling, *

_____

and that the prices above set forth show the actual cost or foreign market value of the articles named, to the best of my knowledge, information, and belief.

_____

Subscribed and sworn to before me, this _____ day of _____ 187 .

_____ Appraiser.

_____ Collector's Clerk.

_____ Deputy Collector.

_____ Naval Office Clerk.

* If other reasons exist they should be stated.

NOTICE TO CABIN PASSENGERS.

The baggage of passengers will be landed upon the steamship wharf as soon as practicable after the vessel is docked. But before any baggage is delivered each passenger will be required to make, under oath, an entry of his or her baggage, and a separate entry, also under oath, of all articles contained in his or her baggage which, by the United States laws, are subject to duty, and to pay such duty, if any.

The blank forms of the entries to be made will (if practicable) be furnished to each passenger after the vessel leaves quarantine by the Customs officers, who will also give the passenger all necessary information relative thereto. In case no Customs officers come on board at quarantine, the forms of entries will be furnished when the vessel arrives at her wharf.

The senior member of a family coming together, if sufficiently acquainted with the contents of the baggage of the whole party to make a sworn statement of the same, may be allowed to include all such baggage in one entry.

Whenever any trunk or package brought by a passenger as baggage contains articles subject to duty, and the value thereof exceeds $500, or if the quantity or variety of the dutiable articles is such that a proper examination, classification, or appraisement thereof cannot be made at the vessel, the trunk or package will be sent to the Public Store for appraisement.

_____

The attention of passengers is directed to the following laws of the United States, and the Regulations of the Treasury Department, relative to the importation and entry of baggage:

SECTION 2505.—The importation of the following articles shall be exempt from duty: * * * Wearing apparel in actual use, and other personal effects (not merchandise), professional books, implements, instruments, and tools of trade, occupation, or employment of persons arriving in the United States. * * * —(*Revised Statutes, pp.* 259, 267.)

SECTION 2799.—In order to ascertain what articles ought to be exempted as the wearing apparel, and other personal baggage, and the tools or implements of a mechanical trade only, of persons who arrive in

the United States, due entry thereof, as of other merchandise, but separate and distinct from that of any other merchandise, imported from a foreign port, shall be made with the Collector of the District in which the articles are intended to be landed by the owner thereof, or his agent, expressing the persons by whom or for whom such entry is made, and particularizing the several packages, and their contents, with their marks and numbers; and the persons who shall make the entry shall take and subscribe an oath before the Collector, declaring that the entry subscribed by him, and to which the oath is annexed, contains, to the best of his knowledge and belief, a just and true account of the contents of the several packages mentioned in the entry, specifying the name of the vessel, of her master, and of the port from which she has arrived; and that such packages contain no merchandise whatever other than wearing apparel, personal baggage, or, as the case may be, tools of trade, specifying it; that they are all the property of a person named who has arrived, or is shortly expected to arrive, in the United States, and are not, directly or indirectly, imported for any other, or intended for sale.—(*Revised Statutes, pp.* 320, 321.)

SECTION 2802.—Whenever any article subject to duty is found in the baggage of any person arriving within the United States, which was not, at the time of making entry for such baggage, mentioned to the Collector before whom such entry was made, by the person making entry, such article shall be forfeited, and the person in whose baggage it is found shall be liable to a penalty of treble the value of such article. —(*Revised Statutes, p.* 321.)

ARTICLE 399.—"Professional books, implements, and tools of trade, occupation, or employment," are understood to embrace such books or instruments as would naturally belong to a surgeon, physician, engineer, or scientific person returning to this country. * * * —(*Customs Regulations*, 1874, *p.* 192.)

ARTICLE 400.—Jewelry that has been worn or is in use as a personal ornament may be admitted free of duty. * * * .—(*Customs Regulations*, 1874, *p.* 192.)

Duty must be demanded on all watches but *one* brought into the United States by a single passenger. If all the watches are old, the passenger may choose the one to be treated as personal effects. If some are old and some new, the new are to be included among those treated as subject to duty.—(*Synopsis of Decisions*, 1868 (170), p. 52.)

☞ * * * So far as wearing apparel is concerned, only those articles which have been in actual use exempted from duty. * * * New articles of clothing which have not been in actual use abroad, and not necessary for the present comfort or convenience of the owner, are chargeable with duty; and the fact that they are intended for the future use of the person who brings them, or of another person, and are not for sale, does not exempt them from duty.

Tourists and passengers are, therefore, cautioned to preserve the proper care, when arriving with articles claimed to be free as personal effects, in making a separate statement of their effects which have been in actual use abroad from those which are new, in order that the customs officers may readily decide what portions are liable to or exempt from duty.—(*Department Circular, dated February* 23, 1875.)

The importance of a comprehensive work dealing with the United States Tariff is evidenced by the following extract from the "Times" of September 30, 1875:—

"In 1874 we imported merchandise from the United States of the value of nearly 74 millions sterling, but exported thither our own produce not quite to the value of 28¼ millions."

Whereas in 1837 we imported 11 millions and exported 9 millions.

The gross amount of imports for the fiscal year ending June 30, 1875 in the United States was about 72¾ millions sterling, paying a duty of nearly 21½ millions, averaging about 34 per cent.

The British manufacturer on perusing the following pages will probably conclude that the high rates of duty shown in the Tariff must ultimately prove prohibitive so far as staple goods are concerned. It should however be borne in mind that the *best* goods, when distinguished by intrinsic excellence and taste, together with stability of manufacture, will always find a market in the United States.

Manufactures, throughout the world, are localised by the skill of the population in each particular production as well as by district peculiarities. This is probably the reason why manufactories can seldom be removed with success, or be established in foreign countries, since various details in skill and labour *in combination* with natural local advantages are necessary to mature the peculiar excellences of any particular fabric.

For instance, a West of England broadcloth (unsurpassed in the world) when imitated in Yorkshire from a precisely similar class of wool with the same care and attention, and made at the same expense, does not hold its own in the markets against the produce of the West country mill.

Without entering into general statistics, it may not be out of place to refer here to the remarkable and sudden success of the United States manufacturers, which success may certainly be held to have deranged our home industries, and appears not unlikely to create a revolution in our exports to that market of any goods save the choicest specialities. Whilst admitting the decadence of exports from Great Britain to the United States of America, it may not be inexpedient to suggest to British merchants that they should not overlook the markets of Central and South America, which seem destined to prove of great value to any nation inclined to study their specific requirements. As an illustration of the perseverance of American manufacturers in the face of many obstacles, the following is quoted from a recent number of the "United States Economist," a journal of acknowledged authority :—

"The contract for the carpets of the Palace Hotel, San Francisco, is the largest ever undertaken by any firm in the United States. The total length of the carpets, if stretched three quarters of a yard wide, would reach 45 miles, the conditions being that as far as possible they should be manufactured in the United States. With the exception of two Axminster reception room carpets, the whole were woven by 20 looms, within five months, at the works of the Bigelow Carpet Company, the patterns being all new and effective."

With a tariff of over 60 per cent. *ad valorem* besides cost of freight, the English carpet manufacturer has at present but limited opportunities for competition. A few years since nearly one quarter of the English-made carpets went to the United States to supply such contracts as that above referred to. There are now in the States upwards of 2,000 Brussels and Tapestry looms for carpet weaving with manifest advantages for economical production, since female labour is chiefly employed.

It is gratifying, however, to learn that the two Axminster carpets for the San Francisco Hotel (which were made at Glasgow), were said by the "Economist" "to surpass every-" thing of the kind ever produced, both in beauty of design and excellence of manu-" facture," which confirms, so far as a typical branch of industry is concerned, the inference before suggested in this paper, that the British manufacturer must rely upon the superior excellence and intrinsic merit of his goods to maintain a footing in the American market whilst the present duties exist.

It may not be widely known that, in many specialities of British manufacture, trade is becoming reversed; the buyer of yesterday becoming the seller of to-day; this is shown by the following quotations :—

"As an indication of the growth of our export trade to Great Britain it may be stated that the Borden City Mills, at Fall River, Mass., have received an order from Manchester for 25,000 pieces of printing cloths, and preparations are now being made for this manufacture."—(New York Custom House Reports, Feb. 1876.)

At the annual meeting of the Sheffield Chamber of Commerce, January 27th, 1876, the President referred to the startling decline of our American trade, and said that "neither " Sheffield nor Birmingham would have such a position in the American market as they " formerly had. American and German manufacturers were pushing our goods into a

" corner, and by introducing machinery for the production of articles of equal quality to " those made by hand they had become successful competitors."

The " Times " of October 16th, 1875 quotes the following from the New York Bulletin :—

" The United States is constantly adding to the lists of its manufactures which are finding markets in Great Britain. Among the most recent additions is that of leather belting, the first invoice of which was shipped recently by a New York firm, that use 10,000 hides per annum in their Brooklyn works."

But British manufacturers and merchants should not overlook the fact that the present internal taxation of the United States on home or domestic manufactured goods is equally as burdensome, though indirectly so, as the taxation on importations; and until an alteration in the form of repeal of home imposts takes place, it is hardly reasonable to expect any considerable reduction in the present tariff, or even any advance, however limited, towards free trade.

The approaching Centennial Exhibition, however, cannot but have a potent and far-reaching influence over the entire Continent of America, of which the United States form only a part, and it will assuredly afford the opportunity of a peaceful rivalry between the English manufacturer, untrammelled with excessive revenue taxation, and his American competitor. The English exhibitor will be permitted to mark his goods at the price in sterling at which he would be prepared to supply them direct from England, exclusive of duties, &c. ; a valuable concession, since it will illustrate the working of the protective tariff on all sides, enlightening more especially American customers from outlying States, who have few opportunities of becoming acquainted with the first cost of the goods they require.

The trading, and commercial classes, indeed, from the north of America to the extreme south will concentrate at Philadelphia and will there form their own opinions as to the best and cheapest market in which to purchase merchandise.

If the participation of European nations in the Philadelphia Exhibition does not immediately lead to a reduction of this nearly prohibitive duty which threatens to close the United States market against them for many staple commodities, the hope may not unreasonably be cherished that it may prove the means of opening out new trade, in friendly competition with their brethren across the Atlantic, with the great and rising nations of Central and South America, whose requirements, if well understood and anticipated, may not unlikely create a large and lasting trade of great benefit to this, and future generations.

15th March 1876.

A. J. R. T.

EXPLANATORY STATEMENT AS TO AMERICAN CUSTOM HOUSE DUTIES, AND EXCHANGE.*

The misunderstanding existing in this country as to American exchange may be attributed almost entirely to the fact that the Spanish silver dollar, which contained as much silver as 4*s.* 6*d.* sterling, was formerly in use. This was taken as the *basis* of exchange, and is still so used by the commercial world.

The premium indicated, now almost obsolete, is a style of quotation which has grown up by commercial usage, consequent upon the change in 1834 of pure gold in the national currency.

The object here sought is to explain in as simple and concise a manner as possible the law on tariff and exchange as applied between the United States and England; the following information is the result of some years' personal experience, and may probably be found useful to those trading between the two countries.

The currency of the United States is decimal, and for the information of those unaccustomed to such expressions it may be stated that the dollar ($1·00) is the unit consisting of one hundred cents, and each cent of ten mills. The first figure to the right of the *point* represents tenths, the second figure from the point hundredths, and the third thousandths, &c. Thus 5·7 is five units and seven tenths, or $5\frac{7}{10}$; 9·21 is nine units and twenty-one hundredths, or $9\frac{21}{100}$; and 7·207 is seven units and two hundred and seven thousandth part of one unit, or $7\frac{207}{1000}$.

No arithmetical expression relating to the United States currency can possibly be accurate without this decimal notation.

In 1834 it became necessary in the United States to alter the standard of gold in order to adjust the relative values of gold and silver, which hitherto had not been in strict accordance with their actual worth in the markets of the world, in consequence of which gold was continually taken out of the country and silver brought in. To balance the *proportional* value of these metals a reduction in the quantity of pure gold contained in the eagle of ten dollars was essential. An Act was passed with the following result, and the gold dollar became the standard:—

1792. Eagle of $10·00 contained 270 standard or 247·5 grains pure gold, with 12 per cent. alloy.

1834. „ „ „ 258 standard or 232·2 „ „ 10 per cent. alloy.

Thus the dollar contains at the present day 23·22 grains of pure gold.

In England there has been no alteration in the standard of pure gold since 1627 (2nd Charles I.), but in 1816, when the British coinage was reformed (56 Geo. III.), the sovereign was made the standard and only legal specie tender in all payments exceeding forty shillings. Thus the sovereign of twenty shillings took the place of the guinea, rated in 1717 at twenty-one shillings under Sir Isaac Newton, Master of the Mint.

One pound troy, or 5,760 grains of gold, was coined into $46\frac{2}{40}$ sovereigns (46*l.* 14*s.* 6*d.*) instead of $44\frac{1}{2}$ guineas. These contained $\frac{11}{12}$ or 5,280 grains of pure gold and $\frac{1}{12}$ or 480 grains of alloy. The alloy, however, is never reckoned in the account; the value of a currency depends upon the quantity of pure gold contained in the coin which is the legal tender, and as the gold coin of England is issued at the price bullion sells for, it is thus coined free of expense.

Now, by dividing the 5,280 grains of pure gold by $46\frac{2}{40}$ sovereigns, it will be found that a single sovereign contains exactly $113\frac{1}{623}$ grains; divide these by the number of pure grains in a dollar of the present standard (23·22) and the result will prove that an English sovereign contains $4·86\frac{65}{100}$ or four dollars eighty-six cents and sixty-five hundredths of a cent.

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* The compiler is indebted to Mr. Thomas Winter, of East Sheen, for this condensed statement on an abstruse subject.

Example.

$46\frac{3}{4}\frac{9}{0}l. = 46.14.6 = 46{\cdot}725l.$ (decimal of $1l.$)
$5280{\cdot}000 \div 46{\cdot}725 = 113{\cdot}000160.$
$113{\cdot}000160 \div 23{\cdot}22 = 4{\cdot}86{\cdot}65.$

This is the exact and actual value of $1l.$ sterling in the United States, as accepted in all the Government offices by order of the Finance Committee. All foreign moneys are estimated by the United States Treasury according to the *intrinsic* value thereof in comparison with the American dollar.

Before the change in the coinage in 1834, and calculating by this *same* process of equivalent weights, when the old Spanish dollar was worth $4s.\ 6d.$, it will be seen that the sovereign was worth under the old standard four dollars forty-four cents and forty-four one hundredth part of a cent; as follows:—

If $\$1{\cdot}00$ be worth 54 pence ($4s.\ 6d.$), what is the value in dollars of 240 pence ($1l.$)?
$240 \div 54 = \$4{\cdot}44{\cdot}44.$

This is the old *Par of exchange*,* which has never been altered, and is still quoted by the American merchants as their *basis;* thus giving the British sovereign under the present gold standard a premium of $9\frac{1}{2}$ per cent. to make the commercial par of a pound sterling.

1792	intrinsic par value of $1l.$ sterling		$\$4{\cdot}44{\cdot}44.$
1834	„ „	$9\frac{1}{2}$ % pm.	42·21.
			$\$4{\cdot}86{\cdot}65$

The accompanying tables show the value in sterling of one quarter of a cent to five thousand dollars; as also the value in dollars and cents of one farthing sterling to one thousand pounds at the Custom House *par* value of four dollars eighty-six cents and sixty-five hundredths of a cent to one pound sterling.

Example.

Given an invoice amounting to $143l.\ 17s.\ 9\frac{3}{4}d.$ sterling, to find the value in dollars and cents of

£	*s.*	*d.*	$	Cents.	Decimals of cents.
100			486·65		
40			194·66		
3			14·59·95		
	17		4·13·652		
		9	18·249		
		$\frac{3}{4}$	1·520		
£143	17	$9\frac{3}{4}$	$\$700{\cdot}24{\cdot}\frac{371}{1000} = \frac{11}{16}$		

or seven hundred dollars twenty-four cents and eleven sixteenths of a cent.

* "Par of exchange" signifies the equal value of money between one country and another without discount or premium.—"Ogilvie's Dictionary."

PAR of EXCHANGE as adopted by CONGRESS, $4·86·65 to the £1 sterling.

Sterling into Dollars and Cents.

Pounds.	Dollars.	Cents.	Decimals of Cents.
1	= 4	86	65
2	= 9	73	30
3	= 14	59	95
4	= 19	46	60
5	= 24	33	25
6	= 29	19	90
7	= 34	06	55
8	= 38	93	20
9	= 43	79	85
10	= 48	66	50
20	= 97	33	
30	= 145	99	50
40	= 194	66	
50	= 243	32	50
60	= 291	99	
70	= 340	65	50
80	= 389	32	
90	= 437	98	50
100	= 486	65	
200	= 973	30	
300	= 1,459	95	
400	= 1,946	60	
500	= 2,433	25	
600	= 2,919	90	
700	= 3,406	55	
800	= 3,893	20	
900	= 4,379	85	
1,000	= 4,866	50	

Shillings.	Dollars.	Cents.	Decimals of Cents.
1	=	24	332
2	=	48	665
3	=	72	997
4	=	97	33
5	= 1	21	662
6	= 1	45	995
7	= 1	70	327
8	= 1	94	66
9	= 2	18	992
10	= 2	43	325
11	= 2	67	657
12	= 2	91	99
13	= 3	16	322
14	= 3	40	655
15	= 3	64	987
16	= 3	89	32
17	= 4	13	652
18	= 4	37	985
19	= 4	62	317

Pence.	Dollars.	Cents.	Decimals of Cents.
1/4	=	1	506
1/2	=	1	013
3/4	=	1	520
1	=	2	027
2	=	4	055
3	=	6	083
4	=	8	110
5	=	10	138
6	=	12	166
7	=	14	193
8	=	16	221
9	=	18	249
10	=	20	277
11	=	22	304

Dollars.	Pounds.	Shillings.	Pence.	Decimals of Pence.
1	=	4	1 5/16	316
2	=	8	2 5/8	633
3	=	12	3 15/16	950
4	=	16	5 1/4	267
5	= 1	0	6 9/16	583
6	= 1	4	7 7/8	900
7	= 1	8	9 3/16	217
8	= 1	12	10 1/2	534
9	= 1	16	11 13/16	850
10	= 2	1	1 1/8	167
20	= 4	2	2 5/16	335
30	= 6	3	3 7/16	502
40	= 8	4	4 9/16	670
50	= 10	5	5 11/16	837
60	= 12	6	7	005
70	= 14	7	8 1/16	173
80	= 16	8	9 5/16	340
90	= 18	9	10 7/16	508
100	= 20	10	11 9/16	675
200	= 41	1	11 5/8	351
300	= 61	12	11	027
400	= 82	3	10 1/16	702
500	= 102	14	10 3/8	378
600	= 123	5	10	054
700	= 143	16	9 11/16	730
800	= 164	7	9 3/8	405
900	= 184	18	9 1/16	081
1,000	= 205	9	8 3/4	757
2,000	= 410	19	5 1/2	514
3,000	= 616	9	2 1/4	272
4,000	= 821	18	11	029
5,000	= 1,027	8	7 3/4	787

Cents.	Pence.	Decimals of Pence.
1/4	= 1/16	123
1/2	= 1/8	246
3/4	= 3/16	369
1	= 1/4	493
2	= 1 1/16	986
3	= 1 3/16	479
4	= 1 5/16	972
5	= 2 7/16	465
6	= 2 9/16	959
7	= 3 1/16	452
8	= 3 5/16	945
9	= 4 7/16	438

Cents.	Shillings.	Pence.	Decimals of Pence.
10	=	4 7/8	931
11	=	5 1/16	424
12	=	5 5/16	918
13	=	6 1/16	411
14	=	6 5/16	904
15	=	7 1/16	397
16	=	7 7/16	890
17	=	8 1/16	383
18	=	8 7/16	877
19	=	9 1/16	370
20	= 1	0 1/16	863
25	= 1	2 1/4	329
30	= 1	5 1/4	795
35	= 1	7 1/16	260
40	= 1	10 1/16	726
45	= 2	0 1/16	192
50	= 2	3 1/16	658
55	= 2	5 1/16	124
60	= 2	8	590
65	= 2	10 1/16	055
70	= 2	10 1/2	521
75	= 3	0 1/16	987
80	= 3	3 1/16	453
85	= 3	5 1/16	919
90	= 3	8 1/16	385

Again.

Given an invoice amounting to $473·64 cents in gold, to find the value in sterling of.

$	cts.	£	s.	d.
400		82	3	$10\frac{11}{16}$
70		14	7	$8\frac{1}{16}$
3			12	$3\frac{15}{16}$
	60		2	$5\frac{9}{16}$
	4			$1\frac{15}{16}$
$473·64		£97	6	$6\frac{3}{16}$

or ninety-seven pounds six shillings and sixpence and three sixteenths of a penny.

Exchange.

Real *par* of exchange is the actual existing proportion between supply and demand, and this is regulated by the state of trade between the two countries.

When the value of imports from England, in a given period, is equal to the value of exports from America in the same period, trade is balanced and bills drawn in each country upon the other would be equal in amount, or in other words at *Par*.

Bills of exchange facilitate the settlement of debts between persons residing at a distance from each other, and avoid the risk as also the expense of remitting actual coin.

This may be explained as follows :—

Smith in New York owes Brown in London for merchandize, and Jones in Liverpool owes Robinson in New York for corn. Brown in London draws on Smith in New York, sells his bill to Jones in Liverpool for cash, who transmits it to Robinson in New York, who receives the cash from Smith, thus dispensing with a shipment of money.

If, however, imports in America exceed the exports to England there would be more money payable at the time by persons in America to others in England than there would be payable by those in England to those in America, hence a demand would arise for bills of exchange on England, and, being scarce, those who want them would have to pay a premium for the accommodation. Exchange would, therefore, be against America.

In England, on the other hand, there would be more people ready to draw such bills of exchange than customers in want of them, and those who dispose of them would have to do so at a discount. Exchange, therefore, would be in favour of England.

A bad harvest in England would necessitate our importing wheat to a large amount from America, our imports of that commodity would then exceed our exports of merchandize, bills of exchange would at once become scarce in England, and in America would be at a discount, and any overplus would have to be remitted to America in actual coin at a risk which is inconvenient, hazardous, and expensive, as it would cost fully $1\frac{1}{2}$ per cent. to 2 per cent. to an ordinary shipper to pay for transmission, insurance, &c. of specie.

Thus it will be seen that the accommodation of a remittance in the form of a bill of exchange actually means a saving of some 2 per cent. independent of the trouble of shipping. It will also be observed that the fluctuation in the price of bills of exchange seldom exceed this margin of 2 per cent. above or below *par* of $4·86·65, unless under very extraordinary circumstances.

To ship gold to England to yield a profit equal to the cost of freight, &c., exchange would have to advance to about $11\frac{1}{2}$ per cent. = 4·95·50, being 2 per cent. above *par*.

When exchange is at $9\frac{1}{2}$ per cent. it is at *par* value ; if higher, at a premium ; if lower, at a discount. It is always calculated on a gold basis, and is now generally quoted in our daily newspapers in dollars instead of, as hitherto, by the premium.

EXCHANGE ON LONDON, $4·84. ["Times," 17th Nov. 1875.]

About 9 per cent. premium on $4·44·4, and about 4*s.* 1½*d.* to a dollar. This is some half per cent. below par, which may be attributed to the necessity of England importing more wheat than she is exporting merchandize, at the present moment.

The object of the following table is to approximate calculations of exchange to such price as may be found useful for business purposes :—

EXCHANGE ON ENGLAND.

	$ cents.		s.	d.	
9½ % Premium on old par of 4·44·4 is	*$4·86·65*	*to £1 stg. or*	*4·1*	*$\frac{316}{1000} = \frac{5}{16}$*	*to $1·00*

(This is the Custom House and legal value of a Sovereign in the United States.)

3½	% premium on old par of	$4·44·4	is	$4·60	to £1 stg. or	4	4¼	to $1·00
4	,,	,,	,,	,,	,,	4·62·21	,,	,,	4	4	,,	,,
4½	,,	,,	,,	,,	,,	4·64·43	,,	,,	4	3¾	,,	,,
5	,,	,,	,,	,,	,,	4·66·66	,,	,,		3½	,,	,,
5½	,,	,,	,,	,,	,,	4·68·88	,,	,,	4	3¼	,,	,,
5¾	,,	,,	,,	,,	,,	4·70	,,	,,				
6	,,	,,	,,	,,	,,	4·71·10	,,	,,	4	3	,,	,,
6½	,,	,,	,,	,,	,,	4·73·33	,,	,,	4	2¾	,,	,,
7	,,	,,	,,	,,	,,	4·75·54	,,	,,	4	2½	,,	,,
7½	,,	,,	,,	,,	,,	4·77·76	,,	,,	4	2¼	,,	,,
8	,,	,,	,,	,,	,,	4·80	,,	,,	4	2	,,	,,
8½	,,	,,	,,	,,	,,	4·82·21	,,	,,	4	1¾	,,	,,
8¾	,,	,,	,,	,,	,,	4·83·32	,,	,,				
9	,,	,,	,,	,,	,,	4·84·43	,,	,,	4	1½	,,	,,
9¼	,,	,,	,,	,,	,,	4·85·54	,,	,,				
9½	,,	,,	,,	,,	,,	*4·86·65*	,,	,,	*4*	*1 5/16*	,,	,,
9¾	,,	,,	,,	,,	,,	4·87·76	,,	,,	4	1¼	,,	,,
10	,,	,,	,,	,,	,,	4·88·88	,,	,,	4	1	,,	,,
10¼	,,	,,	,,	,,	,,	4·90	,,	,,				
10½	,,	,,	,,	,,	,,	4·91·10	,,	,,	4	0¾	,,	,,
11	,,	,,	,,	,,	,,	4·93·32	,,	,,				
11½	,,	,,	,,	,,	,,	4·95·54	,,	,,	4	0½	,,	,,
12	,,	,,	,,	,,	,,	4·97·76	,,	,,	4	0¼	,,	,,
12½	,,	,,	,,	,,	,,	5·00	,,	,,	4	0	,,	,,

To facilitate general calculations the dollar may be taken at the value of 4*s.* 2*d.* or 8 per cent. premium on old par, this is about ⅝ths of a penny above its actual value as quoted in the "Times," 28th February 1876, and referred to also as a *basis* of calculations on page 77 of this work.

SUBJECT INDEX OF CONTRIBUTIONS BY BRITISH EXHIBITORS TO THE PHILADELPHIA INTERNATIONAL EXHIBITION OF 1876, TOGETHER WITH THE NAMES AND ADDRESSES OF THE MANUFACTURERS AND PRODUCERS.

Object, and Name of Exhibitor.	Address of Exhibitor.
AËRATED WATERS AND AËRATED WATER MACHINERY.	
Bewley & Draper	23, Mary Street - Dublin.
Cantrell & Cochrane	Cromac-buildings - Belfast and Dublin.
Corry & Co.	Cromac Springs, Cromac-street - Belfast.
Inman Bros.	Aspley-place - Huddersfield.
Nicoll, D.	15, Clement's Inn - London.
Smith, T. and H., & Co.	21, Duke-street - Edinburgh.
AGRICULTURAL IMPLEMENTS, APPLIANCES, AND TOOLS (Miscellaneous).	
Clarke & Dunham	69, Mark-lane - London.
Corcoran, Witt, & Co.	28, Market-buildings, Mark-lane - London.
Davey, Paxman, & Co.	- - Colchester, Essex.
Dunston Engine Works Co.	- - Gateshead-on-Tyne.
Fison, J. P.	Feversham Works - Cambridge.
Fussell, J., Sons, & Co.	- - Frome, Somerset.
Smith, W., & Sons	Barnard Castle - Durham.
AGRICULTURAL PRODUCE.	
Hunter, J., & Sons	Wood Hall Mills, Juniper-green near Edinburgh.
McCann, J.	Beamond Mills - Drogheda, Ireland.
Usher, R.	- - Bodicote, near Banbury, Oxfordshire.
AIR BLOWING MACHINERY.	
Ellis, W. I.	66, Murray-street - Higher Broughton, Manchester.
AIR COMPRESSORS.	
Holmes, Payton, & Taylor	43, Borough-road - Southwark, London.
Hurd, F., & Co.	Wood Street - Wakefield.
AIR PUMPS.	
Wier, M. A.	33, Abchurch-lane - London.
ALE, PORTER, STOUT, AND BEER OF ALL KINDS.	
Bindley & Co.	The Brewery - Burton-on-Trent.
Ind, Coope, & Co.	- - Burton-on-Trent.
Johnson & Co.	- - Canterbury.
Wright, H., & Co.	Maxton Brewery - near Dover, Kent.
ALUM.	
Spence, P.	Pendleton Works, Oldham-road - Manchester.

Object, and Name of Exhibitor.	Address of Exhibitor.
AMMUNITION.	
Copeland, G. A.	- - - Camborne, Cornwall.
Eley Bros., Limited	254, Gray's Inn-road - London.
Pigou, Wilks, & Laurence, Limited	11, Queen Victoria-street - London.
ANCHORS.	
Martin, C.	73 and 74, King William-street - London.
ARCHITECTURAL PLANS, DESIGNS, AND DRAWINGS.	
Cochrane, R., C.E.	- - - - Athlone, Ireland.
Fogerty, W., F.R.S.	23, Harcourt-street - - Dublin.
Francis & Co.	Bridge Foot, Vauxhall - London.
Greenway, H.	Ham-street - - - Plymouth.
Hall, H. E.	44, Kingsland Park - - Dublin.
Munroe, W.	High-steet, Wick - - Caithness, Scotland.
Nicholl, S. J.	1, Caversham-road, Kentish Town - London.
ARMOUR PLATES, BOLTS, SCREWS.	
Brown, John, & Co., Limited	Atlas Works - - Sheffield.
Cammell, C., & Co., Limited	Cyclops Works - - Sheffield.
ARTIFICIAL LIMBS AND TEETH, DENTAL INSTRUMENTS, &c.	
Patrick, H. W., & Son	22, St. Luke's Street, Stockbrook-street - - - Derby.
ARTILLERY.	
Hewitt, W.	Prospect Villa, Sydenham Hill - Bristol.
ARTISTS' COLOURS AND MATERIALS.	
Culmer, W., & Son	Hornsey-road - - London.
Rowney, G., & Co.	52, Rathbone-place - - London.
Storer, D., & Sons	Sydney-street - - Glasgow.
ASSAY APPARATUS.	
Johnson, Matthey, & Co.	78, Hatton-garden - - London.
Patent Plumbago Crucible Company	Battersea Works - - London.
ASTRONOMICAL INSTRUMENTS.	
Adams, W. M.	Arundel Club, Salisbury-street, Strand London.
Dallmeyer, J. H.	19, Bloomsbury-street - - London.
BAROMETERS, THERMOMETERS, &c.	
Beck, R. & J.	31, Cornhill - - - London.
Hicks, J. J.	8, Hatton-garden - - London.
Negretti & Zambra	Holborn Viaduct - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
BARRACK FURNITURE.	
Turner, G., & Co. - -	94, Gracechurch-street - - London.
Wethered, E. R., Major, R.A. -	- - - - - Woolwich, Kent.
BATHS.	
Thornton, E. - - -	12, Richmond-road - - - Bradford.
BEEHIVES.	
Lovey, E. - - - - -	- - - - - Ponsnooth, Perran-ar-worthal, Cornwall.
Neighbour, G., & Sons - -	149, Regent-street - - - London.
BISCUITS.	
Gissing, A. S., & Sons - -	Castle-street - - - Eye, Suffolk.
BLOCKS FOR WOOD ENGRAVING.	
Scott, R. J. - - -	8, Whitefriars-street, Fleet-street - London.
BOATS, AND BOAT LOWERING APPARATUS.	
Bradford, W. H. - -	- - - - - Great Saughall, near Chester.
Hill & Clark - - -	6, Westminster-chambers, Victoria-street - - - - London.
Logan, J. M. - - -	Chesterton-road - - - Cambridge.
Roby, G. - - - -	31, King-street - - - Wigan.
BOILERS, BOILER PLATES, TUBES, FEED PUMPS, &c.	
Davey, Paxman, & Co. - -	- - - - - Colchester, Essex.
Galloway, W. & J., & Sons -	Knott Mill Ironworks - - Manchester.
Graham & Co. - - -	Premier Boiler Works, Premier-road Halifax.
Wright, W. - - -	Vulcan Foundry - - Coatbridge, Scotland.
BOLTS AND NUTS.	
Adams, R. - - - -	25, Falmouth-road, Great Dover-street London.
Patent Nut and Bolt Co., Limited - - - -	London Works - - near Birmingham.
BOLT FORGING MACHINE.	
Greenwood & Batley - -	Albion Works - - - Leeds.
BOOKS, BOOK BINDING, ALBUMS, &c.	
Augener, G., & Co. - -	86, Newgate-street - - - London.
Birdsall & Co. - - -	- - - - - Northampton.
Cassell, Petter, & Galpin -	La Belle Sauvage Yard, Ludgate-hill London.
Dickson, J. H., & Nephew -	Rheea Rod Fibre Works - - Godalming, Surrey.
Dickinson & Higham - -	73, Farringdon-street - - London.
Holdsworth, E. W. H. - -	12, Clifton-road, St. John's Wood - London.
Johnson, E. - - -	3, Castle-street, Holborn - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
BOOKS, BOOK BINDING, ALBUMS, &c.—*cont.*	
Lockwood & Co.	7, Stationers' Hall-court, Ludgate-hill London.
Loth, J. T., Dr.	18, Gilmore-place - Edinburgh.
Paul, W.	- Waltham Cross, Hertfordshire.
Potts, R.	Trinity College - Cambridge.
Prendergast, T.	Meldon Lodge - Cheltenham.
Smith, D.	Liddal - Halifax.
Sunday School Union	56, Old Bailey - London.
Ward, M., & Co.	67 and 68, Chandos-street, Strand - London.
Warner, R.	8, Crescent, Cripplegate - London.
Williams, B. S.	Victoria and Paradise Nurseries, Upper Holloway - London.
BOOTS, SHOES, ELASTIC WEBS FOR DO., SPURS, &c.	
Baxter, R.	St. James' Green - Thirsk, Yorkshire.
Hale, J., & Co.	Hatherton Works - Walsall.
Hodges, T. W., & Sons	- Leicester.
Lobb, J.	296, Regent-street - London.
Matthews, James	43, Gibson-street, Waterloo-road - London.
Roe, W. A.	81, Humberstone-gate - Leicester.
Simon, May, & Co.	Week-day Cross - Nottingham.
Ullathorne & Co.	- Barnard Castle, Durham.
BORING AND BLASTING TOOLS, AND ACCESSORIES.	
Bickford, Smith, & Co.	Tucking Mill - Cornwall.
Copeland, G. A.	- Camborne, Cornwall.
Pigou, Wilks, & Laurence	11, Queen Victoria-street - London.
BOTTLES.	
Aire & Calder Glass Bottle Co. (E. Breffit, Proprietor)	83, Upper Thames-street - London.
Codd, H.	14, Dunster House, Mark-lane - London.
Kilner Brothers	Great Northern Goods Station, King's Cross - London.
BRASS CASTINGS, SHEETS, TUBES, WIRE, NAILS, SPIKES.	
Baker, C., & Sons	98, Lichfield-street - Birmingham.
Cox & Sons	28, 29, 31, Southampton-street, Strand London.
Keith & Co.	6, Denmark-street, Soho - London.
Matthews, E.	377, Oxford-street - London.
Singer, J. W., & Son	- Frome, Somerset.
BRICKS, BRICKMAKING, TILES, COPINGS, &c.	
Brooke, E., & Sons	Field House - Huddersfield.
Brownhills Pottery Co.	- Tunstall, Staffordshire.

Object, and Name of Exhibitor.	Address of Exhibitor.
BRICKS, BRICKMAKING, TILES, COPINGS, &c.—*cont.*	
Campbell Brick and Tile Company	- - - - - Stoke-on-Trent.
Cliff, J.	- - - - - Runcorn, near Liverpool.
Colthurst, Symonds, & Co.	- - - - - Bridgwater, Somerset.
Eastwood & Co., Limited	Wellington Wharf, Belvedere-road, Lambeth - - - - London.
Hamblet, J.	Piercy Works - - - West Bromwich, Staffordshire.
Harper & Moores	- - - - - Stourbridge.
Holland, W. T.	- - - - - Llanelly, South Wales.
Johnson & Co.	Ditchling Potteries - - - Sussex.
King Brothers	- - - - - Stourbridge.
Peake, T.	The Tileries - - - Tunstall, Staffordshire.
Reynolds, J. G.	9, Old Ford-road - - London.
Stanley Brothers	Midland Tile Works - - Nuneaton, Warwickshire.
Stiff, J., & Sons	High-street, Lambeth - - London.
Wood & Ivery	Albion Brick Works - - West Bromwich, Staffordshire.
BRONZE GOODS.	
Phosphor Bronze Company, Limited	139, Cannon-street - - - London.
BRUSHES, COMBS, AND SPONGES.	
Elrick, C. G.	8, Aldermanbury Postern - - London.
Kent, G. B., & Co.	11, Great Marlborough-street - London.
Low, Son, & Haydon	148 and 330, Strand - - London.
CANDLES, MATCHES, &c.	
Bryant & May	Fairfield Works, Bow - - London.
Field, J. C., & J.	Lambeth Marsh - - London.
Price's Patent Candle Co.	Belmont Works, Battersea - - London.
CANDELABRA AND CHANDELIERS.	
Green, J., & Nephew	107, Queen Victoria-street - - London.
CARPETS, RUGS, AND CARPET DESIGNS.	
Crossley, J., & Sons, Limited	Deanclough Mills - - - Halifax.
Gregory & Co.	212, 214, Regent Street - - London.
Henderson & Co.	- - - - - Durham.
Lapworth Brothers	22, Old Bond-street - - - London.
Lewis, John	India-buildings - - - Halifax, and 78, Watling-street, London.
Robinson, V., & Co.	38, Welbeck-street, Cavendish-square London.
Shoolbred, J., & Co.	Tottenham Court-road - - London.
Templeton, J., & Co.	William-street - - - Glasgow.
Templeton, J., & J. S.	Crownpoint-road - - - Glasgow.
Tomkinson & Adam	- - - - - Kidderminster.

Object, and Name of Exhibitor.	Address of Exhibitor.
CARRIAGES, PARTS OF CARRIAGES, AND FITTINGS OF CARRIAGES, CARTS, &c.	
Hooper & Co. - - -	113, Victoria-street, Westminster - London.
McNaught & Smith - -	- - - - - Worcester.
Mulliner, H., & Co. - -	- - - - - Leamington Spa, Warwickshire.
Peters, T., & Sons - -	53, Park-street, Grosvenor-square - London.
Roberts, J. - - -	10, Cavendish-street, Stretford-road Manchester.
Roberts, J., & Sons - -	West of England Carriage Works - Bridgewater.
Thorn, C. - - - -	St. Gile's-gate - - - Norwich.
Windover, C. S. - - -	32, 33, Long Acre - - - London.
CEMENTS, CHALK, LIME, &c.	
Busse, G., & Co. - - -	8, South-street, Finsbury - - London.
Eastwood & Co., Limited -	Wellington Wharf, Belvedere-road, Lambeth - - - London.
Francis & Co. - - -	Bridge Foot, Vauxhall - - London.
Gray's Chalk Quarries Co., Limited - - - -	90, Lower Thames-street - - London.
Holland, W. T. - - -	- - - - - Llanelly, South Wales.
Hollick & Co. - - -	- - - - - Greenwich, London.
Lavers, A. H. - - -	Nine Elms - - - - London.
Patent Selenitic Cement Co., Limited - - - -	21½, Millbank-street, Westminster - London.
Wouldham Cement Co. - -	10A, King's Arms-yard, Moorgate-st. - London.
CHEESE.	
Evans & Stafford - -	Campbell-street - - - Leicester.
CHEMICAL AND PHARMACEUTICAL PRODUCTS.	
Allen & Hanburys - -	Plough-court, Lombard-street - London.
Brunner, Mond, & Co. - -	- - - - - Winnington, Northwich, Cheshire.
Calvert, F. C., & Co. - -	- - - - - Bradford, near Manchester.
Chambers, T. F. - - -	51, High Street - - - Hull.
Chance, Brothers, & Co. -	Alkali Works - - near Birmingham.
Desoto Alkali Company, Limited	- - - - - Widnes, Lancashire.
Evans, Lescher, & Evans -	60, Bartholomew Close - - London.
Gaskell, Deacon, & Co. - -	- - - - - Widnes, Lancashire.
Gerrard, A. W. - - -	153, Liverpool-road - - - London.
Greenbank Alkali Company, Limited - - - -	- - - - - St. Helen's, Lancashire.
Hutchinson, J., & Co. - -	- - - - - Widnes, Lancashire.
Jennings, T. - - -	Brookfield Works - - - Cork, Ireland.
Johnson Bros. - - -	High Street - - - Hull.
Kinmond & Co. - - -	Kenilworth-street - - - Leamington, Warwickshire.
Liver Alkali Works Company -	Lightbody Street - - - Liverpool.
Morson, T., & Son - -	31, 33, & 124, Southampton-row, Russell-square - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
CHEMICAL AND PHARMACEUTICAL PRODUCTS—*cont.*	
Muspratt, J., & Sons	5, Chapel-street - Liverpool.
Muspratt, Bros., & Huntley	5, Chapel-street - Liverpool.
Newcastle Chemical Works Co., Limited	- Newcastle-on-Tyne.
Price's Patent Candle Company	Belmont Works, Battersea - London.
Rawlins & Son	Brook Works, Rainhill - Prescot.
Richards, Kearne, & Gasquoine	- Sandbach, Cheshire.
Runcorn Soap and Alkali Co., Limited	6, Water-street - Liverpool.
Smith, T. & H., & Co.	21, Duke-street - Edinburgh.
Weldon, W.	Abbey Lodge - Merton, Surrey.
White, J. & J.	80, Wilson-street - Glasgow.
Wyndham, F., & Co.	37, Eastcheap - London.
Young, J.	- Kelly, Wemyss Bay, Scotland.
CHINA, EARTHENWARE, AND OTHER POTTERY.	
Bailey, W. & J. A.	- Alloa, Scotland.
Bates, Walker, & Co.	Dale Hall Works - Burslem.
Brown-Westhead, Moore, & Co.	Cauldon-place - Staffordshire Potteries.
Brownfield, W., & Son	- Cobridge, Staffordshire.
Brownhills Pottery Company	- Tunstall, Staffordshire.
Craven, Dunnill, & Co., Limited	Jackfield Works - near Ironbridge, Shropshire.
Daniell, A. B., & Son	46, Wigmore-street - London.
Doulton & Watts	Lambeth Pottery, Lambeth - London.
Edwards, John	King-street, Fenton - Staffordshire.
Edwards, J. & Son	Dale Hall Pottery - Burslem.
Gardner, P.	Dunmore Pottery - Stirling, Scotland.
Green, James, & Nephew	107, Queen Victoria-street, City - London.
Holland, W. T.	- Llanelly, South Wales.
Hope and Carter	Burslem - Staffordshire.
Maw & Co.	Benthall Works - Broseley, Shropshire.
Millar, J., & Co.	2, South Saint Andrew-street - Edinburgh.
Minton, Hollins, & Co.	- Stoke-on-Trent.
Powell & Bishop	- Hanley, Staffordshire.
CHRONOMETERS AND CLOCKS, AND WATCH WORK OF ALL KINDS.	
Claxton, R.	65, Middleton-street, Clerkenwell - London.
Del Riego, M.	284, Regent-street - London.
Dent, M. F.	33, Cockspur-street, Charing Cross - London.
Frodsham, C., & Co.	84, Strand - London.
Gibson, W.	Castle-place - Belfast.
Kullberg, V.	105, Liverpool-road, Islington - London.
Mercer, T.	161, Goswell-road - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
CHRONOMETERS, &c.—*cont.*	
Morton, G. - - -	31, Hanover-street, Islington - London.
Neal, J. - - - -	44, 46, 48, Edgware-road - - London.
Nicole, Neilson, & Co. - -	14, Soho-square - - - London.
Poole, J., & Co. - - -	33, Spencer-street, Clerkenwell - London.
Sewill, J. - - - -	20, Cornhill - - - London.
Smith, Borthwick - -	Junction-street - - - Coventry.
Whittaker, R. - - -	7, Great Sutton-street, Clerkenwell - London.
CHURCH FURNITURE.	
Cox & Sons - - -	28, 29, 31, Southampton-street, Strand - - - - London.
Gill, J. - - - -	66, Regent-street, Lambeth - - London.
Hart, Son, Peard, & Co. - -	Wych-street, Strand - - London.
Hems, Harry - - -	69, Paris Street - - - Exeter.
Matthews, E. - - -	377, Oxford-street - - - London.
Singer, J. W., & Son - -	- - - - - Frome, Somerset.
CLEATS, SELF-ACTING, SAFETY.	
Cruickshank, A. B. - -	5, Reform-street - - - Dundee, Scotland.
CLAY.	
Davidson, T., Jun., & Co. -	33 and 41, Garngad-hill - - Glasgow.
Dunn, R., & Co. - - -	Oak Villa - - - St. Austell, Cornwall.
Harper & Moores - -	- - - - - Stourbridge.
King Brothers - - -	- - - - - Stourbridge.
Pike, W. J. - - -	- - - - - Wareham, Dorsetshire.
Reynolds, J. G. - -	9, Old Ford-road - - - London.
CLOTHING.	
Dickson, J. H., & Nephew -	Rheea Rod Fibre Works - - Godalming, Surrey.
Festa, G. P. - - -	13, Charles-street, Grosvenor-square London.
Hitchcock, Williams, & Co. -	St. Paul's Churchyard - - London.
Jones, P. - - - -	- - - - - Newtown, Montgomeryshire.
McGee, J. G., & Co. - -	30, 32, 34, High-street - - Belfast.
McLintock, J., & Sons - -	Utilitas Works - - - Barnsley, Yorkshire.
Schreiber, F. A. - - -	17, Thavies Inn - - - London.
Sykes, Josephine, & Co. - -	280, Regent-street - - - London.
Thomson, W. S., & Sons - -	97, Cheapside - - - London.
COAL, COKE, AND OTHER FUEL.	
Marriott, Elizabeth - -	15, Oldfield Road - - - Stoke Newington.
Penrose & Richards - -	- - - - - Swansea, South Wales.
Wigan Coal & Iron Company, Limited - - - -	- - - - - Wigan, Lancashire.
COCOA, CHOCOLATE, COFFEE, CHICORY, AND THEIR PREPARATIONS.	
Fry, J. S., & Sons - - -	252, City-road - - - London.
Menier, E. - - -	Southwark-street, Borough - - London.
Turner, R. P. - - -	7, Market-place - - - Peterborough.

Object, and Name of Exhibitor.	Address of Exhibitor.
COLOURS, PAINTS, DYES, VARNISHES, AND STAINS.	
Craig & Rose	Caledonian Works - Edinburgh.
Reynolds, J. G.	9, Old Ford-road - London.
Rowney, G., & Co.	52, Rathbone-place - London.
Silicate Paint Company, The	24, Fenwick-street - Liverpool.
Stephens, H. C.	171, Aldersgate-street - London.
Storer, D., & Sons	Sydney-street - Glasgow.
Turner, C. & Son	7, Broad Street, Bloomsbury - London.
Williams, M.	Britannia Varnish Works - Wigan.
CONDIMENTS, SAUCES, SPICES, FLAVOURINGS, &c.	
Ball, J.	12, Duke-street, Grosvenor-square - London.
Crosse & Blackwell	Soho-square - London.
Gissing, A. S., & Sons	Castle-street - Eye, Suffolk.
Goodall, Backhouse, & Co.	Boar-lane - Leeds.
Jaap, J.	268, Buchanan-street - Glasgow, Scotland.
Jones, Palmer, & Co.	Eastern Works, Tabernacle-walk, Finsbury - London.
Keen, Robinson, Bellville, & Co.	6, Garlick Hill, Cannon-street - London.
Lea & Perrins	- Worcester.
Mackay, J.	119, George-street - Edinburgh.
Maw, T.	Windsor-place - Burmantofts, Leeds.
Mellin, G.	16, Tichborne-street, Regent-street - London.
Nicoll, D.	15, Clement's Inn - London.
Parkinson Brothers	43, Hammerton-street - Burnley, Lancashire.
Patchitt, E. C.	Ilkeston-road - Nottingham.
Powell, T.	81, High-street, St. Marylebone - London.
Pratt, J.	227, Oxford-street - London.
Smith, T. & H., & Co.	21, Duke-street - Edinburgh.
Turner, R. P.	7, Market-place - Peterborough.
Yuille, A.	132, Irongate, Melville-court - Glasgow.
CONVERTER OF BREECH LOADING FIRE-ARMS.	
Clay, R.	58, Finborough-road, South Kensington - London.
COOKING APPARATUS.	
Etzensberger, R. U.	Midland Hotel, St. Pancras - London.
Perkins, A. M., & Son	Seaford-street, Regent-square, Gray's Inn-road - London.
Thornton, E.	12, Richmond-road - Bradford.
COTTON, COTTON YARN, COTTON THREAD.	
Ashworth, E., & Sons	Egerton Mills - Bolton.
Brook, J., & Brothers	Meltham Mills - Huddersfield.
Clark, J., Jun., & Co.	16, George-street, Mile-end - Glasgow.
Coats, J. P., & Co.	Ferguslie Thread Works - Paisley.

Object, and Name of Exhibitor.	Address of Exhibitor.
COTTON, YARN, COTTON YARD, COTTON THREAD.—*cont.*	
Dewhurst, J., & Sons - -	Belle Vue Mills - - - Skipton.
Ferguson Brothers - -	Holme Head Works - near Carlisle.
Neilson, Storer, & Sons - -	Thorn Mills - - - Johnstone, near Paisley.
Ullathorne & Co. - -	- - - - - Barnard Castle, Durham.
COTTON FABRICS.	
Barlow & Jones, Limited -	2, Portland-street - - - Manchester.
Brigg, J. F., & Co. - -	- - - - - Huddersfield.
Greenmount Spinning Co. -	Greenmount Factory - - Harold's Cross, Dublin.
Hawkins, J., & Sons - -	8, Faulkner-street - - - Manchester.
McBride, R., & Co. - -	4, Bedford-street - - - Belfast.
Schwabe, Salis, & Co. - -	41, George-street - - - Manchester.
Simpson & King - - -	7, York-street - - - Manchester.
Swainson, Birley, & Co. -	42, Cheapside - - - London.
Wilson, T. & D., & Co. - -	145, Ingram-street - - - Glasgow.
CRAPE.	
French & Co. - - -	St. Mary's Works - - - Norwich.
CRUCIBLES, MELTING POTS.	
Doulton & Co. - - -	48, High-street, Lambeth - - London.
Harper & Moores - -	- - - - - Stourbridge.
Patent Plumbago Crucible Company - - - -	Battersea Works - - - London.
CUTLERY.	
Brookes & Crookes - -	Atlantic Works, St. Philip's-road - Sheffield.
Burnand & Co. - - -	Leicester Works, Leicester-street - Sheffield.
Hawkesworth (Wilson), Ellison, & Co. - - -	Carlisle Works - - - Sheffield.
Kingsbury, T. - - -	9, New Bond-street - - - London.
Neal, J. - - - -	44, 46, 48, Edgware-road - - London.
Neal, J., & Co. - - -	22, 23, 24, Hampden Gurney-street, Portman-square - - - London.
Needham, J. - - -	69, Arundel-street - - - Sheffield.
Wostenholm & Son (Limited) -	Washington Works - - Sheffield.
DAMASK LINENS.	
Barlow & Jones, Limited -	2, Portland-street - - - Manchester.
Dicksons, Ferguson, & Co. -	Linen Hall-street - - - Belfast.
Ewart, W. & Son - - -	- - - - - Belfast.
Greenmount Spinning Company	Greenmount Factory - - Harold's Cross, Dublin.
Johnson, J., & Fildes - -	44, Spring-gardens - - - Manchester.
Laird, W., & Co. - - -	Canmore Linen Works - - Forfar, Scotland.
Richardson, J. N., Sons, & Owden - - - -	1, Donegall-square, North - - Belfast.
Webb, E., & Sons - - -	Copenhagen-street - - - Worcester.

Object, and Name of Exhibitor.	Address of Exhibitor.
DESIGNS FOR MANUFACTURES AND DECORATIONS.	
Bevis, H.	140, Pentonville-road - London.
Dashwood, C. W.	1, St. Clement's Churchyard, Strand London.
Hooper & Co.	113, Victoria-street, Westminster - London.
Kerr, E.	7, Merville-terrace, Gilford-place, North Strand - Dublin.
Leighton, John	12, Ormonde-terrace, Regent's Park, London.
McIntosh, J.	38, Langham-street - London.
Nicholl, S. J.	1, Caversham-road, Kentish Town - London.
DISINFECTANTS, DISINFECTORS, FUMIGATORS, INSECT AND VERMIN DESTROYERS.	
Calvert, F. C., & Co.	- Bradford, near Manchester.
Ledger, H., & Co.	61, 63, Lant-street, Borough - London.
Lee, R. J., Dr.	4, Savile-row - London.
Rimmel, Eugene	96, Strand - London.
DRUGS.	
Allen & Hanburys	Plough Court, Lombard-street - London.
Evans, Lescher, & Evans	60, Bartholomew Close - London.
Gerrard, A. W.	153, Liverpool Road - London.
Kinmond & Co.	Kenilworth Street - Leamington.
Morson & Son	Southampton Row, Russell Square - London.
Smith, T. & H., & Co.	21, Duke-street - Edinburgh.
Tyne Vale Chemical Co.	Northumberland Works, Forth Banks Newcastle-on-Tyne.
Usher, R.	- Bodicote, near Banbury, Oxfordshire.
EDUCATIONAL BOOKS, &c.	
British and Foreign Blind Association	33, Cambridge-square, Hyde-park - London.
Cassell, Petter, and Galpin	La Belle Sauvage Yard, Ludgate-hill London.
Lockwood & Co.	7, Stationers' Hall-court, Ludgate-hill London.
Loth, J. T., Dr.	18, Gilmore-place - Edinburgh.
Potts, R., M., A.	Trinity College - Cambridge.
Rola, V.	22, Leinster-square, Bayswater - London.
Rundell, J. B.	Science and Art Department, South Kensington Museum - London.
Sunday School Union	56, Old Bailey - London.
Ward, M., & Co.	67, 68, Chandos-street, Strand - London.
ELASTIC FABRICS AND ELASTIC WEB.	
Hodges, T. W., & Sons	- Leicester.
Lang, J. & J.	13, Charterhouse-buildings, Aldersgate-street - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
ELASTIC FABRICS, AND ELASTIC WEB.—*cont.*	
Rein, F. C., Mrs.	108, Strand - London.
Simon, May, & Co.	Week-day Cross - Nottingham.
Turner, A., & Co.	Bow Bridge Works - Leicester.
ELECTRICAL MACHINES AND ELECTRO-MAGNETIC AND GALVANIC BATTERIES, APPARATUS, LAMPS, &c.	
Pulvermacher, I. L.	194, Regent-street - London.
Rein, F. C., & Son	108, Strand - London.
Smith & Starley	Trafalgar Works - Coventry.
Thermo Electric Generator Co., Limited	27, New-street, Cloth Fair - London.
ELECTRO REPRODUCTIONS OF WORKS OF ART.	
Elkington & Co.	Newhall Street - Birmingham.
EMERY.	
Oakey, J., & Sons	Wellington Works, Westminster-bridge-road - London.
ENGRAVING AND ENAMELLING ON WOOD, GEMS, METAL, GLASS, &c.	
Dickes, W.	Farringdon-road - London.
Fetherston, J. J.	2, Coppingers-row - Dublin.
Gill, James	66, Regent Street, Lambeth - London.
Johnson, J. M., & Sons, Limited	3, Castle-street, Holborn - London.
Lafargue, P., Dr.	27, South Hill-park, Hampstead - London.
Typographic Etching Co.	23, Farringdon-street - London.
Ulrich, H. S.	Brynterian, Chelsfield, Chislehurst - Kent.
FELT AND ARTICLES MADE OF FELT.	
Anderson, D., & Son	Lagan Felt Works - Belfast.
Engert & Rolfe	Barchester-street, Poplar New Town - London.
McTear & Co.	Corporation-street - Belfast.
FILES AND RASPS.	
Hawksworth, (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.

Object, and Name of Exhibitor.	Address of Exhibitor.
FILTERS, FILTERING BAGS, &c.	
Busse, G., & Co.	8, South-street, Finsbury - London.
Cheavin, George	Wide Bargate Filter Works, Boston - Lincolnshire.
Stiff, J., & Sons	High-street, Lambeth - London.
FIRE-ARMS.	
Bussey, G. G., & Co.	Museum Works, Rye-lane, Peckham - London.
Dougall, J. D.	59, St. James-street - London.
Gibbs, G.	29, Corn-street - Bristol.
Green, E. C.	87, High-street - Cheltenham.
Greener, W. W.	St. Mary's Works - Birmingham.
Henry, A.	12, South St. Andrew-street - Edinburgh.
Lancaster, A.	27, South Audley-street - London.
Lancaster, C. W.	151, New Bond-street - London.
Lang, J., & Sons	23, Cockspur-street - London.
Needham & Co.	53, Piccadilly - London.
Purdey, J.	314½, Oxford-street - London.
Reilly, E. M., & Co.	502, New Oxford-street - London.
Rigby, J., & Co.	72, St. James-street - London.
Scott, W. & C., & Sons	Premier Gun Works, Lancaster-street Birmingham.
Soper, W.	23, Friar-street - Reading.
Tolley, J. & W.	Pioneer Works, St. Mary's-square - Birmingham.
Webley, P., & Son	82, Weaman-street - Birmingham.
Williams & Powell	25, South Castle-street - Liverpool.
FIRE-BRICKS AND FIRE-CLAY.	
Cliff, J.	- Runcorn, near Liverpool
Harrison, G. K.	The Lye and Brettel Works - Stourbridge.
Harper & Moores	- Stourbridge.
Holland, W. T.	- Llanelly, South Wales.
King Brothers	- Stourbridge.
Reynolds, J. G.	9, Old Ford-road - London.
FIRE ENGINES AND FIRE EXTINGUISHING APPARATUS.	
Adair & Co.	Neptune-street - Liverpool.
Wallace, J. S., & Tucker, E.	3, Antrim-place - Belfast.
FIRE-PROOF SAFES, FIRE PROOFING.	
Chatwood, Samuel	120, Cannon Street - London.
Roby, G., & Co.	31, King-street - Wigan.
White, W. G.	Albert Villa - New Malden, Surrey.

Object, and Name of Exhibitor.	Address of Exhibitor.
FISHHOOKS, FISHING NETS AND TACKLE.	
Buchanan, J.	56 to 62, Dale-street - Tradeston, Glasgow.
English, J., & Co.	- - - - Feckenham, near Redditch.
Henry, A.	12, South St. Andrew-street Edinburgh.
Milward, H., & Sons	- - - - Redditch.
Pullinger, C.	- - - - Selsey, near Chichester, Sussex.
Ryder, W. H.	48, Ellis-street Birmingham.
Turner, R., & Co.	Old Factory Redditch.
Woodfield, W., & Sons	Easemore Works Redditch.
FLAGS.	
Bevis, H.	140, Pentonville-road London.
Turtle & Pearce	11, Duke Street, London Bridge London.
FLANNEL.	
Jones, P.	- - - - Newtown, Montgomeryshire.
FLAX, HEMP, JUTE, AND OTHER FIBRES.	
Cox Brothers	Camperdown Works Lochee, Dundee.
Laird, W., & Co.	Canmore Linen Works Forfar, Scotland.
Sandeman, F. S.	Manhattan Works Dundee.
FLOORCLOTHS AND MATTING.	
Boulinikon Floor Cloth Manufacturing Company, Limited	Worsley-street Salford, Manchester.
Corticene Floor Covering Company	115, Queen Victoria-street London.
Nairn, M., & Co.	- - - - Kirkcaldy, Scotland.
Tull, Glanvill, & Co.	Crown Works, Roupell-street, Lambeth London.
FLOUR AND FLOUR MILLS.	
Lloyd, T., & Sons	327, Old-street, Shoreditch London.
Powell, T.	81, High-street, St. Marylebone London.
Sutcliffe, J. S.	- - - - Bacup, Lancashire.
FUEL ECONOMISERS.	
Green, E., & Son	14, St. Anne's-square Manchester.
Brechin, J. B.	45, Commercial-street Dundee.
FURNACES, FORGES, AND BLOWING MACHINERY.	
Doulton & Co.	48, High-street, Lambeth London.
Ellis, W. J.	66, Murray-street Higher Broughton, Manchester.

Object, and Name of Exhibitor.	Address of Exhibitor.
FURNACES, FORGES, &c.—*cont.*	
PATENT PLUMBAGO CRUCIBLE COMPANY	Battersea Works - London.
SIEMENS, C. W.	12, Queen Anne's-gate - London.
SMITH, D.	153, Duke-street - Liverpool.
FURNITURE DECORATION AND DESIGNS.	
ARTHUR, F.	18, Motcomb-street - London.
BARNARD, B.	107, St. Paul's-road, Highbury - London.
COLLINSON & LOCK	109, Fleet-street - London.
COLLMAN, L. W.	67, George-street, Portman-square - London.
COOPER & HOLT	48, 49, 50, Bunhill-row - London.
COX & SONS	28, 29, 31, Southampton-street, Strand London.
HEMS, HARRY	69, Prior-street - Exeter.
HOWARD & SONS	25, Berners-street - London.
JEFFREYS, CHARLES	103, Hatton Garden - London.
KNIGHT, MARY	1, Anderson-street, Chelsea - London.
LAFARGUE, P.	27, South Hill-park, Hampstead - London.
MCINTOSH, J.	38, Langham-street - London.
MORTON, W., SCOTT, & Co.	Dabry House - Edinburgh.
PEYTON & PEYTON	Bordesley Works - Birmingham.
PHIPSON, EMMA	- Monk Sherborne, Basingstoke, Hampshire.
ROBERTS, W.	139, Derby-road - Bootle, near Liverpool.
ROYAL SCHOOL OF ART NEEDLEWORK	Exhibition-road - London.
SAGE, FREDERICK	80–84, Gray's Inn Road - London.
SCHILDBERG, H., & Co.	26, Moorgate-street - London.
SHOOLBRED, J., & Co.	Tottenham Court-road - London.
WATSON, J., & SON	Moorgate-street Chambers - London.
WATSON & Co.	Bombay, care of J. Watson & Co., Moorgate-street Chambers - Loondon.
WRIGHT & MANSFIELD	104, New Bond-street - London.
FURNITURE AND UPHOLSTERY STUFFS, &c.	
NORRIS & Co.	124, Wood-street - London.
PIM BROTHERS & Co.	22, William-street - Dublin.
ROYAL SCHOOL OF ART NEEDLEWORK	Exhibition-road - London.
SAGE, FREDERICK	80–84, Gray's Inn-road - London.
SIMPSON & KING	7, York-street - Manchester.
GAMES AND TOYS.	
LONDON STEREOSCOPIC AND PHOTOGRAPHIC COMPANY	110 and 108, Regent-street - London.
LEWIS, J.	177, Cannongate - Glasgow.
MARRISON, R. D.	Great Orford-street - Norwich.
MIDDLETON, T. J.	38, Little Queen-street, High Holborn London.
NICHOLSON, H.	Kilner Deyne-terrace - Rochdale.

Object, and Name of Exhibitor.	Address of Exhibitor.
GARDEN AND PARK ENGINES, FURNITURE, FITTINGS, AND UTENSILS.	
Barnard, Bishop, and Barnards	Norfolk Ironworks - - - Norwich.
Kerr, E. - - - -	7, Merville-terrace, Gilford-place, North Strand - - - Dublin.
Pullinger, C. - - -	- - - - " - Selsey, near Chichester, Sussex.
Wilkinson, W., & Son - -	Spring Works - - - Grimesthorpe, Sheffield.
Wills, A. W. - - -	Park Mills, Nechells - - Birmingham.
GAS APPARATUS, GASOMETERS, METERS, AND FITTINGS.	
Air Burning Co., Limited -	118, Green-street - - - Glasgow.
Gwynne & Co. - - -	Essex-street Works - - London.
Hart, Son, Peard, & Co. - -	Wych-street, Strand - - London.
Kimpton, T. - - -	2, 3, Barnards Inn, Holborn - London.
Partridge & Co. - - -	Lombard-street - - - Birmingham.
Reynolds, J. G. - - -	9, Old Ford-road - - - London.
Sugg, W. - - -	Vincent Works, Vincent-street, Westminster - - - London.
Williams, M. - - -	Britannia Varnish Works - - Wigan.
GELATINE, ISINGLASS, GLUE, &c.	
Green, J. - - - -	12, Graham-terrace, Ridley-road, Kingsland - - - London.
Hooper, C., Jun. - -	6, 7, 8, New Weston-street, Bermondsey - - - - London.
GIRDERS.	
McTear & Co. - - -	117, 119, 121, Corporation-street - Belfast.
GLASS, ARTICLES MADE OF GLASS, AND STAINED GLASS.	
Aire and Calder Glass Bottle Co. (E. Breffit, Proprietor) -	83, Upper Thames-street - - London.
Bailey, W. & J. A. - -	- - - - - Alloa, Scotland.
Baillie & Co. - - -	118, Wardour-street - - London.
Chance Brothers & Co. - -	Glass Works - near Birmingham.
Codd, H. - - -	14, Dunster House, Mark-lane - London.
Constable, W. H. - - -	Stained Glass Works - near Cambridge.
Cox & Sons - - -	28, 29, 31, Southampton-street, Strand London.
Daniell, A. B., & Son - -	46, Wigmore-street - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
GLASS ARTICLES, &c.—*cont.*	
De Morini C.	170, Great Portland-street - London.
Gibbs & Moore	89, Southampton-row - London.
Green, J., & Nephew	107, Queen Victoria-street - London.
Heaton, Butler, & Bayne	14, Garrick-street - London.
Hardman, John, & Co.	Newhall Hill - Birmingham.
Hetley, J., & Son	35, Soho-square - London.
Jenkinson, A.	10, Princes-street - Edinburgh.
Kilner Brothers	Great Northern Goods Station, King's Cross - London.
Matthews, E., & Son	377, Oxford-street - London.
McGrath, J.	6a, White Lion-street, Chelsea - London.
Middleton, T. J.	38, Little Queen-street, High Holborn London.
Millar, J., & Co.	2, South Saint Andrew-street - Edinburgh.
Powell & Sons	Whitefriars Glass Works - London.
Ramsey, W.	83 and 84, Farringdon-street - London.
Ward & Hughes	67, Frith-street - London.
GLOVES.	
Daggett, C.	- Woodstock, Oxfordshire.
Debenham & Freebody	27, 29, 31, Wigmore-street - London.
Morley, J. & R.	18, Wood-street, Cheapside - London.
Pullman, R. & J.	17, Greek-street, Soho - London.
Welch, Margetson, & Co.	16 and 17, Cheapside - London.
GOLDBEATERS' SKIN.	
Bennett, T., & Son	70, Turnmill-street, Farringdon-road London.
Puckridge, F., & Nephew	530, Kingsland-road - London.
GOLDSMITHS' AND SILVERSMITHS' WORK AND PLATED GOODS.	
Aitchison, J.	23, Princes-street - Edinburgh.
Elkington & Co.	Newhall-street - Birmingham.
Neal, J.	44, 46, 48, Edgware-road - London.
Neal, J., & Co.	22, 23, 24, Hampden Gurney-street, Portman-square - London.
HAIR (HUMAN).	
Van Volen, G.	50 and 52, Waterloo-road, Lambeth, London.
HATS, CAPS, AND THEIR MATERIALS.	
Dash, O.	10, King's-road, Brighton - Sussex.
Humbert, H.	30, Barbican - London.
Lincoln, Bennett, & Co.	40, Piccadilly - London.
Tress & Co.	33, Stamford-street - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
HEEL BALL.	
Ullathorne & Co. - -	- - - - - Barnard Castle, Durham.
HONEY.	
Lovey, E. - - - -	- - - - - Ponsnooth, Perran-ar-worthal, Cornwall.
HORSE CLIPPERS.	
Martin, R. - - -	The Village - - - - Old Charlton, Kent.
HORTICULTURE.	
Paul, W. - - - -	- - - - - Waltham Cross, Hertfordshire.
Veitch, J., & Sons - -	Royal Nursery, King's-road, Chelsea London.
Warner, R. - - -	8, Crescent, Cripplegate - - London.
Waterer, Anthony - -	Knap Hill Nursery - - Woking, Surrey.
Williams, B. S. - - -	Victoria and Paradise Nurseries, Upper Holloway - - - London.
HOSIERY.	
Morley, J. & R. - - -	18, Wood-street, Cheapside - - London.
Smyth & Co. - - -	36 and 37, Lower Abbey-street - Dublin.
Welch, Margetson, & Co. -	16 and 17, Cheapside - - London.
HOSPITALS, AMBULANCES, &c.	
Clay, R. - - - -	58, Finborough-road, South Kensington - - - - London.
Turner, G., & Co. - -	94, Gracechurch-street - - London.
HYDRAULIC JACKS, PRESSES, HOISTS, TUBES, AND FITTINGS.	
Nussey & Leachman - -	- - - - - Leeds.
Tangye Bros. - - -	Cornwall Works, Soho - - Birmingham.
West & Co. - - -	Crown-place, Kentish Town-road - London.
INDIA-RUBBER BELTING, PACKING, HOSE AND FABRICS, &c., GUTTA PERCHA.	
India-rubber, Gutta Percha, and Telegraph Works Company, Limited - - -	100, Cannon-street - - - London.
Lang, J. & J. - - -	13, Charterhouse-buildings, Aldersgate-street - - - London

Object, and Name of Exhibitor.	Address of Exhibitor.
INKS AND INKSTANDS.	
Blackwood, J., & Co.	18, Bread-street Hill - London.
Bowman, C.	6, King-street, Tower-hill - London.
Cooper & Co.	5, Shoe-lane, Fleet-street - London.
Hickisson, M. A., Mrs. (Daughter of the late John Bond)	75, Southgate-road - London.
Lyons, W.	Park-street - Manchester.
Sands Brothers & Co.	Salford Chemical Works - Manchester.
Stephens, H. C.	171, Aldersgate-street - London.
Webster, H.	22, Litchfield-street, Soho - London.
IRON, IRON PLATE, FORGINGS, TUBES, CASTINGS, TANKS, BEDSTEADS, &c.	
Adams, R.	25, Falmouth-road, Great Dover-street London.
Ash & Lacy	Meriden Street - Birmingham.
Baldwin, E. P., & W.	Wilden Works - near Stourport.
Barnard, Bishop, and Barnards	Norfolk Ironworks - Norwich.
Brown, John, & Co., Limited	Atlas Works - Sheffield.
Cammell, C., & Co., Limited	Cyclops Works - Sheffield.
Cox & Sons	Cwm Avon Works - Taibach, Glamorganshire.
Governor and Company of Copper Miners in England	Shepton - Wouldham.
Great Western Iron Co.	Broadwater Works - Kidderminster.
Hatton, Sons, & Co.	16, Station-street - Walsall.
Hawkins, J., & Co.	London Works - near Birmingham.
Patent Nut and Bolt Co., Limited	12, Queen Anne's-gate - London.
Siemens, C. W.	Workington - Cumberland.
West Cumberland Iron and Steel Co., Limited	Thornaby Iron Works - Stockton-on-Tees.
Whitwell, Thomas	- Wigan, Lancashire.
Wigan Coal and Iron Co., Limited	Collector of H.M.'s Customs - Harwich, Essex.
Wood, J. W.	
IVORY, BONE WARE, AND IMITATIONS.	
Elrick, C. G.	8, Aldermanbury Postern - London.
Spill, Daniel	124, High-street, Homerton - London.
JEWELLERY, TRINKETS, AND JEWEL CASES.	
Aitchison, J.	23, Princes-street - Edinburgh.
Bryan, C.	West Cliff - Whitby, Yorkshire.

Object, and Name of Exhibitor.	Address of Exhibitor.
JEWELLERY, TRINKETS, AND JEWEL CASES—*cont.*	
Fetherston, J. J.	2, Coppinger's-row - Dublin.
Francati & Santamaria	65, Hatton-garden - London.
Fridlander, A. A.	26, Hylton-street - Birmingham.
Gibson, W.	Castle-place - Belfast.
Goggin, J.	74, Grafton-street - Dublin.
Jeffery, John	14, Tottenham Court-road - London.
Neal, J.	44, 46, 48, Edgware-road - London.
LACE, NET, LACE DRESSES, CURTAINS, &c.	
Dunraven, Countess of	Adare - Co. Limerick.
Heyman & Alexander	Stoney-street - Nottingham.
Jacoby, M., & Co.	Broadway - Nottingham.
Simon, May, & Co.	Week-day Cross - Nottingham.
Smith, G. J.	The Terrace, Church-road - Upper Norwood, Surrey.
Stewart, Moir, & Muir	73, Mitchell-street - Glasgow.
LAMPS, LANTERNS, AND SAFETY LAMPS.	
Bainbridge, E.	Nunnery Colliery Offices - Sheffield.
Cooke, J., & Co.	82, Lawley-street, Belmont-passage - Birmingham.
Gardner, J., & Sons	453, Strand - London.
Kerr, E.	7, Merville-terrace, Gilford-place, North Strand - Dublin.
Skelton & Co.	37, Essex-street, Strand London.
LEAK STOPPER.	
Wood, J. W.	Collector of H.M. Customs - Harwich, Cambridgeshire.
LEATHER.	
Angus, G., & Co.	10, Thomas-street - Liverpool.
Bussey, G. G., & Co.	Museum Works, Rye-lane, Peckham - London.
Edinburgh Western Tanning Company, Limited	135, West Port - Edinburgh.
Harrington, J., & Co.	Union Works - Ryde, Isle of Wight.
Hoe, R., & Sons	44, Leadenhall-street - London.
Hooper, C., Jun.	6, New Weston-street, Bermondsey - London.
Hooper, C. W., & Sons	51, Weston-street, Bermondsey - London.
Pullman, R. & J.	17, Greek-street, Soho - London.
Wilson, Walker, & Co.	Sheepscar Works - Leeds.

Object, and Name of Exhibitor.	Address of Exhibitor.
LIFE-SAVING AND DIVING APPARATUS.	
Lacey, R. G.	Coast Guard Station - Leigh, Essex.
Sainty, J. & B.	Alpha Works - Wisbeach, Cambridge.
Sanderson & Proctor	Shore Works - Huddersfield.
Siebe & Gorman	17, Mason-street, Westminster Bridge-road - London.
Wallace & Tucker, E.	3, Antrim-place - Belfast.
LINEN YARNS, THREAD, AND FABRICS.	
Ainsworth, T.	Cleator Mills - Cleator, Carnforth, Cumberland.
Brigg, F., J. & Co.	- Huddersfield.
Browett, F., & Co.	- Coventry.
Brown, J. S., & Sons	Bedford-street - Belfast.
Dicksons, Ferguson, & Co.	Linen Hall-street - Belfast.
Dunbar, McMaster, & Co.	- Gilford, County Down, Ireland.
Ewart, W., & Sons	- Belfast, Ireland.
Fenton, Connor, & Co.	Linen Hall - Belfast.
Greenmount Spinning Company	Greenmount Factory, Harold's-cross Dublin.
Johnson, J., & Fildes	44, Spring-gardens - Manchester.
Laird, W., & Co.	Canmore Linen Works - Forfar, Scotland.
Marshall & Co.	- Leeds.
Matier, H., & Co.	Clarence-place - Belfast.
Normand, J., & Son	Dysart - Fifeshire, Scotland.
Richardson, J. N., Sons, & Owden	1, Donegall-square, North - Belfast.
Sandeman, F. S.	Manhattan Works - Dundee.
York Street Flax Spinning Co., Limited	- Belfast, Ireland.
LITHOGRAPHIC PRINTING AND MATERIALS, LITHOGRAPHY, CHROMO LITHOGRAPHY, &c.	
Audsley & Bowes	11, Dale Street - Liverpool.
Bartholomew, J.	Chambers-street - Edinburgh.
Day & Son	47, Charing Cross - London.
Dickes, W.	Farringdon-road - London.
Johnson, J. M., & Sons, Limited	3, Castle-street, Holborn - London.
Rowney, G., & Co.	52, Rathbone-place - London.
LOCKS.	
Phosphor Bronze Company, Limited	139, Cannon-street - London.
White, W. G.	Albert Villa - New Malden, Surrey.

Object, and Name of Exhibitor.	Address of Exhibitor.
LOOMS AND ACCESSORIES FOR WEAVING.	
Fish, J. & G.	12, Grayston Street - Fiswick, Preston.
Greenwood & Batley	Albion Works - Leeds.
Ingham, J., & Son	Croft Head Works, Thornton near Bradford.
Mackenzie, D.	Care of W. Smith, 19, Salisbury-street, Strand - London.
Stevens, T.	- Coventry ; and 20, Warwick lane, London.
LUBRICATORS AND LUBRICATING OILS.	
Clarke & Dunham	69, Mark-lane - London.
MACHINE TOOLS.	
Beesley, L. W. & J., & Sons	Abbey-road Boiler Works - Barrow-in-Furness.
Greenwood & Batley	Albion Works - Leeds.
Heap, J., & Co., Limited	Lee-street - Oldham.
Nussey & Leachman	- Leeds.
Roberts, W.	139, Derby-road - Bootle, near Liverpool.

MACHINERY.

AIR BLOWING MACHINERY.	
Ellis, W. J.	66, Murray-street, Higher Broughton Manchester.
AIR COMPRESSORS.	
Holmes, Payton, & Taylor	43, Borough-road, Southwark - London
Hurd, F.	Grove House - Walton, near Wakefield.
AIR PUMPS.	
Wier, M. A.	33, Abchurch-lane - London.
BOILERS.	
Davey, Paxman, & Co.	Colchester - Essex.
Galloway, W. & J., & Sons	Knott Mill Ironworks - Manchester.
Graham & Co.	Premier Boiler Works, Premier-road Halifax.
BOLT FORGING MACHINERY.	
Greenwood & Batley	Albion Works - Leeds.

Object, and Name of Exhibitor.	Address of Exhibitor.
BONE CRUSHING MACHINERY.	
Dunston Engine Works Co. -	- - - - - Gateshead-on-Tyne.
BOTTLE-FILLING MACHINE.	
Codd, H. - - - -	14, Dunster House, Mark-lane - London.
Ross, W. A. - - -	Cromac Buildings - - - Belfast.
BREWERS' MACHINERY.	
Lawrence & Co. - - -	22, St. Mary Axe - - - London.
CALICO PRINTING MACHINERY.	
Gadd, T. - - - -	Salford - - - - Manchester.
CARDING MACHINERY.	
Fleming, T., & Son - -	West Grove Mill - - - Halifax.
CLARIFYING MACHINERY.	
Needham & Kite - - -	Phœnix Ironworks, Vauxhall - London.
CLOTH CUTTING AND PRESSING MACHINERY.	
Sanson, R. B. - - -	87, Globe-road, Mile End-road - London.
COAL CUTTING MACHINERY.	
Baird, W., & Co. - - -	Gartsherrie Ironworks - - Coatbridge, Scotland.
Holmes, Payton, & Taylor -	43, Borough-road, Southwark - London.
Hurd, F. - - - -	Grove House - - - Walton, near Wakefield.
Macdermott, M. - - -	Scott's Chambers, 25 and 26, Pudding-lane - - - London.
CONFECTIONERS' MACHINERY.	
Collier, L. - - -	Wellington Works, River-street - Rochdale.
CORN DRESSING MACHINERY.	
Davey, Paxman, & Co. - -	- - - - - Colchester, Essex.
CORN WEIGHING MACHINERY.	
Clarke & Dunham - -	69, Mark-lane - - - London.
Corcoran, Witt, & Co. - -	Market-buildings, 28, Mark-lane - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
COTTON WORKING MACHINERY.	
Gadd, T. - - - -	- - - - - Salford, Manchester.
Howard & Bullough - -	Globe Works - - - Accrington, Lancashire.
Platt Brothers & Co., Limited -	Hartford Works - - - Oldham.
West & Co. - - -	Crown-place, Kentish Town-road - London.
CRANES.	
Appleby Brothers - -	Emerson-street, Southwark - - London.
Aveling & Porter - -	- - - - - Rochester, Kent; and Cannon-street, London
DARNING MACHINERY.	
Smith & Starley - - -	Trafalgar Works - - - Coventry.
DISTILLERY MACHINERY.	
Lawrence & Co. - - -	22, St. Mary Axe - - - London.
DRILLING MACHINERY.	
Macdermott, M. - - -	Scott's Chambers, 25 and 26, Pudding-lane - - - - London
ELECTRICAL MACHINERY.	
Thermo-Electric Generator Co., Limited - - - -	27, New-street, Cloth Fair - - London.
FLAX MACHINERY.	
Fairbairn, Kennedy, & Naylor -	- - - - - Leeds.
Lawson, S., & Sons - -	Hope Foundry - - - Leeds.
HIGH-PRESSURE TESTING MACHINERY.	
Siemens, C. W. - - -	12, Queen Anne's-gate - - London.
HOISTING MACHINERY.	
Pickering, J. - - -	Grove Works - - - Stockton-on-Tees.
Tangye Bros. - - -	Cornwall Works - - - Soho, Birmingham.
HOSIERY MACHINERY.	
Gimson & Coltman - -	Duke-street - - - - Leicester.
HYDRAULIC MACHINERY.	
Monckton, G. H. - - -	Care of Coutts & Co. - - London.
KNIFE CLEANING MACHINERY.	
Kent, George - - -	200, High Holborn - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
KNITTING MACHINERY.	
Smith & Starley - - -	Trafalgar Works - - - Coventry.
LAWN MOWERS.	
Barnard, Bishop, & Barnards -	Norfolk Ironworks - - - Norwich.
LEATHER MACHINERY.	
Pullman, R. & J. - - -	17, Greek-street, Soho - - London.
LITHOGRAPHING MACHINERY.	
Beatty, F. S. - - -	30, Summers Hill - - - Dublin.
LOCOMOTIVES.	
Handysides Steep Gradient Company, Limited - -	9, Victoria-chambers, Victoria-street London.
LOGOTYPES.	
Tomline, Colonel - -	Carlton Terrace - - - London.
LOOMS.	
Stevens, T. - - - -	- - - - - Coventry ; and 20, Warwick-lane, London.
MACHINE TOOLS.	
Beesley, L. W. & J., & Sons -	Abbey-road Boiler Works - - Barrow-in-Furness.
Greenwood & Batley - -	Albion Works - - - Leeds.
Heap, J., & Co., Limited - -	Lee-street - - - - Oldham.
Nussey & Leachman - -	- - - - - - Leeds.
Roberts, W. - - -	139, Derby-road - - - Bootle, near Liverpool.
MARINE ENGINES.	
Hewitt, W. - - -	Prospect Villa, Sydenham-hill - Bristol.
PAINTING MACHINE.	
Roberts, W. - - -	139, Derby-road - - - Bootle, near Liverpool.
PAPER-MAKING MACHINERY.	
Annandale, Alex, & Sons -	Beltonford Paper Works - - Dunbar.
Marshall, T. J., & Co. - -	Campbell Works, Gillet-street, Kingsland - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
PRINTING MACHINERY.	
Lilly, J., & Co. - - -	172, St. John-street, Clerkenwell - London.
Shaw, W. - - - -	3, Sheldon-street, Bayswater - London.
Walter, J., M.P. - - -	"Times" Office, Printing House-square - - - - London.
PULVERIZING MACHINERY.	
Kimberley, N. G. - - -	11, Great St. Helen's - - London.
PUNCHING AND SHEARING MACHINERY.	
Beesley & Sons - - -	Abbey-road Boiler Works - - Barrow-in-Furness.
Nussey & Leachman - -	- - - - - Leeds.
ROCK DRILLING MACHINERY.	
Annandale, Alex., & Sons -	Beltonford Paper Works - - Dunbar.
Holmes, Payton, & Taylor -	43, Borough-road, Southwark - London.
SCREW CUTTING MACHINERY.	
Heap, J., & Co., Limited - -	Lee-street - - - Oldham.
SCREW PROPELLERS.	
Hewitt, W. - - -	Prospect Villa, Sydenham-hill - Bristol.
Vansittart, Henrietta - -	2, Montpelier-row, Twickenham - Middlesex.
SEWING MACHINES.	
Kimball & Morton - -	80, Bishop-street - - - Anderston, Glasgow.
Laing's Patent Overhead Sewing Machine Co. - -	4, Bain-square - - - Dundee.
Smith & Starley - - -	Trafalgar Works - - - Coventry.
Wilson, Newton, & Co. - -	144, High Holborn - - - London.
Greenwood & Battey - -	Albion Works - - - Leeds.
SILK MACHINERY.	
Stevens, T. - - -	20, Warwick-lane - - - London.
SPINNING MACHINERY.	
Fairbairn, Kennedy, & Naylor -	- - - - - Leeds.
Howard & Bullough - -	Globe Works - - - Accrington, Lancashire.
Lawson & Sons - - -	Hope Foundry - - - Leeds.
SPOOLING MACHINERY.	
Coats, J. & P. - -	Ferguslie Thread Works - - Paisley.

Object, and Name of Exhibitor.	Address of Exhibitor.
STEAM ENGINE FITTINGS.	
Cohné, S.	13, Sise-lane - London.
Dennis, T. H. P., & Co.	Anchor Ironworks - Chelmsford.
Phosphor Bronze Company, Limited	139, Cannon-street - London.
Turner, C.	3, Bugle-street - Southampton.
Wier, M. A.	33, Abchurch-lane - London.
STAMPING MACHINERY.	
Massey, B. & S.	- Openshaw, Manchester.
Sloper, Joseph	6, King William-street, City - London.
STEAM HAMMERS.	
Massey, B. & S.	- Openshaw, Manchester.
STEAM PUMPS.	
Fison, J. P.	Feversham Works - Cambridge.
Gwynne, J. & H.	Hammersmith - London.
Gwynne & Co.	Essex-street Works - London.
Pickering, J.	Globe Works - Stockton-on-Tees.
STEAM ROAD ROLLERS.	
Aveling & Porter	- Rochester, Kent.
STONE DRESSING MACHINERY.	
Shearer, H.	21, Great George-street, Westminster London.
STONE BREAKING MACHINERY.	
Dunston Engine Works Co.	- Gateshead-on-Tyne.
STREET SWEEPING AND SCRAPING MACHINERY.	
Smith & Sons	- Barnard Castle, Durham.
SUGAR MACHINERY.	
Mirrlees, Tait, & Watson	Scotland-street Ironworks - Glasgow.
TAILORS' MACHINERY.	
Sanson, R. B.	87, Globe-road, Mile End-road - London.
THRASHING MACHINERY.	
Fison, J. P.	Feversham Works - Cambridge.

Object, and Name of Exhibitor.	Address of Exhibitor.
THREAD WINDING AND TICKETTING MACHINERY.	
Coats, J. & P. - - -	Ferguslie Thread Works - - Paisley.
TOBACCO MACHINERY.	
Andrew, J. E. H. - - -	Waterloo-road - - - Stockport.
TRACTION ENGINES.	
Aveling & Porter - -	- - - - Rochester, Kent.
WASHING AND IRONING MACHINERY.	
Air Burning Co., Limited -	118, Green-street - - - Glasgow.
Pullinger, C. - - - -	- - - - - Selsey, near Chichester.
WEIGHING MACHINERY.	
Clarke & Dunham - -	69, Mark-lane - - - London.
Corcoran, Witt, & Co. - -	Market-buildings, 28, Mark-lane - London.
WOOD WORKING MACHINERY.	
Roberts, W. - - -	139, Derby-road - - - Bootle, near Liverpool.
WOOL AND WORSTED WORKING MACHINERY.	
Nussey & Leachman - -	- - - - - Leeds.
Smith, J. & S. - - -	Low Bridge Works - - - Keighley.
MAGIC LANTERN SLIDES.	
Middleton, T. J. - - -	38, Little Queen-street, High Holborn London.
York, F. - - -	87, Lancaster-road, Notting-hill - London.
MALT.	
Plunkett, J., & Co. -	Portland Works, Portland-street West Dublin.
MANURES.	
Universal Charcoal & Sewage Company, Limited - -	5, High-street - - - Manchester.
MAPS, GLOBES, AND MAP ENGRAVING.	
Bartholomew, J. - - -	Chambers-street - - - Edinburgh.
British & Foreign Blind Association - - - -	33, Cambridge-square, Hyde-park - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
MAPS, GLOBES, AND MAP ENGRAVING—*cont.*	
Geological Survey of the United Kingdom (A. C. Ramsay, LL.D., F.R.S., Director-General)	28, Jermyn-street - - - London.
Johnston, W. & A. K. - -	4, St. Andrew-square - - Edinburgh.
Ordnance Survey Office -	- - - - - Southampton.
Ravenstein, E. G. - - -	10, Lower-road, Brixton - - London.
Ward, M., & Co. - - -	67, 88, Chandos-street, Strand - London.
MARKING INK.	
Hickisson, M. A. - - -	75, Southgate-road - - - London.
MARINE ENGINES.	
Hewitt, W. - - -	Prospect Villa, Sydenham Hill - Bristol.
MATCHES.	
Bryant & May - - -	Fairfield Works, Bow - - London.
MATHEMATICAL, SURVEYING, MEASURING, AND OTHER SCIENTIFIC INSTRUMENTS, RULES, &c	
Adams, W. M. - - -	Arundel Club, Salisbury-street, Strand London.
Cassell, Petter, & Galpin - -	La Belle Sauvage Yard, Ludgate-hill London.
Clay, R. - - - -	58, Finborough-road, South Kensington, London.
Hicks, J. J. - - -	8, Hatton-garden - - - London.
Kimpton, T. - - -	2 and 3, Barnard's Inn, Holborn - London.
Lyon, W. - - - -	1, Cowper's-court, Cornhill - - London.
Wier, M. A., & Co. - -	6, Kirby-street, Hatton-garden - London.
Zimdars, C. E. - - -	28, Red Lion-square - - London.
MEAL.	
Hunter, J., & Son - - -	Wood Hall Mills, Juniper-green, near Edinburgh.
MEDALS AND DIE SINKING.	
Morgan, Geo. - - -	144, Finborough-road, West Brompton - - - - London.
Wyon, J. S. & A. B. - -	287, Regent-street - - - London.
Ortner & Houle - - -	3, St. James's-street - - London.
MILITARY EQUIPMENT.	
Clarke, Captain E. P. - -	6, Edward-street - - - Bath.
Firmin & Sons, Limited - -	155, Strand - - - - London.
Henry, A. - - - -	12, South St. Andrew-street - Edinburgh.
Soper, W. - - - -	23, Friar-street - - - Reading.
Turner, G., & Co. - - -	95, Gracechurch-street - - London.
Webley, P., & Son - -	82, Weeman-street - - - Birmingham.
MILLS, MILLSTONES, AND UTENSILS.	
Clarke & Dunham - -	69, Mark-lane - - - London.
Corcoran, Witt, & Co. - -	28, Market-buildings, Mark-lane - London.
Kay & Hilton - - -	Bankhall-bridge - - - Liverpool.

Object, and Name of Exhibitor.	Address of Exhibitor.
MINING, QUARRYING, &c.	
Baird, W., & Co.	Gartsherrie Ironworks - Coatbridge, Scotland.
Hardy Patent Pick Company, Limited	Mining Tool Works, Ecclesall-road - Sheffield.
Holmes, Payton, & Taylor	43, Borough road, Southwark - London.
Hurd, F.	Grove House - Walton, near Wakefield.
Macdermott, M.	Scott's Chambers, 25 & 26, Pudding-lane - London.
MODELS.	
Bradford, W. H.	Great Saughall - near Chester.
Brierley, Sons, & Reynolds	81A, Edgware-road - London.
Clarke, Captain E. P.	6, Edward-street - Bath.
Clark, L., Standfield, & Co.	6, Westminster Chambers, Victoria-street - London.
Fison, J. P.	Feversham Works - Cambridge.
Francis & Co.	Bridge Foot, Vauxhall - London.
"Graphic," The Proprietors of the	190, Strand - London.
Green, E., & Son	Economiser Works - Wakefield.
Gümpel, C. G.	49, Leicester-square - London.
Gwynne, J. & H.	Hammersmith - London.
Handysides Steep Gradient Co., Limited	9, Victoria-chambers, Victoria-street London.
Hewitt, W.	Prospect Villa, Sydenham Hill - Bristol.
Inman Steamship Co., Limited	22, Water-street - Liverpool.
Johnston Still Company, Limited	43, Dame-street - Dublin.
Kerr, E.	7, Merville-terrace, Gilford-place, North Strand - Dublin.
Logan, J. M.	Chesterton-road - Cambridge.
Munroe, W.	High-street - Wick, Caithness, Scotland.
Ravenstein, E. G.	10, Low-road, Brixton - London.
Roby, G., & Co.	31, King-street - Wigan.
Saxby & Farmer	Kilburn - London.
Siemens, C. W.	12, Queen Anne's-gate - London.
Wallace & Tucker	3, Antrim-place - Belfast.
Welch, A.	11, Bank-buildings, Metropolitan Cattle Market - London.
Zobel, C. F. J.	139, Euston-road - London.
MOULDS, MOULDINGS, &c.	
Engert, A. C., & Co.	75, City-road - London.
Hieronimus, W.	53, City-road - London.
MUSEUMS, COLLECTIONS, AND ART GALLERIES.	
Fetherston, J. J.	2, Coppinger's-row - Dublin.

Object, and Name of Exhibitor.	Address of Exhibitor.
MUSEUMS, &c.—*cont.*	
Geological Survey of the United Kingdom of Great Britain and Ireland, A. C. Ramsay, LL.D., F.R.S., Director-General	28, Jermyn-street - London.
Ordnance Survey Office, Major-General Cameron, R.E., C.B., Director-General	- Southampton.
Science and Art Department, P. Cunliffe Owen, C.B., Director	South Kensington Museum - London.
MUSIC AND MUSICAL INSTRUMENTS.	
Augener, G., & Co.	86, Newgate-street - London.
Besson, F.	198, Euston-road - London.
Boosey & Co.	295, Regent-street - London.
Brinsmead, J., & Sons	18, Wigmore-street - London.
Browne, H. J.	237, 239, Euston-road - London.
Heaps, J. K.	Folly Hall - Holbeck, Leeds.
Rola, V.	22, Leinster-square, Bayswater - London.
Smith, G.	57, Victoria Park-road, South Hackney London.
MUSLINS.	
Barlow & Jones, Limited	2, Portland-street - Manchester.
Johnson, J., & Fildes	44, Spring-gardens - Manchester.
Swainson, Birley, & Co.	42, Cheapside - London.
NAILS, SPIKES, SCREWS, &c.	
Baker, C., & Sons	98, Lichfield-street - Birmingham.
Francis, T., & Co.	Liverpool-street - Birmingham.
Patent Nut & Bolt Company, Limited	London Works - near Birmingham.
NATURAL HISTORY.	
Murray, A.	67, Bedford-gardens, Kensington - London.
Ward & Co.	158, Piccadilly - London.
Wheeler, E.	48, Tollington-road, Holloway - London.
NEEDLES, NEEDLE CASES, &c.	
English, J., & Co.	- Feckenham, near Redditch.
Evans, D.	Studley - Redditch.
Hayes, Crossley, & Co.	153, Cheapside - London.
Heath, W.	Neveux Works, Crabb's Cross - Redditch.
Kirby, Beard, & Co.	18, Cannon-street - London.
Milward, H., & Sons	- Redditch.
Smith, J., & Son	Astwood Bank - near Redditch.
Smith, J. W.	121, Belgrave-gate - Leicester.
Smith & Starley	Trafalgar Works - Coventry.
Turner, R., & Co.	Old Factory - Redditch.
Woodfield, W., & Sons	Easemore Works - Redditch.

Object, and Name of Exhibitor.	Address of Exhibitor.
NEWSPAPERS.	
Dowson, Sutherland, & Co.	12, Fetter-lane - London.
Illustrated London News, Editor of	198, Strand - London.
Palmer, S.	Park House, Grove-street, South Hackney - London.
OAKUM.	
Liverpool Spun Oakum Company	9, North John-street - Liverpool.
OATMEAL.	
McCann, J.	Beamond Mills - Drogheda, Ireland.
OILS, OIL CAKE.	
Allen & Hanbury's	Plough-court, Lombard-street - London.
Craig & Rose	Caledonian Works - Edinburgh.
Price's Patent Candle Company	Belmont Works, Battersea - London.
OPTICAL INSTRUMENTS, MICROSCOPES, AND OPTICAL TOYS.	
Beck, R. & J.	31, Cornhill - London.
Crouch, H.	66, Barbican - London.
Dallmeyer, J. H.	19, Bloomsbury-street - London.
Negretti & Zambra	Holborn Viaduct - London.
Ross & Co.	7, Wigmore-street - London.
Swift, J.	43, University-street, Tottenham Court-road - London.
Wheeler, E.	48, Tollington-road, Holloway - London.
PAINT BRUSHES.	
Bowman, C.	6, King-street, Tower-hill - London.
Culmer, W., & Sons	Hornsey-road - London.
PAPER AND MATERIALS FOR MANUFACTURE OF PAPER, STATIONERY.	
Dudgeon, A.	22, Great George-street, Westminster London.
Fletcher, R., & Son	Kersley Works - Stoneclough, nr. Manchester.
Ford Works Company, Limited	- Ford, near Sunderland, Durham.
Harrington, J., & Co.	Union Works - Ryde, Isle of Wight.
Jeffrey & Co.	64, Essex-road, Islington - London.
Johnson, J., & Co.	Charterhouse Works, Sycamore-street London.
Pirie, A., & Sons	Stoneywood Works - Aberdeen.
Sands Brothers & Co.	Salford Chemical Works - Manchester.
Ward, M., & Co.	67, 68, Chandos-street, Strand - London.
Waterston, G., & Sons	56, Hanover-street - Edinburgh.

Object, and Name of Exhibitor.	Address of Exhibitor.
PARAFFIN, PETROLEUM, &c.	
PRICE'S PATENT CANDLE COMPANY - - - -	Belmont Works, Battersea - - London.
PATENT AND PEAT FUEL.	
DIXON, F. - - - -	20, Charterhouse-square - - London.
DUDGEON, A. - - -	22, Great George-street, Westminster London.
MARRIOTT, ELIZABETH - -	15, Oldfield-road, Stoke Newington - London.
PENS, PENHOLDERS, PENCILS, AND PENCIL CASES.	
HINKS, WELLS, & Co. - -	Buckingham-street Works - - Birmingham.
PERAMBULATORS.	
THOMPSON, C. - - -	33, Newington Butts - - London.
PERFUMERY AND TOILET REQUISITES.	
ATKINSON, J. & E. - - -	24, Old Bond-street - - London.
CROWN PERFUMERY CO. - -	40, Strand - - - - London.
ELRICK, C. G. - - -	8, Aldermanbury Postern - - London.
KENT, G. B., & Co. - -	11, Great Marlborough-street - London.
LOW, SON, & HAYDON - -	148, Strand - - - London.
PERKS, S. - - - -	High-street - - - Hitchin, Herts.
PRICE'S PATENT CANDLE CO. -	Belmont Works, Battersea - - London.
RIMMEL, E. - - - -	96, Strand - - - London.
THIELLAY, E. H. - - -	Charing Cross Hotel - - London.
PHOTOGRAPHS.	
BARNARD, JOHN - - -	5, St. Mary's Buildings - - Bedford.
BAUM, F. - - - -	St. Ann's-square - - - Manchester.
BEAU, A. - - - -	283, Regent-street - - - London.
BEAUFORD & BRUCE - -	2, Nuns Island - - - Galway, Ireland.
BEDFORD, W. - - -	326, Camden-road - - London.
BOOL, A. & J. - - -	86, Warwick-street, Pimlico - London.
BROWNRIGG, T. M. - - -	32, Lower Leeson-street - - Dublin.
CAMERON, J. M., MRS. - -	- - - - - Freshwater, Isle of Wight.
COOPER, GEO., and Co. - -	Elm Tree House, Aulaby-road - Hull.
CRAWSHAY, ROBERT - -	Cyfarthfa Castle, Merthyr Tydfil - Glamorganshire.
DALLAS, D. C. - - -	362, Gray's Inn-road - - London.
DALLMEYER, J. H. - - -	19, Bloomsbury-street - - London.
ENGLAND, W. - - -	7, St. James'-square, Notting-hill - London.
FOGERTY, W. - - -	23, Harcourt-street - - - Dublin.
FRADELLE & MARSHALL - -	230, Regent-street - - - London.
GODBOLD, H. J. - - -	Grand Parade - - - St. Leonards-on-Sea.
HAIG, E. M. - - -	203, Regent-street - - - London.
HALL, H. E. - - -	44, Kingsland-park - - - Dublin.
HANSON, W. - - -	Great George-street - - - Leeds.
HEATH, V. - - - -	43, Piccadilly - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
PHOTOGRAPHS—*cont.*	
Hedges, D.	7, Queen-street - Lytham, Lancashire.
Henderson, A. L.	49, King William-street, City - London.
Hudson, F.	1, Regent-parade - Ventnor, Isle of Wight.
Jennings, P.	1, Belgrave-place, Belgrave-square - Rathmines, Dublin.
Kerr, E.	7, Merville-terrace, Gilford-place, North Strand - Dublin.
Lee & Co.	9, Crockherbtown - Cardiff, Wales.
Lemere, B.	147, Strand - London
London Stereoscopic & Photographic Co.	110 and 108, Regent-street - London.
Mansell, W. A., & Co.	2, Percy-street - London.
Norman, C.	Graphic Villa - Tunbridge Wells, Kent.
Robinson & Cherrill	The New Public Buildings - Tunbridge Wells, Sussex.
Ross & Co.	7, Wigmore-street, Cavendish-sq. - London.
Slingsby, R.	168, High-street - Lincoln.
Typographic Etching Co.	23, Farringdon-street - London.
Wilson, G. W., & Co.	24, Crown-street - Aberdeen.
York, F.	87, Lancaster-road, Notting-hill - London.
PINS, HAIR PINS, HOOKS AND EYES, &c.	
Cooke, Bros.	65*a*, Constitution-hill - Birmingham.
English, J., & Co.	- - - - - Feckenham, near Redditch.
Hayes, Crossley, & Co.	153, Cheapside - London.
Kirby, Beard, & Co.	18, Cannon-street - London.
Tayler, D. F., & Co.	New Hall Works - Birmingham.
PIPES, TOBACCO (CLAY).	
Davidson, T., Jun., & Co.	33 and 41, Garngad-hill - Glasgow.
PISCICULTURE.	
Hoare, J.	39, Bloomsbury-street - London.
PLANTS, GRASS, AND FLOWER SEEDS.	
Sutton & Sons	Royal Berkshire Seed Establishment, Reading.
Veitch, J. & Sons	Royal Nursery, King's road, Chelsea, London.
Waterer, Anthony	Knap-hill Nursery, Woking - Surrey.
Williams, B. S.	Victoria and Paradise Nurseries, Upper Holloway - London.
PLATINUM, PALLADIUM, AND OTHER RARE METALS.	
Johnson, Matthey, & Co.	78, Hatton-garden - London.
PLAYING CARDS.	
Goodall, C., & Son	24, Great College-street, Camden Town London.
PLOUGHS.	
Fison, J. P.	Feversham Works - Cambridge.

Object, and Name of Exhibitor.	Address of Exhibitor.
PNEUMATIC APPARATUS, &c.	
Boyle, Robert M., & Son -	100, Mitchell-street - - - Glasgow.
Wier, M. A. - - -	33, Abchurch-lane - - - London.
Zimdars, C. E. - - -	28, Red Lion-square - - London.
POLISHING POWDERS, PASTES, &c.	
Oakey, J., & Sons - -	Wellington Works, Westminster Bridge-road - - - London.
Star Plate and Universal Polishing Powder Company - -	Gracechurch-street - - - London.
POPLINS.	
Pim Brothers & Co. - -	22, William-street - - - Dublin.
PRESERVED PROVISIONS AND CONSERVES.	
Allen, F., & Sons - -	Canal-road, Mile End-road - - London.
Ball, J. - - - -	12, Duke-street, Grosvenor-square - London.
Chapman, E., & Co. - -	10, Duke-street, Portland-place - London.
Cliff, J. - - - -	5, Dungeon-street - - - Halifax.
Crosse & Blackwell - -	Soho-square - - - - London.
Geyelin & Co. - - -	Belgrave House, Argyle-square - London.
Hooker, J. - - -	104, Upper Thames-street - - London.
Ledger, H., & Co. - -	61, 63, Lant-street, Borough - London.
Nicoll, D. - - - -	15, Clement's Inn - - - London.
Patchitt, E. C. - - -	Ilkeston-road - - - Nottingham.
Schneider, E. A. - - -	4, Cambria-villas, Chesterton-road - Cambridge.
Stevens, T. - - -	46, Hope-street - - - Wrexham, Wales.
PREVENTION OF ACCIDENTS IN FEEDING THRESHING MACHINES.	
Sainty, J. & B. - - -	Alpha Works - - - Wisbeach, Cambridgeshire.
PRINTING.	
Augener, G., & Co. - -	86, Newgate-street - - - London.
Bradbury, Agnew, & Co. -	Bouverie-street - - - London.
British and Foreign Blind Association - - -	33, Cambridge-square, Hyde Park - London.
Dickinson & Higham - -	73, Farringdon-street - - London.
Dowson, Sutherland & Co., Limited - - - -	12, Fetter-lane - - - London.
Goodall, C., & Son - -	24, Great College-street, Camden Town - - - - London.
"Graphic," The Proprietors of the - - - -	190, Strand - - - - London.
Illustrated London News -	198, Strand - - - - London.
Johnson, Edmund - - -	3, Castle-street, Holborn - - London.
Johnson, J. M., & Sons, Limited - - - -	3, Castle-street, Holborn - - London.
Norton & Shaw - - -	7, Garrick-street - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
PRINTING—*cont.*	
PALMER, S. - - -	Park House, Grove-street, South Hackney - - - London.
PRICE & Co. - - -	36, Great Russell-street - - Bloomsbury.
SUNDAY SCHOOL UNION - -	56, Old Bailey - - - London.
WARD & Co., MARCUS - -	67, 68, Chandos-street, Strand - London.
PRINTING TYPES, LOGOTYPES, AND MACHINERY, STAMPS, &c.	
BEATTY, F. S. - - -	5, Aston's-quay - - - Dublin.
BOWMAN, C. - - -	6, King-street, Tower-hill - - London.
GREENWOOD & BATLEY - -	Albion Mills - - - Leeds.
LILLY, J., & Co. - - -	172, St. John's-street, Clerkenwell - London.
SHAW, W. - - - -	3, Sheldon-street, Bayswater - London.
STEPHENSON, BLAKE, & Co. -	- - - - - Sheffield.
TOMLINE COLONEL - - -	Carlton-terrace - - - London.
WALTER, J., M.P. - - -	"Times" Office, Printing House-square - - - - London.
PULLEY BLOCKS.	
LACEY, R. G. - - -	Coast Guard Station - - Leigh, Essex.
PICKERING, J. - - -	Globe Works - - - Stockton-on-Tees.
WETHERED, E. R. - - -	- - - - - Woolwich, Kent.
PULVERIZING MACHINE.	
KIMBERLEY, N. G. - - -	11, Great St. Helen's - - London.
PUMPS AND PUMPING ENGINES.	
ADAIR & Co. - - -	Neptune-street - - - Liverpool.
GWYNNE, J. & H. - - -	Hammersmith - - - London.
GWYNNE & Co. - - -	Essex-street Works - - - London.
HAYNES, T., & SONS - - -	229, Edgware-road - - - London.
KERR, E. - - - -	7, Merville-terrace, Gilford-place, North Strand - - - Dublin.
PICKERING, J. - - -	Globe Works - - - Stockton-on-Tees.
PUNCHING AND SHEARING MACHINERY.	
BEESLEY & SONS - - -	Abbey-road Boiler Works - - Barrow-in-Furness.
NUSSEY & LEACHMAN - -	- - - - - Leeds.
QUILLS AND QUILL PENS.	
STEPHENS, H. C. - - -	171, Aldersgate-street - - London.
QUILTS, QUILTINGS, &c.	
PEARSON, T., & SON - -	54, Church-street - - - Manchester.
RAILS, RAILWAY PLANT, CARRIAGES, SIGNALS, &c.	
BRIERLEY, SONS, & REYNOLDS -	81A, Edgware-road - - - London.
PATENT NUT & BOLT Co., LIMITED	London Works - - near Birmingham.

Object, and Name of Exhibitor.	Address of Exhibitor.
RAILS, RAILWAY PLANT, &c. —*cont.*	
Saxby & Farmer	Canterbury-road, Kilburn - London.
Seaton, W.	19, Salisbury-street, Strand - London.
Welch, Alfred	11, Bank-buildings, Metropolitan Cattle Market - London.
West Cumberland Iron & Steel Co., Limited	- Workington, Cumberland.
Williams, R. P.	9, Great George-street, Westminster - London.
Zimdars, C. E.	28, Red Lion-square - London.
REFRIGERATORS AND ICE SAFES.	
Lawrence & Co.	22, St. Mary Axe - London.
Stiff, J., & Sons	High-street, Lambeth - London.
Roby, G.	31, King-street - Wigan.
ROCK DRILLING MACHINE.	
Holmes, Payton, & Taylor	43, Borough road, Southwark - London.
SADDLERY AND HARNESS.	
Hawkins Bros. (late J. Hale & Co.)	Hatherton Works - Walsall.
Hudson, S.	65, Dawson-street - Dublin.
Pollock, Sydney	72, Lancaster-road, Notting-hill - London.
Swaine & Adeney	185, Piccadilly - London.
SALT.	
Corbett, J., M.P.	Stoke Prior Salt Works - Worcestershire.
Higgins, T., & Co.	33, Tower-buildings - West Liverpool.
SANITARY APPARATUS, SANITARY POTTERY, WATER CLOSETS, &c.	
Bates, Walker, & Co.	Dale Hall Works - Burslem.
Browne, Westhead, Moore, & Co.	Cauldon-place, Staffordshire Potteries.
Dean, H.	Southam - Rugby, Warwickshire.
Greenway, H.	Ham-street - Plymouth.
Holland, W. T.	- Llanelly, South Wales.
Jennings, George	Palace Wharf, Stangate - London.
Lindsay & Anderson	Lilliehill Works - Dunfermline, Scotland.
Stiff, J., & Sons	High-street, Lambeth - London.
Zimdars, C. E.	28, Red Lion-square - London.
SCREW CUTTING MACHINE.	
Heap, J., & Co., Limited	Lees-treet - Oldham.
SCREW PROPELLERS AND FITTINGS.	
Hewitt, W.	Prospect Villa, Sydenham Hill - Bristol.
Vansittart, Henrietta	2, Montpelier-row - Twickenham, Middlesex.

Object, and Name of Exhibitor.	Address of Exhibitor.
SEWAGE, TREATMENT AND PRODUCTS.	
Universal Charcoal & Sewage Company, Limited - -	5, High-street - - - Manchester.
SEWING MACHINES.	
Greenwood & Batley - -	Albion Works - - - Leeds.
Kimball & Morton - -	80, Bishop-street - - - Anderston, Glasgow.
Smith & Starley - - -	Trafalgar Works - - - Coventry.
Wilson, Newton, & Co. - -	144, High Holborn - - - London.
SHEEP AND GARDEN SHEARS.	
Wilkinson, W., & Sons - -	Spring Works - - Grimesthorpe, Sheffield.
SHIP MODELS, SIGNALS, SHEATHING, MACHINERY, IRON WORK, &c.	
Gümpel, C. G. - - -	49, Leicester-square - - - London.
Hewitt, W. - -	Prospect Vilia, Sydenham Hill - Bristol.
Hill & Clark - - -	6, Westminster Chambers, Victoria-street - - - - London.
Inman Steamship Co., Limited -	22, Water-street - - - Liverpool.
Lacey, R. - - - -	Coast Guard Station - - Leigh, Essex.
Sainty, J. & B. - - -	Alpha Works - - - Wisbeach, Cambridgeshire.
Tucker & Wallace - -	3, Antrim-place - - - Belfast.
Turner, C. - -	3, Bugle-street - - - Southampton.
Vansittart, Henrietta - -	2, Montpelier-row - - - Twickenham, Middlesex.
Zimdars, C. E. - - -	28, Red Lion-square - - - London.
SILK MACHINERY.	
Stevens, T. - - -	20, Warwick-lane - - - London; and Coventry.
SILK, RAW, YARN, SEWING SILK, CORD, &c.	
Adams & Co. - - -	5, New-street, Bishopsgate-street - London.
Clayton, Marsdens, Holden, & Co., Limited - - -	Wellington Mills - - - Halifax.
Milner, W., & Sons - -	Union-street - - - Leek, Staffordshire.
Rickards, C. A. - - -	Bell Busk Mills - near Leeds.
Ward, A., & Co. - - -	Albion Mills - - - Leek, Staffordshire.
SILKS AND VELVETS, MIXED GOODS, SILK LACE, SHAWLS, &c.	
Brigg, J. F., & Co. - -	- - - - - Huddersfield.
Farmer & Rogers - -	171, 173, 175, Regent-street - London.
French & Co. - - -	St. Mary's Mills - - - Norwich.
Hilditch, G. & J. B. - -	11 and 12, Cheapside - - London.
Humbert, H. - - -	30, Barbican - - - London.
Norris & Co. - -	124, Wood-street - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
SILKS, VELVETS, &c.—*cont.*	
Pim Brothers & Co. - -	22, William-street - - - Dublin.
Sheldon & Fenton - -	12, King-street, Cheapside - - London.
Stevens, T. - - -	20, Warwick-lane - - - London; and Coventry.
Welch, Margetson, & Co. -	16, 17, Cheapside - - - London.
Wild, J. - - - -	Greenfield Mill - - - Shaw, near Oldham.
SKINS, FURS, AND LEATHER, LEATHER GOODS.	
Angus, G., & Co. - - -	10, Thomas-street - - - Liverpool.
Bennett, T., & Son - -	70, Turnmill-street, Farringdon-road London.
Bussey, G. G., & Co. - -	Museum Works, Rye-lane, Peckham London.
Edinburgh Western Tanning Co., Limited - - -	135, West Port - - - Edinburgh.
Harrington, J., & Co. - -	Union Works - - - Ryde, Isle of Wight.
Hoe, R., & Sons - - -	44, Leadenhall-street - - London.
Hooper, Cleeve, Junior -	6, 7, 8, New Weston-street, Bermondsey - - - - London.
Hooper, Cleeve, W., & Sons -	51, Weston-street, Bermondsey - London.
Marling & Co. - - -	Ebley and Stanley Mills - - Stroud, Gloucester.
Puckridge, F., & Nephew -	530, 534, Kingsland-road - - London.
Pullman, R. & J. - -	17, Greek-street, Soho - - London.
Ward, Marcus, & Co. - -	67, 68. Chandos-street, Strand - London.
Wilson, Walker, & Co. - -	Sheepscar Works - - - Leeds.
SLATE AND ENAMELLED SLATE.	
Cwmorthin Slate Company, Limited - - - -	- - - - - Portmadoc, North Wales.
Pen-yr-orsedd Slate Quarry Company, Limited - -	- - - - - Carnarvon, North Wales.
SMALL WARES, SUCH AS BUTTONS, STUDS, LINKS, BUCKLES, CLASPS, HOOKS AND EYES.	
Baker, C., & Sons - -	98, Lichfield-street - - - Birmingham.
Fenton, J. - - - -	74, Great Hampton-street - - Birmingham.
Smith, J., & Son - - -	Astwood Bank - - near Redditch.
Tayler, D. F., & Co. - -	New Hall Works - - - Birmingham.
SOAP.	
Atkinson, J. & E. - - -	24, Old Bond-street - - - London.
Cohné, S. - - - -	13, Sise-lane - - - London.
Field, J. C. & J. - - -	Lambeth Marsh - - - London.
Low, Son, & Haydon - -	148, Strand - - - London.
Marrison, R. D. - - -	Great Orford-street - - Norwich.
Pears, A. & F. - - -	91, Great Russell-street - - London.
Price's Patent Candle Company - - - -	Belmont Works, Battersea - - London.
Rimmel, E. - - -	96, Strand - - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
SPINNING MACHINERY AND ACCESSORIES.	
Ambler, W. - - -	17, Elizabeth-street - - - Bradford.
Booth, H., & Co. - - -	Edward-street - - - Preston.
Fairbairn, Kennedy, & Naylor - - - -	- - - - - Leeds.
Howard & Bullough - -	Globe Works - - - Accrington, Lancashire.
Lawson, S., & Sons - -	Hope Foundry - - - Leeds.
Smith, J. & S. - - -	Low Bridge Works - - - Keighley.
SPOOLING AND THREAD-WINDING MACHINE.	
Coats, J. & P. - - -	- - - - - Paisley.
SPRINGS.	
Hawksworth (Wilson), Ellison, & Co. - - - -	Carlisle Works - - - Sheffield.
STARCH, STARCH PRODUCTS, AND FIREPROOF STARCH.	
Nicoll, D. - - -	15, Clements Inn - - - London.
STEAM CRANES AND HOISTS.	
Appleby Brothers - -	Emerson-street, Southwark - - London.
Aveling & Porter - -	- - - - Rochester, Kent.
STEAM ENGINE AND OTHER BOILERS AND GENERATORS.	
Brechin, J. B. - - -	45, Commercial-street - - Dundee.
Davey, Paxman, & Co. - -	- - - Colchester, Essex.
Galloway, W. & J., & Sons -	Knott Mill Ironworks - - Manchester.
Graham & Co. - - -	Premier Boiler Works, Premier-road Halifax.
STEAM ENGINE FITTINGS, FORGINGS, &c.	
Cohné, S. - - - -	13, Sise-lane - - - London.
Dennis, T. H. P., & Co. - -	Anchor Ironworks - - - Chelmsford, Essex.
Moncrieff, J. - - -	North British Glass Works - - Perth, Scotland.
Phosphor Bronze Co., Limited -	139, Cannon-street - - - London.
Turner, C. - - -	3, Bugle-street - - - Southampton.
Wier, M. A. - - -	33, Abchurch-lane - - - London.
STEAM ENGINES, LOCOMOTIVES, AND TRACTION ENGINES.	
Aveling & Porter - -	- - - - - Rochester, Kent.
Davey, Paxman, & Co. - -	- - - - Colchester, Essex.
Green, E., & Son - - -	Economiser Works - - - Wakefield.
Moy, Thomas - - -	37, Farringdon-street - - London.
Ransomes, Sims, & Head - -	Orwell Works - - - Ipswich.

Object, and Name of Exhibitor.	Address of Exhibitor.
STEAM HAMMERS, STAMPS, AND STRIKERS.	
Massey, B. & S.	Openshaw - Manchester.
STEAM PUMPS, AND INJECTORS.	
Fison, J. P.	Feversham Works - Cambridge.
Gwynne, J. & H.	Hammersmith - London.
Gwynne & Co.	Essex-street Works - London.
Pickering, J.	Globe Works - Stockton-on-Tees.
STEAM ROAD ROLLERS.	
Aveling & Porter	- Rochester, Kent.
STEEL.	
Brown & Co., John, Limited	Atlas Works - Sheffield.
Cammell, C., & Co., Limited	Cyclops Works - Sheffield.
Great Western Iron Co., Limited	Soudley - Newnham.
Hawksworth (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.
Jessop, W., & Sons, Limited	Park and Brightside Works - Sheffield.
Siemens, C. W.	12, Queen Anne's-gate - London.
West Cumberland Iron & Steel Co., Limited	- Workington, Cumberland.
STEEL RAILS, TYRES, CASTINGS, FORGINGS, SPINDLES, SHUTTERS, AND OTHER GOODS.	
Great Western Iron Co., Limited	Soudley - Newnham.
Hawksworth (Wilson), Ellison, & Co.	Carlisle Works - Sheffield.
Houghton, W. D.	Friars Green Mill - Warrington.
Ward & Payne	West-street - Sheffield.
STOKERS (MECHANICAL).	
Smith, Dillwyn	153, Duke-street - Liverpool.
STONE DRESSING MACHINES, STONE BREAKING MACHINES.	
Dunston Engine Works Company	- Gateshead-on-Tyne.
Shearer, H.	21, Great George-street, Westminster- London.
STONE, STONEWARE, MARBLE WORK, &c.	
Bessbrook Granite Works	- Bessbrook, Ireland.
Brooke, E., & Sons	Field House - Huddersfield.
Brownfield, W., & Son	- Cobridge, Staffordshire.
Campbell, Hugh, & Son	Newry Granite Polishing Works, Moor Quarries - Newry.
Dean, H.	- Southam, Rugby.
Doolin, Walter	23, Westland-row - Dublin.

Object, and Name of Exhibitor.	Address of Exhibitor.
STONE, STONEWARE, &c.—*cont.*	
Doulton, H., & Co.	63, High-street, Lambeth - London.
Doulton & Watts	Lambeth Pottery, Lambeth - London.
Great North of Scotland Granite Co., Limited	- - - - Peterhead, Scotland.
Hunter, J.	209, King-street - - Aberdeen.
Lindley, R. C.	- - - - Mansfield, Nottingham.
Macdonald, A., Field, & Co.	Aberdeen Granite Works - Aberdeen.
Price, J. & C., & Brothers	69, Victoria-street - - Bristol.
Shearer, Smith, & Co.	21, Great George-street - London.
Stiff, J., & Sons	High-street, Lambeth - London.
STOVES, RANGES, AND GRATES, FENDERS, AND FIRE-IRONS.	
Barnard, Bishop, and Barnards	Norfolk Ironworks - - Norwich.
Clough, S. W.	Stanningley - - near Leeds.
Doulton & Co.	48, High-street, Lambeth - London.
Feetham, M., & Co.	9, Clifford-street - - London.
Gregory, J.	South Park - - - Lincoln.
Heaps & Wheatley	- - - - Brotherton, Normanton, Yorkshire.
Kerr, E.	84, Talbot-street - - Dublin.
Perkins, A. M., & Sons	Seaford-street, Regent's-square, Gray's Inn-road - - London.
Smart, T. W.	Queens-road, Buckhurst Hill - London.
Steel & Garland	Wharncliffe Works - - Sheffield.
Thornton, E.	12, Richmond-road - - Bradford.
STRAW PLAIT AND FINISHED ARTICLES.	
Humbert, H.	30, Barbican - - London.
STREET SWEEPING AND SCRAPING MACHINE.	
Smith, W., & Sons	- - - - Barnard Castle, Durham.
SUGAR MACHINERY.	
Mirrlees, Tait, & Watson	Scotland-street Ironworks - Glasgow.
SURGICAL AND MEDICAL INSTRUMENTS AND APPLIANCES.	
Glasgow Apothecaries Co.	34, Virginia-street - - Glasgow.
Haywood, J. S.	Castle Gate - - - Nottingham.
Lang, J. & J.	13, Charterhouse-buildings, Aldersgate-street - - London.
Lee, R. J., Dr.	4, Savile-row - - London.
Lynch & Co.	171A, Aldersgate-street - London.
Mayer & Meltzer	71, Great Portland-street - London.
Pulvermacher, I. L.	194, Regent-street - - London.
Rein, F. C., Mrs.	108, Strand - - - London.
Rein, F. C., & Son	108, Strand - - - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
TABLE FOUNTAINS.	
Storer, J. - - - -	Stamford Brook, Hammersmith - Middlesex.
TAILORS' MACHINERY.	
Sanson, R. B. - - -	87, Globe-road, Mile End-road - London.
TANNING MATERIAL.	
Hooper, Cleeve, W., & Sons -	51, Weston-street, Bermondsey - London.
Sands Bros. & Co. - -	Salford Chemical Works - - Manchester.
TAPESTRY.	
Hall, T. - - - - -	8, George-street - - - Edinburgh.
TELEGRAPHIC APPARATUS AND MATERIALS.	
India-rubber, Gutta Percha, and Telegraph Works Co., Limited - - - -	100, Cannon-street - - - London.
Siemens Brothers - -	12, Queen Anne's-gate - - London.
Telegraphic Construction and Maintenance Co. - -	38, Old Broad-street - - London.
Wier, M. A. - - -	33, Abchurch-lane - - London.
TERRA-COTTA WORK.	
Brooke, E., & Sons - -	Field House - - - - Huddersfield.
Doulton, H., & Co. - -	63, High-street, Lambeth - - London.
Holland, W. T. - - -	- - - - - Llanelly, South Wales.
Jennings, G. - - -	Palace Wharf, Stangate - - London.
Johnson & Co. - - -	Ditchling Potteries - - - Sussex.
Lindsay & Anderson - -	Lilliehill Works - - - Dunfermline, Scotland.
Matthews, J. - - -	Royal Pottery - - - Weston-super-Mare, Somersetshire.
Maw & Co. - - -	Benthall Works - - - Broseley, Shropshire.
Reynolds, J. G. - - -	9, Old Ford-road - - - London.
Stiff, J., & Sons - - -	High-street, Lambeth - - London.
Tinworth, G. - -	122, Hill-street, Walworth - - London.
Watcombe Terra - Cotta Co., Limited - - - -	- - - - - Torquay, South Devon.
Wood & Ivery - - -	Albion Brick Works - - West Bromwich, Staffordshire.
THRASHING MACHINES.	
Fison, J. P. - - -	Feversham Works - - - Cambridge.
TICKETTING MACHINE.	
Coats, J. & P. - - -	Ferguslie Thread Works - - Paisley.
TILES, ENCAUSTIC, AND OTHERS.	
Brownhills Pottery Co. -	- - - - - Tunstall, Staffordshire.
Campbell Brick & Tile Company - - - - -	- - - - - Stoke-on-Trent.
Colthurst, Symonds, & Co. -	- - - - - Bridgwater, Somerset.
Cox & Sons - - -	28, 29, 31, Southampton-street, Strand London.
Craven, Dunnill, & Co., Limited - - - - -	Jackfield Works - - near Ironbridge, Salop.

Object, and Name of Exhibitor.	Address of Exhibitor.
TILES, ENCAUSTIC, &c.—*cont.*	
Eastwood & Co., Limited -	Wellington, Wharf, Belvedere-road, Lambeth - - - - London.
Gibbs & Moore - - -	89, Southampton-row - - London.
Holland, W. T. - - -	- - - - - Llanelly, North Wales.
Johnson & Co. - - -	Ditchling Potteries - - - Sussex.
Matthews, E. - - -	377, Oxford-street - - - London.
Maw & Co. - - -	Benthall Works - - - Broseley, Salop.
Minton, Hollins, & Co. - -	- - - - - Stoke-on-Trent.
Minton's China Works - -	- - - - - Stoke-on-Trent.
Stanley Brothers - -	Midland Tile Works - - Nuneaton, Warwickshire.
Stiff, J., & Sons - - -	High-street, Lambeth - - London.
TIN, TIN AND TERNE PLATES, TIN WORK, TIN FOIL.	
Ash & Lacy - - -	Meriden-street - - - Birmingham.
Baldwin, E. P. & W. - -	Wilden Works - - near Stourport, Worcestershire.
Governor & Company of Copper Miners in England - -	Cwm Avon Works - - - Taibach, Glamorganshire, South Wales.
Morewood, E., & Co. - -	Coleridge House - - - Swansea.
Nash, H., & Co. - - -	12 and 14, Tower-buildings North, Water-street - - - Liverpool.
Swansea Tin Plate Co. - -	Swansea Tin Plate Works - - Swansea.
Hatton, Sons, & Co. - -	Broadwater Works - - - Kidderminster.
TISSUE PAPER.	
Fletcher, R., & Sons - -	Kersley Works - - - Stoneclough, nr. Manchester.
TOBACCO MACHINERY.	
Andrew, J. E. H. - - -	Waterloo-road - - Stockport, Cheshire.
TOOLS, EDGE TOOLS, AND OTHERS.	
Addis, J. B., & Sons - -	Arctic Works - - - Sheffield.
Baker, W.- - - -	10, Pembroke-street, Bingfield-street, Caledonian-road.
Beck, R. & J. - - -	31, Cornhill - - - London.
Brooks & Cooper - -	Mousehole Forge - - - Sheffield.
Fussell, J., Sons, & Co. - -	- - - - - Frome, Somerset.
Hardy Patent Pick Company, Limited - - - -	Mining Tool Works, Ecclesall-road - Sheffield.
Hawksworth (Wilson), Ellison, & Co. - - - -	Carlisle Works - - - Sheffield.
Heap, J., & Co., Limited - -	Lee-street - - - - Oldham.
Phosphor Bronze Company, Limited - - - -	139, Cannon-street - - - London.
Pullinger, C. - - -	- - - - - Selsey, near Chichester, Sussex.
Ward & Payne - - -	West-street - - - Sheffield.
Wills, A. W. - - -	Park Mills - - - - Nechells, Birmingham.
Woodfield, W., & Sons - -	Easemore Works - - Redditch.
Wright, P., & Sons - -	Constitution Hill Works - - Dudley, Worcestershire.

Object, and Name of Exhibitor.	Address of Exhibitor.
TRAVELLING ARTICLES, TRUNKS, &c.	
Bliss, W., & Sons	Chipping Norton, Oxfordshire.
Bussey, G. G., & Co.	Museum Works, Rye-lane, Peckham London.
Hepworth, B., & Son	New Wakefield Mill - Dewsbury, Yorkshire.
Hoe, R., & Sons	44, Leadenhall-street - London.
TUBES, TUBE EXPANDERS AND SCRAPER.	
Brooks, H., &. Co.	31, Cumberland-market - London.
Clay, R.	58, Finborough-road, South Kensington - London.
Phosphor Bronze Company, Limited	139, Cannon-street - London.
UMBRELLAS AND PARASOLS.	
Davis & Wilson	Sun-street, West - Birmingham.
Martin, W. H.	64 and 65, Burlington Arcade, Piccadilly - London.
Sangster & Co.	140, Regent-street - London.
Swaine & Adeney	185, Piccadilly - London.
VARNISHES.	
Adams, J.	Victoria Park - Sheffield.
Mackay, J.	119, George-street - Edinburgh.
Rowney, G., & Co.	52, Rathbone-place - London.
Turner, C., & Son	7, Broad-street, Bloomsbury - London.
Williams, M.	Britannia Varnish Works - Wigan.
VICES, ANVILS, &c.	
Brooks & Cooper	Mousehole Forge - Sheffield.
Wright, P., & Sons	Constitution Hill Works - Dudley.
WASHING AND IRONING MACHINES AND FLUIDS.	
Air Burning Company, Limited	118, Green-street - Glasgow.
Pullinger, C.	Selsey, near Chichester, Sussex.
WATER SUPPLY, APPARATUS AND FITTINGS, WATER BOILING APPARATUS, WATER METERS.	
Dennis, T. H. P., & Co.	Anchor Ironworks - Chelmsford.
Graham & Co.	Premier Boiler Works, Premier-road Halifax.
Heaps & Wheatley	Brotherton, Normanton, Yorkshire.
Kimpton, T.	2 and 3, Barnard's Inn, Holborn - London.
Stockman, B. P., C.E.	3, Poets' Corner - Westminster Abbey.
Thornton, E.	12, Richmond-road - Bradford.
Wier, M. A.	33, Abchurch-lane - London.
Wright, W.	Vulcan Foundry - Coatbridge, Scotland.
Zimdars, C. E.	28, Red Lion-square - London.

Object, and Name of Exhibitor.	Address of Exhibitor.
WATERPROOF ARTICLES.	
Turner, G., & Co. - -	94, Gracechurch-street - - London.
Wellock, J., & Co. - -	62 and 64, Broom-street - - Bradford.
WAX AND WAX CANDLES, SEALING WAX.	
Blackwood, J., & Co. - -	18, Bread-street-hill - - - London.
Field, J. C., & J. - - -	Lambeth Marsh - - - London.
Lovey, E. - - - -	- - - - Ponsnooth, Perran-ar-worthal, Cornwall.
Lyons, W. - - - -	Park-street - - - Manchester.
Stephens, H. C. - - -	171, Aldersgate-street - - London.
Waterston, G., & Son - -	56, Hanover-street - - - Edinburgh.
WEIGHTS AND WEIGHING MACHINES.	
Clarke & Dunham - -	69, Mark-lane - - - London.
Corcoran, Witt, & Co. - -	28, Market-buildings, Mark-lane - London.
WHEAT.	
Delf, Captain - - -	Great Bentley - - - Colchester.
WHEEL CLEANING MACHINE.	
Ambler, W. - - -	17, Elizabeth-street - - Bradford.
WHIPS AND WALKING STICKS.	
Davis & Wilson - - -	Sun-street, West - - - Birmingham.
Martin, W. H. - - -	64, 65, Burlington Arcade - - London.
Swaine & Adeney - -	185, Piccadilly - - - London.
WINES, SPIRITS, CIDER, PERRY, &c.	
Bernard & Co. - - -	The Distillery - - - Leith.
Burke, E. & J. - - -	16, Bachelor's Walk - - Dublin.
Cork Distilleries Co. - -	- - - - - Cork.
Goodall, Backhouse, & Co. -	Boar-lane - - - - Leeds.
Grant, T. - -	Distillery - - - - Maidstone, Kent.
Johnson Still Company, Limited - - - -	Rye Vale Distillery - - Leixlip, near Dublin.
Mott & Co. - - -	18, Galltree-gate - - - Leicester.
Muir, James, & Son - -	Calton Hill Brewery - - Edinburgh.
Pendock Brothers - -	Queen-street Wharf - - - Bristol.
Richardson, Earp, & Slater -	Trent and Northgate Brewery - Newark-on-Trent.
WIRE AND WIREWORK.	
Brown, J. B., & Co. - -	90, Cannon-street - - - London.
Corcoran, Witt, & Co. - -	28, Market-buildings, Mark-lane - London.
Edge & Sons - - -	Coalport Works - - - Shlfnal, Shropshire.
Greening, N., & Sons - -	- - - - - Warrington.
Hawksworth (Wilson), Ellison, & Co. - - - -	Carlisle Works - - - Sheffield.
Houghton, W. D. - - -	Friars Green Mill - - - Warrington.

Object, and Name of Exhibitor.	Address of Exhibitor.
WIRE AND WIREWORK.—*cont.*	
Phosphor Bronze Company, Limited	139, Cannon-street - London.
Smith, F., & Co.	Caledonia Works - Halifax.
Tayler, D. F., & Co.	New Hall Works - Birmingham.
Warrington Wire Rope Works	32, Redcross-street - Liverpool.
WOOD, WOODWORK, AND WOOD WORKING MACHINERY.	
Bullivant, T.	104, Ledbury-road, Bayswater - London.
Edwards, G.	149, Brompton-road - London.
Keith & Co.	6, Denmark-street, Soho - London.
Roberts, W.	139, Derby-road - Bootle, near Liverpool.
WOOL, WOOLLEN, AND WORSTED YARNS.	
Bowes, J. L., & Brother	11, Dale-street - Liverpool.
Mill Hill, Wool and Rag Extracting Company, Limited	Mill Hill Works - Huddersfield.
Smith, D., & Co., Limited	Kensington Works - Halifax.
WOOL AND WORSTED WORKING MACHINERY.	
Nussey & Leachman	- Leeds.
Smith, J. & S.	Low Bridge Works - Keighley, Yorkshire.
WOOLLEN, WORSTED, AND MIXED FABRICS.	
Andrews, H., & Co.	29, Albion-street - Leeds.
Birchall, J. D., & Co.	Wellington and Burley Mills - Leeds.
Bliss, W., & Sons	- Chipping Norton, Oxfordshire.
Brigg, J. F., & Co.	- Huddersfield.
Bubb & Co.	Southfield Mills - near Stroud.
Buckley, J., & Co.	Moorcroft Mills - Delph, near Manchester.
Buckley, J. E. & G. F.	Linfitt Mills - Delph, near Manchester.
Carr, I., & Co.	Twerton Mills - Bath.
Davies, R., & Sons	Stonehouse Mills - Gloucestershire.
Hargreave & Nusseys	Farnley Low Mills - Leeds.
Hepworth, B., & Son	New Wakefield Mills - Dewsbury.
Hooper, C., & Co.	Eastington Mills - Stonehouse, Gloucestershire.
King, W.	Gilroyd and Albert Mills - Morley, near Leeds.
Little, J. W., & Co.	- Leeds.
Mahony, M., & Brothers	3, Camden Quay - Cork.
Marling, G., & Co.	Ebley and Stanley Mills - Stroud, Gloucestershire.
McGee, J. G., & Co.	30, 32, 34, High-street - Belfast.
Salter, S., & Co.	Home Mills - Trowbridge, Wiltshire.
Williams, E. G., & Co.	- Bradford.
WRITING DESKS, &c.	
Schildberg, H., & Co.	26, Moorgate-street - London.
Webster, H.	22, Litchfield-street, Soho - London.
ZINC.	
Zobel, C. F. J.	139, Euston-road - London.

LIST

Of Articles of Produce and Manufacture which are admitted to the United States Free of Duty.

Acids: arsenious, crude; boracic; nitric, not chemically pure; muriatic; oxalic; picric and nitro-picric; succinic; sulphuric; but carboys containing acids shall be subject to the same duty as if empty; and all acids of every description used for chemical and manufacturing purposes not otherwise provided for.

Aconite, root, leaf, and bark.

Agaric.

Agates, unmanufactured.

Albumen and lactarin.

Alcornoque.

Alkanet root.

Alkekengi.

Alizarine.

Almond shells.

Aloes.

Aluminium.

Amber beads.

Ambergris.

Amber gum.

American manufactures of casks, barrels, or carboys and other vessels, and grain bags, (the manufacture of the United States,) if exported containing American produce, and declaration be made of intent to return the same empty under such regulations as shall be prescribed by the Secretary of the Treasury.

American barrels and grain bags, the manufacture of the United States, when exported filled with American products or exported empty, and returned filled with foreign products, may be returned to the United States free of duty, under such rules and regulations as shall be prescribed by the Secretary of the Treasury. These provisions shall apply to and include shooks when returned as barrels or boxes as aforesaid.

Ammonia, crude.

Angelica root.

Aniline oil, crude.

Anmals brought into the United States temporarily and for a period not exceeding six months, for the purpose of exhibition or competition for prizes offered by any agricultural or racing association; but a bond shall be first given, in accordance with the regulations to be prescribed by the Secretary of the Treasury, with the condition that the full duty

Animals—*continued.*

of which such animals would otherwise be liable shall be paid in case of their sale in the United States, or if not re-exported within six months.

Animals, alive, specially imported for breeding purposes from beyond the seas, shall be admitted free, upon proof thereof satisfactory to the Secretary of the Treasury, and under such regulations as he may prescribe; and teams of animals, including their harness and tackle, actually owned by persons immigrating to the United States with their families from foreign countries, and in actual use for the purposes of such immigration, shall also be admitted free of duty, under such regulations as the Secretary of the Treasury may prescribe.

Annatto, roncou, rocou, or Orleans, and all extracts of.

Annato seed.

Antimony, ore, and crude sulphuret of.

Aqua fortis.

Argal dust.

Argols, crude.

Arsenic.

Arseniate of aniline.

Articles, the growth, produce, and manufacture of th
United States, when returned in the same condi
tion as exported; but proof of the identity of suc
articles shall be made under regulations to be pre
scribed by the Secretary of the Treasury, and
such articles were subject to internal tax at th
time of exportation, such tax shall be proved
have been paid before exportation and not refunde

Articles imported for the use of the United State
provided that the price of the same did not inclu
the duty.

Asbestos, not manufactured.

Asses' skins, raw, unmanufactured.

Balm of Gilead.

Balsams: copaiva, fir or Canada, Peru, and tolu.

Bamboo-reeds, no further manufactured than cut i
suitable lengths for walking sticks or canes, or
sticks for umbrellas, parasols, or sun-shades.

Bamboos, unmanufactured.

Barrels, of American manufacture, exported filled w
domestic petroleum and returned empty, under su
regulations as the Secretary of the Treasury m

rrels—*continued.*
prescribe, and without requiring the filing of a declaration at time of export of intent to return the same empty.
rilla.
rks ; Quilla, Peruvian, Lima, calisaya, the all cinchona barks, canella alba, pomegranate, croton, cascarilla, and all other barks not otherwise provided for.
ans, vanilla, or vanilla plants.
ll feathers and downs.
lladonna, root and leaf.
ls, broken, and bell-metal, broken and fit only to be re-manufactured.
ls, old, and bell-metal.
rries, nuts, and vegetables for dyeing, or used for composing dyes, not otherwise provided for.
oar stones.
ds, stuffed.
ds, singing and other, and land and water-fowls.
muth.
er apples, colocynth, coloquintida.
ck salts.
ck tares.
dders, crude, and all integuments of animals not otherwise provided for.
ogna sausages.
ting cloths.
es, crude and not manufactured, burned, calcined, ground, or steamed.
ne-dust and bone-ash for manufacture of phosphates and fertilizers.
ks which shall have been printed and manufactured more than 20 years at the date of importation.
ks, maps, and charts imported by authority for the use of the United States or for the use of the Library of Congress. But the duty shall not have been included in the contract or price paid.
ks, maps, and charts, specially imported, not more than two copies in any one invoice, in good faith for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts, or for the use or by the order of any college, academy, school, or seminary of learning in the United States.
ks, professional, of persons arriving in the United States.
ks, household effects, or libraries, or parts of libraries, in use of persons or families from foreign countries, if used abroad by them not less than one year, and not intended for any other person or persons, nor for sale.
ate of lime.

Borax, crude.
Brazil paste.
Brazil pebbles for spectacles, and pebbles for spectacles, rough.
Brazil-wood, braziletto, and all other dye-woods, in sticks.
Breccia, in blocks or slabs.
Brime.
Brimstone, crude.
Bromine.
Buchu leaves.
Bullion, gold and silver.
Burgundy pitch.
Burr-stone in blocks, rough or unmanufactured, and not bound up into mill-stones.

Cabinets of coins, medals, and all other collections of antiquities.
Cadmium.
Calamine.
Camphor, crude.
Cantharides.
Carnelian, unmanufactured.
Castor or castoreum.
Catechu or cutch.
Cat-gut strings or gut cord for musical instruments.
Cat-gut or whip-gut, unmanufactured.
Chalk and cliff-stone, unmanufactured.
Chamomile flowers.
Charcoal.
China-root.
Chloride of lime.
Cinchona-root.
Citrate of lime.
Coal, anthracite.
Coal stores of American vessels, but none shall be unloaded.
Cobalt, ore of.
Cocculus indicus.
Cochineal.
Cocoa or cacao, crude, and fibre, leaves, and shells of.
Coffee.
Coins ; gold, silver, and copper.
Coir and coir-yarn.
Colcothar, dry, or oxide of iron.
Collections of antiquity, specially imported and not for sale.
Colt's-foot (crude drug).
Columbo root.
Conium cicuta or hemlock, seed and leaf.
Contrayerva root.
Copper, old, taken from the bottom of American vessels, compelled by marine disaster to repair in foreign ports.

Copper, when imported for the United States Mint.
Coral, marine, unmanufactured.
Cork-wood or cork-bark, unmanufactured.
Cotton.
Cowage down.
Cow or kine pox, or vaccine virus.
Cubebs.
Cudbear.
Curling-stones or quoits.
Curry and curry powders.
Cuttle fish bone.
Cyanite or kyanite.

Diamonds, rough or uncut, including glaziers' diamonds.
Diamond-dust or bort.
Divi-divi.
Dragon's blood.
Dried and prepared flowers.
Dried blood.
Dried bugs.
Dyeing or tanning; articles in a crude state used in dyeing or tanning, not otherwise provided for.

Eggs.
Elecampane-root.
Ergot.
Esparto, or Spanish grass, and other grasses, and pulp of, for the manufacture of paper.

Fans, common palm-leaf.
Farina.
Fashion plates engraved on steel or on wood, coloured or plain.
Felt, adhesive, for sheathing vessels.
Fibrin, in all forms.
Firewood.
Fish, fresh, for immediate consumption.
Fish for bait.
Flint, flints, and ground flint stones.
Flowers, leaves, plants, roots, barks, and seeds for medicinal purposes in a crude state, not otherwise provided for.
Foliæ digitalis.
Foreign machinery for the manufacture of ramie, jute, and flax fabrics.
Foreign grain bags, exported filled and returned empty.
Fossils.
Fruit-plants, tropical and semi-tropical, for the purpose of propagation or cultivation.
Fur-skins of all kinds not dressed in any manner.

Galanga or galangal.
Garancine.
Gentian-root.
Ginger root.
Ginseng root.
Glass, broken in pieces, and old glass which cannot be cut for use, and fit only to be re-manufactured.
Goat-skins, raw.
Goldbeaters' molds and goldbeaters' skins.
Gold size.
Grease, for use as soap-stock only, not otherwise provided for.
Guano and other animal manures.
Gums: arabic, Jeddo, Senegal, Barbary, East India, Cape, Australian, gum benzoin or benjamin, gum copal, sandarac, dammar, gamboge, cowrie, mastic, shellac, tragacanth, olibanum, guaiac, myrrh, bdellium, garbanum, and all gums not otherwise provided for.
Gunny-bags and gunny-cloth, old or refuse, fit only for re-manufacture.
Gut and worm-gut, manufactured or unmanufactured, for whip and other cord.
Guts, salted.
Gutta-percha, crude.

Hair, all horse, cattle, cleaned or uncleaned, drawn or undrawn, but unmanufactured.
Hair of hogs, curled for beds and mattresses, and not fit for bristles.
Handle-bolts.
Hellebore-root.
Hemlock-bark.
Hide cuttings, raw, with or without the hair on, for glue stock.
Hide-rope.
Hides, raw or uncured, whether dry, salted or pickled, and skins, except sheepskins with the wool on, Angora goatskins, raw, without the wool, unmanufactured, asses' skins, raw, unmanufactured.
Hones and whetstones.
Hoofs, horns, and horn-tips.
Horn-strips.
Hop roots for cultivation.
Hyoscyamus, or henbane leaf.

Ice.
India-rubber, crude, and milk of.
Indian hemp (crude drug).
Indigo.
India or Malacca joints, not further manufactured than cut into suitable lengths for the manufactures into which they are intended to be converted.
Iodine, crude.
Ipecac.
Iridium.
Iris, orris root.
Isinglass, or fish glue.
Istle, or tampico fibre.
Ivory and vegetable ivory, unmanufactured.

Jalap.
Jet, unmanufactured.
Joss-stick, or joss light.
Juniper and laurel berries.
Junk, old.
Jute butts.

Kelp.
Kryolite.

Lac, dye, crude, seed, button, stick, and shell.
Lac spirits.
Lac sulphur.
Lava, unmanufactured.
Leather, old scrap.
Leaves, all, not otherwise provided for.
Leeches.
Licorice-root.
Life-boats and life saving apparatus, specially imported by societies incorporated or established to encourage the saving of human life.
Lithographic stones, not engraved.
Litmus and all lichens, prepared or not prepared.
Loadstones.
Logs, and round unmanufactured timber not otherwise provided for, and ship timber.

Madder and munjeet, or Indian madder, ground or prepared, and all extracts of.
Magnets.
Manganese, oxide and ore of.
Manna.
Manuscripts.
Marrow, crude.
Marsh-mallows.
Matico leaf.
Medals, of gold, silver, or copper.
Meerschaum, crude or raw.
Mercury or quicksilver.
Mica and mica waste.
Mineral waters, all not artificial.
Models of inventions and other improvements in the arts. But no article or articles shall be deemed a model or improvement which can be fitted for use.
Moss, Iceland, and other mosses, crude.
Moss, sea-weed, and all other vegetable substances used for beds and mattresses.
Murexide (a dye).
Musk and civet, crude, in natural pod.
Mustard seed, brown and white.
Nitrate of soda, or cubic nitre.

Nut galls.
Nuts, cocoa and Brazil or cream.
Nux vomica.

Oak-bark.
Oakum.
Oil-cake.
Oil, spermaceti, whale, and other fish of American fisheries; and all other articles the produce of such fisheries.
Oil, essential, fixed or expressed, viz., almonds; amber, crude and rectified; ambergris; anise, or anise-seed; anthos, or rosemary; bergamot; cajeput; caraway; cassia; cedrat; chamomile; cinnamon; citronella or lemon-grass; civet; fennel; jasmine, or jessamine; juglandium; juniper; lavender; mace; ottar of roses; poppy; sesame, or sesamum-seed, or bene; thyme; red, or origanum; thyme, white; valerian.
Olives, green or prepared.
Orange and lemon-peel, not preserved, candied, or otherwise prepared.
Orange buds and flowers.
Orchil, or archil, in the weed or liquid.
Ores of gold and silver.
Orpiment.
Osmium.
Oxidizing-paste.

Palladium.
Palm and cocoa-nut oil.
Palm-leaf, unmanufactured.
Palm-nuts and palm-nut kernels.
Paper-stock, crude, of every description, including all grasses, fibres, rags, other than wool, waste, shavings, clippings, old paper, rope-ends, waste rope, waste bagging, gunny bags and gunny cloth, old or refuse, to be used in making and fit only to be converted into paper, and unfit for any other manufacture, and cotton-waste, whether for paper-stock or other purposes.
Pearl, mother of.
Pellitory-root.
Persis, or extract of archil, and cudbear.
Personal and household effects, not merchandise, of citizens of the United States dying abroad.
Peruvian bark.
Pewter and Britannia metal, old, and fit only to be re-manufactured.
Phanglein.
Philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not imported for sale.

Phosphates, crude or native, for fertilizing purposes.
Plants, trees, shrubs, roots, seed-cane, and seeds imported by the Department of Agriculture or the United States Botanical Garden.
Plaster of Paris, or sulphate of lime, unground.
Platina, unmanufactured.
Platinum vases or retorts for chemical uses, or parts thereof.
Plumbago.
Polishing stones.
Polypodium.
Potassa, muriate of.
Pulu.
Pumice and pumice-stones.

Quassia-wood.
Quick-grass root.
Quicksilver.
Quills, prepared or unprepared.

Rags, of cotton, linen, jute, and hemp, and paper-waste, or waste or clippings of any kind fit only for the manufacture of paper, including waste rope and waste bagging.
Railroad ties, of wood.
Rattans and reeds, unmanufactured.
Regalia and gems, and statues and specimens of sculpture, where specially imported, in good faith, for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts, or for the use or by the order of any college, academy, school, or seminary of learning in the United States.
Rennets, raw or prepared.
Resins, crude, not otherwise provided for.
Rhubarb.
Root flour.
Rose leaves.
Rottenstone.

Saffron and safflower, and extract of.
Saffron cake.
Sago, sago crude, and sago flour.
Saint John's beans.
Salacine.
Salep, or saloup.
Sandal wood.
Sarsaparilla, crude.
Sassafras bark and root.
Sauerkraut.
Sausage skins.
Scammony, or resin of scammony.
Seaweed, not otherwise provided for.
Seeds: cardamom, caraway, coriander, fenugreek, fennel, cummin, and other seeds not otherwise provided for.
Seeds: anise, anise star, canary, chia, sesamum, sugar cane, sugar-beet, and seeds of forest trees.
Senna, in leaves.
Shark skins.
Shells of every description, not manufactured.
Shingle-bolts and stave-bolts, and "heading-bolts" shall be held and construed to be included under the term "stave-bolts."
Ship-planking.
Shrimps, or other shell fish.
Silk, raw, or as reeled from the cocoon, not being doubled, twisted, or advanced in manufacture any way, and silk cocoons and silk waste.
Silk-worm eggs.
Skeletons, and other preparations of anatomy.
Skins, dried, salted, or pickled, ten per centum ad valorem.
Snails.
Soap-stocks.
Sparterre for making or ornamenting hats.
Specimens of natural history, botany, and mineralogy, when imported for cabinets as objects of taste or science, and not for sale.
Spunk.
Spurs and stilts used in the manufacture of earthen or crockery ware.
Squills or silla.
Staves-acre, crude.
Storax or styrax.
Straw, unmanufactured.
Strontia, oxide of, or protoxide of strontium.
Substances expressly used for manure.
Sugar-beet seed.
Sugar of milk.
Sweepings of gold or silver.

Talc.
Tamarinds.
Tapioca, cassava, or cassada.
Tea.
Tea plants.
Teasels.
Teeth, unmanufactured.
Terra-alba, aluminous.
Terra japonica.
Tica, crude.
Tin in pigs, bars, or blocks, and grain-tin.
Tonquin, tonqua, or tonka beans.
Tortoise and other shell, unmanufactured.
Tripoli.

urmeric.
urtles.
ypes, old, and fit only to be re-manufactured.

mbrella-sticks, crude, to wit, all partridge, hair-wood, pimento, orange, myrtle, andother sticks and canes in the rough, or no further manufactured than cut into lengths suitable for umbrella, parasol, or sun-shade sticks or walking canes.
ranium, oxide of.

enice turpentine.
erdigris, or subacetate of copper.

afers.
ax, bay or myrtle, Brazilian and Chinese.
earing apparel in actual use, and other personal effects (not merchandise), professional books, implements, instruments, and tools of trade, occupation, or employment of persons arriving in the United States. But this exemption shall not be construed to include machinery or other articles imported for use in any manufacturing establishment, or for sale.
halebone, unmanufactured.

Woad, weld or pastel.
Wood-ashes, and lye of, and beet-root ashes.
Woods, poplar, or other woods for the manufacture of paper.
Woods, namely, cedar, lignum-vitæ, lance-wood, ebony, box, granadilla, mahogany, rose-wood, satin-wood, and all cabinet woods, unmanufactured.
Works of art: paintings, statuary, fountains and other works of art, the production of American artists. But the fact of such production must be verified by the certificate of any consul or minister of the United States indorsed upon the written declaration of the artist.
Works of art: paintings, statuary, fountains and other works of art, imported expressly for presentation to national institutions or to any state, or to any municipal corporation.
Worm-seed, Levant.

Xylonite or Xylotile.

Yams.
Yeast-cakes.

Zaffer.

Extract from Revised Statutes, approved June 22, 1874.

Whenever the President of the United States shall receive satisfactory evidence that the Imperial Parliament f Great Britain, the Parliament of Canada, and the Legislature of Prince Edward's Island have passed laws on heir part to give full effect to the provisions of the treaty between the United States and Great Britain signed the city of Washington on the eighth day of May, eighteen hundred and seventy-one, as contained in articles ighteenth to twenty-fifth, inclusive, and article thirtieth of said treaty, he is hereby authorised to issue his roclamation declaring that he has such evidence, and thereupon, from the date of such proclamation and so ong as the said articles eighteenth to twenty-fifth, inclusive, and article thirtieth of said treaty, shall remain in orce, according to the terms and conditions of article thirty-third of said treaty, all fish oil and fish of all kinds except fish of the inland lakes and of the rivers falling into them, and except fish preserved in oil), being the roduce of the dominion of Canada or of Prince Edward's Island, shall be admitted into the United States free f duty; and whenever the colony of Newfoundland shall give its consent to the application of the stipulations nd provisions of the said articles eighteenth to twenty-fifth of said treaty, inclusive, to that colony, and the egislature thereof and the Imperial Parliament shall pass the necessary laws for that purpose, the above numerated articles, being the produce of the fisheries of the colony of Newfoundland, shall be admitted into he United States free of duty, from and after the date of a proclamation by the President of the United States, eclaring that he has satisfactory evidence that the said colony of Newfoundland has consented, in a due and roper manner, to have the provisions of the said articles eighteenth to twenty-fifth, inclusive, of the said treaty xtended to it, and to allow the United States the full benefits of all the stipulations therein contained, and hall be so admitted free of duty, so long as the said articles eighteenth to twenty-fifth, inclusive, and article hirtieth, of said treaty, shall remain in force, according to the terms and conditions of article thirty-third of aid treaty; but the provisions of this section shall not apply to any articles of merchandise mentioned therein hich were held in bond by the customs officers of the United States on the first day of July, eighteen hundred nd seventy-three.

Whenever any vessel laden with merchandise in whole or in part subject to duty has been sunk in any river, harbour, bay, or waters subject to the jurisdiction of the United States, and within its limits, for the period of two years, and is abandoned by the owner thereof, any person who may raise such vessel shall be permitted to bring any merchandise recovered therefrom into the port nearest to the place where such vessel was so raised, free from the payment of any duty thereupon, and without being obliged to enter the same at the custom house; but under such regulations as the Secretary of the Treasury may prescribe.

The produce of the forests of the State of Maine upon the Saint John River and its tributaries, owned by American citizens, and sawed or hewed in the province of New Brunswick by American citizens, the same being unmanufactured in whole or in part, which is now admitted into the ports of the United States free of duty, shall continue to be so admitted under such regulations as the Secretary of the Treasury shall from time to time prescribe.

The produce of the forests of the State of Maine upon the Saint Croix River and its tributaries, owned by American citizens, and sawed in the province of New Brunswick by American citizens, the same being unmanufactured in whole or in part, and having paid the same taxes as other American lumber on that river, shall be admitted into the ports of the United States free of duty, under such regulations as the Secretary of the Treasury shall from time to time prescribe.

Machinery for the manufacture of beet-sugar, and imported for that purpose solely, shall be exempted from duty.

Machinery for repair may be imported into the United States without payment of duty, under bond, to be given in double the appraised value thereof, to be withdrawn and exported after said machinery shall have been repaired; and the Secretary of the Treasury is authorised and directed to prescribe such rules and regulations as may be necessary to protect the revenue against fraud, and secure the identity and character of all such importations when again withdrawn and exported, restricting and limiting the export and withdrawal to the same port of entry where imported, and also limiting all bonds to a period of time of not more than six months from the date of the importation.

All paintings, statuary, and photographic pictures imported into the United States for exhibition by any association duly authorised under the laws of the United States or any state for the promotion and encouragement of science, art, or industry, and not intended for sale, shall be admitted free of duty under such regulations as the Secretary of the Treasury shall prescribe. But bonds shall be given for the payment to the United States of such duties as are now imposed by law upon any and all of such articles as shall not be re-exported within six months after such importation.

All lumber, timber, hemp, manilla, and iron and steel rods, bars, spikes, nails, and bolts, and copper and composition metal which may be necessary for the construction and equipment of vessels built in the United States for the purpose of being employed in the foreign trade, including the trade between the Atlantic and Pacific ports of the United States, and finished after the sixth day of June eighteen hundred and seventy-two, may be imported in bond, under such regulations as the Secretary of the Treasury may prescribe; and, upon proof that such materials have been used for such purpose, no duties shall be paid thereon; but vessels receiving the benefit of this section shall not be allowed to engage in the coastwise trade of the United States more than two months in any one year, except upon the payment to the United States of the duties on which a rebate is herein allowed.

All articles of foreign production needed for the repair of American vessels engaged exclusively in foreign trade may be withdrawn from bonded warehouses free of duty, under such regulations as the Secretary of the Treasury may prescribe.

That no duty shall be levied or collected on the importation of peltries brought into the territories of the United States, nor on the proper goods and effects, of whatever nature, of Indians passing or repassing the boundary line aforesaid, unless the same be goods in bales or other large packages unusual among Indians, which shall not be considered as goods belonging to Indians, nor be entitled to the exemption from duty aforesaid.

There shall be levied, collected, and paid on the importation of all raw or unmanufactured articles, not herein enumerated or provided for, a duty of 10 per centum ad valorem; and on all articles manufactured in whole or in part, not herein enumerated or provided for, a duty of 20 per centum ad valorem.

LIST

f Articles of Produce and Manufactures chargeable with Duty on being imported into the United States.

n the following calculations, since all customs duties are *only* payable in gold, the dollar has been taken at 4*s.* 2*d.* At the rate of exchange on the 28th of February 1876, which was 4·86 to the £ sterling, this is about $\frac{3}{8}$ths of a penny more than its actual value, as exemplified in Exchange Tables, page 22).

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ *s.* *d.*	
A.				
bsinthe - - - -	$2 per proof gall.	= per proof gall.	0 8 4	
cademies. Books, maps, and charts (not more than two copies in any one invoice), specimens of sculpture, regalia and gems, and statues and specimens of sculpture, specially imported, in good faith, for the use or by the order of any college, school, or seminary of learning -	Free.	—	—	—
„ Philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported for the use of, or of any institution or society incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not for sale -	Free.	—	—	—
ccordeons - - - -	30 per cent.	—	—	30 per cent.
cetate of ammonia - - -	25 cts. per lb.	= per lb.	0 1 $0\frac{1}{2}$	—
„ baryta - - -	25 cts. per lb.	= per lb.	0 1 $0\frac{1}{2}$	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Acetate of iron, strontia, or zinc -	25 cts. per lb.	= per lb.	0 1 $0\frac{1}{2}$	—
„ lead, brown - - -	5 cts. per lb.	= per lb.	0 0 $2\frac{1}{2}$	—
„ lead, white - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ copper - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ magnesia - - -	50 cts. per lb.	= per lb.	0 2 1	—
„ soda - - - -	25 cts. per lb.	= per lb.	0 1 $0\frac{1}{2}$	—
„ lime - - - -	25 per cent.	—	—	25 per cent.
„ potash - - -	25 cts. per lb.	= per lb.	0 1 $0\frac{1}{2}$	—
Acid, acetic, acetous or pyroligneous acid, of specific gravity of 1·047, or less - - -	5 cts. per lb.	= per lb.	0 0 $2\frac{1}{2}$	—
„ „ exceeding the specific gravity of 1·047 - - -	30 cts. per lb.	= per lb.	0 1 3	—
„ arsenious, crude - - -	Free.	—	—	—
„ benzoic - - - -	10 per cent.	—	—	10 per cent.
„ boracic - - - -	Free.	—	—	—
„ carbolic, as a disinfectant - -	20 per cent.	—	—	20 per cent.
„ „ for chemical or manufacturing purposes -	Free.	—	—	—
„ „ crystallized, used for medicinal purposes - -	10 per cent.	—	—	10 per cent.
„ „ liquid - - -	10 per cent.	—	—	10 per cent.
„ chromic - - - -	15 per cent.	—	—	15 per cent.
„ citric - - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ gallic - - - -	$1 per lb.	= per lb.	0 4 2	—
„ muriatic - - - -	Free.	—	—	—
„ nitric, yellow and white - -	10 per cent.	—	—	10 per cent.
„ „ not chemically pure - -	Free.	—	—	—
„ oxalic - - - -	Free.	—	—	—
„ picric and nitro-picric - -	Free.	—	—	—
„ rosalic, so styled - - -	20 per cent.	—	—	20 per cent.
„ succinic - - - -	Free.	—	—	—
„ sulphuric, or oil of vitriol - -	Free.	—	—	—
„ „ fuming (Nordhausen) -	1 ct. per lb.	= per lb.	0 0 $0\frac{1}{2}$	—
„ tannic - - - -	$1 per lb.	= per lb.	0 4 2	—
„ tartaric - - - -	15 cts. per lb.	= per lb.	0 0 $7\frac{1}{2}$	—
Acids, of every description, used for chemical and manufacturing purposes, not otherwise provided for	Free.	—	—	—
Acids, of every description, used for medicinal purposes or in the fine arts, not otherwise provided for - PROVIDED, that carboys containing acids shall be subject to the same duty as if empty.	10 per cent.	—	—	10 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Aconite, root, leaf, and bark - -	Free.	—	—	—
Acoustic apparatus.				
Acorns (powdered), and acorn coffee -	3 cts. per lb.	= per lb.	0 0 1½	—
Adamantine spar, as Emery Stone -	$6 per ton.	= per ton	1 5 0	—
Adhesive felt, for sheathing vessels -	Free.	—	—	—
Adiantum, a crude drug - -	20 per cent.	—	—	20 per cent.
Adzes - - - - -	45 per cent.	—	—	45 per cent.
Aerated waters,* in bottles or jugs containing one quart or less - -	3 cts. each, and 25 per cent.	=per doz.	0 1 6	+ 25 per cent.
„ „ containing more than one quart, 3 cts. for each additional quart or fractional part thereof, and 25 per cent.				
„ „ not in bottles or jugs	30 per cent.	—	—	30 per cent.
Aerial machines, according to materials.				
African fibre, for beds, unmanufactured -	Free.	—	—	—
Agaric - - - - -	Free.	—	—	—
Agate balls and hooks - - -	20 per cent.	—	—	20 per cent.
„ mortars, as stoneware - -	—	—	—	—
Agates, not set - - - -	10 per cent.	—	—	10 per cent.
„ unmanufactured - - -	Free.	—	—	—
„ cut, for bookbinders - -	20 per cent.	—	—	20 per cent.
Agriculture, Department of, or the United States Botanic Garden; plants, trees, shrubs, roots, seed-cane, and seeds imported for - - - -	Free.	—	—	—
Alabaster, ornaments of - -	30 per cent.	—	—	30 per cent.
„ casts of, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale - -	Free.	—	—	—
Albata, unmanufactured or in sheets -	35 per cent.	—	—	35 per cent.
Albums, photographic, of leather and paper - - -	35 per cent.	—	—	35 per cent.

* These are generally put up in half-pint and pint bottles, but it would seem to be the interest of the manufacturer to increase the size of the bottles, otherwise the duty would, in the case of many of these preparations, amount to nearly 75 per cent. of their value.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Albums, same, unbound - -	35 per cent.	—	—	35 per cent.
Albumen - - - -	Free.	—	—	35 per cent.
Alcohol - - - - -	$2 per proof gall.	= per proof gall.	0 8 4	—
Alcohol, amylic, or fusil oil - -	$2 per gall.	= per gall.	0 8 4	—
Alcoholado, so called, as distilled spirits	$2 per proof gall.	= per proof gall.	0 8 4	—
Alcoholometers - - -	40 per cent.	—	—	40 per cent.
Alcornoque, or cork-tree - -	Free.	—	—	—
Ale, porter, and beer, in bottles *- -	35 cts. per gall.	= per gall.	0 1 5½	—
„ „ „ otherwise than in bottles - -	20 cts. per gall.	= per gall.	0 0 10	—
Alizarine, extract of madder - -	Free.	—	—	—
„ artificial, of coal tar, and used by calico printers as a dye, as an unenumerated manufacture - - -	20 per cent.	—	—	20 per cent.
Alkaline silicates - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
Alkanet root - - - -	Free.	—	—	—
Alkekengi - - - -	Free.	—	—	—
Almonds - - - -	6 cts. per lb.	= per lb.	0 0 3	—
„ shelled - - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ paste, as cosmetics - -	50 per cent.	—	—	50 per cent.
„ shells - - - -	Free.	—	—	—
Almond oil - - - -	Free.	—	—	—
„ „ artificial, made of benzole and nitric acid - - -	20 per cent.	—	—	20 per cent.
Aloes, gum - - - -	Free.	—	—	—
Alpaca,† hair of the, or other like animals, the value of which at the last port or place whence exported to the United States, excluding charges in such port, shall be 32 cents or less per lb.	10 cts. per lb. and 11 per cent.	= per lb.	0 0 5	+11 per cent.

* The duty on 100 doz. in bottles would amount to 8*l.* 4*s.* 0¾*d.* in English currency; otnerwise than in bottles, duty at the rate of 30*s.* per barrel in English currency. "The 35 cts. per gallon obviously includes duty on the bottles, as when not bottled pays "but 20 cts. per gallon."—"If it becomes sour on the voyage of importation, is subject to the regular duty for such articles, and "if an abatement is claimed for damage resulting from 'souring,' it does not change the classification."—"Under existing laws "there are no restrictions as to the size of the packages in which beer, ale, and porter may be imported."—"One doz. pint "bottles considered one and one-eighth gallon."

† Rates to be doubled when the same is not imported in the ordinary condition, or is changed to evade the duty, or reduced in value by the admixture of dirt or other foreign substance. Rates to be trebled if scoured.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Alpaca, hair of the, of greater value -	12 cts. per lb. and 10 per cent.	= per lb.	0 0 6	+10 per cent.
„ „ manufactured. *See* Dress Goods (page 137), Clothing (page 119), and Manufactures of Worsted (page 337).				
Alum, patent alum, alum substitute, sulphate of alumina, and aluminous cake	60 cts. per 100 lbs.	= per 100 lbs.	0 2 6	—
Aluminium or aluminum - -	Free.	—	—	—
Amber, gum - - - -	Free.	—	—	—
„ beads - - - -	Free.	—	—	—
Ambergris - - - -	Free.	—	—	—
Amelines of worsted, as manufactures of worsted, viz. :—				
Valued at not over 20 cents per square yard - - - -	6 cts. per square yard and 35 per cent.	= per sq. yard.	0 0 3	+35 per cent.
Valued higher - - -	8 cts. per square yard and 40 per cent.	= per sq. yard.	0 0 4	+40 per cent.
Provided that on all goods weighing 4 ozs. or over per square yard the duty shall be - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
***American** manufactures, to wit :—casks, barrels, or carboys, and other vessels, and grain bags, the manufacture of the United States, if exported containing American produce, and declaration be made of intent to return the same empty, under such regulations as shall be prescribed by the Secretary of the Treasury -	Free.	—	—	—
„ fisheries, all articles the produce of such fisheries -	Free.	—	—	—
Amethysts, not set - - -	10 per cent.	—	—	10 per cent.
„ set - - - -	25 per cent.	—	—	25 per cent.
Ammonia, refined - - -	20 per cent.	—	—	20 per cent.
„ acetate or pyrolignite of -	25 cts. per lb.	= per lb.	0 1 0½	—
„ aqua, or hartshorn (medicinal preparation) - -	40 per cent.	—	—	40 per cent.

* The Act of Feb. 8, 1875 provides that bags, other than of American manufacture, in which grain shall have been actually exported from the United States, may be returned empty to the United States free of duty, under regulations to be prescribed by the Secretary to the Treasury.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Ammonia, carbonate of	20 per cent.	—	—	20 per cent.
„ crude	Free.	—	—	—
„ muriate of	10 per cent.	—	—	10 per cent.
„ sal	10 per cent.	—	—	10 per cent.
„ sulphate of	20 per cent.	—	—	20 per cent.
Ammonium, grains of, or gum ammoniac, a resin	20 per cent.	—	—	20 per cent.
Amomum, or grains of paradise	20 per cent.	—	—	20 per cent.
Amyl of oxyd (so called)	$2½ per lb.	= per lb.	0 10 5	—
Amylic alcohol	$2 per gall.	=per gall.	0 8 4	—
Anatomical preparations	Free.	—	—	—
„ specimens, models or imitations of, in pâpier maché	35 per cent.	—	—	35 per cent.
Anchors or parts thereof	2¼ cts. per lb.	= per 100lbs.	0 9 4½	—
„ so broken, rusty, or old, as to be unfit for use and fit only to be re-manufactured — Provided that the same shall be subject to the full duty if fit for use as anchors by being repaired.	$8 per ton.	= per ton	1 13 4	—
Anchovies,* packed in oil or otherwise, in tin boxes, for each whole box measuring not more than 5 in. long, 4 in. wide, and 3½ in. deep	15 cts. per whole box	=per whole box.	0 0 7½	—
„ for each half box, measuring not more than 5 in. long, 4 in. wide, and 1⅝ in. deep	7½ cts. per half box	=per ½ box	0 0 3¾	—
„ for each quarter box, measuring not more than 4¾ in. long, 3½ in. wide, and 1½ in. deep	4 cts. per quarter box	=per ¼ box	0 0 2	—
„ imported in any other form	60 per cent.	—	—	60 per cent.
Andirons, of cast iron	1½ cts. per lb.	= per 100lbs.	0 6 3	—
Angelica root	Free.	—	—	—
Angora goats, living	Free.	—	—	—

* *Provided* that cans or packages made of tin or other material, containing fish of any kind, admitted free of duty under a existing law or treaty, not exceeding one quart in contents, shall be subject to a duty of 1½ cts. on each can or package, and wh exceeding one quart shall be subject to an additional duty of 1½ cts. for each additional quart or fractional part thereof.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Angora goat skins, raw, without the wool, unmanufactured - -	Free.	—	—	—
„ „ raw or unmanufactured with the wool on - -	30 per cent.	—	—	30 per cent.
Aniline, chemical preparation - -	20 per cent.	—	—	20 per cent.
„ arseniate of - - -	Free.	—	—	—
„ dyes and colours, by whatever name known - -	50 cts. per lb., and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ oil, crude - - -	Free.	—	—	—
„ pulp or paste - - -	20 per cent.	—	—	20 per cent.
Animal carbon - - - -	Free.	—	—	—
„ integuments, not otherwise provided for - - -	Free.	—	—	—
Animal manures - - - -	Free.	—	—	—
„ oils, not otherwise provided for -	20 per cent.	—	—	20 per cent.
Animals, alive, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ for breeding purposes, from beyond the seas (under regulations)* - - -	Free.	—	—	—
„ teams of, including harness and tackle, actually owned by persons immigrating and in actual use (under regulations)* -	Free.	—	—	—
„ brought into the United States temporarily, for exhibition or competition for prizes* -	Free.	—	—	—
Anise seed - - - -	Free.	—	—	—
„ oil - - -	Free.	—	—	—
Annatto - - - - -	Free.	—	—	—
„ extracts of - - -	Free.	—	—	—
„ seed - - - -	Free.	—	—	—
Anodyne, Hoffman's - - -	50 cts. per lb.	= per lb.	0 2 1	—
„ other, as medicinal preparations - - -	40 per cent.	—	—	40 per cent.
Anthos oil - - - -	Free.	—	—	—
Anthracite - - - -	Free.	—	—	—
Antimony, crude, and regulus of -	10 per cent.	—	—	10 per cent.
„ ore of, and crude sulphuret of	Free.	—	—	—
„ tartrate of, or tartar emetic -	15 cts. per lb.	= per lb.	0 0 7½	—
„ white oxide of - -	40 per cent.	—	—	40 per cent.
Antique oil - - - -	50 per cent.	—	—	50 per cent.
Antiquity, collections of, specially imported, and not for sale - - -	Free.	—	—	—

* Circular of Dec. 27, 1870, specifies what affidavits are required.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
Anvils	½ cts. per lb.	= per 100lbs.	£ s. d. 0 10 5	—
Apparatus, philosophical and scientific, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale	Free.	—	—	—
„ life-saving, specially imported	Free.	—	—	—
Apple sauce	35 per cent.	—	—	35 per cent.
Apples	10 per cent.	—	—	10 per cent.
„ bitter	Free.	—	—	—
Aprons, silk	60 per cent.	—	—	60 per cen
Aqua fortis	Free.	—	—	—
Arabic, gum	Free.	—	—	—
Archill, in the weed or liquid	Free.	—	—	—
„ extract of, or persis	Free.	—	—	—
Argentine, or German silver, unmanufactured	35 per cent.	—	—	35 per cent.
„ manufactures of	40 per cent.	—	—	40 per cent.
Architectural plans	25 per cent.	—	—	25 per cent.
Argal dust	Free.	—	—	—
Argols, crude	Free.	—	—	—
„ other than crude or partly refined, as brown tartar	6 cts. per lb.	= per lb.	0 0 3	—
Armenian bole, a cosmetic	50 per cent.	—	—	50 per cent.
„ stone	50 per cent.	—	—	50 per cent.
Arms, fire and side, except swords*	35 per cent.	—	—	35 per cent.
Aromatic cachous	50 per cent.	—	—	50 per cent.
„ vinegar, alcohol or distilled spirits principal ingredients, as alcoholic perfumery	$3 per gall. and 50 per cent.	= per gall.	0 12 6	+ 50 per cent.
same, without alcohol	50 per cent.	—	—	50 per cent
Armour, antique, modern imitations of, made of iron	35 per cent.	—	—	35 per cent
Armour plates, iron	35 per cent.	—	—	35 per cent
„ steel	45 per cent.	—	—	45 per cent
Arrack	$2 per proof gall.	=per proof gall.	0 8 4	—
Arrowroot	30 per cent.	—	—	30 per cent

* Swords are liable to a duty of 45*l.* and sword blades of 35*l.* for every 100*l.* of their declared value. *See* page 302 of the Tari

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Arseniate of aniline - - -	Free.	—	—	—
„ soda - - -	20 per cent.	—	—	20 per cent.
Arsenic - - - - -	Free.	—	—	—
„ sulphide of, or orpiment -	Free.	—	—	—
Arsenious acid, crude - - -	Free.	—	—	—
„ „ other than crude -	20 per cent.	—	—	20 per cent.
Art, works of, imported expressly for presentation to national institutions or to any state, or to any municipal corporation*	Free.	—	—	—
„ by American artists, verified as provided for -	Free.	—	—	—
„ generally, whether paintings, sculpture, enamel or similar artistic productions -	10 per cent.	—	—	10 per cent.
Arts, fine, all acids used in, and not otherwise provided for - -	10 per cent.	—	—	10 per cent.
Articles,† all raw or unmanufactured, not otherwise provided for -	10 per cent.	—	—	10 per cent.
„ imported for the use of the United States - -	Free.	—	—	—
„ made on frames, to wit, caps, gloves, leggings, mitts, socks, stockings, wove shirts and drawers and all similar articles, of whatever material composed, except silk or linen, worn by men, women, or children, and not otherwise provided for - -	35 per cent.	—	—	35 per cent.
„ of grass, osier, palm leaf, whalebone, or willow, not otherwise provided for - -	35 per cent.	—	—	35 per cent.
„ such as card cases, pocket books, shell boxes, souvenirs, and all similar articles of whatever material composed, and not otherwise provided for	35 per cent.	—	—	35 per cent.
„ in a crude state, used in dyeing or tanning, not otherwise provided for - -	Free.	—	—	—

* "The individual or association of individuals importing any object of art for presentation as a gift to the United States Government, or to any State, county, or municipal government, is required to make an application in writing to the Department, requesting such free entry, which shall contain a description of the work of art imported, and the name of the branch of the United States Government, or of the State, county, or municipal government, to which the presentation is intended to be made: such application to be accompanied by a letter, or other evidence, from the chief officer of the branch of the United States Government, or of the State, county, or municipal government, signifying the acceptance of such work of art as a gift."

† Articles indecent or obscene, importation prohibited.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Articles, *not* in a crude state, used in dyeing or tanning, not otherwise provided for - -	20 per cent.	—	—	20 per cent.
„ manufactured, not otherwise provided for - -	20 per cent.	—	—	20 per cent.
„ not otherwise provided for, made of gold, silver, German silver, or platina, or of materials of which either of these metals shall be a component part - - -	40 per cent.	—	—	40 per cent.
„ once exported, of the growth, production, or manufacture of the United States, upon which no internal tax has been assessed or paid, or upon which such tax has been paid and refunded by allowance or drawback, on re-importation, must pay a duty in coin equal to the tax imposed by the internal revenue laws upon such articles - - -	—	—	—	—
„ the growth, produce, and manufacture of the United States exported and brought back in the same condition as exported, identity proved according to regulations prescribed by Treasury, and on which all lawful internal taxes shall be proved to have been paid before exportation, and not refunded by allowance or drawback, and on which no other drawback or bounty has been allowed -	Free.	—	—	—
„ worn by men, women, and children, of whatever material composed, except silk or linen, made up or made wholly or in part by hand, not otherwise provided for -	35 per cent.	—	—	35 per cent.
Artificial stone - - - -	$1.50 per ton	=per ton	0 6 3	—
„ manures - - -	Free.	—	—	—
„ flowers, or parts thereof -	50 per cent.	—	—	50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Artificial feathers, or parts thereof, of whatever nature composed, not otherwise provided for -	50 per cent.	—	—	50 per cent.
„ limbs, iron - - -	35 per cent.	—	—	35 per cent.
„ „ steel - - -	45 per cent.	—	—	45 per cent.
„ „ wood - - -	35 per cent.	—	—	35 per cent.
Artillery, of iron or brass - -	35 per cent.	—	—	35 per cent.
Artists' colours, not otherwise provided for - - - -	25 per cent.	—	—	25 per cent.
Asbestos, manufactured - -	25 per cent.	—	—	25 per cent.
„ not manufactured - -	Free.	—	—	—
Ashes, of wood and beetroot - -	Free.	—	—	—
„ of lead - - - -	10 per cent.	—	—	10 per cent.
„ pearl - - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
Asphaltum - - - -	25 per cent.	—	—	25 per cent.
Assafœtida - - - -	20 per cent.	—	—	20 per cent.
Assay apparatus - - - -	40 per cent.	—	—	40 per cent.
Asses' skins, raw, unmanufactured -	Free.	—	—	—
„ tanned - - -	25 per cent.	—	—	25 per cent.
Asthma cigarettes, as medicinal preparations - - - -	40 per cent.	—	—	40 per cent.
Astronomical instruments - -	40 per cent.	—	—	40 per cent.
Astronomical instruments, specially imported for the use of any society established for religious purposes - -	15 per cent.	—	—	15 per cent.
Astronomical instruments, specially imported for the use of any philosophical, educational, scientific, or literary society, or society for the encouragement of the fine arts, and not for sale* -	Free.	—	—	—
Australian gum - - -	Free.	—	—	—
Augers **Awls** **Axes** - - - - -	45 per cent.	—	—	45 per cent.
Awl hafts, as manufactures of wood, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
"**Axe** shaped" steel - - -	30 per cent.	—	—	30 per cent.
Axles or parts thereof - - -	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
„ „ cast steel - -	45 per cent.	—	—	45 per cent.
Ayr stone (water of Ayr stone), for polishing or fit for use as whetstones - -	Free.	—	—	—

* This does not include like articles imported by other parties and purchased from them while in bond by or for colleges, schools, &c.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
B.			£ s. d.	
Bacon - - - - -	2 cts. per lb.	= per lb.	0 0 1	—
Baggage, personal, in actual use -	Free.	—	—	—
Bagging, for cotton and other manufactures not otherwise provided for, suitable for the same uses, wholly or partly of hemp, jute, flax, gunny bags, gunny cloth, or other material, valued at not over 7 cents per square yard - - - -	2 cts. per lb.	= per lb.	0 0 1	—
,, same, valued over 7 cents -	3 cts. per lb.	= per lb.	0 0 1½	—
,, Dundee or Scotch double warp, of jute, not fit for use in bagging cotton - - -	40 per cent.	—	—	40 per cent.
,, jute, for tailoring purposes, hop sacking, &c. - - -	40 per cent.	—	—	40 per cent.
,, waste, fit only for making paper	Free.	—	—	—
Bags, grain,* American manufacture. *See* American manufactures.				
,, ,, other. *See* note to American manufactures, page 81.				
,, ,, of American manufacture, when exported filled with American produce, or exported empty and returned filled with foreign products, may be returned to the United States under regulations - - -	Free.	—	—	—
,, cotton bags and bagging, and all other like manufactures, not herein otherwise provided for, except bagging for cotton, composed wholly or in part of flax, hemp, jute, gunny cloth, gunny bags, or other material - - -	40 per cent.	—	—	40 per cent.
,, grass cloth - - -	30 per cent.	—	—	30 per cent.
,, silk - - - -	60 per cent.	—	—	60 per cent.

* "Grain bags, imported from Canada, filled with flaxseed, reported by appraiser as a 'not unusual' covering, are not liable to duty as bags."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Bags, woollen	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ gunny and gunny cloth, not cotton bagging, valued at not over 10 cts. per sq. yard	3 cts. per lb.	= per lb.	0 0 1½	—
„ same, valued over 10 cts. per sq. yard	4 cts. per lb.	= per lb.	0 0 2	—
„ same, suitable for same uses as cotton bagging, valued at not over 7 cts. per sq. yard	2 cts. per lb.	= per lb.	0 0 1	—
„ same, suitable for same uses as cotton bagging, valued over 7 cts. per sq. yard	3 cts. per lb.	= per lb.	0 0 1½	—
„ gunny and gunny cloth, old or refuse, fit only to be remanufactured	Free.	—	—	—
Bait, fish for	Free.	—	—	—
Baize, as bocking	25 cts. per sq. yard and 35 per cent.	= per sq. yard	0 1 0½	+ 35 per cent.
Baking machine, according to principal material composing it.				
Balerope, hemp	30 per cent.	—	—	30 per cent.
Ballast, stone, unmanufactured, not merchantable, *if landed*	10 per cent.	—	—	10 per cent.
„ stone, manufactured	20 per cent.	—	—	20 per cent.
Ball caps, as percussion caps	40 per cent.	—	—	40 per cent.
Balls, bagatelle, ivory or bone	50 per cent.	—	—	50 per cent.
„ billiard, ivory or bone	50 per cent.	—	—	50 per cent.
„ india rubber, solid, from ½ to 2½ inches in diameter, classed as toys	50 per cent.	—	—	50 per cent.
„ india rubber, larger than above, not children's toys	35 per cent.	—	—	35 per cent.
„ wash	10 cts. per lb. and 25 per cent.	= per lb.	0 0 5	+ 25 per cent.
„ wholly of india rubber, and not toys	25 per cent.	—	—	25 per cent.
Balm of Gilead	Free.	—	—	—
Balmorals, wholly or in part of wool or worsted, hair of the alpaca, goat, or other like animals :—				
valued at 40 cts. or less per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued above 40 cts. and not above 60 cts. per lb.	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Balmorals—				
valued above 60 cts. and not above 80 cts. per lb. - - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued above 80 cts. per lb. - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
same, of any other material, duty according to material.				
Balmoral skirts and skirting, and goods of similar description, or used for like purposes, wholly or in part of wool, worsted, hair of alpaca, goat, or other like animals, made up or manufactured wholly or in part by the tailor, seamstress, or manufacturer - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Balsam, as cosmetic - - -	50 per cent.	—	—	50 per cent.
„ Canada or fir - - -	Free.	—	—	—
„ of capivi - - -	Free.	—	—	—
„ Peruvian - - -	Free.	—	—	—
„ of Tolu - - - -	Free.	—	—	—
„ used for medicinal purposes -	30 per cent.	—	—	30 per cent.
Bamboo cloth - - - -	30 per cent.	—	—	30 per cent.
„ reeds, manufactured in part -	35 per cent.	—	—	35 per cent.
„ reeds, no further manufactured than cut into suitable lengths for walking sticks or canes, or for umbrella, parasol, and sunshade sticks - - -	Free.	—	—	—
„ unmanufactured - -	Free.	—	—	—
Bananas. *See* Damage on Fruit.	10 per cent.	—	—	10 per cent.
Banks or "straits" oil, so called, crude -	10 per cent.	—	—	10 per cent.
„ „ refined, as medicinal preparations - -	40 per cent.	—	—	40 per cent.
Barbary gum - - - -	Free.	—	—	—
Barbe noires, silk - - -	60 per cent.	—	—	60 per cent.
Barège (according to material).				
Barilla (impure carbonate of soda) -	Free.	—	—	—
Bark, cork, manufactured - -	30 per cent.	—	—	30 per cent.
„ unmanufactured - -	Free.	—	—	—
Barks, viz.:— aconite, calisaya, canella alba, cascarilla, all cinchona barks, croton, hemlock, Lima, oak, Peruvian, pomegranate, quilla, sassafras, and all other barks not otherwise provided for	Free.	—	—	—

* No allowance will be made for loss or decay on the voyage, unless the said loss shall exceed 25 per cent. of the quantity, and the allowance then made shall be only for the amount of loss in excess of 25 per cent. of the whole quantity.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Barks, all medicinal, crude, not otherwise provided for	Free.	—	—	—
„ same, not crude	20 per cent.	—	—	20 per cent.
Barley, 48 lbs. to bushel	15 cts. per bushel.	= per bush.	0 0 7½	—
„ caustic, crude drug	20 per cent.	—	—	20 per cent.
„ patent	20 per cent.	—	—	20 per cent.
„ pearl or hulled	1 ct. per lb.	= per lb.	0 0 0½	—
„ pulverized	20 per cent.	—	—	20 per cent.
Barometers, glass and metal (only 5 per cent. of glass), as manufactures of glass or philosophical apparatus	40 per cent.	—	—	40 per cent.
Barrels, American manufacture, if exported containing American produce, and declaration be made of intent to return the same empty, under regulations	Free.	—	—	—
„ American manufacture, exported filled with American produce, or exported empty and returned filled with foreign produce, may be returned to the United States under regulations	Free.	—	—	—
„ as coverings of importations*	—	—	—	—
„ empty	30 per cent.	—	—	30 per cent.
Barytes	½ ct. per lb.	= per lb.	0 0 0¼	—
„ acetate or pyrolignite of	25 cts. per lb.	= per lb.	0 1 0½	—
„ carbonate of	½ ct. per lb.	= per lb.	0 0 0¼	—
„ combinations of, with acids or water	3 cts. per lb.	= per lb.	0 0 1½	—
„ crude	20 per cent.	—	—	20 per cent.
„ nitrate of	20 per cent.	—	—	20 per cent.
„ sulphate of	½ ct. per lb.	= per lb.	0 0 0¼	—

* "Barrels of American manufacture exported filled, to be entitled to free entry on return, must be returned as *barrels, and not as parts of barrels*, and must have the internal revenue mark erased at the expense of the importer, before delivery. If the hoops, heads, and staves of such barrels are detached and returned as 'shooks,' they are dutiable."

A practice has obtained at some of the ports on the Canadian frontier of admitting free of duty barrels and bags of domestic manufacture which have been exported empty and returned filled with the products of Canada. This practice is not warranted by law, inasmuch as the barrels and bags are not returned in the same condition as when exported. They stand, therefore, upon the same footing as such articles of foreign manufacture; and if the merchandise they contain is subject to ad valorem duty, the value of the sack or barrel should be added to the foreign value of the merchandise to make the dutiable value. If the merchandise contained in them is subject to a specific duty, and the covering is of the kind in which such merchandise is usually imported, then the covering will be free of duty.

The dutiable value of merchandise imported in packages, as a general rule, embraces the cost of the cask, box, bag, bottle, or other envelope or covering, when so purchased; but when such is not the case, and the envelope or covering has been purchased, or furnished, separate from the contents, the cost of such envelope or covering must be added to the value of the contents.

In case of unusual coverings, the facts are to be reported to the Department for its consideration and decision. This provision does not apply to any such box, &c. containing goods paying strictly specific duties, provided the covering is not unusual, but such as is commonly used to protect the description of goods contained in them.

In regard to sacks, boxes, &c. containing goods paying an ad valorem duty, duty should in all cases be assessed upon the value of the sack, box or other covering at the same rate as is imposed by law upon the merchandise they contain; provided, as just above mentioned, the sack, box or other covering is of the character in which such merchandise is usually imported.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Baskets, and all other articles composed of grass, osier, palm leaf, whalebone, or willow, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ same of straw	35 per cent.	—	—	35 per cent.
„ „ wood	35 per cent.	—	—	35 per cent.
Bas reliefs of terra-cotta	40 per cent.	—	—	40 per cent.
Bass mats	20 per cent.	—	—	20 per cent.
„ wood bark	Free.	—	—	—
Bassoons	30 per cent.	—	—	30 per cent.
Baths, according to principal material composing them.				
Bath brick	20 per cent.	—	—	20 per cent.
Battledores, as manufactures of wood not otherwise provided for	35 per cent.	—	—	35 per cent.
Battley's sedative (Liq. Opii Sed.)	50 per cent.	—	—	50 per cent.
Bayonets	45 per cent.	—	—	45 per cent.
Bay leaves, oil of, essential	$17\frac{1}{2}$ per lb.	= per lb.	3 12 11	—
„ or laurel berries	Free.	—	—	—
„ „ oil, fixed or expressed	20 cts. per lb.	= per lb.	0 0 10	—
„ rum essence or oil	50 cts. per oz.	= per oz.	0 2 1	—
„ rum or water, distilled spirits component of chief value	$2 per proof gall.	= per proof gall.	0 8 4	—
„ „ distilled from the leaf or compounded, if distilled spirits not the component of chief value, $1 per gall. 1st proof	$1 per gall.	= per gall.	0 4 2	—
And in proportion for any greater strength.				
Bay wax or myrtle wax	20 per cent.	—	—	20 per cent.
Bdellium gum	Free.	—	—	—
Bead necklaces	50 per cent.	—	—	50 per cent.
Beads, and bead ornaments	50 per cent.	—	—	50 per cent.
„ amber	Free.	—	—	—
Beam knives	45 per cent.	—	—	45 per cent.
Beams, scale, iron	35 per cent.	—	—	35 per cent.
„ wooden	35 per cent.	—	—	35 per cent.
Beans, castor, or castor seed, per bushel of 50 lbs.	60 cts. per bush.	= per bush.	0 2 6	—
„ for seed	20 per cent.	—	—	20 per cent.
„ St. John's	Free.	—	—	—
„ tonqua	Free.	—	—	—
„ vanilla	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Beans, used as vegetables, not otherwise provided for - - -	10 per cent.	—	—	10 per cent.
Beds, feather - - - -	20 per cent.	—	—	20 per cent.
„ feathers and downs for - -	Free.	—	—	—
„ and mattresses, hair for, other than hogs, curled -	30 per cent.	—	—	30 per cent.
„ „ hogs, curled, for, and not fit for bristles - -	Free.	—	—	—
„ „ moss, seaweed, and all other vegetable substances for -	Free.	—	—	—
Bedscrews - - - - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
Bedsides, according to material.				
Bedspreads, or covers, of scraps of calico sewed together - - - -	35 per cent.	—	—	35 per cent.
Bedsteads, brass or iron - -	35 per cent.	—	—	35 per cent.
Beef - - - - -	1 ct. per lb.	= per lb.	0 0 0½	—
Beehives, according to material.				
Beer, in bottles - - - -	35 cts. per gall.	= per gall.	0 1 5½	—
„ otherwise than in bottles - -	20 cts. per gall.	= per gall.	0 0 10	—
Bees, swarms or plain hives of - -	20 per cent.	—	—	20 per cent.
Beeswax - - - -	20 per cent.	—	—	20 per cent.
Beet root ashes - - - -	Free.	—	—	—
„ „ waste, for manufacture of paper	Free.	—	—	—
„ [sugar-beet] seeds - - -	Free.	—	—	—
„ sugar, machinery imported solely for manufacture of - - -	Free.	—	—	—
Beets - - - - -	10 per cent.	—	—	10 per cent.
„ red essence of, as distilled spirits -	$2 per proof gall.	= per proof gall.	0 8 4	—
Behen, or ben, medicinal root, crude -	20 per cent.	—	—	20 per cent.
Belladonna, root and leaf - -	Free.	—	—	—
Bell metal, all* - - - -	Free.	—	—	—
Bells, church† - - - -	35 per cent.	—	—	35 per cent.
„ copper chief value - - -	45 per cent.	—	—	45 per cent.
„ old or broken, and fit only to be remanufactured - - -	Free.	—	—	—
„ silver, German silver, or gold -	40 per cent.	—	—	40 per cent.
Bellows and bellows pipes, according to material.				

* "Which ordinarily is composed of 78 parts of copper and 22 parts of tin." Parts of broken cannon imported as "old bronze bell metal," and differing materially from the alloy known as bell metal, were classified as "metal unmanufactured not otherwise provided for."

† There is no law to authorise the free entry of bells and appurtenances, imported for the use of churches or other religious societies.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Beltings, wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Belts, or felts, endless, for paper or printing machines - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
„ leather - - - -	35 per cent.	—	—	35 per cent.
Benzine or benzole - - -	40 cts. per gall.	= per gall.	0 1 8	—
Benzoin or Benjamin, gum - -	Free.	—	—	—
Benzoates - - - -	30 per cent.	—	—	30 per cent.
Benzoic acid - - - -	10 per cent.	—	—	10 per cent.
Bergamot oil - - - -	Free.	—	—	—
Berlin blue - - - -	25 per cent.	—	—	25 per cent.
Berries, flowers, nuts, plants, vegetables, and other articles in a crude state, used exclusively in dyeing or in composing dyes, not otherwise provided for -	Free.	—	—	—
„ as fruit, not otherwise provided for	10 per cent.	—	—	10 per cent.
„ juniper - - - -	Free.	—	—	—
„ laurel - - - -	Free.	—	—	—
Bessemer metal, as steel.				
„ railway bars - - -	1¼ cts. per lb.	= per 100 lb.	0 5 2½	—
		= per ton.	5 16 8	—
Beverages, spirituous - - -	$2 per proof gall.	= per proof gall.	0 8 4	—
„ as granulated effervescent preparations of citrate of soda, lemonade, ginger beer, &c. - -	20 per cent.	—	—	20 per cent.
Bezoar stones - - - -	Free.	—	—	—
Bibles - - - - -	25 per cent.	—	—	25 per cent.
Bicarbonate of soda - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
„ of potash - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
same, as medicinal preparation - -	40 per cent.	—	—	40 per cent.
Bichromate of potash - - -	4 cts. per lb.	= per lb.	0 0 2	—
Bick irons - - - -	35 per cent.	—	—	35 per cent.
Bicycles, iron - - - -	35 per cent.	—	—	35 per cent.
„ steel - - - -	45 per cent.	—	—	45 per cent.
Billiard balls - - - -	50 per cent.	—	—	50 per cent.
„ chalk - - - -	50 per cent.	—	—	50 per cent.
Binding, cotton - - - -	35 per cent.	—	—	35 per cent.
„ leather - - - -	35 per cent.	—	—	35 per cent.
„ silk - - - -	60 per cent.	—	—	60 per cent.
silk and cotton - -	50 per cent.	—	—	50 per cent.
Binding, wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Bird pepper	5 cts. per lb.	= per lb.	0 0 2½	—
„ skins, dressed	20 per cent.	—	—	20 per cent.
„ „ imported for millinery purposes, being the entire skins, with plumage, bills, and feet of small birds, temporarily stuffed, &c. for preservation during voyage, dutiable as crude ornamental feathers	25 per cent.	—	—	25 per cent.
Birds, singing, or other	Free.	—	—	—
„ stuffed	Free.	—	—	—
Biscuits	20 per cent.	—	—	20 per cent.
Biscuit machinery, according to principal material composing it.				
Bismuth	Free.	—	—	—
„ oxide of	20 per cent.	—	—	20 per cent.
„ subnitrate of	40 per cent.	—	—	40 per cent.
Bits, polished, as saddlery	35 per cent.	—	—	35 per cent.
„ except for saddlery, as manufactures of steel	45 per cent.	—	—	45 per cent.
Bitter apples	Free.	—	—	—
Bitters containing spirits	$2 per proof gall.	=per proof gall.	0 8 4	—
Bitumen, as pitch	20 per cent.	—	—	20 per cent.
Bituminous and mineral substances in a crude state, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ coal, per ton of 28 bushels of 80 lbs. each	75 cts. per ton	= per ton	0 3 1½	—
Blacking, of all descriptions	30 per cent.	—	—	30 per cent.
Black lead (plumbago)	Free.	—	—	—
„ same, mixed with large quantities of earth, slate, and shaly substances	20 per cent.	—	—	20 per cent.
„ dust or powder, manufactured	20 per cent.	—	—	20 per cent.
„ pots, of sand and clay	25 per cent.	—	—	25 per cent.
„ powder	Free.	—	—	—
Black, Frankfort	25 per cent.	—	—	25 per cent.
„ lamp	20 per cent.	—	—	20 per cent.
„ of bone or ivory drop black	25 per cent.	—	—	25 per cent.
„ salts of potash	Free.	—	—	—
Blacksmiths' hammers and sledges	2½ cts. per lb.	= per lb.	0 0 1¼	—
Black tares	Free.	—	—	—
Bladders, manufactures of	30 per cent.	—	—	30 per cent.
„ crude	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Bladders, manufactured in part - -	20 per cent.	—	—	20 per cent.
Blades, sword - - - -	35 per cent.	—	—	35 per cent.
„ for pocket knives - -	45 per cent.	—	—	45 per cent.
Blanc fixé - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Blank books - - - -	25 per cent.	—	—	25 per cent.
„ copying books - - -	25 per cent.	—	—	25 per cent.
„ labels - - - -	25 per cent.	—	—	25 per cent.
Blanketing, machine* - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+35 per cent.
Blankets wholly or in part of wool, worsted, the hair of the alpaca, goat, or other animals valued at 40 cts. or less per lb. - - - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+35 per cent.
„ valued above 40 cts., and not above 60 cts. per lb. -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+35 per cent.
„ valued above 60 cts., and not above 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+35 per cent.
„ valued above 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ gentionella, as manufacture of wool - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
„ plush, woollen, or railway rugs	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Bleaching powder (chloride of lime) -	Free.	—	—	—
Blocks, viz. : last, wagon, oar, gun, heading, and all like blocks or sticks, rough hewn or sawed only - - -	20 per cent.	—	—	20 per cent.
Same, otherwise than rough-hewn or sawed - - - -	35 per cent.	—	—	35 per cent.
Blood, dried - - - -	Free.	—	—	—
„ dragons' - - - -	Free.	—	—	—
Blue, Berlin - - - -	25 per cent.	—	—	25 per cent.
„ Chinese - - - -	25 per cent.	—	—	25 per cent.
„ fig - - - - -	25 per cent.	—	—	25 per cent.
„ Prussian, dry or moist - -	30 per cent.	—	—	30 per cent.
„ wash - - - -	25 per cent.	—	—	25 per cent.
Blue galls (Nutgalls) - - -	Free.	—	—	—
Blue mass - - - -	20 per cent.	—	—	20 per cent.
„ vitriol - - - -	¼ cts. per lb.	= per lb.	0 0 2	—
Board nails, iron, cut - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
„ „ wrought - -	2½ cts. per lb.	= per lb.	0 0 1¼	—

* This is liable to the same rate of duty as belts for machines. (See page 94.)

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Boards, sawed - - -	$1 per 1,000 feet board measure.	= per 1,000 feet	0 4 2	—
Boats, life, and life-saving apparatus, specially imported by societies incorporated or established to encourage the saving of human life	Free.	—	—	—
„ for American vessels engaged in frontier trade - - -	50 per cent.	—	—	50 per cent.
Bobbinet, cotton - - -	35 per cent.	—	—	35 per cent.
Bobbin wire, covered - - -	pays 5 cts. per lb. in addition to the rates on iron wire.	—	—	—
Bocking, printed, coloured, or otherwise	25 cts. per sq. yard and 35 per cent.	= per sq. yd.	0 1 $0\frac{1}{2}$	+ 35 per cent.
Bodkins (according to material).				
Bog oak or bog oak jewellery (imitation of jet)	35 per cent.	—	—	35 per cent.
Boilers, iron - - - -	35 per cent.	—	—	35 per cent.
„ steel - - - -	45 per cent.	—	—	45 per cent.
Boiler or other plates not thinner than $\frac{3}{16}$ths of an inch -	$1\frac{1}{2}$ cts. per lb.	= per lb.	0 0 $0\frac{3}{4}$	—
„ „ not otherwise provided for - -	$25 per ton	= per ton	5 4 2	—
„ flues, wrought iron - -	$3\frac{1}{2}$ cts. per lb.	= per lb.	0 0 $1\frac{3}{4}$	—
Bole armeniac, a cosmetic - -	50 per cent.	—	—	50 per cent.
Bologna sausages - - -	Free.	—	—	—
Bolting cloths - - - -	Free.	—	—	—
Bolt rope, tarred, as cordage tarred -	3 cts. per lb.	= per lb.	0 0 $1\frac{1}{2}$	—
„ „ untarred, as cordage untarred, other than manilla - -	$3\frac{1}{2}$ cts. per lb.	= per lb.	0 0 $1\frac{3}{4}$	—
Bolts, brass* - - - -	35 per cent.	—	—	35 per cent.
„ for railroads. *See* Note to railroad chairs (page 257) - -	$2\frac{1}{2}$ cts. per lb.	= per 100 lb.	0 10 5	—
„ wrought iron - - -	$2\frac{1}{2}$ cts. per lb.	= per 100 lb.	0 10 5	—
„ other, of iron - - -	35 per cent.	—	—	35 per cent.
„ for fastening doors, &c., according to material - - -	—	—	—	—
„ rivet or screw, iron, wrought -	$2\frac{1}{2}$ cts. per lb.	= per lb.	0 0 $1\frac{1}{4}$	—
Bone or ivory dice, draughts, chessmen, chess-balls, and bagatelle balls -	50 per cent.	—	—	50 per cent.
„ or ivory drop black - -	25 per cent.	—	—	25 per cent.

* Bolts for railways and bolts of wrought iron subject to duty of 11*l.* 13*s.* 4*d.* per ton. Bolts of brass and of iron, other than wrought iron, 35*l.* for every 100*l.* of their declared value. (*See also* note (p. 219) to Metal Sheathing.)

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ *s.* *d.*	
Bone dust and bone ash for manufacture of phosphates and fertilizers - -	Free.	—	—	—
Bone, manufactures of, not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
Bones, burned or steamed - -	Free.	—	—	—
„ crude and not manufactured; bones ground or calcined -	Free.	—	—	—
Bonnets, hats, and hoods, for men, women, and children, of chip, grass, palm leaf, willow, or any other vegetable substance, or hair, whalebone, or other material not otherwise provided for -	40 per cent.	—	—	40 per cent.
„ of silk - - - - -	60 per cent.	—	—	60 per cent.
„ of straw - - - -	40 per cent.	—	—	40 per cent.
„ braids, plaits, flats, laces, trimmings, tissues, willow sheets and squares, used for making or ornamenting hats, bonnets, and hoods, composed of chip, grass, palm leaf, willow, or any other vegetable substance, whalebone, or of other material, not otherwise provided for - - - -	30 per cent.	—	—	30 per cent.
„ „ of hair - - -	30 per cent.	—	—	30 per cent.
„ „ of straw - - -	30 per cent.	—	—	30 per cent.
„ „ of sparterre - - -	Free.	—	—	—
Bookbinders' agates - - -	20 per cent.	—	—	20 per cent.
Books,* all, bound or unbound, maps and charts - - -	25 per cent.	—	—	25 per cent.

* "Books exported and bound abroad are liable to duty on their full value on their return. The assessment of duty cannot be restricted to the value of the binding done abroad.

"Books and tracts imported for distribution are subject to duty.

"A distinction is made between books imported in good faith, to be *used* by Sunday Schools (which do not pay any duty), and books imported for distribution among the scholars thereof (which are subject to the ordinary rate of 25 per cent.). In the one case, the books remain the property of the Schools; in the other they become the property of the scholars." [But see Treasury Regulations of 1857, p. 598, where a different decision is made as to books imported for distribution among the students of a college as premiums.]

Bocks imported by religious societies for distribution do not come within this provision.

Bibles and other books imported in good faith for the use of Sunday schools in the United States admitted free of duty on requisite proof. But if for distribution among the scholars, they are subject to duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Books, blank copying - - -	25 per cent.	—	—	25 per cent.
„ as household effects or libraries, or parts of libraries, in use of persons and families from foreign countries, if used abroad by them at least one year and not intended for any other person or persons, and not for sale	Free.	—	—	—
„ as personal effects of persons arriving in the United States, "not merchandise," and not exceeding in value what is usual for a person to carry with him for actual use - - -	Free.	—	—	—
„ professional, of persons arriving in the United States - -	Free.	—	—	—
„ blank memorandum, with fine leather covers, elastic band fastening, &c., as manufactures of leather not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ *(not more than two copies in any one invoice) specially imported in good faith, for the use or by the order of any academy, college, school, or seminary of learning, or for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts - - -	Free.	—	—	—

Printed music, in books or otherwise, is not entitled to free entry when imported for the use of any legally incorporated institution or society.

Exemption not restricted to single copies of books.

"Books invoiced as 'metallic memorandum books,' or 'metallic books with flap and band.' containing a few blank leaves between covers of leather, one of the covers having a flap, and containing a pocket for money or papers, the chief material being leather, are not to be regarded as 'blank books,' but as 'manufactures of leather not otherwise provided for.'"

So blank books with leather covers, pocket pencil, metal clasp, and blank leaves, are classified as manufactures of leather, metal, and paper, not otherwise provided for.

Tracts and pamphlets consigned to one for free distribution in his travels as an evangelist, are dutiable.

Books sent out of the United States to be bound, are liable to duty on their full value on their return.

* By the words "two copies in any one invoice," is meant two copies of each publication so invoiced.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Books, maps and charts for Library of Congress, or for use of the United States, provided the duty be not included in the price paid	Free.	—	—	—
„ moveable picture - -	25 per cent.	—	—	25 per cent.
„ printed and manufactured more than 20 years at the date of importation - - -	Free.	—	—	—
Boot fronts, as manufactures of leather, not otherwise provided for -	35 per cent.	—	—	35 per cent.
„ lacings or lacets, as cotton laces -	35 per cent.	—	—	35 per cent.
Boots and shoes, india-rubber - -	30 per cent.	—	—	30 per cent.
The same, with felted linings -	30 per cent.	—	—	30 per cent.
The same, leather - -	35 per cent.	—	—	35 per cent.
The same, felt leather, being in part wool - - -	{ 50 cts. per lb. and 40 per cent. }	= per lb.	0 2 1	+ 40 per cent.
The same, silk - - -	60 per cent.	—	—	60 per cent.
„ bootees, shoes, slippers and gaiters, cloth lastings, &c., woven, made or cut for, duty same as if for other purposes.				
Borate of lime - - - -	Free.	—	—	—
Borax or tincal, crude - - -	Free.	—	—	—
„ „ refined - -	10 cts. per lb.	= per lb.	0 0 5	—
Boring tools, steel - - -	45 per cent.	—	—	45 per cent.
Bort* - - - - - -	Free.	—	—	—
Botany, specimens of, models or imitations of, in papier mâché - - -	35 per cent.	—	—	35 per cent.
Bottles, glass, not cut - - -	35 per cent.	—	—	35 per cent.
„ „ cut - - -	40 per cent.	—	—	40 per cent.
„ containing brandy and other spirituous liquors † - -	3 cts. each.	= per 100	0 12 6	—
„ or jars, glass, filled with sweetmeats or preserves - -	40 per cent.	—	—	40 per cent.
„ containing other articles -	30 per cent.	—	—	30 per cent.
Bougies (according to material).				
Bouillons or cannetille, and metal threads, filé or gespinst - - - -	25 per cent.	—	—	25 per cent.

* Diamonds that are unfit (from imperfection) for jewellery are sold under the technical name of *bort*. They are crushed and used by lapidaries, the splinters being made into drills for piercing excessively hard substances.

† This is in addition to the duty leviable on the brandy, &c. which the bottle contains. (*See* page 102 et seq.)

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Boxes, sacks and covering of any kind, containing goods paying an ad valorem duty are subject to the same rate of duty on their value as the goods they contain, provided they are of the character of the coverings in which such goods are usually imported.				
,, musical* - - - -	30 per cent.	—	—	30 per cent.
,, fancy, not otherwise provided for	35 per cent.	—	—	35 per cent.
,, of gold and silver - -	40 per cent.	—	—	40 per cent.
,, japanned - - - -	40 per cent.	—	—	40 per cent.
,, paper - - - -	35 per cent.	—	—	35 per cent.
,, papier mâché - - -	35 per cent.	—	—	35 per cent.
,, of cedar and other precious woods	35 per cent.	—	—	35 per cent.
,, sheil - - - -	35 per cent.	—	—	35 per cent.
,, tin - - - -	35 per cent.	—	—	35 per cent.
,, wood - - - -	35 per cent.	—	—	35 per cent.
,, packing, of wood - -	30 per cent.	—	—	30 per cent.
Box-wood - - - -	Free.	—	—	—
Bracelets, if jewellery - - -	25 per cent.	—	—	25 per cent.
,, jet, gold mounted - -	35 per cent.	—	—	35 per cent.
,, hair - - - -	35 per cent.	—	—	35 per cent.
Braces or suspenders, cotton - -	35 per cent.	—	—	35 per cent.
,, ,, wholly or partly of india-rubber -	35 per cent.	—	—	35 per cent.
,, ,, leather - -	35 per cent.	—	—	35 per cent.
,, ,, silk - -	60 per cent.	—	—	60 per cent.
,, smiths' or carpenters', without bits	35 per cent.	—	—	35 per cent.
,, ,, ,, with bits -	45 per cent.	—	—	45 per cent.
Brackets (according to material).				
Brads, iron, cut, not over 16 oz. to the 1,000 - -	$2\frac{1}{2}$ cts. per 1,000.	= per 1,000	0 0 $1\frac{1}{4}$	—
,, ,, ,, exceeding 16 oz. to the 1,000 - -	3 cts. per lb.	= per lb.	0 0 $1\frac{1}{2}$	—
Braid sennit, as manufactures of coir -	30 per cent.	—	—	30 per cent.
Braids, cotton - - - -	35 per cent.	—	—	35 per cent.
,, for making or ornamenting bonnets, hats, &c. - -	30 per cent.	—	—	30 per cent.
,, hair - - - -	35 per cent.	—	—	35 per cent.
,, silk - - - -	60 per cent.	—	—	60 per cent.

* "A bird musical box, being a gold snuff box with a musical attachment, held to be a manufacture of gold, and liable to duty accordingly."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Braids, wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Brandy - - - - -	$2 per proof gall.	= per proof gall.	0 8 4	—
Brass, in bars or pigs* - - -	15 per cent.	—	—	15 per cent.
„ clippings - - - -	20 per cent.	—	—	20 per cent.
„ manufactures of - - -	35 per cent.	—	—	35 per cent.
„ old, and fit only to be re-manufactured - - -	15 per cent.	—	—	15 per cent.
„ sheathing metal, old, fit only for re-manufacture - - -	15 per cent.	—	—	15 per cent.
„ sheet - - - -	35 per cent.	—	—	35 per cent.
Brazil or cream nuts - - -	Free.	—	—	—
„ paste - - - -	Free.	—	—	—
„ pebbles, for spectacles, rough -	Free.	—	—	—
„ wood and brazilletto in sticks -	Free.	—	—	—
Bread - - - - -	20 per cent.	—	—	20 per cent.
„ baskets, japanned - - -	40 per cent.	—	—	40 per cent.
„ „ silver - - -	40 per cent.	—	—	40 per cent.
Breccia, in blocks or slabs - -	Free.	—	—	—
Bremen blue - - - -	30 per cent.	—	—	30 per cent.
Brewing machinery, according to principal material composing it.				
Bricks - - - - -	20 per cent.	—	—	20 per cent.
„ fire - - - - -	20 per cent.	—	—	20 per cent.
Bridles and bridle bits, as saddlery -	35 per cent.	—	—	35 per cent.
Brilliants, classified with jeans. *See* Cottons.				
Brime - - - - -	Free.	—	—	—
Brimstone, crude - - -	Free.	—	—	—
„ in rolls, or refined - -	$10 per ton	= per ton	2 1 8	—
Bristles - - - - -	15 cts. per lb.	= per lb.	0 0 7½	—
„ imitation of, made of whalebone or other similar substances -	20 per cent.	—	—	20 per cent.
Bristol boards - - - -	35 per cent.	—	—	35 per cent.
„ „ perforated - -	35 per cent.	—	—	35 per cent.
„ stones - - - -	10 per cent.	—	—	10 per cent.
Britannia ware - - - -	35 per cent.	—	—	35 per cent.
„ metal, old, and fit only to be re-manufactured - -	Free.	—	—	—
British gum, or dextrine - -	20 per cent.	—	—	20 per cent.
„ lustre, or black lead - -	20 per cent.	—	—	20 per cent.

* See note to Metal Sheathing, page 219.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	——	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Bromide of potassium, medicinal preparation	40 per cent.	—	—	40 per cent.
Bromine	Free.	—	—	—
Bronze busts and casts, specially imported for academies, philosophical and other societies, &c.	Free.	—	—	—
„ casts of, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale	Free.	—	—	—
„ metal, in leaf	10 per cent.	—	—	10 per cent.
„ powder (copper not chief value)	10 per cent.	—	—	10 per cent.
„ liquor	10 per cent.	—	—	10 per cent.
„ manufactures of	35 per cent.	—	—	35 per cent.
Brooms, of all kinds	35 per cent.	—	—	35 per cent.
Brown crystals, so called, as aniline dyes	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ grease, so called, as animal oils	20 per cent.	—	—	20 per cent.
„ Spanish	25 per cent.	—	—	25 per cent.
„ Hollands, value *not* over 30 cts. per sq. yard	35 per cent.	—	—	35 per cent.
„ „ value over 30 cts. per sq. yard	40 per cent.	—	—	40 per cent.
Brucine, medicinal preparation	40 per cent.	—	—	40 per cent.
Brushes, of all kinds excepting toys	40 per cent.	—	—	40 per cent.
„ miniature, for dolls, as children's toys	50 per cent.	—	—	50 per cent.
Buchu leaves	Free.	—	—	—
Buckles (according to material).				
Buckwheat (42 lbs. to bushel)	10 per cent.	—	—	10 per cent.
Buffalo robes	20 per cent.	—	—	20 per cent.
Bugles	30 per cent.	—	—	30 per cent.
„ glass, as beads	50 per cent.	—	—	50 per cent.
„ other, as trimmings	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Bugs, dried	Free.	—	—	—
Building stones, except marble	$1½ per ton	= per ton	0 6 3	—
Bulbous roots	30 per cent.	—	—	30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Bull's eyes, glass - - -	35 per cent.	—	—	35 per cent.
Bullion, gold and silver - - -	Free.	—	—	—
Bullrushes - - - -	$15 per ton	=per ton.	3 2 6	—
Bunion or corn plasters, of wool -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Bunting* - - - -	20 cts. per sq. yd. and 35 per cent.	= pr. sq. yd.	0 0 10	+ 35 per cent.
Burgundy pitch - - - -	Free.	—	—	—
Burlaps - - - - -	30 per cent.	—	—	30 per cent.
Burning fluid - - - -	50 cts. per gall.	= per gall.	0 2 1	—
Burr stones, manufactured or bound up into millstones in any manner	20 per cent.	—	—	20 per cent.
,, stones, in blocks, rough or unmanufactured and not bound up into millstones - - -	Free.	—	—	—
,, stones, known as "skeleton stones," manufactured, but not bound up	20 per cent.	—	—	20 per cent.
Busts, specially imported, for academies, learned and other societies, &c.	Free	—	—	—
Butter† - - - - - -	4 cts. per lb.	= per lb.	0 0 2	—
Buttons, and button moulds of all kinds, except as below - -	30 per cent.	—	—	30 per cent.
,, convex linen, so called, made of linen and brass, brass chief value - - -	30 per cent.	—	—	30 per cent.
,, cuff and sleeve, if not jewellery (dutiable according to material, as personal ornaments, without reduction).				
,, cuff and sleeve, mother-of-pearl	35 per cent.	—	—	35 per cent.
,, iron, not cuff or sleeve -	30 per cent.	—	—	30 per cent.
,, cuff or sleeve, of glass, cannot be classed as buttons -	40 per cent.	—	—	40 per cent.
,, and ornaments for dresses and outside garments, made of silk, or of which silk is chief value, no wool, worsted, or goat's hair	60 per cent.	—	—	60 per cent.
,, or barrel buttons, or buttons of other forms for tassels or ornaments, of wool, worsted or mohair - - - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.

* As flags are not mentioned in the tariff, it would appear that the duty is the same whether the goods are made up or sold by the piece.

† Butter become valueless in a public store, claimed to be admitted to entry as "soap grease," not allowed.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Buttons, lasting, mohair cloth, silk twist, or other manufacture of cloth, woven or made in patterns of such size, shape and form, or cut in such manner as to be fit for buttons, exclusively, not combined with india rubber -	10 per cent.	—	—	10 per cent.
„ silk, or silk component of chief value, containing no wool, worsted, or goat's hair -	60 per cent.	—	—	60 per cent.
„ mother-of-pearl, with metal eyes and shanks - -	30 per cent.	—	—	30 per cent.
„ vegetable ivory - -	30 per cent.	—	—	30 per cent.
Butts, cast iron - - -	2½ cts. per lb.	= per 100 lb.	0 10 5	—
„ other (according to material).				
C.				
Cabinet ware, finished - - -	35 per cent.	—	—	35 per cent.
„ „ in pieces, or rough and not finished - - -	30 per cent.	—	—	30 per cent.
„ woods, unmanufactured - -	Free.	—	—	—
„ „ manufactures of, not otherwise provided for -	35 per cent.	—	—	35 per cent.
Cabinets, of coins, medals, and all other collections of antiquities -	Free.	—	—	—
„ specimens of natural history, mineralogy, and botany, when imported for, as objects of taste or science, and not for sale -	Free.	—	—	—
Cable chains, broken, rusty or old, unfit for use (dutiable as "scrap iron," but not so if fit for use as such by repairs).				
Cables, or cable chains, and parts of -	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ or cordage, tarred - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ manilla, untarred - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ all other, untarred - -	3½ cts. per lb.	= per lb.	0 0 1¾	—
Cacao ("cocoa") crude - - -	Free.	—	—	—
„ „ prepared or manufactured - -	2 cts. per lb.	= per lb.	0 0 1	—
Cachous, aromatic - - -	50 per cent.	—	—	50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Cadmium	Free.	—	—	—
Cajeput, oil of	Free.	—	—	—
Calamine	Free.	—	—	—
Calamus root, peeled, crude drug	Free.	—	—	—
Calcined magnesia	12 cts. per lb.	= per lb.	0 0 6	—
Calcium, chloride of	20 per cent.	—	—	20 per cent.
Calf skins, tanned, or tanned and dressed	25 per cent.	—	—	25 per cent.
Calisaya bark	Free.	—	—	—
Calomel	30 per cent.	—	—	30 per cent.
Calx (lime)	10 per cent.	—	—	10 per cent.
Cambrics, as cottons.				
Camels' hair, cleaned or uncleaned, but not manufactured	10 per cent.	—	—	10 per cent.
„ „ pencils	35 per cent.	—	—	35 per cent.
„ „ shawls	50 cts. per lb and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Cameos, set in gold, silver, or other metal	25 per cent.	—	—	25 per cent.
„ not set	10 per cent.	—	—	10 per cent.
„ in frames of material other than metal	20 per cent.	—	—	20 per cent.
„ imitation of, set	25 per cent.	—	—	25 per cent.
„ „ not set	40 per cent.	—	—	40 per cent.
Camera tubes, brass and glass, as manufactures of glass not otherwise provided for	40 per cent.	—	—	40 per cent.
Camphor, crude	Free.	—	—	—
„ refined	5 cts. per lb.	= per lb.	0 0 2½	—
Camomile flowers	Free.	—	—	—
Camwood, in sticks	Free.	—	—	—
Canary seed	Free.	—	—	—
„ weed	Free.	—	—	—
Candles and tapers, stearine and adamantine	5 cts. per lb.	= per lb.	0 0 2½	—
„ and tapers, spermaceti, paraffine and wax, pure or mixed	8 cts. per lb.	= per lb.	0 0 4	—
„ and tapers, all other	2½ cts. per lb.	= per lb.	0 0 1¼	—
Candlesticks (according to material).				
Canella Alba, bark	Free.	—	—	—
Canes and sticks, for walking, finished or not	35 per cent.	—	—	35 per cent.
„ and sticks, for walking, in the rough, or no further manufactured than cut into suitable lengths	Free.	—	—	—
Cannetille	25 per cent.	—	—	25 per cent.
Cannon, iron	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Cannon, brass - - - -	35 per cent.	—	—	35 per cent.
Cantharides, or Spanish flies - -	Free.	—	—	—
Canton crapes - - - -	60 per cent.	—	—	60 per cent.
Canvas (other than sail canvas), valued at not over 30 cts. per sq. yard -	35 per cent.	—	—	35 per cent.
„ (other than sail canvas), valued at over 30 cts. per sq. yard -	40 per cent.	—	—	40 per cent.
„ for buttons - - -	10 per cent.	—	—	10 per cent.
Canvas paddings, valued at not over 30 cts. per sq. yard -	35 per cent.	—	—	35 per cent.
„ „ valued at over 30 cts. per sq. yard - -	40 per cent.	—	—	40 per cent.
„ or duck for sails - - -	30 per cent.	—	—	30 per cent.
„ „ if cotton - -	35 per cent.	—	—	35 per cent.
„ floor cloth or oil-cloth foundations, of flax, jute or hemp, or of which either shall be the component material of chief value - -	40 per cent.	—	—	40 per cent.
Cape of Good Hope,* goods of the produce east of, imported from places west of, subject to extra duty of -	10 per cent.	—	—	10 per cent.
„ gum - - - - -	Free.	—	—	—
Capers, all, not otherwise provided for -	35 per cent.	—	—	35 per cent.
Caps, of whatever material composed, worn by men, women, or children, not otherwise provided for (except silk or linen), made up or made wholly or in part by hand -	35 per cent.	—	—	35 per cent.

* The Treasury Department holds "that by 'countries beyond the Cape of Good Hope' is meant all countries with which we carry on commercial intercourse by means of vessels passing by or around the Cape of Good Hope in a westerly direction when sailing to this country, and which in the ordinary course of navigation are reached from here and from England by vessels passing by or around the Cape of Good Hope eastwardly; and that all goods, wares, and merchandise of the growth or produce of countries beyond the Cape of Good Hope, when imported from places this side of the Cape of Good Hope, are subject to the additional duty of 10 per cent., unless their character, quality, and condition be entirely changed by manufacture or otherwise. For example, Manilla hemp, if manufactured into cordage in England, would not on the importation of said cordage into this country be subject to the additional duty of 10 per cent.; in such a case its distinctiveness as hemp would be merged in its new condition."

Jute butts, originally shipped from Calcutta for the United States, but landed and sold at Bermuda and thence imported to the United States, held to be subject to discriminating duty.

Also, a cargo of tea, originally shipped at China for Montreal, but which on arrival there at its destination, changed to New York, and was shipped thence without breaking bulk.

Also, crude camphor, imported from east of the Cape, refined here, exported to Canada, and then re-imported.

Also, opium, the product of Persia, imported to the United States from London, although taken to London *vid* the Suez Canal, Persia coming within the meaning of the statutory words "east of the Cape," &c., according to prior decisions holding those words to mean such countries as are ordinarily reached in commercial intercourse by sailing round the Cape.

But otherwise as to sugar imported from Liverpool but being the product of Egypt, lying east of the meridian of the Cape, but not ordinarily reached by sailing round the Cape.

"Goods, the production of countries beyond the Cape of Good Hope, coming from places this side, which they have reached by overland route, &c. are not liable to the additional ten per centum duty."

Essential oils, the product of countries east of the "Cape," when rectified in and imported from countries west thereof, are liable to the discriminating duty.

If the papers presented at the custom house by the importor show that the goods were originally destined for the United States, and that their arrival at and transhipment in the country west of the Cape were only an incident in the voyage of importation, the discriminating duty would not apply, the voyage being considered continuous.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Caps, chip, &c. as hats of same material -	40 per cent.	—	—	40 per cent.
„ linen - - - -	40 per cent.	—	—	40 per cent.
„ fur - - - -	35 per cent.	—	—	35 per cent.
„ leather - - - -	35 per cent.	—	—	35 per cent.
„ made on frames, of whatever material composed (except silk or linen) not otherwise provided for	35 per cent.	—	—	35 per cent.
„ silk, or silk chief value - -	60 per cent.	—	—	60 per cent.
„ wool, worsted, or goats' hair, not knit - - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
, wool, worsted, or goats' hair, knit, as woollen knit goods, viz. :—				
valued at not over 40 cts. per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 and not over 60 cts. per lb. - - - - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 and not over 80 cts. per lb. - - - - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb. - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Capsules, Learned's charcoal - -	50 per cent.	—	—	50 per cent.
Caraway, oil and seed - - -	Free.	—	—	—
Carbines - - - -	35 per cent.	—	—	35 per cent.
Carbolic acid, as a disinfectant - -	20 per cent.	—	—	20 per cent.
„ for chemical or manufacturing purposes -	Free.	—	—	—
„ dry or other, medicinal -	10 per cent.	—	—	10 per cent.
„ liquid, pure - -	10 per cent.	—	—	10 per cent.
Carbon, animal, crude - - -	Free.	—	—	—
„ bisulphate and bisulphide of -	20 per cent.	—	—	20 per cent.
„ pure - - - -	20 per cent.	—	—	20 per cent.
Carboys, empty, as manufacture of glass -	35 per cent.	—	—	35 per cent.
„ [containing acids shall be subject to the same duty as if empty].				
„ American, if exported containing American produce, and declaration be made of intent to return same empty under regulations - -	Free.	—	—	—
„ as coverings to importations*.	—	—	—	—

* *See also* note to Barrels, p. 91.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Carbuncles, not set	10 per cent.	—	—	10 per cent.
„ set	25 per cent.	—	—	25 per cent.
Card cases, of whatever material composed not otherwise provided for	35 per cent.	—	—	35 per cent.
Cardamom seeds	Free.	—	—	—
Cardboard	35 per cent.	—	—	35 per cent.
Cardigan jackets, cuffs, &c. wholly or partly wool	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Carding machinery, chiefly of iron, with an insignificant portion of wool, as a manufacture of iron not otherwise provided for	35 per cent.	—	—	35 per cent.
Cards, blank	35 per cent.	—	—	35 per cent.
„ playing, costing not over 25 cts. per pack	25 cts per pack.	= per pack	0 1 0½	—
„ playing, costing over 25 cts. per pack	35 cts. per pack.	= per pack	0 1 5½	—
„ printed picture	25 per cent.	—	—	25 per cent.
„ wool and cotton, part iron	35 per cent.	—	—	35 per cent.
„ wool and cotton, part steel	45 per cent.	—	—	45 per cent.
Carmine and carmine lake	35 per cent.	—	—	35 per cent.
Carpeting, Angola, so-called two-ply ingrain, of wool, grass, and cotton, as two-ply carpets	12 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 0 6	+ 35 per cent.
„ cork, so-called, of thin cork, with a few threads of hemp pasted on one side, for strengthening, dutiable as manufactures of cork	30 per cent.	—	—	30 per cent.
„ Aubusson and Axminster	50 per cent.	—	—	50 per cent.
„ woven whole for rooms	50 per cent.	—	—	50 per cent.
„ Brussels, printed on the warp or otherwise	28 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 1 2	+ 35 per cent.
„ Brussels, tapestry, printed on the warp or otherwise *	28 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 1 2	+ 35 per cent.
„ Brussels, wrought by the Jacquard machine	44 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 1 10	+ 35 per cent.
„ hemp or jute	8 cts. per sq. yd.	= per sq. yd.	0 0 4	—
„ Saxony, Wilton, and Tournay velvet, wrought by the Jacquard machine	70 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 2 11	+ 35 per cent.

* These goods being but ¾ yard in width, 100 yards would only be liable to duty as 75 square yards, which at 1*s.* 2*d.* would be 4*l.* 7*s.* 6*d.* in addition to 35*l.* for every 100*l.* of the declared value.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Carpeting, treble ingrain, three-ply, and worsted chain Venetian -	17 cts. per sq. yd. and 35 per cent.	=per sq. yd.	0 0 8½	+ 35 per cent.
„ velvet, patent and tapestry, printed on the warp or otherwise - - -	40 cts. per sq. yd. and 35 per cent.	=per sq. yd.	0 1 8	+ 35 per cent.
„ yarn, Venetian and two-ply-in grain - - -	12 cts. per sq. yd. and 35 per cent.	=per sq. yd.	0 0 6	+ 35 per cent.
„ flax or other material not otherwise provided for - -	40 per cent.	—	—	40 per cent.
„ of wool or cotton or of parts of either, not otherwise provided for - - - - -	40 per cent.	—	—	40 per cent.
„ druggets and bockings, woven -	25 cts. per sq. yd. and 35 per cent.	=per sq. yd.	0 1 0½	+ 35 per cent.
[hassocks, rugs, screens, mats, bedsides, covers, &c., pay duty as carpetings of like description.]				
„ felt - - - - -	40 per cent.	—	—	40 per cent.
Carpet yarns, so styled, composed of wool waste, cowhair, &c., dutiable as woollen yarns, to wit:—				
valued at not over 40 cts. per lb. -	20 cts. per lb. and 35 per cent.	=per lb.	0 0 10	+ 35 per cent.
valued at over 40 and not over 60 cts. per lb. - - - - -	30 cts. per lb. and 35 per cent.	=per lb.	0 1 3	+ 35 per cent.
valued at over 60 and not over 80 cts. per lb. - - - - -	40 cts. per lb. and 35 per cent.	=per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb. - -	50 cts. per lb. and 35 per cent.	=per lb.	0 2 1	+ 35 per cent.
Carriages, and parts of - - -	35 per cent.	—	—	35 per cent.
„ hardware and furniture for -	35 per cent.	—	—	35 per cent.
Cars, American built, repairs to, in a foreign country - - -	50 per cent.	—	—	50 per cent.
„ Canadian, built in Canada and brought to the United States to be used only in the through business between Canada and the United States internationally -	Free.	—	—	—
Cartridges, bulletted, as percussion caps - - - - -	40 per cent.	—	—	40 per cent.
Carts (wood and iron) - - -	35 per cent.	—	—	35 per cent.
Carvers, as cutlery - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Cascarilla bark - - - -	Free.	—	—	—
Cashmere shawls - - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Cassimere - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Casks and barrels, manufactured in United States, if exported containing American produce, and declaration be made of intent to return same empty under regulations - - - -	Free.	—	—	—
„ as coverings to importations* -	Free.	—	—	—
„ empty, not otherwise provided for -	30 per cent.	—	—	30 per cent.
Cassava, or cassada, tapioca - -	Free.	—	—	—
Cassia and cassia vera - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ ground - - - - -	20 cts. per lb.	= per lb.	0 0 10	—
„ buds - - - - -	20 cts. per lb.	= per lb.	0 0 10	—
Castana, or castanea nuts, as nuts not otherwise provided for - - -	2 cts. per lb.	= per lb.	0 0 1	—
Casters, or cruets, not in the stands, cut or ornamented -	40 per cent.	—	—	40 per cent.
„ „ plain - -	35 per cent.	—	—	35 per cent.
„ liquor stands, &c., according to material.				
„ furniture, according to material.				
Castings of iron, not otherwise provided for - - - -	30 per cent.	—	—	30 per cent.
„ of plaster - - -	40 per cent.	—	—	40 per cent.
Castor or castoreum - - -	Free.	—	—	—
„ beans or seeds (per bushel of 50 lbs.)† - - - - -	60 cts. per bushel.	= per bush.	0 2 6	—
„ oil - - - - -	1 ct. per gall.	= per gall.	0 0 0½	—
Cast steel tires - - - -	45 per cent.	—	—	45 per cent.
Casts of marble, bronze, alabaster, or plaster of Paris, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific or literary purposes, or encouragement of the fine arts, and not intended for sale - -	Free.	—	—	—

* *See also* note to Barrels, p. 91.

† If the beans are in the pod, an allowance may be made for the weight of the pods as *tare*.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Catechu, or cutch - - -	Free.	—	—	—
Catches (according to material).				
Catgut or whipgut, unmanufactured -	Free.	—	—	—
„ strings of, or gut cord, for musical instruments - - -	Free.	—	—	—
„ or whip gut strings for other purposes - - -	30 per cent.	—	—	30 per cent.
Catsup - - - - - -	40 per cent.	—	—	40 per cent.
Cattle not otherwise provided for -	20 per cent.	—	—	20 per cent.
„ specially imported for breeding purposes - - -	Free.	—	—	—
„ the property of immigrants -	Free.	—	—	—
„ brought for purposes of exhibition, if not sold and re-exported within six months are admitted under regulations - -	Free.	—	—	—
Cauliflowers in salt or brine - -	10 per cent.	—	—	10 per cent.
Caulking mallets, as manufactures of wood not otherwise provided for -	35 per cent.	—	—	35 per cent.
Caustic soda - - - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
Cayenne pepper - - - - -	10 cts. per lb.	= per lb.	0 0 5	—
Cedar wood - - - - -	Free.	—	—	—
„ boards, unmanufactured, for cigar boxes (not cabinet wood) classified as common lumber -	$2 per 1,000 feet board measure.	= per 1,000 feet.	0 8 4	—
„ wood, Spanish, so called (not cabinet wood) - - -	20 per cent.	—	—	20 per cent.
„ fence posts and telegraph poles, unmanufactured, other than round - - - -	20 per cent.	—	—	20 per cent.
„ logs and posts, round and unmanufactured - - -	Free.	—	—	—
Celery seed - - - -	20 per cent.	—	—	20 per cent.
Cellar machinery (according to material).	20 per cent.	—	—	20 per cent,
Cement, Portland - - -	20 per cent.	—	—	20 per cent.
„ Roman - - - -	30 cts. per gall.	= per gall.	0 1 3	—
Cenne oil - - - -	25 per cent.	—	—	25 per cent.
Chains, gold or silver, if jewellery -	40 per cent.	—	—	40 per cent.
„ if not jewellery - - -	25 per cent.	—	—	25 per cent.
„ all others that are jewellery -	2½ cts. per lb.	= per 100 lb.	0 10 5	—
„ cable, or parts thereof - -				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Chains, cable, broken, rusty, or old, unfit for use, dutiable as "scrap-iron;" but not so if fit for use as such by repairs - -	$8 per ton	= per ton	£ s. d. 1 13 4	—
PROVIDED, that no chains made of wire or rods of a diameter less than ½ an inch, shall be considered a chain cable.				
„ curb, polished as saddlery -	35 per cent.	—	—	35 per cent.
„ iron fence, halter, trace and other, made of wire or rods, not less than ¼ inch in diameter - - -	2½ cts. per lb.	= per 100 lb.	0 10 5	—
„ as above, less than ¼ inch in diameter and not under No. 9, wire gauge - - -	3 cts. per lb.	= per 100 lb.	0 12 6	—
„ as above, under No. 9, wire gauge - - -	35 per cent.	—	—	35 per cent.
„ hair - - - -	35 per cent.	—	—	35 per cent.
„ steel, if neither jewellery nor personal ornaments - - -	45 per cent.	—	—	45 per cent.
„ watch, silk - - -	60 per cent.	—	—	60 per cent.
„ other (according to material).				
PROVIDED, that all wire rope and wire strand or chain made of iron wire, either bright, coppered, galvanised, or coated with other metals, shall pay the same rate of duty that is now levied on the iron wire of which said rope or strand or chain is made; and all wire rope and wire strand or chain made of steel wire, either bright, coppered, galvanised, or coated with other metals, shall pay the same rate of duty that is now levied on the steel wire of which said rope or strand or chain is made.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Chairs, sitting, wood, as manufactures of wood not otherwise provided for -	35 per cent.	—	—	35 per cent.
Chalk, billiard - - - -	50 per cent.	—	—	50 per cent.
„ red and French - - -	20 per cent.	—	—	20 per cent.
„ unmanufactured - - -	Free.	—	—	—
„ white - - - - -	Free.	—	—	—
„ all, not otherwise provided for -	25 per cent.	—	—	25 per cent.
Chambery Blanch, as silk - -	60 per cent.	—	—	60 per cent.
Champagne. *See* Liquors.				
Chamomile flowers - - -	Free.	—	—	—
Chamois skins, as "skins, dressed and finished," not otherwise provided for -	20 per cent.	—	—	20 per cent.
Chandeliers (according to material).				
Charcoal - - - - -	Free.	—	—	—
„ capsules - - -	50 per cent.	—	—	50 per cent.
Charts and maps - - -	25 per cent.	—	—	25 per cent.
„ (not more than two copies in any one invoice) specially imported in good faith, for the use or by the order of any academy, college, school, or seminary of learning, or for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts* - - - -	Free.	—	—	—
Chatelaines, metal attachments to ladies' belts for carrying parasols, &c., dutiable as jewellery - - - -	25 per cent.	—	—	25 per cent.
Cheese - - - - -	4 cts. per lb.	= per lb.	0 0 2	—
„ grated - - - -	4 cts. per lb.	= per lb.	0 0 2	—
„ if in glass bottles, same are dutiable as such - - -				
Chemical preparations, not otherwise provided for -	20 per cent.	—	—	20 per cent.
„ „ used chiefly in medicines -	40 per cent.	—	—	40 per cent.
„ purposes, acids used for -	Free.	—	—	—
Chemisettes, silk - - -	60 per cent.	—	—	60 per cent.

* This does not include like articles imported by other parties and purchased from them while in bond, by or for colleges, schools, &c.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Chenille cords or trimmings, cotton, as cotton manufactures, not otherwise provided for - -	35 per cent.	—	—	35 per cent.
„ cords or trimmings, silk -	60 per cent.	—	—	60 per cent.
Cheroots - - - - -	$2½ per lb. and 25 per cent.	= per lb.	0 10 5	+ 25 per cent.
Also, internal revenue tax of -	$6 per 1,000	= per 1,000	1 5 0	—
Chessmen and chess balls, ivory or bone	50 per cent.	—	—	50 per cent.
same, if wood - -	35 per cent.	—	—	35 per cent.
Chest handles (according to material).				
Chestnuts - - - - -	2 cts. per lb.	= per lb.	0 0 1	—
Chicle, gum - - - - -	Free.	—	—	—
Chicory paste - - - - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ root, ground or unground -	1 ct. per lb.	= per lb.	0 0 0½	—
„ „ burnt or prepared - -	5 cts. per lb.	= per lb.	0 0 2½	—
Children's rattles, silver or other, as toys	50 per cent.	—	—	50 per cent.
Chili peppers, unground - - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ ground - - -	10 cts. per lb.	= per lb.	0 0 5	—
Chimney pieces, of slate - - -	40 per cent.	—	—	40 per cent.
„ marble - - -	50 per cent.	—	—	50 per cent.
China clay or kaoline - - -	$5 per ton	= per ton	1 0 10	—
„ porcelain, and Parian ware, plain white, and not decorated in any manner - - -	45 per cent.	—	—	45 per cent.
„ porcelain and Parian ware, gilded, ornamented, or decorated in any manner - - -	50 per cent.	—	—	50 per cent.
„ root - - - - -	Free.	—	—	—
Chinchards (or chinches) in oil, as sardines in oil - - - -	50 per cent.	—	—	50 per cent.
Chinese blue - - - -	25 per cent.	—	—	25 per cent.
„ pea-nut oil - - -	20 per cent.	—	—	20 per cent
„ wax - - - - -	Free.	—	—	—
Chinotti or Eve's apples, as confectionery.				
Chip bonnets, &c. - - -	40 per cent.	—	—	40 per cent.
„ braids, &c. - - - -	30 per cent.	—	—	30 per cent.
Chisels, as manufactures of steel -	45 per cent.	—	—	45 per cent.
Chloral hydrate - - - -	40 per cent.	—	—	40 per cent.
Chlorbarium, barytes with acid or water	3 cts. per lb.	= per lb.	0 0 1½	—
„ or chloride of barium, or salt, barium, and chlorine	20 per cent.	—	—	20 per cent.
Chloride of lime - - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Chlorine - - - -	20 per cent.	—	—	20 per cent.
Chlorometers, part glass - -	40 per cent.	—	—	40 per cent.
Chloroform - - - -	$1 per lb.	= per lb.	0 4 2	—
Chlorure d'oxide de sodium, or liqueur disinfectante de Labarraque - -	20 per cent.	—	—	20 per cent.
Chocolate - - - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ prepared as confectionery -	50 per cent.	—	—	50 per cent.
Chondrometers - - - -	40 per cent.	—	—	40 per cent.
Chromate of potash - - -	4 cts. per lb.	= per lb.	0 0 2	—
Chrome-yellow - - - -	25 per cent.	—	—	25 per cent.
Chromo-lithographs - - -	25 per cent.	—	—	25 per cent.
Chronometers, box or ship's, and parts thereof * - - - -	10 per cent.	—	—	10 per cent.
Chrysolite, crude mineral - -	20 per cent.	—	—	20 per cent.
Church furniture,† according to material.				
Churns, according to material.				
Cicuta, conia, extract of - - -	40 per cent.	—	—	40 per cent.
„ „ or hemlock seed and leaf -	Free.	—	—	—
Cider - - - - - -	20 per cent.	—	—	20 per cent.
Cigarette papers, in sheets and reams -	35 per cent.	—	—	35 per cent.
Cigarettes, asthma, medicinal preparation	40 per cent.	—	—	40 per cent.
Cigars, cigarettes, and cheroots of all kinds,‡ paper cigars and cigarettes including wrappers, being subject to the same duties as cigars -	$2½ per lb. and 25 per cent.	= per lb.	0 10 5	+ 25 per cent.

* "Empty chronometer boxes liable to duty as manufactures of wood at 35 per cent."

† So of church organs, and of cloth imported for a church or charitable association, and gas fixtures for a church.

So of a memorial tablet of marble and brass to be placed in a church.

Caen stone font and six brass flower vases for a church held dutiable.

An altar and appendages, a gift to an academy, held dutiable. Also painted windows for churches. And bells for churches. And a clock imported for the tower of a cathedral. And candlesticks, church ornaments, &c. So also of glass intended to be used for constructing a telescope for a seminary of learning; but held that a finished telescope imported for that purpose would be free.

A marble altar with statuary carved thereon, and imported for a convent, refused free entry as not embraced in the term "statuary" in this clause, but dutiable as a manufacture of marble.

Paintings on glass for churches, free.

The term "Regalia," as used in this clause, was, September 30, 1864, ruled by the Department to be "confined to articles "worn on the persons of priests and others officiating, or used by hand in the performance of their ceremonies." A silver communion service imported for a church was held to be exempt as "regalia."

This term does not include brown frieze cloth still in the piece though designed for the manufacture of priests' gowns, but is limited as above.

Nor cords with tassels for trimming altars or pulpits.

But contra as to *altar* cloths.

An altar lamp imported for a church is not considered "regalia," nor is a brass lectern. Paintings imported for churches or religious institutions after June 22, 1874, are not exempt from duty.

‡ Cheroots and cigarettes must be imported (the same as cigars) in quantities not less than 3,000, and packed in boxes as prescribed in the case of cigars, but in no case over 500 in a single box.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Cigars, &c.—*continued.*				
Also, internal revenue tax, as follows :—				
On all cigars and cheroots	$6 per 1,000	= per 1,000	1 5 0	—
On cigarettes weighing over 3lb. per 1,000 -	$6 per 1,000	= per 1,000	1 5 0	—
On same, weighing not over 3lb. per 1,000 -	$1.75 per 1,000	= per 1,000	0 7 3½	—
Cinchona bark and root - - -	Free.	—	—	—
,, muriate of - - -	40 per cent.	—	—	40 per cent.
Cinnabar, artificial, mercurial preparation	20 per cent.	—	—	20 per cent.
Cinnamon - - - -	20 cts. per lb.	= per lb.	0 0 10	—
,, chips - - - -	20 cts. per lb.	= per lb.	0 0 10	—
,, oil of - - - -	Free.	—	—	—
Citron, as fruit - - - -	10 per cent.	—	—	10 per cent.
,, preserved - - -	35 per cent.	—	—	35 per cent.
Citronella or lemon-grass, oil of - -	Free.	—	—	—
Civet, crude, in natural pod - -	Free.	—	—	—
,, oil of - - - -	Free.	—	—	—
Clasps (according to material).				
Clapboards,* rough-hewn or sawed only, pine or spruce, per 1,000 pieces of 4 feet long, or 4,000 lineal feet, viz. :—				
pine - - -	$2	= per 1,000 pieces.	0 8 4	—
spruce - - -	$1½	= per 1,000 pieces.	0 6 3	—
all other, rough hewn or sawed only - -	20 per cent.	—	—	20 per cent.
,, when planed or finished, there shall be levied and paid, in addition to the above rates, for each side so planed or finished, 50 cts. per 1,000 feet; and if planed on one side, and tongued and grooved, $1 per 1,000 feet; and if planed on two sides, and tongued and grooved, $1½ per 1,000 feet.				
Clay, china, as kaoline - -	$5 per ton	= per ton	1 0 10	—
,, unwrought, pipe clay and fire clay -	$5 per ton	= per ton	1 0 10	—
,, prepared - - - -	$5 per ton	= per ton	1 0 10	—
,, pipes, common white - -	35 per cent.	—	—	35 per cent.

* Under previous Acts, clapboards manufactured by a further process than sawing alone, viz., by having the thick edges cut nearly smooth by a knife or other sharp instrument, although such further process were accomplished at the same time that the sawing was done, were held liable to duty at the rate of thirty-five per centum ad valorem, as manufactures of wood not otherwise provided for.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Clay, pipes, with india-rubber bands at tips or otherwise advanced beyond the common white clay	$1½ per gross and 75 per cent.	= per gross	0 6 3	+ 75 per cent.
„ pipe bowls or pipe heads, and clay pipes, coloured - -	$1½ per gross and 75 per cent.	= per gross	0 6 3	+ 75 per cent.
Claystone - - - -	20 per cent.	—	—	20 per cent.
Cliffstone, unmanufactured - -	Free.	—	—	—
Clippings, of brass - - -	20 per cent.	—	—	20 per cent.
„ or scraps of Dutch metal made of brass, as manufactures of brass - - -	35 per cent.	—	—	35 per cent.
„ of copper, as manufactures of copper - - -	45 per cent.	—	—	45 per cent.
„ of any kind, fit only for making paper - -	Free.	—	—	—
Cloaks and capes, wholly or partly wool, worsted, hair of alpaca, goat, or like animals -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ silk, or of which silk is a component of chief value, and containing neither of the above materials - -	60 per cent.	—	—	60 per cent.
„ of all other materials not otherwise provided for	35 per cent.	—	—	35 per cent.
Cloak-pins (according to material).				
Clocks, and parts of - - -	35 per cent.	—	—	35 per cent.
Clocks, same, if iron, steel, or other metal, chief value - - -	35 per cent.	—	—	35 per cent.
„ side ornaments for, as vases, candelabras, &c., are not "parts of clocks."				
Clock cases, of marble - - -	35 per cent.	—	—	35 per cent.
Cloth, bolting - - - -	Free.	—	—	—
„ button - - - -	10 per cent.	—	—	10 per cent.
„ coloured, for book-binding -	35 per cent.	—	—	35 per cent.
„ corset, woven, or made in patterns of such size, shape, and form, or cut in such manner as to be fit for corsets, valued at not over $6 per doz. - - -	$2 per doz.	= per doz.	0 8 4	—
„ same, valued at over $6 per doz.	35 per cent.	—	—	35 per cent.
„ crinoline - - - -	30 per cent.	—	—	30 per cent.
„ floor, of cork, india rubber, &c. -	30 per cent.	—	—	30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Cloth, grass	30 per cent.	—	—	30 per cent.
„ gunny, not cotton bagging, valued at not over 10 cts. per sq. yard	3 cts. per lb.	= per lb.	0 0 1½	—
The same, valued over 10 cts. per sq. yard	4 cts. per lb.	= per lb.	0 0 2	—
The same, suitable for same uses as cotton bagging, valued at not over 7 cts. per sq. yard	2 cts. per lb.	= per lb.	0 0 1	—
The same, valued over 7 cts. per sq. yard	3 cts. per lb.	= per lb.	0 0 1½	—
„ gunny, old or refuse, fit only to be re-manufactured	Free.	—	—	—
„ hair, not otherwise provided for	30 per cent.	—	—	30 per cent.
„ india rubber, with linen or cotton	35 per cent.	—	—	35 per cent.
„ Italian. *See* Dress Goods.				
„ oil, all except floor and silk	45 per cent.	—	—	45 per cent.
„ seer sucker, so-styled	50 per cent.	—	—	50 per cent.
„ water proof, not otherwise provided for	45 per cent.	—	—	45 per cent.
„ woollen	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Clothing, ready made, and wearing apparel of every description, and balmoral skirts and skirting, and goods of similar description, or used for like purposes, composed wholly or in part of wool, worsted, the hair of the alpaca, goat, or other like animals, made up or manufactured wholly or in part by the tailor, seamstress, or manufacturer, except knit goods	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ knit goods, wholly or partly of wool, worsted, the hair of the alpaca, goat, or other like animals, valued at not over 40 cts. per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
„ „ at over 40 and not over 60 cts. per lb.	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
„ „ at over 60 and not over 80 cts. per lb.	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
„ knit goods, at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Clothing, of silk, or silk chief value, except as above - -	60 per cent.	—	—	60 per cent.
„ ready-made, and wearing apparel not otherwise provided for, excepting linen -	35 per cent.	—	—	35 per cent.
„ such as articles worn by men, women, or children, of whatever material composed, except silk or linen, made up, or made wholly or in part by hand, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
Cloves - - - - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ oil of - - - - -	$2 per lb.	= per lb.	0 8 4	—
Clove stems - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Cluny lace - - - -	40 per cent.	—	—	40 per cent.
Coaches, furniture and hardware for, not otherwise provided for -	35 per cent.	—	—	35 per cent.
Coaches, lace for, according to component materials.	Free.	—	—	—
Coal, anthracite - - -	75 cts. per ton	= per ton	0 3 1½	—
„ bituminous,* 80 lbs. to bush. and 28 bush. to ton - -	75 cts. per ton	= per ton	0 3 1½	—
„ cannel - - - -	40 cts. per ton	= per ton	0 1 8	—
„ dust - - - -	45 per cent.	—	—	45 per cent.
„ hods, copper, as manufactures of copper, not otherwise provided for - - - -	40 cts. per ton	= per ton	0 1 8	—
„ screenings, bituminous and anthracite, as culm - -	40 cts. per ton	= per ton	0 1 8	—
„ slack or culm,† such as will pass through a half-inch screen, 80 lbs. to bush. and 28 bush. to ton - - - -	40 cts. per ton	= per ton	0 1 8	—
„ all other, 80 lbs. to bush., 28 bush. to ton - - - -	15 cts. per gall.	= per gall.	0 0 7½	—
„ oil, crude - - - -	40 cts. per gall.	= per gall.	0 1 8	—
„ „ refined or distilled - -	20 per cent.	—	—	20 per cent.
„ tar oil, also known as nitro-benzole, oil or essence of mirbane, and artificial oil of almonds, made of benzole and nitric acid - -				

* "Coal brought by vessels, propelled by steam, may be retained on board; if landed, liable to duty."

† Culm of coal embraces the screenings of bituminous as well as of anthracite coal.

Coal stores of American vessels free; *provided*, that none should be unloaded.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Coatings, linen, and Genoese linen coatings, coloured, valued at not over 30 cts. per sq. yard	35 per cent.	—	—	35 per cent.
Cobalt, oxide of	20 per cent.	—	—	20 per cent.
„ ore of	Free.	—	—	—
Coburgs, printed or ombre-striped, as woollen dress goods.				
Coburg robes aquille. *See* note to Robe Patterns, page 261.				
Cocculus indicus	Free.	—	—	—
Cochineal	Free.	—	—	—
„ lake	25 per cent.	—	—	25 per cent.
Cocoa or cacao, crude	Free.	—	—	—
„ leaves, fibre and shells of	Free.	—	—	—
„ ground or prepared	2 cts. per lb.	= per lb.	0 0 1	—
„ nuts	Free.	—	—	—
„ nut mats	30 per cent.	—	—	30 per cent.
same with wool border	45 per cent.	—	—	45 per cent.
„ „ matting	30 per cent.	—	—	30 per cent.
same with narrow border, partly of wool	30 per cent.	—	—	30 per cent.
„ „ oil	Free.	—	—	—
„ wine (if exclusively used medicinally)	40 per cent.	—	—	40 per cent.
Cocoons, silk	Free.	—	—	—
Codilla, or tow of hemp	$10 per ton	= per ton	2 1 8	—
Codfish, dried	½ ct. per lb.	= per lb.	0 0 0¼	—
Cod oil, for tanners' use	20 per cent.	—	—	20 per cent.
„ lines, hemp	30 per cent.	—	—	30 per cent.
„ liver oil, medicinal preparation	40 per cent.	—	—	40 per cent.
„ „ brown or crude, or crude in barrels.	20 per cent.	—	—	20 per cent.
„ sounds and tongues, dried	Free.	—	—	—
„ „ salted in barrels, as fish not specified pickled in barrels	$1½ per brl.	= per brl.	0 6 3	—
Coffee, of all kinds *	Free.	—	—	—
„ acorn, and dandelion root, raw or prepared, and all other articles used or intended to be used as coffee, or a substitute for coffee, and not otherwise provided for, except chicory	3 cts. per lb.	= per lb.	0 0 1½	—
„ extract of	20 per cent.	—	—	20 per cent.
„ mills, wood and iron, as manufactures of iron, not otherwise provided for	35 per cent.	—	—	35 per cent.

* Coffee (Java) imported from Rotterdam viâ London, in vessels of the Netherlands, liable to a discriminating duty after Oct. 1, 1872.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Cognac oil or œnanthic ether - -	$4 per oz.	= per oz.	0 16 8	—
Coins, gold and silver - - -	Free.	—	—	—
„ copper - - - -	Free.	—	—	—
„ cabinets of, and all other collections of antiquities - - -	Free.	—	—	—
„ old foreign copper, in large quantities for manufacturing purposes, as old copper - - -	4 cts. per lb.	= per lb.	0 0 2	—
Coir and coir yarn - - -	Free.	—	—	—
„ mats - - - -	30 per cent.	—	—	30 per cent.
same with wool border - -	45 per cent.	—	—	45 per cent.
„ matting - - - -	30 per cent.	—	—	30 per cent.
„ matting with narrow border, partly of wool - - - -	30 per cent.	—	—	30 per cent.
Coke - - - - -	25 per cent.	—	—	25 per cent.
Colcothar,* dry, or oxide of iron -	Free.	—	—	—
Cold cream, cosmetic - - -	50 per cent.	—	—	50 per cent.
Collections of antiquities specially imported and not for sale - - -	Free.	—	—	—
Colleges, books, maps, and charts (not more than two copies in any one invoice), specimens of sculpture, regalia, and gems, and statues and specimens of sculpture, specially imported in good faith, for the use or by the order of, or of any academy, school, or seminary of learning - - -	Free.	—	—	—
„ philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported for the use of, or of any institution or society incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not for sale	Free.	—	—	—

* *Colcothar and Venetian Red* are separate and distinct articles of commerce; colcothar being a dry oxide of iron produced by chemical action (but not chemically pure), containing small quantities of lime, sulphuric acid, and sulphate of lime as impurities, while Venetian red is a native or prepared oxide of iron, ground with twenty-five to forty percentum of whiting to make it fit for use as a paint. Colcothar is much heavier and darker in colour than Venetian red, and of nearly triple its value in England.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Collodion, fluid	$1 per lb.	= per lb.	0 4 2	—
Colocynth (bitter apples)	Free.	—	—	—
Cologne water and other perfumery, of which alcohol forms the principal ingredient	$3 per gal. & 50 per cent.	= per gal.	0 12 6	+ 50 per cent.
Coloquintida (bitter apples)	Free.	—	—	—
Coloring for brandy, if it contains spirits, dutiable as distilled spirits	$2 per proof gall.	=per proof gall.	0 8 4	—
„ for brandy,* without spirits	50 per cent.	—	—	50 per cent.
Colors, aniline, by whatever name known	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ moist water, used in the manufacture of paper-hangings and coloured papers and cards, not otherwise provided for	25 per cent.	—	—	25 per cent.
„ painters, not otherwise provided for	25 per cent.	—	—	25 per cent.
„ water, not otherwise provided for	35 per cent.	—	—	35 per cent.
Coltsfoot (crude drug)	Free.	—	—	—
Colombo root	Free.	—	—	—
Colza oil	20 per cent.	—	—	20 per cent.
Combs, for the hair, all kinds	35 per cent.	—	—	35 per cent.
„ curry, as manufactures of iron	35 per cent.	—	—	35 per cent.
„ machines for making, part steel	45 per cent.	—	—	45 per cent.
Comfits, sweetmeats, or fruits preserved in sugar, brandy, or molasses, not otherwise provided for	35 per cent.	—	—	35 per cent.
Comforters, of worsted, made on frames	35 per cent.	—	—	35 per cent.
Compasses, mathematical or mechanics' (according to material).				
„ mariners'	40 per cent.	—	—	40 per cent.
Composition of glass or paste, set	30 per cent.	—	—	30 per cent.
„ of glass or paste, for jewellers' use, not set	40 per cent.	—	—	40 per cent.
„ tops for furniture	35 per cent.	—	—	35 per cent.
Compounds or preparations of which distilled spirits are component parts of chief value, same as spirits	$2 per proof gall.	=per proof gall.	0 8 4	—
Condensed milk	20 per cent.	—	—	20 per cent.

* "So-styled 'Prune wine for fining liquors,' does not on examination bear similitude to brandy coloring, and should be classed as non-enumerated manufactured articles at 20 per cent."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Confectionery, sugar candy, not colored, nor sold otherwise than by the lb., nor valued above 30 cts. per pound	10 cts. per lb.	= per lb.	0 0 5	—
„ all other, not otherwise provided for, made wholly or in part of sugar, and on sugars, after being refined, when tinctured, colored, or in any way adulterated, valued at 30 cts. per lb. or less -	15 cts. per lb.	= per lb.	0 0 7½	—
„ all, valued above 30 cts. per lb., or when sold by the box, package, or otherwise than by the pound - -	50 per cent.	—	—	50 per cent.
Condiments and sauces, not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
"**Coney** plates," so called, being parts of coney skins sewed together and used for linings and for manufacture of children's cloaks, &c., as manufactures of furs -	35 per cent.	—	—	35 per cent.
Conia, cicuta, or hemlock seed and leaf -	Free.	—	—	—
„ extract of - - - - -	40 per cent.	—	—	40 per cent.
Contrayerva root - - -	Free.	—	—	—
Copal gum - - - -	Free.	—	—	—
Copper bottoms (still bottoms) - -	45 per cent.	—	—	45 per cent.
„ alloys, not otherwise provided for, of which copper is a component of chief value - - -	45 per cent.	—	—	45 per cent.
„ chafing dishes - - -	45 per cent.	—	—	45 per cent.
„ clippings from new copper plates, never in use, as copper unmanufactured, not otherwise provided for - - - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ coins - - - -	Free.	—	—	—
„ coins, old foreign, for manufacturing, as old copper - -	4 cts. per lb.	= per lb.	0 0 2	—
„ eyelets, all kinds - -	6 cts. per 1,000	= per 1,000	0 0 3	—
„ for United States Mint - -	Free.	—	—	—
„ in rolled plates, called brazier's -	45 per cent.	—	—	45 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Copper, in plates, bars, ingots, pigs, and in other forms not manufactured, not otherwise provided for -	5 cts. per lb.	= per 100lbs. = 1 0 10 / = per ton = 23 6 8		—
,, in sheets, bolts, nails, spikes, wire rods, pipes, &c. - -	45 per cent.	—	—	45 per cent.
,, manufactures of, or of which copper is component of chief value, not otherwise provided for* -	45 per cent.	—	—	45 per cent.
,, old, fit only for re-manufacture -	4 cts. per lb.	= per 100lbs. = 0 16 8 / = per ton = 18 13 4		—
old, from American vessels' bottoms, compelled by marine disaster to repair in foreign ports - - -	Free.	—	—	—
,, ore, on each pound of fine copper contained therein - -	3 cts. per lb.	= per 100lbs. = 0 12 6 / = per ton = 14 0 0		—
,, regulus of, and on all black or coarse copper, on each pound of fine copper contained therein	4 cts. per lb.	= per 100lbs. = 0 16 8 / = per ton = 18 13 4		—
,, sheathing metal - - -	45 per cent.	—	—	45 per cent.
,, subacetate of (verdigris) -	Free.	—	—	—
,, sulphate of, or blue vitriol -	4 cts. per lb.	= per lb.	0 0 2	—
,, sulphides of - - -	20 per cent.	—	—	20 per cent.
Copperas, green vitriol or sulphate of iron - - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
Copybooks, with printed headings -	25 per cent.	—	—	25 per cent.
Copying books, blank, for taking press copies of writing, bound or unbound -	25 per cent.	—	—	25 per cent.
Coral, marine, unmanufactured - -	Free.	—	—	—
,, cut or manufactured - -	30 per cent.	—	—	30 per cent.
Coralline, not otherwise provided for -	20 per cent.	—	—	20 per cent.
†**Cordage** or cables, tarred - -	3 cts. per lb.	= per lb.	0 0 1½	—

* "Machinery manufactured wholly of iron, with the exception of an insignificant portion thereof (say 1–28 part of its value) which is of brass, is liable to duty at the rate of 35 per centum ad valorem as a manufacture of iron. To constitute it subject to the rate of duty imposed on manufactures of copper, it must contain copper of more than 50 per centum in value of all the materials contained therein."

† The term "cordage," as used in the tariff, being considered only applicable to ropes used in the rigging of vessels, "common bale rope for baling cotton," not used for that purpose, nor commonly known as "cordage," is entitled to entry as a manufacture of hemp.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Cordage, untarred Manilla - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ all other untarred - -	3½ cts. per lb.	= per lb.	0 0 1¾	—
Cord, sash, as manufactures of hemp -	30 per cent.	—	—	30 per cent.
„ and cords and tassels, metal -	35 per cent.	—	—	35 per cent.
„ „ „ cotton -	35 per cent.	—	—	35 per cent.
„ „ „ silk - -	60 per cent.	—	—	60 per cent.
„ „ „ wool, worsted or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Cordials - - - - -	$2 per proof gall.	=per proof gall.	0 8 4	—
Coriander seed - - - -	Free.	—	—	—
Cork bark, manufactured - - -	30 per cent.	—	—	30 per cent.
„ "carpeting," so called, of thin cork, with a few threads of hemp on one side for strengthening, dutiable as manufactures of cork - -	30 per cent.	—	—	30 per cent.
„ wood or bark, cut into small squares	Free.	—	—	—
„ wood or cork bark, unmanufactured	Free.	—	—	—
„ wood, pictures of - - -	30 per cent.	—	—	30 per cent.
Corks* - - - - -	30 per cent.	—	—	30 per cent.
Cornelian rings, as jewelry - -	25 per cent.	—	—	25 per cent.
„ stones - - -	10 per cent.	—	—	10 per cent.
„ „ unmanufactured -	Free.	—	—	—
Corn, Indian or maize (56 lbs. to bushel)	10 cts. per bus.	= per bus.	0 0 5	—
„ meal - - - - -	10 per cent.	—	—	10 per cent.
„ **mills,** according to principal materials composing them.				
„ **dressing machinery,** according to principal materials composing them.				
Cornplasters, of wool - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Corrosive sublimate, mercurial preparation - - - - -	20 per cent.	—	—	20 per cent.
Corsets, or manufactured cloth, woven or made in patterns of such size, shape, and form, or cut in such manner as to be fit for corsets :				
valued at $6 per doz. or less -	$2 per doz.	= per doz.	0 8 4	—
valued over $6 per doz. - -	35 per cent.	—	—	35 per cent.

* "The cost of baskets containing imported corks is properly charged under the ninth section of the Act of July 28, 1866 in the dutiable value of the corks."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Corset wire, steel - - -	9 cts. per lb. and 10 per cent.	= per lb.	0 0 4½	+ 10 per cent.
Corundum, ore - - - -	$6 per ton	= per ton	1 5 0	—
Cosmetics, essences, extracts, toilet waters, hair oils, pomades, hair dressings, hair restoratives, hair dyes, tooth washes, dentrifices, tooth pastes, aromatic cachous, or other perfumeries or cosmetics, by whatsoever name or names known, used or applied as perfumes or applications to the hair, mouth or skin - - -	50 per cent.	—	--	50 per cent.
Cot bottoms, valued at not over 30 cts. per square yard - -	35 per cent.	—	--	35 per cent.
„ valued at over 30 cts. per square yard - -	40 per cent.	—	—	40 per cent.
Coton azotique, or gun cotton, valued at not over 20 cts. per lb. -	6 cts. per lb. and 20 per cent.	= per lb.	0 0 3	+ 20 per cent.
„ „ „ valued at over 20 cts. per lb. -	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.
Cotton and silk plush, for hatters, cotton chief value - - - -	25 per cent.	—	—	25 per cent.
Cotton and worsted braids, for boot and shoe straps, chiefly cotton, as manufactures partly of worsted, viz.:				
valued at not over 40 cts. per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 and not over 60 cts. per lb. - - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 and not over 80 cts. per lb. - - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Cotton and worsted trimmings - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Cotton bagging, or other manufactures, not otherwise herein provided for, suitable for the uses to which cotton bagging is applied, composed in whole or part of hemp, jute, flax, gunny bags, gunny cloth, or other material :*				
valued at 7 cts. or less per sq. yd. -	2 cts. per lb.	= per lb.	0 0 1	—
valued at over 7 cts. per sq. yard -	3 cts. per lb.	= per lb.	0 0 1½	—

* "Cotton bagging is commercially known and understood to apply exclusively to articles used and suitable for the baling of cotton, without reference to material, and this the phraseology of the law clearly indicates."
"Certain so-called 'Dundee Bagging,' reported by appraisers as suitable for the use to which cotton bagging was applied, subject to duty as 'cotton bagging.'"

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ *s.* *d.*	
Cotton bags and bagging, and all other like manufactures, not herein otherwise provided for, except bagging for cotton, composed wholly or in part of flax, hemp, jute, gunny cloth, gunny bags, or other material - - - - -	40 per cent.	—	—	40 per cent.
Cotton bobbinet, braids, insertings, lace, and trimmings - - - -	35 per cent.	—	—	35 per cent.
Cotton braids, imported for trimming hats, but which may be used for other purposes, dutiable as other cotton braids - - - - -	35 per cent.	—	—	35 per cent.
,, caps, hose, leggings, mitts, socks, made on frames, bleached or coloured - - -	35 per cent.	—	—	35 per cent.
,, carpets and carpeting - -	40 per cent.	—	—	40 per cent.
,, containing the seed, unginned, classified as raw cotton -	Free.	—	—	—
,, cords, gimps, galloons, braces, or suspenders - - -	35 per cent.	—	—	35 per cent.
,, drawers and other articles made on frames - - -	35 per cent.	—	—	35 per cent.
,, dreadnoughts - - -	35 per cent.	—	—	35 per cent.
,, duck - - - - -	35 per cent.	—	—	35 per cent.
,, embroidered or tamboured, in the loom or otherwise, by machinery or with the needle, or other process - - -	35 per cent.	—	—	35 per cent.
,, fibre vestings, so called, of grass and cotton, cotton chief value -	35 per cent.	—	—	35 per cent.
,, floss, as cotton thread.				
,, fringes - - - - -	35 per cent.	—	—	35 per cent.
,, fuse, for smokers' use - -	75 per cent.	—	—	75 per cent.
,, hat bodies - - -	35 per cent.	—	—	35 per cent.
,, hosiery, all - - -	35 per cent.	—	—	35 per cent.
,, lace, insertings, trimmings -	35 per cent.	—	—	35 per cent.
,, ,, coloured - - -	35 per cent.	—	—	35 per cent.
,, moleskins and repellent moleskins	35 per cent.	—	—	35 per cent.
,, rags as paper stock - -	Free.	—	—	—
,, raw - - - - -	Free.	—	—	—
,, seed, for planting - -	20 per cent.	—	—	20 per cent.
,, ,, oil - - -	30 cts. per gall.	= per gal.	0 1 3	—
,, shirts, woven or made on frames -	35 per cent.	—	—	35 per cent.
,, ,, all other - - -	35 per cent.	—	—	35 per cent.
,, thread lace, entirely of cotton -	30 per cent.	—	—	30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
*Cotton thread, on spools, or spool thread, containing on each spool not exceeding 100 yds. of thread	6 cts. per doz. and 30 per cent.	=per 100 doz.	1 5 0	+ 30 per cent.
exceeding 100 yds., for every additional 100 yds. on each spool, or fractional part thereof, in excess of 100 yards	6 cts. per doz. and 35 per cent.	=per 100 doz.	1 5 0	+ 35 per cent.
Cotton thread, yarn, warps, or warp yarn, not wound upon spools, whether single or advanced beyond the condition of single by twisting two or more single yarns together, whether on beams or in bundles, skeins, or cops, or in any other form :				
valued at not over 40 cts. per lb.	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.
valued at over 40 cts., and not over 60 cts. per lb.	20 cts. per lb. and 20 per cent.	= per lb.	0 0 10	+ 20 per cent.
valued at over 60 cts., and not over 80 cts. per lb.	30 cts. per lb. and 20 per cent.	= per lb.	0 1 3	+ 20 per cent.
valued at over 80 cts. per lb.	40 cts. per lb. and 20 per cent.	= per lb.	0 1 8	+ 20 per cent.
,, tracing cloth	35 per cent.	—	—	35 per cent.
,, unginned, containing the seed	Free.	—	—	—
,, velvets, printed or painted, or otherwise	35 per cent.	—	—	35 per cent.
,, velvet binding	35 per cent.	—	—	35 per cent.
,, velveteens	35 per cent.	—	—	35 per cent.
,, velvet ribbons	35 per cent.	—	—	35 per cent.
,, velvet slipper patterns, embroidered with silk floss, silk chief value	35 per cent.	—	—	35 per cent.
,, velvet uppers for slippers	35 per cent.	—	—	35 per cent.
,, vestings	35 per cent.	—	—	35 per cent.
,, waste	Free.	—	—	—
,, manufactures, not otherwise provided for	35 per cent.	—	—	35 per cent.
Cottons, (except jeans, denims, drillings, bed tickings, ginghams, plaids, cottonades, pantaloons stuff, and goods of like description), but including Canton flannels, not exceeding 100 threads to the square inch, counting the warp and fill-				

* In the case of an importation of 478 tin boxes containing spool cotton, it was found that the spool cotton had been purchased by the dozen spools and not by the box, and afterwards put into the boxes by the purchaser at his own expense to prevent damage on the voyage. Held, "that the boxes do not enter into the market value or form part of the wholesale price of the spool cotton at the period of exportation."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
Cottons, &c.—*continued.*			£ *s.* *d.*	
ing, and *exceeding* in weight 5 ounces per square yard :*				
if unbleached - - -	5 cts. per sq. yd.	=per 100 sq. yds.	1 0 10	—
if bleached - - -	5½ cts. per sq. yd.	=per 100 sq. yds.	1 2 11	—
if coloured, stained, painted, or printed - - - -	5½ cts. per sq. yd. & 10 per cent.	=per 100 sq. yds.	1 2 11	+ 10 per cent.
Cotton muslin skirting and lappets, as fabrics immediately following.				
„ silesias or twilled, as fabrics immediately following.				
„ tarlatane muslins, as fabrics immediately following.				
On goods of like description, exceeding 200 threads to the square inch, counting the warp and filling :				
if unbleached - - -	5 cts. per sq. yd.	=per 100 sq. yds.	1 0 10	—
if bleached - - -	5½ cts. per sq. yd.	=per 100 sq. yds.	1 2 11	—
if colored, stained, painted, or printed - - -	5½ cts. per sq. yd. and 20 per cent.	=per 100 sq. yds.	1 2 11	+ 20 per cent.
On finer and lighter goods of like description, not exceeding 200 threads to the square inch, counting the warp and filling :†‡				
if unbleached - - -	5 cts. per sq. yd.	=per 100 sq. yds.	1 0 10	—
if bleached - - -	5½ cts. per sq. yd.	=per 100 sq. yds.	1 2 11	—

* "The terms of the law imposing duty according to the count of threads should be held to apply in all cases where such count can be ascertained by means of the 'glass' commonly used for such purpose, and in all cases where the value of the goods is partially or wholly determined between the manufacturer and the purchaser according to the number of threads to the square inch."

The fact that goods are not termed in trade "countable goods," will not exclude them from classification for duty according to the count of the threads, provided they come within the rule above stated.

Cotton linings, manufactured with a few threads of flax in the selvage, which, however, did not change the commercial character of the goods, were held to be dutiable as *countable cottons*.

"Cotton towels, bleached and having coloured stripes at either end, intended as an ornament or finish, are properly assessed with the additional duty provided for articles of cotton, 'if printed, painted, coloured, or stained.'"

† As cotton goods are made of various widths, the duty per lineal yard would, in most cases, be lower than that quoted; thus 100 yards of cotton goods ¾ yard wide would be charged as 75 square yards, and so on in proportion as the width is greater or less than that mentioned.

‡ This includes coloured cottons (not similar to ginghams) numbering over 100 and less than 200 threads to the square inch and costing less than 25 cents per square yard.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Cotton, &c.—*continued.*				
if colored, stained, painted, or printed - - -	5½ cts. per sq. yd. and 20 per cent.	=per 100 sq. yds.	1 2 11	+ 20 per cent.
Cotton brilliants, classified with jeans.				
Cottons, viz.: jeans, denims, drilling, bed tickings, ginghams, plaids, cottonades, pantaloon stuffs, and goods of like description, or for similar uses, and not exceeding 100 threads to the square inch, counting the warp and filling, and exceeding 5 oz. to the square yard:				
if unbleached - - -	6 cts. per sq. yd.	=per 100 sq. yds.	1 5 0	—
if bleached - - -	6½ cts. per sq. yd.	=per 100 sq. yds.	1 7 1	—
if colored, stained, painted, or printed - - -	6½ cts. per sq. yd. and 10 per cent.	=per 100 sq. yds.	1 7 1	+10 per cent.
On finer or lighter goods of like description, not exceeding 200 threads to the square inch, counting the warp and filling:				
if unbleached - - -	6 cts. per sq. yd.	=per 100 sq. yds.	1 5 0	—
if bleached - - -	6½ cts. per sq. yd.	=per 100 sq. yds.	1 7 1	—
if colored, stained, painted, or printed - - -	6½ cts. per sq. yd. and 15 per ct.	=per 100 sq. yds.	1 7 1	+ 15 per cent.
On goods of lighter description, exceeding 200 threads to the square inch, counting the warp and filling:				
if unbleached - - -	7 cts. per sq. yd.	=per 100 sq. yds.	1 9 2	—
if bleached - - -	7½ cts. per sq. yd.	=per 100 sq. yds.	1 11 3	—
if colored, stained, painted, or printed - - -	7½ cts. per sq. yd. and 15 per cent.	=per 100 sq. yds.	1 11 3	+ 15 per cent.
Provided, that upon all plain woven cotton goods, not included in the foregoing schedule:				
if unbleached, valued at over 16 cts. per sq. yd. - - -	35 per cent.	—	—	35 per cent.
if bleached, valued at over 20 cts. per sq. yd. - - -	35 per cent.	—	—	35 per cent.
if colored, valued at over 25 cts. per sq. yd. - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Cottons, &c.—*continued.*			£ *s.* *d.*	
Grenadines and goods of like description, such as Japanese cloths, Japanese poplins, &c., when they count less than 100 threads to the sq. inch	5½ cts. per sq. yd. and 20 per cent.	= per 100 sq. yds.	1 2 11	+ 20 per cent.
„ cotton and silk, cotton chief value, when threads cannot be counted - -	35 per cent.	—	—	35 per cent.
"Hair switches," so called, of coloured cotton, as cotton thread - -	40 cts. per lb. and 20 per cent.	= per lb.	0 1 8	+ 20 per cent.
Imitation Italian cloths, readily countable with the glass, as jeans and similar fabrics.				
Jeans, denims, and drillings, valued at over 20 cts. per sq. yd., unbleached -	35 per cent.	—	—	35 per cent.
All other cotton goods of every description, the value of which shall exceed 25 cts. per sq. yd. - - -	35 per cent.	—	—	35 per cent.
PROVIDED FURTHER, that no cotton goods having more than 200 threads to the square inch, counting the warp and filling, shall be admitted to a less rate of duty than is provided for goods which are of that number of threads.				
Court plaster - - - -	35 per cent.	—	—	35 per cent.
Counters, duty according to material.	—	—	—	—
Counting house boxes, paper - -	35 per cent.	—	—	35 per cent.
Coverings of merchandise subject to ad valorem duty pay the same rate of duty as the merchandise, provided they are of the character of those in which such merchandise is usually imported.				
Covers and other portions of carpets or carpetings are subject to the rate of duty imposed on carpets or carpeting of like character or description.				
Cowhage or cowitch down - -	Free.	—	—	—
Cow hair, cleaned or not, drawn or not, but unmanufactured - -	Free.	—	—	—
„ hides, so called, used as whips -	20 per cent.	—	—	20 per cent.
Cowrie gum - - - -	Free.	—	—	—
„ shells, unmanufactured - -	Free.	—	—	—
Cow or kine pox, or vaccine virus -	Free.	—	—	—
Crackers (bread) - - -	20 per cent.	—	—	20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Crackers, fire, large size, known as double headers	30 per cent.	—	—	30 per cent.
„ „ not over 1½ or 2 in. long, per box of 40 packs, not over 80 in each pack. And in the same proportion for greater or less numbers.	$1 per box	= per box	0 4 2	—
„ „ not otherwise provided for	30 per cent.	—	—	30 per cent.
Cranes, steam or otherwise, according to material.				
Cranks, mill, wrought iron, weighing 25 lbs. or more	2 cts. per lb.	= per 100 lbs.	0 8 4	—
Crapes, silk, for veils	60 per cent.	—	—	60 per cent.
„ „ if piece silks or for dresses	60 per cent.	—	—	60 per cent.
„ trimmings, silk chief value	60 per cent.	—	—	60 per cent.
Crash (linen):—				
valued at not over 30 cts. per sq. yd.	35 per cent.	—	—	35 per cent.
valued at over 30 cts. per sq. yd.	40 per cent.	—	—	40 per cent.
Cravats, cotton	35 per cent.	—	—	35 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ wool, worsted, or mohair	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Crayons, of all kinds	30 per ct.	—	—	30 per cent.
Cream nuts	Free.	—	—	—
„ of tartar	10 cts. per lb.	= per lb.	0 0 5	—
Crinoline wire	9 cts. per lb. and 10 per cent.	= per lb.	0 0 4½	+ 10 per cent.
„ cloth	30 per cent.	—	—	30 per cent.
Cremnitz white	3 cts. per lb.	= per lb.	0 0 1½	—
Crêpe de chene	50 per cent.	—	—	50 per cent.
Crochet needles, bone, ivory, or horn	35 per cent.	—	—	35 per cent.
Crocus colcottra	Free.	—	—	—
Croton bark	Free.	—	—	—
„ oil	$1 per lb.	= per lb.	0 4 2	—
Crucibles, black lead	20 per cent.	—	—	20 per cent.
„ sand	25 per cent.	—	—	25 per cent.
Cryolite	Free.	—	—	—
Crystals, brown, so called, as aniline dyes	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ for watches, glass	40 per cent.	—	—	40 per cent.
„ yellow, as aniline dyes	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Cubebs	Free.	—	—	—
Cubic nitre or nitrate of soda	Free.	—	—	—
Cucumbers, in salt and water, and imported in hogsheads or casks, dutiable as pickles	35 per cent.	—	—	35 per cent.
Cudbear	Free.	—	—	—
„ extract of, or persis	Free.	—	—	—
Cummin seed	Free.	—	—	—
Cupboard turns, according to material.				
Curb chains, polished iron, as saddlery	35 per cent.	—	—	35 per cent.
Curling stones or quoits	Free.	—	—	—
Curls, hair	35 per cent.	—	—	35 per cent.
Currants, Zante or other	1 ct. per lb.	= per lb.	0 0 0½	—
Curriers' and cutting knives, as manufactures of steel, not otherwise provided for	45 per cent.	—	—	45 per cent.
Curry and curry powders	Free.	—	—	—
Cutch or Catechu	Free.	—	—	—
Cutlasses (swords)	45 per cent.	—	—	45 per cent.
Cutlery, of all kinds except pen, jack, and pocket knives	35 per cent.	—	—	35 per cent.
Razors, scissors, garden scissors, pruning shears, table knives and forks, carvers, steels, fleams, lancets, pallettes, daggers, dirks, and bread, cook's, butcher, shoe, farrier's, bowie, budding, pruning, and fruit knives are to be considered as cutlery.				
Cuttlefish bone (sepia)	Free.	—	—	—
Cyanite, or Kyanite	Free.	—	—	—
Cymbals, musical instruments	30 per cent.	—	—	30 per cent.
D.				
Dairy furniture, according to material.				
Daggers, as cutlery	35 per cent.	—	—	35 per cent.
Daguerreotype plates, as manufactures of metal not otherwise provided for	35 per cent.	—	—	35 per cent.
***Damage** from rust, no allowance or reduction of duty for, except on polished Russia sheet iron.				

* *Damage* to goods in bond by freezing not a "casualty."
Excessive damage or rust to iron, &c., by wreck or other extraordinary cause, may be allowed for under the general law.
Fruit so damaged on voyage as to be worthless, to be treated as if not imported.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Damage on fruit, viz.: oranges, lemons, pineapples, grapes, limes, bananas, plaintains, shaddocks, and mangoes; no allowance shall be made for loss by decay on the voyage, unless the said loss shall exceed twenty-five per cent. of the quantity, and the allowance then made shall be only for the amount of loss in excess of twenty-five per cent. of the whole quantity.				
Damar, gum - - - -	Free.	—	—	—
Damasks, valued at not over 30 cts. per square yard - - -	35 per cent.	—	—	35 per cent.
„ valued at over 30 cts. per square yard - - -	40 per cent.	—	—	40 per cent.
Dandelion root - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Darning needles - - - -	25 per cent.	—	—	25 per cent.
Dates - - - - -	1 ct. per lb.	= per lb.	0 0 0½	—
„ preserved in sugar or molasses -	35 per cent.	—	—	35 per cent.
Decalcomanie, as printed matter -	25 per cent.	—	—	25 per cent.
Decanters, glass, not cut - -	35 per cent.	—	—	35 per cent.
„ cut - - - - -	40 per cent.	—	—	40 per cent.
Decoctions of logwood and other dye-woods - - - - -	10 per cent.	—	—	10 per cent.
Deer carcasses - - - -	10 per cent.	—	—	10 per cent.
„ skins, not dressed or tanned -	Free.	—	—	—
„ „ dressed and finished - -	20 per cent.	—	—	20 per cent.
„ „ tanned - - - -	25 per cent.	—	—	25 per cent.
Demijohns, part glass - - -	40 per cent.	—	—	40 per cent.
Denims. *See* Cottons.				
Dental instruments, if cutlery - -	35 per cent.	—	—	35 per cent.
„ „ not cutlery, according to material.				
Dentifrices - - - - -	50 per cent.	—	—	50 per cent.
Dessicated and compressed vegetables -	35 per cent.	—	—	35 per cent.
Dextrine, artificial gum - - -	20 per cent.	—	—	20 per cent.
Dials of copper and enamel (the latter component of chief value), as manufactures of glass - - - - -	40 per cent.	—	—	40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Diamond dust or bort - - -	Free.	—	—	—
Diamonds, cut (not set) - -	10 per cent.	—	—	10 per cent.
,, (set) - - -	25 per cent.	—	—	25 per cent.
,, rough or uncut - -	Free.	—	—	—
,, glaziers', set or not set -	Free.	—	—	—
Diapers, valued at not over 30 cts. per square yard - -	35 per cent.	—	—	35 per cent.
,, valued at over 30 cts. per square yard - - -	40 per cent.	—	—	40 per cent.
Dice, ivory or bone - - -	50 per cent.	—	—	50 per cent.
Dirks, as cutlery - - -	35 per cent.	—	—	35 per cent.
Disks. *See* Glass.				
Dishes, chafing, copper - - -	45 per cent.	—	—	45 per cent.
,, ,, iron or tin - -	35 per cent.	—	—	35 per cent.
Distilled spirits - - - -	$2 per proof gall.	= per proof gall.	0 8 4	—
,, vinegar, exceeding the specific gravity of 1·047 -	30 cts. per lb.	= per lb.	0 1 3	—
,, ,, not exceeding the specific gravity of 1·047, known as No. 8 -	5 cts. per lb.	= per lb.	0 0 2½	—
Divi-divi - - - -	Free.	—	—	—
Diving apparatus, according to material.				
Doeskin, mohair coating, valued at not over 40 cts. per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+35 per cent.
,, ,, valued at over 40 and not over 60 cts. per lb. -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+35 per cent.
,, ,, valued at over 60 and not over 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+35 per cent.
,, ,, valued at over 80 cts. per lb. - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Dog chains, iron, made of wire or rods not less than ¼ inch in diameter - - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
same, less than ¼ inch and not under No. 9 wire gauge - -	3 cts. per lb.	= per lb.	0 0 1½	—
,, of wire or rods under No. 9 -	35 per cent.	—	—	35 per cent.
Dolls, of all kinds - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Dolls, so-called, but which are jumping jacks and caricatures, partly of worsted, held to be dutiable as toys	50 per cent.	—	—	50 per cent.
„ wardrobes and toilet articles, as toys	50 per cent.	—	—	50 per cent.
Dominoes	35 per cent.	—	—	35 per cent.
„ if toys	50 per cent.	—	—	50 per cent.
Donna Maria, as silk veil goods	60 per cent.	—	—	60 per cent.
Downs, of all descriptions, for beds or bedding	Free.	—	—	—
Dragon's blood	Free.	—	—	—
Drain tiles. *See* Earthenware.				
Draughts, bone or ivory	50 per cent.	—	—	50 per cent.
Drawbacks. *See* separate statement, page 397.				
Drawers, cotton, woven	35 per cent.	—	—	35 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ „ and cotton, silk chief value	60 per cent.	—	—	60 per cent.
„ wholly or partly of wool	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Drawer knobs, according to material.				
Drawings	20 per cent.	—	—	20 per cent.
„ specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale	Free.	—	—	—
Dress goods, women's and children's, and real or imitation Italian cloths composed wholly or in part of wool, worsted, the hair of the alpaca, goat, or other like animals, as follows :—				
valued at not above 20 cts. per square yard *	6 cts. per sq. yard and 35 per cent.	=per 100 sq. yds.	1 5 0	+ 35 per cent.
valued at above 20 cts. per square yard	8 cts. per sq. yard and 40 per cent.	=per 100 sq. yds.	1 13 4	+ 40 per cent.

* These goods are generally sold by the lineal yard; it must, therefore, be noted that the duty per lineal yard will vary according to the width; thus, 100 yards $\frac{3}{4}$ yard wide would be charged as 75 square yards, the same quantity $1\frac{1}{4}$ yards wide, 125 square yards, and so on.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Dress goods—*continued.*				
PROVIDED, that on all goods weighing four ounces and over per square yard the duty shall be - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Dressings for the hair - - -	50 per cent.	—	—	50 per cent.
Dressing cases, according to material.				
Dress ornaments, beads, silk, and metal -	50 per cent.	—	—	50 per cent.
,, silk and wood, silk chief value - -	60 per cent.	—	—	60 per cent.
,, silk chief value -	60 per cent.	—	—	60 per cent.
,, wooden moulds or cores for, as manufactures of wood not otherwise provided for -	35 per cent.	—	—	35 per cent.
,, trimmings, cotton - - -	35 per cent.	—	—	35 per cent.
,, ,, cotton and worsted -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
,, ,, flax or linen - -	40 per cent.	—	—	40 per cent.
,, ,, silk - - -	60 per cent.	—	—	60 per cent.
,, ,, wool or worsted, wholly or partly - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Dried fruits, not otherwise provided for	10 per cent.	—	—	10 per cent.
Dried and prepared flowers - -	Free.	—	—	—
,, blood - - - -	Free.	—	—	—
,, bugs - - - -	Free.	—	—	—
,, pulp - - - -	20 per cent.	—	—	20 per cent.
Drillings. *See* Cottons.				
Drills, linen, valued at not over 30 cts. per square yard - -	35 per cent.	—	—	35 per cent.
,, ,, valued at over 30 cts. per square yard - -	40 per cent.	—	—	40 per cent.
,, ,, fancy coloured, valued at not over 30 cts. per square yard	35 per cent.	—	—	35 per cent.
Driving belts, as leather manufactures -	35 per cent.	—	—	35 per cent.
Drop black, as paint - - -	25 per cent.	—	—	25 per cent.
Dross lead, as lead ore - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
Druggets, printed, coloured, or otherwise - - - - -	25 cts. per sq. yard and 35 per cent.	= per sq. yd.	0 1 0½	+ 35 per cent.
Drugs, for dyeing - - -	Free.	—	—	—
,, and medicines, crude, not otherwise provided for* - - -	20 per cent.	—	—	20 per cent.

* If, on examination, any drugs, medicines, medicinal preparations, whether chemical or otherwise, including medicinal essential oils, are found, in the opinion of the examiner, to be so far adulterated, or in any manner deteriorated, as to render them inferior in strength and purity to the standard established by the United States Edinburgh, London, French, and German

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Duck, linen, all (except sail duck), valued at not over 30 cts. per square yard - -	35 per cent.	—	£ s. d. —	35 per cent.

pharmacopœias and dispensatories,* and thereby improper, unsafe, or dangerous to be used for medicinal purposes, a return to that effect shall be made upon the invoice, and the articles so noted shall not pass the Custom House.

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* "It is not conceived to be the intention of the law that the articles referred to should conform in strength and purity to each and all of those standards, as such conformity is believed to be impracticable, owing to the variations in those standards. If, therefore, the articles in question be manufactured, produced, or prepared in England, Scotland, France, or Germany, as the case may be, and prove to conform in strength and purity to the pharmacopœia and dispensatory of the country of their origin, said articles become exempt from the penalties of the law. All articles of the kind mentioned, produced, manufactured, or prepared in any other country than those before mentioned must conform in the qualities stated to the United States pharmacopœia and dispensatory.

With a view to afford a reliable guide to the examiner of drugs and medicines, as well as to the analytical chemist, on appeal, in ascertaining the admissibility of such articles under the provisions of law, founded on their purity and strength, the following list is given of some of the principal articles, with the result of special tests agreeing with the standard authorities referred to in the law; all of which articles are to be entitled to entry when ascertained by analysis to be composed as noted, viz.:—

Aloes, when affording 80 per cent. of pure aloetic extractive.
Assafœtida, when affording 50 per cent. of its peculiar bitter resin, and 3 per cent. of volatile oil.
Bark, Cinchona, when affording 1 per cent. of pure quinine, whether called Peruvian, Calisaya, Arica, Carthagena, Maracaibo, Santa Martha, Bogota, or under whatever name, or from whatever place, or
Bark, Cinchona, when affording 2 per cent. of the several natural alkaloids, combined, as quinine, cinchonine, quinidine, aricene, &c., the barks of such strength being admissible as safe and proper for medicine, and useful for chemical manufacturing purposes.
Benzoin, when affording 80 per cent. of resin, or
Benzoin, when affording 12 per cent. of benzoic acid.
Colocynth, when affording 12 per cent. of colocynthin.
Elaterium, when affording 30 per cent. of elaterin.
Galbanum, when affording 60 per cent. of resin.
Galbanum, when affording 19 per cent. of gum and 6 per cent. of volatile oil.
Gamboge, when affording 70 per cent. of pure gamboge resin and 20 per cent. of gum.
Guaiacum, when affording 80 per cent. of pure guaiac resin.
Gum ammoniac, when affording 70 per cent. of resin and 18 per cent. of gum.
Jalap, when affording 11 per cent. of pure jalap resin, whether in root or in powder.
Manna, when affording 37 per cent. of pure mannite.
Myrrh, when affording 30 per cent. of pure myrrh resin and 50 per cent. of gum.
Opium, when affording 9 per cent. of pure morphine.
Rhubarb, when affording 40 per cent. of soluble matter, whether in root or powder; none admissible but the article known as East India, Turkey, or Russian rhubarb.
Sagapenum, when affording 50 per cent. of resin,
Sapapenum, when affording 30 per cent. of gum, and
Sagapenum, when affording 3 per cent. of volatile oil.
Scammony, when affording 70 per cent. of pure scammony resin.
Senna, when affording 28 per cent. of soluble matter.

All medicinal leaves, flowers, barks, roots, extracts, &c., not herein specified must be, when imported, in perfect condition, and of as recent collection and preparation as practicable.

All pharmaceutical and chemical preparations, whether crystallized or otherwise, used in medicine must be found on examination to be pure and of proper consistence and strength, as well as of perfect manufacture, conformably with the formulas contained in the standard authorities named in the Act, and must in no instance contain over 3 per cent. of excess of moisture or water of crystallization.

Essential or volatile oils, as well as expressed oils, used in medicine must conform in purity to the standards of specific gravity noted and declared in the dispensatories mentioned in the Act.

'Patent or secret medicines' are by law subject to the same examination and disposition after examination as other medicinal preparations, and cannot be permitted to pass the Custom House for consumption, but must be rejected and condemned, unless the special examiner be satisfied, after due investigation, that they are fit and safe to be used for medicinal purposes."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Duck, linen, all (except sail duck), valued at over 30 cts. per square yard - - -	40 per cent.	—	—	40 per cent.
,, cotton - - - -	35 per cent.	—	—	35 per cent.
,, sail - - - -	30 per cent.	—	—	30 per cent.
Dulce, seaweed - - - -	Free.	—	—	—
Dundee double warp bagging, of jute, not fit for use in bagging cotton - -	40 per cent.	—	—	40 per cent.
Dung salts, containing less than 30 per cent. of potash - - - -	Free.	—	—	—
Dunnage, mats - - - -	20 per cent.	—	—	20 per cent.
,, ,, used to protect sheet iron from damage during voyage of importation, if charged in invoice or of merchantable value, are subject to duty.				
Dustpans, according to material.				
Dutch and bronze metal in leaf - -	10 per cent.	—	—	10 per cent.
,, metal made of brass, clippings or scraps of, as manufactures of brass - - -	35 per cent.	—	—	35 per cent.
,, ,, made of copper, clippings or scraps of, as manufactures of copper - - -	45 per cent.	—	—	45 per cent.
,, pink - - - -	25 per cent.	—	—	25 per cent.
Dyes, aniline, by whatever name known -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
,, for the hair - - -	50 per cent.	—	—	50 per cent.
,, not otherwise provided for -	20 per cent.	—	—	20 per cent.
Dye, Tyrian - - - -	20 per cent.	—	—	20 per cent.
Dyewoods, extract and decoction of, not otherwise provided for -	10 per cent.	—	—	10 per cent.
,, all, in sticks - -	Free.	—	—	—
Dye-stuffs, articles in a crude state used in dyeing or tanning, not otherwise provided for - - - -	Free.	—	—	—
Dynamite and other explosive compounds valued at not over 20 cts. per lb. - - - -	6 cts. per lb. and 20 per cent.	= per lb.	0 0 3	+20 per cent.
,, valued at over 20 cts. per lb. - - - -	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
E.				
Earth, cassel	20 per cent.	—	—	20 per cent.
„ known as guhr	20 per cent.	—	—	20 per cent.
„ fullers'	$3 per ton	= per ton	0 12 6	—
*__Earthenware__ and stoneware, as follows:				
Brown earthen and common stoneware, gas retorts, and stoneware, not ornamented	25 per cent.	—	—	25 per cent.
Stoneware, above the capacity of 10 gallons	20 per cent.	—	—	20 per cent.
China, porcelain, and parian ware, gilded, ornamented, or decorated	50 per cent.	—	—	50 per cent.
The same, plain white	45 per cent.	—	—	45 per cent.
All other earthenware, stoneware, or crockery ware, not otherwise provided for, white, glazed, edged, printed, painted, dipped, or cream coloured, composed of earthy or mineral substances, and including "Rockingham ware"	40 per cent.	—	—	40 per cent.
Earths, ochrey, dry	50 cts. per 100 lbs.	= per 100 lbs.	0 2 1	—
„ „ ground in oil	$1½ per 100 lbs.	= per 100 lbs.	0 6 3	—
East India gum	Free.	—	—	—
Eave-troughs of wood	35 per cent.	—	—	35 per cent.
Ebony	Free.	—	—	—
„ manufactures of	35 per cent.	—	—	35 per cent.
Educational societies or institutions, all philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported in good faith for the use of, and not for sale	Free.	—	—	—
Effects, personal and household, not merchandise, of citizens of the United States dying abroad	Free.	—	—	—

* *Invoices of Earthenware* which merely give the aggregate value of the several crates without specifying the items contained therein, not being such as are required by law, will, when presented, be treated as null and void, and entry of the earthenware refused until proper invoices are obtained and produced by the importers (the merchandise in the meantime being treated as unclaimed), or it may be admitted upon giving bonds to produce proper invoices.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Effects, personal and wearing apparel, in actual use, not merchandise, professional books, implements, instruments and tools of trade, occupation, or employment of persons arriving in the United States. PROVIDED, that this exemption shall not include machinery or other articles to be used in any manufacturing establishment or for sale* -	Free.	—	—	—
Effects, household, books, libraries, or parts of libraries, in use of persons or families from foreign countries, if used abroad by them not less than one year, and not intended for any other person or persons, nor for sale†	Free.	—	—	—
Effervescent preparations, granulated -	20 per cent.	—	—	20 per cent.
Eggs - - - - -	Free.	—	—	—
„ silkworm - - - -	Free.	—	—	—
Elastic garters, of wire and leather, with metal clasps - - -	35 per cent.	—	—	35 per cent.
„ webs. *See* Webbing.				
Elecampane root - - -	Free.	—	—	—
Electric batteries - - -	40 per cent.	—	—	40 per cent.
Electro-plated wares of every description.	35 per cent.	—	—	35 per cent.
Elephants' teeth, as ivory - -	Free.	—	—	—
Embroideries, articles embroidered with gold, silver, or other metal not otherwise provided for - -	35 per cent.	—	—	35 per cent.
„ cottons, used as balmorals, dutiable as like countable goods of cotton.				
„ cotton and worsted reps: valued at not over 40 cts. per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40, and not over 60 cts.	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.

* "Duty must be demanded on all watches, but one, brought by a single passenger."

† "Household effects to be entitled to entry free of duty should be in use abroad for more than one year, and arrive with the owner, or within a reasonable time before or after his arrival. Five or six months cannot be considered a reasonable time."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Embroideries, valued at over 60, and not 80 cts.	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2	+ 35 per cent.
,, cotton velvet slipper patterns, embroidered with silk floss	35 per cent.	—	—	35 per cent.
,, cotton velvet uppers, for slippers	35 per cent.	—	—	35 per cent.
,, shawls, wool, worsted, and silk	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
,, slipper patterns, containing no wool	35 per cent.	—	—	35 per cent.
,, wool covers	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
,, *manufactures of linen, worsted, or silk, if embroidered or tamboured, in the loom or otherwise, by machinery or with the needle, or other process, not otherwise provided for	35 per cent.	—	—	35 per cent.
Emeralds, not set	10 per cent.	—	—	10 per cent.
,, set	25 per cent.	—	—	25 per cent.
Emery cloth, cotton	35 per cent.	—	—	35 per cent.
,, manufactured, ground or pulverised	1 ct. per lb.	= per lb.	0 0 0½	—
,, ore or rock, not ground or pulverised	$6 per ton	= per ton	1 5 0	—
,, grains	2 cts. per lb.	= per lb.	0 0 1	—
Emetic tartar	15 cts. per lb.	= per lb.	0 0 7½	—
Emulsion, pancreatic (patent medicine)	50 per cent.	—	—	50 per cent.
Enamel of glass and oxyd of tin	40 per cent.	—	—	40 per cent.
,, white, for manufacturing watch faces	40 per cent.	—	—	40 per cent.
Enamelled leather and skins of all kinds	35 per cent.	—	—	35 per cent.
,, paintings, on gold or other metals, for jewellers	20 per cent.	—	—	20 per cent.
,, white (*see* Colours)	3 cts. per lb.	= per lb.	0 0 1½	—
,, iron tablets (as japanned ware)	40 per cent.	—	—	40 per cent.
Enamels, modern artistic	20 per cent.	—	—	20 per cent.

* "It has been the practice to classify under these sections (paragraphs 100 and 385) such goods as are commercially known as "embroideries," and not manufactures of any material, to which some embroidery *may be added*."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Encaustic tiles	35 per cent.	—	—	35 per cent.
Endless belts or felts, for paper or printing machines	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
Enfleuraged oils	50 per cent.	—	—	50 per cent.
Engraved slipper patterns	25 per cent.	—	—	25 per cent.
„ plates, copper, steel, or wood	25 per cent.	—	—	25 per cent.
Engravers' burnishers, steel	45 per cent.	—	—	45 per cent.
„ „ copper, prepared or polished	45 per cent.	—	—	45 per cent.
„ scrapers, steel	45 per cent.	—	—	45 per cent.
Engravings, coloured, or not, bound or unbound*	25 per cent.	—	—	25 per cent.
„ fashion plates, engraved on steel or on wood, coloured, plain	Free.	—	—	—
„ fashion plates (lithographic) as printed matter	25 per cent.	—	—	25 per cent.
Engraving machinery, according to material.				
Envelopes, paper	35 per cent.	—	—	35 per cent.
Epaulets, cotton	35 per cent.	—	—	35 per cent.
„ metal	35 per cent.	—	—	35 per cent.
„ worsted	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Epsom salts	1 ct. per lb.	= per lb.	0 0 0½	—
Ergot	Free.	—	—	—
Escutcheon pins	35 per cent.	—	—	35 per cent.
Escutcheons, brass, iron, gilt, or plated	35 per cent.	—	—	35 per cent.
„ silver, gold, or German silver	40 per cent.	—	—	40 per cent.
Esparto, or Spanish grass, and other grasses and pulp of, for manufacture of paper	Free.	—	—	—
Essence of red beets, so called, as distilled spirits	$2 per proof gall.	= per proof gall.	0 8 4	—
Essences, or essential oils, not otherwise provided for	50 per cent.	—	—	50 per cent.
„ for perfumes	50 per cent.	—	—	50 per cent.
Etchings, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale	Free.		—	—

* This includes coloured engravings; also "paper slipper patterns consisting of small sheets of paper with lines engraved thereon, at equal distances, upon which are impressed *in colours* the heads of animals;" also lithographs coloured in oil.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Ethers of all kinds, not otherwise provided for, and ethereal preparations or extracts, fluid -	$1 per lb.	= per lb.	0 4 2	—
„ or essences, fruit, made of fusel oil, or fruit or imitations thereof - - -	$2½ per lb.	= per lb.	0 10 5	—
Ether, cognac - - - -	$4 per oz.	= per oz.	0 16 8	—
„ nitric, spirits of - - -	50 cts. per lb.	= per lb.	0 2 1	—
Eve's apples, or chinotti, as confectionery.				
Explosive compounds, used for mining, blasting, artillery, &c. :—				
valued at 20 cts. or less per lb. -	6 cts. per lb. and 20 per ct.	= per lb.	0 0 3	+ 20 per cent.
valued at above 20 cts per lb.. -	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.
Expressed oils, not otherwise provided for - - - - -	20 per cent.	—	—	20 per cent.
Extracts for perfumes - - -	50 per cent.	—	—	50 per cent.
„ medicinal, not otherwise provided for - - -	40 per cent.	—	—	40 per cent.
„ proprietary, not otherwise provided for - - -	50 per cent.	—	—	50 per cent.
Extract of anatto - - -	Free.	—	—	—
„ of coffee - - - -	20 per cent.	—	—	20 per cent.
„ of colocynth - - -	40 per cent.	—	—	40 per cent.
„ of hemlock bark - - -	20 per cent.	—	—	20 per cent.
„ of indigo - - -	10 per cent.	—	—	10 per cent.
„ of indigo carmined - -	20 per cent.	—	—	20 per cent.
„ of logwood - - -	10 per cent.	—	—	10 per cent.
„ of meat, Liebig's - -	20 per cent.	—	—	20 per cent.
„ of madder - - -	Free.	—	—	—
„ of opium - - -	$6 per lb.	= per lb.	1 5 0	—
„ of safflower - - -	Free.	—	—	—
Eyelets of every description - -	6 cts. per 1,000.	= per 1,000	0 0 3	—
Eyes, hooks and (according to material).				
F.				
Fabrics, wholly or in part of india-rubber, not otherwise provided for -	35 per cent.	—	—	35 per cent.
Faïence. *See* Earthenware.				
"**Faille** ribbons" (silk) - - -	60 per cent.	—	—	60 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Fancy leatherwork - - -	35 per cent.	—	—	35 per cent.
„ boxes, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ soap - - - - -	10 cts. per lb. and 25 per cent.	= per lb.	0 0 5	+ 25 per cent.
Fans, common palm leaf* - -	Free.	—	—	—
„ all others, including those made of the leaf of the palm tree, with artificial handles - -	35 per cent.	—	—	35 per cent.
Farina - - - - -	Free.	—	—	—
Farming implements, the property of immigrants - - - -	Free.	—	—	—
Fashion plates, engraved on steel or on wood, coloured, plain -	Free.	—	—	—
„ „ (lithographic) as printed matter† - -	25 per cent.	—	—	25 per cent.
Fausse glacé, of silk, metal, and cotton, neither material chief value - -	50 per cent.	—	—	50 per cent.
Feather beds - - - -	20 per cent.	—	—	20 per cent.
Feathers, ostrich, vulture, cock, and other ornamental feathers, crude or not dressed, colored or manufactured - -	25 per cent.	—	—	25 per cent.
same when dressed, coloured, or manufactured - - -	50 per cent.	—	—	50 per cent.
„ for beds or bedding - -	Free.	—	—	—
„ artificial and ornamental, or parts thereof, of whatever material composed, not otherwise provided for -	50 per cent.	—	—	50 per cent.
Felloes, of wood, as manufactures of wood not otherwise provided for - -	35 per cent.	—	—	35 per cent.
Felspar - - - -	20 per cent.	—	—	20 per cent.
Feeding bottles, glass, india-rubber, and wood - - - - -	40 per cent.	—	—	40 per cent.
Feed pumps, according to material.				
Felt, adhesive, for sheathing vessels, no part wool - - -	Free.	—	—	—
„ carpeting - - - -	40 per cent.	—	—	40 per cent.
„ roofing - - - -	20 per cent.	—	—	20 per cent.
„ hair worked into felt - -	30 per cent.	—	—	30 per cent.

* "Palm leaf fans, is a fan made from the leaf of the palm tree, the natural stem of the leaf being the handle, and the leaf simply bound to prevent creaking and breaking. Those having artificial handles of wood, bone, &c., with cords and tassels and attached to the leaves by means of rivets, pay as other fans."

† Coloured fashion plates, inclosed in illustrated magazines, but separate from the magazines, are entitled to free entry under this clause, the magazines being liable to 25 per centum ad valorem, as illustrated papers.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Felt, leather shoes, part wool - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ "patent asphalted roofing" - -	20 per cent.	—	—	20 per cent.
„ "Wood's patent dry or boiler" -	30 per cent.	—	—	30 per cent.
Felts, endless, for paper or printing machines, or "machine blanketing" -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
Fence rails of wood - - -	35 per cent.	—	—	35 per cent.
Fenders (according to material).				
Fennel seed - - - -	Free.	—	—	—
Fenugreek seed - - - -	Free.	—	—	—
Ferri rubigo, medicinal preparation -	40 per cent.	—	—	40 per cent.
Ferns for Department of Agriculture or United States Botanic Garden - -	Free.	—	—	—
Fertilizers - - - -	Free.	—	—	—
Feuilles gravures, as paper hangings, &c.	35 per cent.	—	—	35 per cent.
Fibre and cotton vestings, so called, of grass and cotton, cotton chief value -	35 per cent.	—	—	35 per cent.
Fibrin, in all forms - - -	Free.	—	—	—
Fiddles and fifes - - - -	30 per cent.	—	—	30 per cent.
Figs - - - - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ preserved - - - -	35 per cent.	—	—	35 per cent.
Fig blue - - - - -	25 per cent.	—	—	25 per cent.
Filberts - - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Filé, or gespinst - - - -	25 per cent.	—	—	25 per cent.
Files, file blanks, rasps, and floats, all kinds :—				
not over 10 inches in length -	10 cts. per lb. and 30 per cent.	= per lb.	0 0 5	+ 30 per cent.
over 10 inches in length -	6 cts. per lb. and 30 per cent.	= per lb.	0 0 3	+ 30 per cent.
Filtering stones - - -	20 per cent.	—	—	20 per cent.
„ unmanufactured - -	10 per cent.	—	—	10 per cent.
Filters, according to material.				
Fine Arts, societies or institutions for encouragement of, books, maps and charts (not more than two copies in any one invoice), regalia, gems, statues, and specimens of sculpture, specially imported in good faith, for the use of - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Fine Arts, all philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings specially imported in good faith for the use of, and not intended for sale - -	Free.	—	—	—
Finishing powder - - -	20 per cent.	—	—	20 per cent.
Fire-arms - - - -	35 per cent.	—	—	35 per cent.
Fire-bricks - - - -	20 per cent.	—	—	20 per cent.
Fire-crackers, box of 40 packs, not over 80 to each pack, and in the same proportion for any greater or less number* -	$1 per box.	= per box.	0 4 2	—
„ large sized, known as double headers - -	30 per cent.	—	—	30 per cent.
„ not otherwise provided for	30 per cent.	—	—	30 per cent.
Fire-engines, steam and manual.				
„ if iron the chief component part - - -	35 per cent.	—	—	35 per cent.
„ if steel the chief component part - - -	45 per cent.	—	—	45 per cent.
Fire-screens, all kinds - - -	35 per cent.	—	—	35 per cent.
Fireproof safes (iron) - - -	35 per cent.	—	—	35 per cent.
Firewood - - - -	Free.	—	—	—
Fireworks, average - - -	30 per cent.	—	—	30 per cent.
Fish, all kinds, the products of the sea fisheries of Newfoundland -	Free.	—	—	—
„ all other pickled, in barrels - -	$1.50 per brl.	= per brl.	0 6 3	—
„ all other, foreign caught, otherwise than in brls., or half brls., or whether fresh, smoked or dried, salted, or pickled, not otherwise provided for	½ ct. per lb.	= per lb.	0 0 0¼	—
„ cod, dried - - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
„ herring, pickled or salted† - -	$1 per brl.	= per brl.	0 4 2	—
„ living - - - -	20 per cent.	—	—	20 per cent.

* That part of the Act of August 6, 1846, or any other Act, which requires the sale of fire-crackers or prohibits their deposit in bonded warehouse, is repealed.

† "Fish in kegs or kits, 8 to a brl. of 25 lbs. each. A barrel is well understood, according to commercial usage, to weigh 200 lbs."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Fish, for bait	Free.	—	—	—
„ fresh, for daily or immediate consumption	Free.	—	—	—
glue or isinglass	Free.	—	—	—
„ hooks	45 per cent.	—	—	45 per cent.
„ mackerel	$2 per brl.	= per brl.	0 8 4	—
„ „ in kits	1 ct. per lb.	= per lb.	0 0 0½	—
„ of American catch	Free.	—	—	—
„ oil, of American fisheries	Free.	—	—	—
„ „ of foreign fisheries	20 per cent.	—	—	20 per cent.
„ „ the product of the sea fisheries of Newfoundland	Free.	—	—	—
„ pickled in foreign salt of American catch	Free.	—	—	—
„ plates, joints, or splice bars, wrought iron. *See* note to Rail Road Chairs, page 257	2 cts. per lb.	= per 100 lb.	0 8 4	—
„ plates, steel	45 per cent.	—	—	45 per cent.
„ prepared	35 per cent.	—	—	35 per cent.
„ preserved in oil (except sardines and anchovies)	30 per cent.	—	—	30 per cent.
„ salmon, pickled	$3 per brl.	= per brl.	0 12 6	—
„ salmon, prepared	35 per cent.	—	—	35 per cent.
„ salmon, preserved	30 per cent.	—	—	30 per cent.
„ sauces	35 per cent.	—	—	35 per cent.
„ shell	Free.	—	—	—
„ skins	20 per cent.	—	—	20 per cent.
„ smelts in oil, put up as sardines and branded "Eperlans a l'Huile," as sardines which *see*	50 per cent.	—	—	50 per cent.
„ sounds and tongues, of cod, hake, or other fish, dried, as fish glue	Free.	—	—	—
„ sounds, cod, salted in barrels, as fish not specified pickled in barrels	$1½ per brl.	= per brl.	0 6 3	—
Fisheries, American, all articles the produce of such fisheries	Free.	—	—	—
Fishing nets and tackle, according to material.				
Fittings for steam engines, according to material.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Flageolets - - - -	30 per cent.	—	—	30 per cent.
Flags. *See* Bunting.				
Flannels, wholly or in part of wool, worsted, the hair of the alpaca, goat, or other like animals :—				
valued at 40 cts. or less per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued above 40 cts. and not above 60 cts. per lb. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued above 60 cts. and not above 80 cts. per lb. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued above 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ slightly embroidered, same rates as above.				
„ plaid - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ shirting - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Flasks (according to material.)				
Flat irons, or sad irons, of cast iron -	1½ ct. per lb.	= per 100 lb.	0 6 3	—
Flats, for ornamenting bonnets, hats, &c., of straw or other material -	30 per cent.	—	—	30 per cent.
	40 per cent.	—	—	40 per cent.
Flax, carpeting - - - -				
„ Italian, so called, but really hemp, unmanufactured - - -	$25 per ton	= per ton	5 4 2	—
„ New Zealand - - -	$20 per ton	= per ton	4 3 4	—
„ stem, or unrotted flax - -	$15 per ton	= per ton	3 2 6	—
„ seed, per bushel of 56 lbs. - -	20 cts. per bushel	= per bush.	0 0 10	—
„ „ oil, per gall. of 7½ lbs. -	30 cts. per gall.	= per gall.	0 1 3	—
„ hackled, known as "dress-line" -	$40 per ton	= per ton	8 6 8	—
„ not hackled or dressed - -	$20 per ton	= per ton	4 3 4	—
„ straw of - - - -	$5 per ton	= per ton	1 0 10	—
„ „ New Zealand - -	$5 per ton	= per ton	1 0 10	—
„ tow of - - - -	$10 per ton	= per ton	2 1 8	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Flax, burlaps and like manufactures of flax, jute, or hemp, or of which flax, jute, or hemp shall be the material of chief value, excepting such as may be suitable for bagging for covering cotton - -	30 per cent.	—	£ s. d. —	30 per cent.
„ manufactures wholly or partly of, suitable for cotton bagging:—				
valued at not over 7 cts. per sq. yard - - -	2 cts. per lb.	= per lb.	0 0 1	—
valued at over 7 cts. per sq. yard - - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ manufactures, similar to cotton bags or bagging, except bagging for cotton, of flax and jute, or hemp, or of which these are the components of chief value, not otherwise provided for - -	40 per cent.	—	—	40 per cent.
„ woven fabrics of, not otherwise provided for:—				
value, 30 cts. or less per sq. yard - - -	35 per cent.	—	—	35 per cent.
value, above 30 cts. per sq. yard. *See* Linens - -	40 per cent.	—	—	40 per cent.
and jute yarns, flax chief value -	40 per cent.	—	—	40 per cent.
„ or linen yarns, for carpets, not exceeding No. 8 Lea:—				
valued at 24 cts. or less per lb.	30 per cent.	—	—	30 per cent.
valued above 24 cts. per lb. -	35 per cent.	—	—	35 per cent.
„ thread or linen thread, twine and packthread - - -	40 per cent.	—	—	40 per cent.
Fleams, as cutlery - - -	35 per cent.	—	—	35 per cent.
Flies, Spanish, or Cantharides - -	Free.	—	—	—
Flint, flints and ground flintstones -	Free.	—	—	—
Floats, all not over 10 inches long -	10 cts. per lb. and 30 per cent.	= per lb.	0 0 5	+ 30 per cent.
„ over 10 inches long - -	6 cts. per lb. and 30 per cent.	= per lb.	0 0 3	+ 30 per cent.
Flocks, shoddy or waste, not otherwise provided for - - -	20 per cent.	—	—	20 per cent.
„ same, if wool - - -	12 cts. per lb.	= per 100 lbs.	2 10 0	—
„ pulverised, wool - -	12 cts. per lb.	= per 100 lbs.	2 10 0	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Floor cloth, canvas	40 per cent.	—	—	40 per cent.
„ cloth of cork, india-rubber, and gutta percha	30 per cent.	—	—	30 per cent.
„ „ (oil cloth) stamped, painted, or printed:—				
valued at not over 50 cts. per sq. yard	35 per cent.	—	—	35 per cent.
valued at over 50 cts. per sq. yard	45 per cent.	—	—	45 per cent.
„ matting	30 per cent.	—	—	30 per cent.
Flor benzoin, benzoic acid	10 per cent.	—	—	10 per cent.
Florentine mosaics, so styled, of slate	40 per cent.	—	—	40 per cent.
Floss, Moravian, on spools of 100 yards, as cotton thread on spools	6 cts. per doz. spools and 30 per cent.	= per doz. spools.	0 0 3	+ 30 per cent.
cotton:—				
valued at not over 40 cts. per lb.	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.
valued at over 40 cts. and not over 60 cts. per lb.	20 cts. per lb. and 20 per cent.	= per lb.	0 0 10	+ 20 per cent.
valued at over 60 cts. and not over 80 cts. per lb.	30 cts. per lb. and 20 per cent.	= per lb.	0 1 3	+ 20 per cent.
valued at over 80 cts. per lb.	40 cts. per lb. and 20 per cent.	= per lb.	0 1 8	+ 20 per cent.
„ silk	35 per cent.	—	—	35 per cent.
Flour, rye	10 per cent.	—	—	10 per cent.
„ wheat	20 per cent.	—	—	20 per cent.
„ root	Free.	—	—	—
Flower pots, according to material.				
Flowers, artificial and ornamental, or parts thereof, of whatever material composed, not otherwise provided for	50 per cent.	—	—	50 per cent.
„ camomile	Free.	—	—	—
„ dried and prepared	Free.	—	—	—
„ medicinal, crude, not otherwise provided for	Free.	—	—	—
„ "natural grass," so called, being natural grasses dried and prepared	20 per cent.	—	—	20 per cent.
„ orange and buds	Free.	—	—	—
„ seeds	20 per cent.	—	—	20 per cent.
„ used in dyeing	Free.	—	—	—
„ wax, in glass cases or otherwise, as artificial flowers	50 per cent.	—	—	50 per cent.
„ all other, not otherwise provided for	10 per cent.	—	—	10 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Flues, steam, gas, and water, wrought iron	3½ cts. per lb.	= per 100lbs.	0 14 7	—
Fluid, burning	50 cts. per gall.	= per gal.	0 2 1	—
Flutes	30 per cent.	—	—	30 per cent.
„ toy, as toys for children	50 per cent.	—	—	50 per cent.
Foil, gold or silver	40 per cent.	—	—	40 per cent.
„ brass	35 per cent.	—	—	35 per cent.
„ blades of steel	45 per cent.	—	—	45 per cent.
„ „ of iron	35 per cent.	—	—	35 per cent.
„ tin	30 per cent.	—	—	30 per cent.
„ copper chief value	45 per cent.	—	—	45 per cent.
Foils for fencing	45 per cent.	—	—	45 per cent.
Foliæ digitalis	Free.	—	—	—
Foot muffs, of dressed sheep skin, with wool on, and leather	35 per cent.	—	—	35 per cent.
Forges, according to material.				
Forgings for steam engines, according to material.				
Forks, table, gold, silver, or German silver	40 per cent.	—	—	40 per cent.
„ „ with blades of iron or steel and handles of wood, ivory, turtle shell, mother-of-pearl, horn, or bone	35 per cent.	—	—	35 per cent.
„ tines	35 per cent.	—	—	35 per cent.
Fossils	Free.	—	—	—
Fountains, by American artists	Free.	—	—	—
„ for presentation to national institutions, or to any state or municipal corporation	Free.	—	—	—
Fowls, land and water, living	Free.	—	—	—
Frankfort black	25 per cent.	—	—	25 per cent.
Frankincense gum	Free.	—	—	—
Frames and sticks for umbrellas, finished or not, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ for looking-glasses (additional to plates), according to material.				
Free goods from beyond the Cape of Good Hope, imported from places west thereof, are liable to 10 per cent. duty *ad valorem.*				
Freestone	$1·50 per ton	= per ton	0 6 3	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
French green, dry or moist - -	30 per cent.	—	—	30 per cent.
„ leaf, rocoa or orleans - -	Free.	—	—	—
„ sand, crude mineral substance -	20 per cent.	—	—	20 per cent.
Fringes, silk - - - -	60 per cent.	—	—	60 per cent.
„ cotton chief value - -	35 per cent.	—	—	35 per cent.
„ wool, worsted, or mohair. *See* Trimmings - - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ other (according to material).				
Frizettes, hair - - - -	30 per cent.	—	—	30 per cent.
„ silk - - - -	60 per cent.	—	—	60 per cent.
Frosts, glass - - - -	40 per cent.	—	—	40 per cent.
Fruit ethers - - - -	$2½ per lb.	= per lb.	0 10 5	—
„ juice - - - -	25 per cent.	—	—	25 per cent.
„ green, ripe, or dried, not otherwise provided for - -	10 per cent.	—	—	10 per cent.
„ plants, tropical and semi-tropical, for the purpose of propagation or cultivation - - -	Free.	—	—	—
pickled - - - -	35 per cent.	—	—	35 per cent.
preserved in their own juice -	25 per cent.	—	—	25 per cent.
comfits or sweetmeats, preserved in sugar, brandy, or molasses, not otherwise provided for -	35 per cent.	—	—	35 per cent.
put up with water only in hermetically sealed cans, jars, or bottles - - - -	25 per cent.	—	—	25 per cent.
„ syrup, orange and lemon juice boiled with sugar for use as beverages - - -	25 per cent.	—	—	25 per cent.
„ bottles and glass jars containing preserves or sweetmeats pay separate duty of - -	40 per cent.	—	—	40 per cent.
„ if fancifully arranged in glace style, charged as confectionery.	35 per cent.	—	—	35 per cent.
Frying pans, tinned - - - -				
Fuel economisers, according to material.				
Fulminates, fulminating powders, and all articles used for like purposes, not otherwise provided for - - -	30 per cent.	—	—	30 per cent.
Fuller's earth - - -	$3 per ton	= per ton	0 12 6	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Furniture, coach and harness - -	35 per cent.	—	—	35 per cent.
„ house or cabinet, in pieces or rough, and not finished -	30 per cent.	—	—	30 per cent.
„ finished - - -	35 per cent.	—	—	35 per cent.
„ springs - - -	2 cts. per lb. and 15 per cent.	per lb.	0 0 1	+ 15 per cent.
„ tops for, of composition or scagliola - - -	35 per cent.	—	—	35 per cent.
„ slate tops for - -	40 per cent.	—	—	40 per cent.
„ marble tops for - -	50 per cent.	—	—	50 per cent.
Fur, caps, hats, muffs, tippets, and all manufactures of, not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
„ "coney-plates," so called, being parts of coney skins sewed together and used for linings, and for manufacture of children's cloaks, &c., as manufactures of furs - -	35 per cent.	—	—	35 per cent.
„ skins, partially dressed - -	20 per cent.	—	—	20 per cent.
„ waste - - - -	20 per cent.	—	—	20 per cent.
Furs, dressed, on the skin, all* - -	20 per cent.	—	—	20 per cent.
„ not dressed, on the skin - -	Free.	—	—	—
„ hares', not on skin, and undressed	20 per cent.	—	—	20 per cent.
„ hatters', not on the skin - -	20 per cent.	—	—	20 per cent.
Fusel oil - - - - -	$2 per gall.	= per gall.	0 8 4	—
Fustic, in sticks - - - -	Free.	—	—	—
G.				
Gaiters, lastings and cloths for, are liable to the rates prescribed for similar fabrics *not* intended for such use.				
Galanga or galangal - - -	Free.	—	—	—
Gallic acid - - - -	$1 per lb.	= per lb.	0 4 2	—
Galloons, bugle and mohair, as galloons, part mohair - - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ cotton - - -	35 per cent.	—	—	35 per cent.

* This embraces squirrels' tails, dyed or dressed, or which, although not dyed, have undergone a process beyond the raw or natural condition, which has cleansed, softened, prepared, or dressed them, so that they have been brought to a state fit and ready without any further preparation, to be used as imported. Also dressed black lambskins.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Galloons, gold, silver, or other metal -	35 per cent.	—	—	35 per cent.
„ silk - - - -	60 per cent.	—	—	60 per cent.
„ wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Galls, nut - - - -	Free.	—	—	—
Galvanic batteries, as philosophic apparatus - - -	40 per cent.	—	—	40 per cent.
Galvanized iron, if galvanized by electric batteries - -	2 cts. per lb.	= per lb.	0 0 1	—
„ „ if galvanized otherwise than by electric batteries - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ „ if corrugated and punched for roofing, is subject to same duty as galvanized iron.				
„ tin plates, as galvanized iron.				
„ iron telegraph wire - -	2 cts. per lb. and 15 per cent.	= per lb.	0 0 1	+ 15 per cent.
Gambia, or gambier, as cutch - -	Free.	—	—	—
Gamboge, gum - - - -	Free.	—	—	—
Game, prepared - - - -	35 per cent.	—	—	35 per cent.
„ bags, leather, as manufactures of leather, not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
„ twines, flax - - -	40 per cent.	—	—	40 per cent.
Games, wood and paper, as toys - -	50 per cent.	—	—	50 per cent.
Gannister, ground, mixed with fire clay and used for the same purpose - -	$5 per ton	= per ton	1 0 10	—
Garance, or granza, prepared madder -	Free.	—	—	—
Garancine, extract of madder - -	Free.	—	—	—
Garbanum, gum - - - -	Free.	—	—	—
Garden seeds, not otherwise provided for -	20 per cent.	—	—	20 per cent.
„ shears - - - -	45 per cent.	—	—	45 per cent.
„ tools, according to material.				
Garnet jewellery, so called, of glass and iron, being imitations of jet, dutiable as jet imitations -	35 per cent.	—	—	35 per cent.
Garnets, set - - - -	25 per cent.	—	—	25 per cent.
„ not set - - - -	10 per cent.	—	—	10 per cent.
Garters, elastic, of wire, covered with leather - - -	35 per cent.	—	—	35 per cent.
Gas flues and tubes, wrought - -	3½ cts. per lb.	= per lb.	0 0 1¾	—
„ retorts, earthenware - - -	25 per cent.	—	—	25 per cent.
Gaze, Chamberg - - - -	60 per cent.	—	—	60 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Gaze, crêpe Anglais, as silk veil goods -	50 per cent.	—	—	50 per cent.
Gelatine and all similar preparations -	35 per cent.	—	—	35 per cent.
Gems - - - - -	10 per cent.	—	—	10 per cent.
„ set - - - - -	25 per cent.	—	—	25 per cent.
„ where specially imported, in good faith, for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts, or for the use or by the order of any college, school, academy, or seminary of learning - -	Free.	—	—	—
Genoese linen coatings, coloured, valued at not over 30 cts. per sq. yd. - -	35 per cent.	—	—	35 per cent.
Gentian-root - - - -	Free.	—	—	—
Gentionella blankets - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Geological collections - - -	Free.	—	—	—
German silver (argentine), manufactures of - - -	40 per cent.	—	—	40 per cent.
„ silver, albata, or argentine, unmanufactured - - -	35 per cent.	—	—	35 per cent.
„ spring steel - - -	30 per cent.	—	—	30 per cent.
Gespinst - - - -	25 per cent.	—	—	25 per cent.
Gig hames, metal - - - -	35 per cent.	—	—	35 per cent.
„ springs - - - -	35 per cent.	—	—	35 per cent.
Gill twine - - - -	40 per cent.	—	—	40 per cent.
Gilt jewellery, or mock jewellery of brass or other metal - - -	25 per cent.	—	—	25 per cent.
„ ware, silver or German silver -	40 per cent.	—	—	40 per cent.
„ plated ware, not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
Gimlets, as manufactures of steel -	45 per cent.	—	—	45 per cent.
Gimps, cotton - - - -	35 per cent.	—	—	35 per cent.
„ linen - - - -	40 per cent.	—	—	40 per cent.
„ silk - - - -	60 per cent.	—	—	60 per cent.
„ wool, worsted or mohair - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ other (according to material).				
Gin - - - - -	$2 per proof gall.	=per proof gall.	0 8 4	—
Ginger ale or beer - - -	20 per cent.	—	—	20 per cent.
„ essence of - - -	35 per cent.	—	—	35 per cent.
„ ground - - - -	3 cts. per lb.	= per lb.	0 0 1½	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Ginger, preserved or pickled - -	35 per cent.	—	—	35 per cent.
„ root, dried or green - -	Free.	—	—	—
Ginghams, cotton, as cotton jeans, &c.				
Ginseng root - - - - -	Free.	—	—	—
Girandoles, according to materials.				
Glass bottles and all other articles of, cut, engraved, painted, coloured, printed, stained, silver or gilded, not including plate glass silvered or looking glass plates - -	40 per cent.	—	—	40 per cent.
same, plain, mould or press, not cut, engraved, or painted, and not otherwise provided for -	35 per cent.	—	—	35 per cent.
„ all manufactures of, not otherwise provided for - - - -	40 per cent.	—	—	40 per cent.
„ all manufactures in part of, not otherwise provided for - -	40 per cent.	—	—	40 per cent.
„ beads - - - - -	50 per cent.	—	—	50 per cent.
„ bead necklaces - - - -	50 per cent.	—	—	50 per cent.
„ bottles or jars, filled with sweetmeats or preserves - - -	40 per cent.	—	—	40 per cent.
„ „ contents of, other than preserved ginger, as comfits -	35 per cent.	—	—	35 per cent.
„ „ „ if preserved ginger -	35 per cent.	—	—	35 per cent.
same, filled with articles not otherwise provided for - -	30 per cent.	—	—	30 per cent.
„ bugles - - - - -	50 per cent.	—	—	50 per cent.
„ bulls' eyes - - - - -	35 per cent.	—	—	35 per cent.
„ buttons, as buttons, not otherwise provided for - - -	30 per cent.	—	—	30 per cent.
„ carboys - - - - -	35 per cent.	—	—	35 per cent.
„ chimneys, cut, ground, however slightly, or coloured - -	40 per cent.	—	—	40 per cent.
„ compositions of, for jewellers' use, not set - - - - -	40 per cent.	—	—	40 per cent.
„ compositions of, for jewellers' use, set - - - - -	30 per cent.	—	—	30 per cent.
„ crystals for watches - -	40 per cent.	—	—	40 per cent.
„ cutters' stones, as grindstones, viz. :—				
finished - - -	$2 per ton	= per ton	0 8 4	—
rough or unfinished, or rough hand dressed - -	$1½ per ton	= per ton	0 6 3	—
„ demijohns (whether empty or containing liquids) - - -	40 per cent.	—	—	40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Glass disks, optical, or object glasses for telescopes, edges ground or cut -	40 per cent.	—	—	40 per cent.
„ goblets, partly ground - -	40 per cent.	—	—	40 per cent.
„ or glasses, paintings on - -	40 per cent.	—	—	40 per cent.
„ painted, for windows - -	40 per cent.	—	—	40 per cent.
„ pebbles, for spectacles - -	40 per cent.	—	—	40 per cent.
„ plates or disks, for optical instruments, unwrought - -	10 per cent.	—	—	10 per cent.
„ cuff and sleeve buttons - -	40 per cent.	—	—	40 per cent.
„ spectacles, steel mounted - -	45 per cent.	—	—	45 per cent.
„ „ all other - - -	40 per cent.	—	—	40 per cent.
„ fluted, rolled, or rough plate (not including crown, cylinder, or common window glass) :—				
not above 10 × 15 inches square -	¾ ct. per sq. ft.	=per 100 sq. ft.	0 3 1½	—
above 10 × 15 and not above 16 × 24 -	1 ct. per sq. ft.	=per 100 sq. ft.	0 4 2	—
above 16 × 24 and not above 24 × 30 -	1½ ct. per sq. ft.	=per 100 sq. ft.	0 6 3	—
all above 24 × 30 - - -	2 cts. per sq. ft.	=per 100 sq. ft.	0 8 4	—
PROVIDED, that all fluted, rolled, or rough plate glass, weighing over 100 lbs. per 100 sq. feet, shall pay an additional duty on the excess at the same rates above imposed.				
Glass, all cast or polished plate glass, unsilvered : —				
not above 10 × 15 inches square -	3 cts. per sq. ft.	=per 100 sq. ft.	0 12 6	—
above 10 × 15 and not above 16 × 24 -	5 cts. per sq. ft.	=per 100 sq. ft.	1 0 10	—
above 16 × 24 and not above 24 × 30 -	8 cts. per sq. ft.	=per 100 sq. ft.	1 13 4	—
above 24 × 30 and not above 24 × 60 -	25 cts. per sq. ft.	=per 100 sq. ft.	5 4 2	—
all above 24 × 60 - - -	50 cts. per sq. ft.	=per 100 sq. ft.	10 8 4	—
Glass, all cast or polished plate glass, silvered, or looking-glass plates :*—				
not above 10 × 15 inches square -	4 cts. per sq. ft.	=per 100 sq. ft.	0 16 8	—

* "The term 'Looking Glass Plate' means any kind of silvered glass used as looking glasses, although not in fact *plate* glass."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Glass—*continued.*				
above 10×15 and not above 16×24 -	6 cts. per sq. ft.	=per 100 sq. ft.	1 5 0	—
above 16×24 and not above 24×30 -	10 cts. per sq. ft.	=per 100 sq. ft.	2 1 8	—
above 24×30 and not above 24×60 -	35 cts. per sq. ft.	=per 100 sq. ft.	7 5 10	—
all above 24×60 - - -	60 cts. per sq. ft.	=per 100 sq ft.	12 10 0	—
PROVIDED, that no looking-glass plates or plate glass, silvered, when framed, shall pay a less rate of duty than that imposed upon similar glass not framed, but shall pay in addition 30 per ct. upon such frames.				
Glass, all unpolished cylinder, crown, and common window glass:*—				
not above 10×15 inches square -	1½ ct. per lb.	=per 100 lbs.	0 6 3	—
above 10×15 and not above 16×24 -	2 cts. per lb.	=per 100 lbs.	0 8 4	—
above 16×24 and not above 24×30 -	2½ cts. per lb.	=per 100 lbs.	0 10 5	—
all above 24×30 - - -	3 cts. per lb.	=per 100 lbs.	0 12 6	—
Glass, cylinder, and crown glass, polished:—				
not above 10×15 inches square	2½ cts. per sq. ft.	=per 100 sq. ft.	0 10 5	—
above 10×15 and not above 16×24 -	4 cts. per sq. ft.	=per 100 sq. ft.	0 16 8	—
above 16×24 and not above 24×30 -	6 cts. per sq. ft.	=per 100 sq. ft.	1 5 0	—
above 24×30 and not above 24×60 -	20 cts. per sq. ft.	=per 100 sq. ft.	4 3 4	—
all above 24×60 - -	40 cts. per sq. ft.	=per 100 sq. ft.	8 6 8	—
Glass, coloured, for manufacture of buttons and imitation of precious stones	40 per cent.	—	—	40 per cent.
,, old or broken in pieces, which cannot be cut for use, and fit only to be remanufactured -	Free.	—	—	—

* "No decision of the Treasury Department has recognised as 'window' any other than the broad, crown, or cylinder glass; glass ground on one side must be taken as a manufacture of glass."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Glass, tinted or coloured window glass, in sheets, for manufacturing church windows, is dutiable by the sq. foot the same as uncoloured glass of the same kind.				
„ porcelain and Bohemian, cut or not	40 per cent.	—	—	40 per cent.
Glauber salts - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
Glazed calf skins, as japanned leather -	35 per cent.	—	—	35 per cent.
Glaziers' diamonds - - -	Free.	—	—	—
Globes, glass, for lamps or gas jets -	40 per cent.	—	—	40 per cent.
„ wood or paper - - -	35 per cent.	—	—	35 per cent.
„ wood and metal, but metal chief value - - - -	35 per cent.	—	—	35 per cent.
Gloves, cotton, lined with wool waste	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ cotton - - - -	35 per cent.	—	—	35 per cent.
„ cotton, edged at the wrist with a small stripe or stripes of coloured worsted yarn, knit in for the purpose of ornament, as cotton hosiery - -	35 per cent.	—	—	35 per cent.
„ hair - - - - -	35 per cent.	—	—	35 per cent.
„ kid or other leather - -	50 per cent.	—	—	50 per cent.
„ linen - - - - -	35 per cent.	—	—	35 per cent.
„ silk - - - - -	60 per cent.	—	—	60 per cent.
„ woollen cloth - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ knit, wool, worsted, hair of alpaca, goat, &c. :—				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 and not over 60 cts. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 and not over 80 cts. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb. - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ wool or worsted, not knit -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Glue	20 per cent.	—	—	20 per cent.
„ fish	Free.	—	—	—
„ stock, hide cuttings for	Free.	—	—	—
Glucose	20 per cent.	—	—	20 per cent.
Glycerine	30 per cent.	—	—	30 per cent.
Goats, living	20 per cent.	—	—	20 per cent.
„ hair, value at place whence exported, 32 cts. or less per lb.	10 cts. per lb. and 11 per cent.	= per lb.	0 0 5	+ 11 per cent.
„ „ of greater value	12 cts. per lb. and 10 per cent.	= per lb.	0 0 6	+ 10 per cent.
Goat skins of Angora goat, raw or unmanufactured, with wool on. *See* Wool on the skin	30 per cent. on skins alone.	—	—	30 per cent.
„ of Angora goat, raw without the wool	Free.	—	—	—
„ of all other goats, raw	Free.	—	—	—
„ with wool or hair on, finished, fit and intended for immediate use as rugs, dutiable as rugs	45 per cent.	—	—	45 per cent.
Goblets, glass, partly ground	40 per cent.	—	—	40 per cent.
Gold bracelets	25 per cent.	—	—	25 per cent.
„ (bullion and coin)	Free.	—	—	—
„ dust	Free.	—	—	—
„ embroideries, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ jewellery	25 per cent.	—	—	25 per cent.
„ medals	Free.	—	—	—
„ muriate of	20 per cent.	—	—	20 per cent.
„ old and unfit for use without remanufacturing, as bullion	Free.	—	—	—
„ oxyd of	20 per cent.	—	—	20 per cent.
„ leaf, package of 500 leaves	$1·50 per pkge.	=per pkge.	0 6 3	—
„ leaf, half gold, as gold leaf.				
„ articles not otherwise provided for	40 per cent.	—	—	40 per cent.
„ and silver epaulets, galloons, laces, tassels, tresses, and wings, knots, and stars	35 per cent.	—	—	35 per cent.
„ ore	Free.	—	—	—
„ paper in any form	40 per cent.	—	—	40 per cent.
„ pens	40 per cent.	—	—	40 per cent.
„ shells or gold saucers for painting	40 per cent.	—	—	40 per cent.
„ studs, with or without settings	25 per cent.	—	—	25 per cent.
„ watch chains	25 per cent.	—	—	25 per cent.
„ watches	25 per cent.	—	—	25 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Gold, size	Free.	—	—	—
„ sweepings of	Free.	—	—	—
„ beaters' skins and moulds	Free.	—	—	—
Goloe shoes, goloshes, or clogs of leather	35 per cent.	—	—	35 per cent.
„ „ „ wood	35 per cent.	—	—	35 per cent.
Gomline, as albumen	Free.	—	—	—
Gothenberg octagonal shaped iron	1¼ cts. per lb.	= per 100 lb.	0 5 2½	—
Gouges, as manufactures of steel	45 per cent.	—	—	45 per cent.
Gowns, as clothing, according to material.				
Grain. *See* note below.*				
„ bags, American and other, if exported containing American produce, and returned empty according to regulations	Free.	—	—	—
„ bags, American, if exported filled with American produce, or exported empty and returned filled with foreign products, may be returned to the United States under regulations	Free.	—	—	—
„ bags, foreign, in which grain shall have been actually exported from the United States may be returned empty thereto under regulations to be prescribed by the Secretary to the Treasury	Free.	—	—	—
Grains, tanned or tawed, as leather	25 per cent.	—	—	25 per cent
„ of Paradise or amomum	20 per cent.	—	—	20 per cent.
Granadilla wood	Free.	—	—	—
„ manufactures of	35 per cent.	—	—	35 per cent.
Grana or granella, cochineal	Free.	—	—	—
Granite	$1½ per ton	= per ton	0 6 3	—
„ dressed or polished	20 per cent.	—	—	20 per cent.
Granza or garance, prepared madder	Free.	—	—	—
Grape sugar	20 per cent.	—	—	20 per cent.
„ juice or pulp	25 per cent.	—	—	25 per cent.
Grapes. *See* Damage on Fruit	20 per cent.	—	—	20 per cent.
Graphite or plumbago	Free.	—	—	—

* For the purpose of estimating the duties on importations of grain, the number of bushels shall be ascertained by weight instead of by measuring; and 60 pounds of wheat, 56 pounds of corn, 56 pounds of rye, 48 pounds of barley, 32 pounds of oats 60 pounds of peas, and 42 pounds of buckwheat, avoirdupois weight, shall respectively be estimated as a bushel.

In all cases in which the invoice or entry does not contain the weight, or quantity, or measure of merchandise, now weighed, or measured, or gauged, the same shall be weighed, gauged, or measured at the expense of the owner, agent, or consignee.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Graphite or plumbago mixed with large quantities of earth, slate, and shaly substances	20 per cent.	—	—	20 per cent.
Grass bags	30 per cent.	—	—	30 per cent.
„ bonnets, hats, and hoods	40 per cent.	—	—	40 per cent.
„ braids, plaits, &c. for ornamenting the same	30 per cent.	—	—	30 per cent.
„ cables or cordage, untarred	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ chine, noils of, bleached and combed in England	20 per cent.	—	—	20 per cent.
„ cloth	30 per cent.	—	—	30 per cent.
„ flowers, being natural grasses dried and prepared	20 per cent.	—	—	20 per cent.
„ mats or matting	30 per cent.	—	—	30 per cent.
„ Sisal	$15 per ton.	= per ton	3 2 6	—
„ „ manufactures of, not otherwise provided for	30 per cent.	—	—	30 per cent.
„ Spanish, or Esparto, and other grasses and pulp of, for manufacture of paper	Free.	—	—	—
„ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
Grasshopper springs	35 per cent.	—	—	35 per cent.
Grates. According to material.				
Grease	10 per cent.	—	—	10 per cent.
„ for use as soap stock only, not otherwise provided for, and soap stocks	Free.	—	—	—
„ known as "brown grease," obtained by pressure from wool skins, as animal oils	20 per cent.	—	—	20 per cent.
Green, French, mineral and Paris, dry or moist	30 per cent.	—	—	30 per cent.
„ turtles	Free.	—	—	—
Greenstone, in block, rough or squared	50 cts. per cubic ft. and 20 per cent.	= per cubic ft.	0 2 1	+ 20 per cent.
Grenadines, silk	60 per cent.	—	—	60 per cent.
„ cotton, when they count less than 100 threads to the square inch	5½ cts. per sq. yard and 20 per cent.	= per sq. yard	0 0 2¾	+ 20 per cent.
„ cotton and silk, cotton chief value, when threads cannot be counted	35 per cent.	—	—	35 per cent.
Grindstones, rough or unfinished or rough hand dressed	$1½ per ton	= per ton	0 6 3	—
„ finished	$2 per ton	= per ton	0 8 4	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Gridirons, manufactures of iron -	35 per cent.	—	—	35 per cent.
Groats, patent - - - -	20 per cent.	—	—	20 per cent.
Ground beans - - - -	1 ct. per lb.	= per lb.	0 0 0½	—
„ bean oil - - - -	20 per cent.	—	—	20 per cent.
„ gannister, mixed with fire-clay and used for the same purposes -	$5 per ton	= per ton	1 0 10	—
Guano and other animal manures, and substances expressly used for manure - - -	Free.	—	—	—
„ imitation of - - -	Free.	—	—	—
Guava jelly - - - -	50 per cent.	—	—	50 per cent.
„ marmalade or paste - -	35 per cent.	—	—	35 per cent.
Guaiac, gum - - - -	Free.	—	—	—
Guhr, earth known as - - -	20 per cent.	—	—	20 per cent.
Guinea grains, as gum resin, not otherwise provided for - -	20 per cent.	—	—	20 per cent.
Guitars - - - -	30 per cent.	—	—	30 per cent.
Guitar strings, of cat-gut or whip-gut -	Free.	—	—	—
„ of metal and silk, metal chief value - -	35 per cent.	—	—	35 per cent.
„ of metal and silk, metal not chief value - -	50 per cent.	—	—	50 per cent.
Gum elastic and manufactures of, as india-rubber.				
Gums, viz.: amber, aloes, Arabic, Australia, benzoin or benjamin, Barbary, bdellium, copal, Cape, chicle, cowrie, damar, East India, frankincense, garbanum, gamboge, guaiac, Jeddo, mastic, myrrh, olibanum, sandarac, Senegal, shellac, talc, tragacanth, and all gums not otherwise provided for - - -	Free.	—	—	—
Gum perdu - - - -	$1 per lb.	= per lb.	0 4 2	—
„ resins, all, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ substitute or burnt starch - -	10 per cent.	—	—	10 per cent.
Gun barrels, if wholly of iron - -	35 per cent.	—	—	35 per cent.
„ blocks - - - -	20 per cent.	—	—	20 per cent.
„ locks, steel - - - -	45 per cent.	—	—	45 per cent.
„ cotton or coton azotique :—				
valued at not over 20 cts. per lb.	6 cts. per lb. and 20 per cent.	= per lb.	0 0 3	+ 20 per cent.
valued at over 20 cts. per lb. -	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon invoiced Value. B.
			£ s. d.	
Gun wads, sporting, of all descriptions -	35 per cent.	—	—	35 per cent.
„ „ not sporting, of paper, cattle hair, or wool waste (the latter of no merchantable value), as manufactures of paper - - -	35 per cent.	—	—	35 per cent.
„ „ not sporting, of wool or wool waste, of any merchantable value - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ barrels, part steel - - -	45 per cent.	—	—	45 per cent.
„ rods, iron - - - -	35 per cent.	—	—	35 per cent.
„ „ steel - - - -	45 per cent.	—	—	45 per cent.
Gunny cloth,* not bagging, of hemp, jute, or flax :—				
valued at 10 cts. or less per sq. yd. - - -	3 cts. per lb.	= per lb.	0 0 1½	—
valued over 10 cts. per sq. yd.	4 cts. per lb.	= per lb.	0 0 2	—
„ bags and gunny cloth, old or refuse fit only for remanufacture -	Free.	—	—	—
„ bags and bagging (except bagging for cotton)† - - -	40 per cent.	—	—	40 per cent.
„ cloth, suitable for same uses as cotton bagging :—				
valued at not over 7 cts. per sq. yd. - - -	2 cts. per lb.	= per lb.	0 0 1	—
valued at over 7 cts. per sq. yd.	3 cts. per lb.	= per lb.	0 0 1½	—
The same for manufacture of paper	Free.	—	—	—
Gunpowder, and all explosive substances used for mining, blasting, artillery, or sporting purposes :				
valued at 20 cts. or less per lb. - - -	6 cts. per lb. and 20 per cent.	= per lb.	0 0 3	+ 20 per cent.
valued above 20 cts. per lb.	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.
Guns - - - - -	35 per cent.	—	—	35 per cent.
„ bayonets, and locks for - -	45 per cent.	—	—	45 per cent.
„ barrels, moulds for, steel, not in bars - - - -	45 per cent.	—	—	45 per cent.
„ plugs and nipples for, of iron and steel - - - -	45 per cent.	—	—	45 per cent.
„ stocks for - - - -	35 per cent.	—	—	35 per cent.

* "Gunny cloth, the produce of a country east of the Cape of Good Hope, manufactured into bags in Great Britain, and imported thence into this country, is subject to the discriminating duty of 10 per centum ad valorem."

† Gunny bags into which bags of rice were placed for greater security, and on landing were removed and sold without reference to the rice, possessed an independent value, and were held to be liable to duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Gut and worm-gut, manufactured or unmanufactured, for whip and other cord	Free.	—	—	—
„ cat (so called) or whip, unmanufactured	Free.	—	—	—
„ cord or cat-gut strings (so called) for musical instruments	Free.	—	—	—
same, or whip-gut strings for other purposes	30 per cent.	—	—	30 per cent.
Guts, salted	Free.	—	—	—
„ and all integuments of animals not otherwise provided for	Free.	—	—	—
Gutta percha, crude	Free.	—	—	—
„ manufactures of	40 per cent.	—	—	40 per cent.
„ in smooth sheets	40 per cent.	—	—	40 per cent.
Gypsum or plaster of Paris, calcined or ground	20 per cent.	—	—	20 per cent.
„ or plaster of Paris, unground	Free.	—	—	—
H.				
Hackles, part steel	45 per cent.	—	—	45 per cent.
Hair, of the alpaca, goat, &c., the value of which at the last port whence exported to the United States, excluding charges, shall be 32 cts. or less per lb.	10 cts. per lb. and 11 per cent.	= per lb.	0 0 5	+ 11 per cent.
same, of greater value	12 cts. per lb. and 10 per cent.	= per lb.	0 0 6	+ 10 per cent.
same, manufactured, according to material.				
„ all manufactures of, not otherwise provided for	30 per cent.	—	—	30 per cent.
„ applications for, as toilet articles	50 per cent.	—	—	50 per cent.
„ bristles	15 cts per lb.	= per lb.	0 0 7½	—
„ brushes	40 per cent.	—	—	40 per cent.
„ camels', cleaned or uncleaned, but not manufactured	10 per cent.	—	—	10 per cent.
„ cow and calf, manufactures of	30 per cent.	—	—	30 per cent.
„ cloth, not otherwise provided for	30 per cent.	—	—	30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Hair* cloth, of the description known as hair seating : —				
18 ins. wide or over - -	40 cts. per sq. yd.	= per sq. yd.	0 1 8	—
less than 18 ins. wide - -	30 cts. per sq. yd.	= per sq. yd.	0 1 3	—
„ cloth known as crinoline cloth -	30 per cent.	—	—	30 per cent.
„ of all kinds, cleaned or uncleaned, but unmanufactured, not otherwise provided for - -	10 per cent.	—	—	10 per cent.
„ curled, except of hogs, for beds or mattresses - - -	30 per cent.	—	—	30 per cent.
„ curled, of hogs, for beds and mattresses, and not fit for bristles -	Free.	—	—	—
„ dressings, dyes, &c., for the hair -	50 per cent.	—	—	50 per cent.
„ horse and cow, not cleaned and dressed	Free.	—	—	—
„ horse, long, used for weaving, cleaned or uncleaned, drawn or undrawn - - -	Free.	—	—	—
„ all horse, cattle, cleaned or uncleaned, drawn or undrawn, but unmanufactured - - -	Free.	—	—	—
„ hogs' - - - - -	1 ct. per lb.	= per 100 lb.	0 4 2	—
„ bonnets, hats, and hoods - -	40 per cent.	—	—	40 per cent.
„ bracelets, braids, chains, curls, or ringlets - - - - -	35 per cent.	—	—	35 per cent.
„ braids, plaits, flats, trimmings, sparterre, tissues, &c., used for ornamenting hats, bonnets, and all manufactures, not otherwise provided for - - -	30 per cent.	—	—	30 per cent.
„ nets for the hair, of silk and gum elastic - - - - -	60 per cent.	—	—	60 per cent.
„ nets for the hair, wool or worsted -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ human, raw, uncleaned, and not drawn - - - - -	per cent.	—	—	20 per cent.
„ human, cleaned or drawn, but not manufactured - - -	30 per cent.	—	—	30 per cent.
„ human, when manufactured -	40 per cent.	—	—	40 per cent.

* Held that the selvage is part of the fabric and to be included in the measurement of width.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Hair, human, netting of, foundation for wigs	40 per cent.	—	£ s. d. —	40 per cent.
„ oils	50 per cent.	—	—	50 per cent.
„ pencils	35 per cent.	—	—	35 per cent.
„ perfumeries or cosmetics	50 per cent.	—	—	50 per cent.
„ pins, of iron wire	50 per cent.	—	—	50 per cent.
„ pins, of gutta percha	40 per cent.	—	—	40 per cent.
„ pins, india rubber	35 per cent.	—	—	35 per cent.
„ restoratives	50 per cent.	—	—	50 per cent.
„ switches, so called, of coloured cotton	40 cts. per lb. and 20 per cent.	= per lb.	0 1 8	+ 20 per cent.
„ watch guards, of human hair	35 per cent.	—	—	35 per cent.
Hake sounds	Free.	—	—	—
Half duck, for sails	30 per cent.	—	—	30 per cent.
„ gold leaf	$1½ per package of 500 leaves.	= per pkge.	0 6 3	—
„ stuff, pulp for paper	20 per cent.	—	—	20 per cent.
Halter chains, made of wire or rods not less than ¼ inch in diameter	2½ cts. per lb.	= per lb.	0 0 1¼	—
same, of wire or rods less than ¼ inch, and not under No. 9 wire gauge	3 cts. per lb.	= per lb.	0 0 1½	—
same, of wire or rods under No. 9	35 per cent.	—	—	35 per cent.
same, tinned or washed	35 per cent.	—	—	35 per cent.
„ rings, as saddlery	35 per cent.	—	—	35 per cent.
Hames, as saddlery	35 per cent.	—	—	35 per cent.
Hammers, blacksmiths'	2½ cts. per lb.	= per 100 lb.	0 10 5	—
„ brass. *See* note to Manufactures of Brass	35 per cent.	—	—	35 per cent.
„ iron	35 per cent.	—	—	35 per cent.
„ part steel	45 per cent.	—	—	45 per cent.
Hams	2 cts. per lb.	= per lb.	0 0 1	—
Hand saws, not over 24 ins. long	75 cts. per doz. and 30 per cent.	= per doz.	0 3 1½	+ 30 per cent.
„ over 24 ins. long	$1 per doz. and 30 per cent.	= per doz.	0 4 2	+ 30 per cent.
Hand-bills or show-bills, lithographed	25 per cent.	—	—	25 per cent.
Handle bolts of wood	Free.	—	—	—
Handles for chests and drawers, according to material.				
Hangers	45 per cent.	—	—	45 per cent.
Handkerchiefs, cotton, printed, as cottons*	35 per cent.	—	—	35 per cent.

* "Handkerchiefs, pocket, although hemmed or otherwise prepared for use, are articles carried and not worn."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Handkerchiefs, linen, hem stitched or hemmed - -	40 per cent.	—	—	40 per cent.
„ silk - - -	60 per cent.	—	—	60 per cent.
„ linen*:—				
valued at not over 30 cts. per sq. yard	35 per cent.	—	—	35 per cent.
„ valued at over 30 cts. per sq. yard	40 per cent.	—	—	40 per cent.
„ cambric, with cotton border, as linen handkerchiefs.				
Hardware, coach and harness, as saddlery	35 per cent.	—	—	35 per cent.
Hares' furs, undressed and not on the skins - - -	20 per cent.	—	—	20 per cent.
„ „ on the skin, dressed -	20 per cent.	—	—	20 per cent.
„ skins, with fur on, not dressed in any manner -	Free.	—	—	—
„ „ partially dressed	20 per cent.	—	—	20 per cent.
Harmonicons - - - -	30 per cent.	—	—	30 per cent.
Harness, as saddlery - - -	35 per cent.	—	—	35 per cent.
„ furniture and hardware -	35 per cent.	—	—	35 per cent.
Harps and harpsichords - -	30 per cent.	—	—	30 per cent.
„ strings, gut - - -	Free.	—	—	—
Harrows, according to material.				
Hartshorn and spirits of, medicinal preparations - - - -	40 per cent.	—	—	40 per cent
Hassocks, subject to duty imposed on carpets or carpeting of like character or description.				
Hat bands, silk and cotton, but commercially known as silk hat bands, as silk trimmings - - -	60 per cent.	—	—	60 per cent.
„ bodies, cotton - - -	35 per cent.	—	—	35 per cent.
„ „ wholly or partly of wool -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Hatchets, as manufactures of steel -	45 per cent.	—	—	45 per cent.
Hats, of chip, grass, palm leaf, willow, or any other vegetable substance, or of hair, whalebone, or other material, not otherwise provided for - - - -	40 per cent.	—	—	40 per cent.

* Handkerchiefs with small plain linen centre, and the rest of linen thread lace, dutiable, *not* as thread lace, but as handkerchiefs.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Hats, braids, flats, plaits, laces, trimmings, tissues, willow sheets and squares used for making or ornamenting the same - - -	30 per cent.	—	—	30 per cent.
„ braids, cotton, imported for trimming hats, but which may be used for other purposes - -	35 per cent.	—	—	35 per cent.
„ fur - - - - -	35 per cent.	—	—	35 per cent.
„ leather - - - - -	40 per cent.	—	—	40 per cent.
„ linings, according to materials.				
„ silk - - - - -	60 per cent.	—	—	60 per cent.
„ straw - - - - -	40 per cent.	—	—	40 per cent.
„ wool :*—				
valued at 40 cts., or less per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued above 40 cts. and not above 60 cts. per lb. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued above 60 cts. and not above 80 cts. per lb. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 53 per cent.
valued above 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ woollen cloth - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ wool or worsted knit, as hats of wool.				
Hatters' plush of silk and cotton (cotton chief value) - - -	25 per cent.	—	—	25 per cent.
„ irons, of cast iron - -	1½ ct. per lb.	= per 100 lbs.	0 6 3	—
Hatwire, of steel - - -	9 cts. per lb. and 10 per cent.	= per lb.	0 0 4½	+ 10 per cent.
Hautboys, musical instruments -	30 per cent.	—	—	30 per cent.
Haversacks, leather - - -	35 per cent.	—	—	35 per cent.
Hay - - - - - -	20 per cent.	—	—	20 per cent.
„ cutting knives - - -	45 per cent.	—	—	45 per cent.
Hay making machines, according to material.				
Heading blocks, rough hewn or sawed only - - - - -	20 per cent.	—	—	20 per cent.
Headings of barrels - - -	35 per cent.	—	—	35 per cent.
Head nets, of silk and gum elastic -	50 per cent.	—	—	50 per cent.

* "The term 'hats of wool' applies only to hats the bodies of which are composed of wool that has undergone no process of manufacture, except felting or fulling, but not hats of cloth of wool."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Head nets, wool, worsted, &c. - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Healds, old, the worn out harness of cotton looms, fit only for re-manufacture -	10 per cent.	—	—	10 per cent.
Hedge or garden shears - - -	45 per cent.	—	—	45 per cent.
Hellebore root - - - -	Free.	—	—	—
Hemlock bark, seed and leaf - -	Free.	—	—	—
„ „ extracts - - -	20 per cent.	—	—	20 per cent.
Hemp, Indian (crude drug) - -	Free.	—	—	—
„ Manilla, and other like substitutes for hemp, not otherwise provided for - - - - -	$25 per ton	= per ton	5 4 2	—
„ Russia, or other unmanufactured -	$25 per ton	= per ton	5 4 2	—
„ sun - - - - -	$15 per ton	= per ton	3 2 6	—
„ tow of (codilla) - - -	$10 per ton	= per ton	2 1 8	—
„ all unenumerated manufactures of, wholly or partly of (hemp chief value), other than such as can be measured by the sq. yard -	30 per cent.	—	—	30 per cent.
„ yarn of - - - - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ bagging, wholly or partly of hemp, suitable as bagging for cotton :—				
valued at not over 7 cts. per sq. yard - - -	2 cts. per lb.	= per lb.	0 0 1	—
valued at over 7 cts. per sq. yard - - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ bags and bagging, wholly or partly of, except bagging for cotton -	40 per cent.	—	—	40 per cent.
„ bale rope of - - -	30 per cent.	—	—	30 per cent.
„ carpeting of - - -	8 cts. per sq. yard	= per sq. yd.	0 0 4	—
„ all burlaps and like manufactures of, or hemp chief value, except such as may be suitable for bagging for cotton - -	30 per cent.	—	—	30 per cent.
„ cloths of, other than above :—				
valued at not over 30 cts. per sq. yard - - -	35 per cent.	—	—	35 per cent.
valued at over 30 cts. per sq. yard	40 per cent.	—	—	40 per cent.
„ cod lines - - - -	30 per cent.	—	—	30 per cent.
„ rags for making paper - -	Free.	—	—	—
„ sail duck, or canvas for sails -	30 per cent.	—	—	30 per cent.
„ sash cord - - - -	30 per cent.	—	—	30 per cent.
„ seed - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
„ „ oil - - - -	23 cts. per gall.	= per gall.	0 0 11½	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Hemp, sheetings, brown or white -	35 per cent.	—	—	35 per cent.
„ unmanufactured, called "Italian flax," but really hemp - -	$25 per ton	= per ton	5 4 2	—
Henbane leaf - - - -	Free.	—	—	—
Herring, pickled or salted - -	$1 per barrel or 50 cts. per 100 lbs.	= per brl. or = per 100 lbs.	0 4 2 or 0 2 1	—
Hervey's magnesia - - -	50 per cent.	—	—	50 per cent.
Hessians. *See* Bags and Cotton bagging.				
Hide cuttings, raw, with or without the hair on, for glue stock - -	Free.	—	—	—
„ rope - - - - -	Free.	—	—	—
Hides, raw or uncured, whether dry, salted, or pickled - - -	Free.	—	—	—
„ tanned - - - -	25 per cent.	—	—	25 per cent.
Hinges, wrought or cast iron - -	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
„ other (according to material).				
Hobby horses, toys for children - -	50 per cent.	—	—	50 per cent.
Hods, coal, copper - - -	45 per cent.	—	—	45 per cent.
„ „ iron - - - -	35 per cent.	—	—	35 per cent.
Hoes, iron - - - -	35 per cent.	—	—	35 per cent.
„ part steel - - - -	45 per cent.	—	—	45 per cent.
„ steeled - - - -	45 per cent.	—	—	45 per cent.
Hoffman's anodyne - - -	50 cts. per lb.	= per lb.	0 2 1	—
Hogs' hair - - - -	1 ct. per lb.	= per lb.	0 0 0½	—
„ „ curled, for beds and mattresses, and not fit for bristles -	Free.	—	—	—
Hogsheads, as casks - - -	30 per cent.	—	—	30 per cent.
Hoisting machinery, according to material.				
Hollands, brown :—				
valued at not over 30 cts. per sq. yard - - -	35 per cent.	—	—	35 per cent.
valued at over 30 cts. per sq. yd.	40 per cent.	—	—	40 per cent.
Hollow ware, glazed or tinned, embracing castings of iron only - - -	3½ cts. per lb.	= per 100 lbs.	0 14 7	—
Hones and whetstones - - -	Free.	—	—	—
Honey - - - - -	20 cts. per gall.	= per gall.	0 0 10	—
„ water, cosmetic - - -	50 per cent.	—	—	50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Hoods, of straw, chip, grass, palm leaf, willow, or other vegetable substance, or of hair, whalebone, or other material not otherwise provided for - - -	40 per cent.	—	—	40 per cent.
„ braids, plaits, flats, laces, trimmings, tissues, willow sheets and squares, used for making or ornamenting the same -	30 per cent.	—	—	30 per cent.
Hoofs - - - - -	Free.	—	—	—
Hooks, fish - - - -	45 per cent.	—	—	45 per cent.
„ reaping - - - -	45 per cent.	—	—	45 per cent.
„ and eyes (according to material).				
Hoop iron, from ½ inch to 6 inches wide, and not thinner than ⅛ inch	1¼ cts. per lb.	= per 100 lbs.	0 5 2½	—
„ if thinner than ⅛ inch, and not thinner than 20 wire gauge -	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ all thinner than 20 wire gauge	1¾ cts. per lb.	= per 100 lbs.	0 7 3½	—
Hoops, iron - - - -	35 per cent.	—	—	35 per cent.
„ iron, not advanced beyond hoop iron except cut into lengths as hoops, duty as hoop iron.				
„ wood, split, not finished - -	20 per cent.	—	—	20 per cent.
„ wood - - - -	35 per cent.	—	—	35 per cent.
Hops - - - - -	8 cts. per lb.	= per lb.	0 0 4	—
Hop poles, unmanufactured - -	20 per cent.	—	—	20 per cent.
„ roots for cultivation - - -	Free.	—	—	—
Horn, manufactures of, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ plates for lanterns - -	35 per cent.	—	—	35 per cent.
„ strips - - - -	Free.	—	—	—
Horns and horn tips - - -	Free.	—	—	—
Horsehair, cleaned or not, drawn or not, but unmanufactured - - -	Free.	—	—	—
Horsehair, long, for weaving, cleaned or not - - - - -	Free.	—	—	—
Horses - - - - -	20 per cent.	—	—	20 per cent.
„ of immigrants, other than "teams"	20 per cent.	—	—	20 per cent.
„ immigrants' teams, including their harness and tackle, and vehicles drawn by them, in actual use for the purposes of the immigration, under regulations -	Free.	—	—	—
Horseshoe nails - - -	5 cts. per lb.	= per lb.	0 0 2½	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Horseshoe nails, iron, and all similar iron, should be classified as bar or flat iron, according to size, without regard to length of bars, designation, or quality. *See* page 181.				
Horse clippers - - - -	45 per cent.	—	—	45 per cent.
Hose, leather - - - -	35 per cent.	—	—	35 per cent.
Hosiery, cotton - - - -	35 per cent.	—	—	35 per cent.
„ knit, wholly or partly of wool or worsted :—				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 and not over 60 cts. per lb. -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 and not over 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ woven wholly or partly of wool	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ silk, and silk and cotton -	60 per cent.	—	—	60 per cent.
Hour glasses - - - -	40 per cent.	—	—	40 per cent.
Household effects of immigrants, which have been in actual use at least one year, and which are intended for their own use and not for sale -	Free.	—	—	—
„ furniture, finished - -	35 per cent.	—	—	35 per cent.
„ „ in pieces or rough, and not finished -	30 per cent.	—	—	30 per cent.
Hubs, for wheels, rough hewn or sawed only - - - -	20 per cent.	—	—	20 per cent.
„ otherwise than rough hewn or sawed - - - -	35 per cent.	—	—	35 per cent.
Huckabacks, valued at not over 30 cts. per sq. yard - -	35 per cent.	—	—	35 per cent.
„ valued at over 30 cts. per sq. yard - -	40 per cent.	—	—	40 per cent.
Human skeletons, and other preparations of anatomy - - - -	Free.	—	—	—
Hungary waters, cosmetic - -	50 per cent.	—	—	50 per cent.
Hyacinth bulbs - - - -	30 per cent.	—	—	30 per cent.
Hydraulic apparatus } according to „ **jacks** - } material.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Hydriodate of potash	75 cts. per lb.	= per lb.	0 3 1½	—
Hydro-carbonate of lime, as whiting	1 ct. per lb.	= per lb.	0 0 0½	—
Hydrometers, part glass	40 per cent.	—	—	40 per cent.
Hyoscyamus or henbane leaf	Free.	—	—	—
Hypo-sulphate of soda	20 per cent.	—	—	20 per cent.
I.				
Ice	Free.	—	—	—
Iceland moss	Free.	—	—	—
Ice safes, according to material.				
Illuminating oils	40 cts. per gall.	= per gall.	0 1 8	—
Illustrated books and papers	25 per cent.	—	—	25 per cent.
Imitation or mock jewellery, of brass or other metal	25 per cent.	—	—	25 per cent.
„ precious stones, not set	40 per cent.	—	—	40 per cent.
„ „ set	30 per cent.	—	—	30 per cent.
Imitations or models, in papier mâché, of anatomical and botanical specimens	35 per cent.	—	—	35 per cent.
Immigrants' personal and household effects, teams of animals, professional books, &c., and implements of trade, under regulations	Free.	—	—	—
Inclined planes, bars for, made to pattern, and fitted to lay down	70 cts. per 100 lbs.	= per 100 lbs.	0 2 11	—
Indecent articles, importation prohibited.				
Indian madder or munjeet, ground or prepared	Free.	—	—	—
„ corn or maize, per bushel of 56 lbs.	10 cts. per bush.	= per bush.	0 0 5	—
„ hemp, as other substitutes for hemp	$25 per ton	= per ton	5 4 2	—
„ hemp (crude drug)	Free.	—	—	—
„ meal	10 per cent.	—	—	10 per cent.
„ red	25 per cent.	—	—	25 per cent.
„ or Malacca joints, as canes, unfinished	35 per cent.	—	—	35 per cent.
same, not further manufactured than cut into suitable lengths for the manufactures into which they are intended to be converted	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
India-rubber "Arctic shoes," of rubber and wool	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ „ bags	25 per cent.	—	—	25 per cent.
„ „ balls, solid, for children, from ½ inch to 2½ inches in diameter, as toys	50 per cent.	—	—	50 per cent.
same, of larger sizes, not children's toys	35 per cent.	—	—	35 per cent.
same, wholly of india rubber, and not toys	25 per cent.	—	—	25 per cent.
„ „ boots and shoes of	30 per cent.	—	—	30 per cent.
same, differing from the ordinary only in having felted lining, part wool	30 per cent.	—	—	30 per cent.
„ „ bougies	35 per cent.	—	—	35 per cent.
„ „ braces, suspenders, webbing or other fabrics, wholly or in part of india rubber, not otherwise provided for, no part silk, wool, worsted, or mohair	35 per cent.	—	—	35 per cent.
same, silk and rubber, or silk, rubber, and cotton, silk not chief value	50 per cent.	—	—	50 per cent.
same, part worsted, as wearing apparel of worsted	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ „ catheters	35 per cent.	—	—	35 per cent.
„ „ cloth, linen foundation	35 per cent.	—	—	35 per cent.
„ „ „ cotton foundation, rubber chief value	35 per cent.	—	—	35 per cent.
„ „ „ cotton foundation, cotton chief value	35 per cent.	—	—	35 per cent.
„ „ crude, and milk of	Free.	—	—	—
„ „ imitation jet jewellery	35 per cent.	—	—	35 per cent.
„ „ injection bags or syringes	35 per cent.	—	—	35 per cent.
„ „ in coloured sheets or cakes, for dentists' use, partially vulcanised, but requiring further manufacture to fit it for use	20 per cent.	—	—	20 per cent.
„ „ in Para sheets, cakes, or other forms, advanced beyond crude, but not vulcanised in any degree, or otherwise manufactured	10 per cent.	—	—	10 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
India-rubber in strips, unmanufactured -	Free.	—	—	—
„ „ manufactures of, mixed with silk chief value - -	60 per cent.	—	—	60 per cent.
„ „ manufactures, rubber and cotton, cotton chief value	35 per cent.	—	—	35 per cent.
„ „ mats, not exclusively of vegetable matter - -	45 per cent.	—	—	45 per cent.
„ „ nipple shields - -	35 per cent.	—	—	35 per cent.
„ „ pessaries - - -	35 per cent.	—	—	35 per cent.
„ pouches - - -	25 per cent.	—	—	25 per cent.
same, for manufacture of toy balloons - - -	25 per cent.	—	—	25 per cent.
„ „ rolled in sheets, of uniform width and thickness, partially manufactured -	20 per cent.	—	—	20 per cent.
„ „ setons - - -	35 per cent.	—	—	35 per cent.
„ „ stomach tubes - -	35 per cent.	—	—	35 per cent.
„ „ suspender web - -	35 per cent.	—	—	35 per cent.
same, of silk and india rubber, or silk, rubber, and cotton, cotton chief value	50 per cent.	—	—	50 per cent.
„ „ articles wholly of india rubber, not otherwise provided for - -	25 per cent.	—	—	25 per cent.
„ shawls - - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
Indigo - - - - -	Free.	—	—	—
„ carmined - - - -	20 per cent.	—	—	20 per cent.
„ extracts of - - -	20 per cent.	—	—	20 per cent.
„ paste - - - -	10 per cent.	—	—	10 per cent.
Ink and ink powder - - -	35 per cent.	—	—	35 per cent.
„ printers' - - - -	35 per cent.	—	—	35 per cent.
„ stands, glass, cut - - -	40 per cent.	—	—	40 per cent.
„ „ „ plain - - -	35 per cent.	—	—	35 per cent.
„ „ iron - - - -	35 per cent.	—	—	35 per cent.
„ „ leather and glass - -	40 per cent.	—	—	40 per cent.
„ „ paper with glass - -	40 per cent.	—	—	40 per cent.
„ „ porcelain, plain white -	45 per cent.	—	—	45 per cent.
„ „ „ gilded or ornamented - -	50 per cent.	—	—	50 per cent.
„ „ silver - - -	40 per cent.	—	—	40 per cent.
Inlaid work of wood or marqueterie -	35 per cent.	—	—	35 per cent.
Insertings, cotton - - -	35 per cent.	—	—	35 per cent.
„ thread - -	30 per cent.	—	—	30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Institutions, educational, scientific, &c., articles specially imported for, under regulations -	Free.	—	£ s. d. —	—
,, philosophical, literary, or religious, or for the encouragement of the fine arts, books, maps, and charts (not more than two copies in any one invoice), regalia, gems, statues and specimens of sculpture, specially imported in good faith, for the use of -	Free.	—	—	—
,, philosophical, educational, scientific, or literary, or for the encouragement of the fine arts, all philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported in good faith, for the use of, and not intended for sale -	Free.	—	—	—
Instruments and apparatus, musical -	30 per cent.	—	—	30 per cent.
,, and apparatus, surgeons' (according to material).				
,, and apparatus, mathematical (according to material).				
,, and apparatus, philosophical	40 per cent.	—	—	40 per cent.
,, and apparatus, philosophical, specially imported in good faith for the use of any society incorporated or established for religious purposes - - -	15 per cent.	—	—	15 per cent.
,, and apparatus, philosophical, part steel - -	40 per cent.	—	—	40 per cent.
,, musical, strings for, of catgut - - -	Free.	—	—	—
same, of metal and silk, metal chief value - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Instruments, same, of metal and silk, metal not chief value - -	50 per cent.	—	—	50 per cent.
„ philosophical and scientific, specially imported in good faith for the use of any society or institution, incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale	Free.	—	—	—
Integuments, all, of animals, not otherwise provided for - - -	Free.	—	—	—
Insulators for use exclusively in telegraphy, except those made of glass -	25 per cent.	—	—	25 per cent.
Insurance charges, not dutiable.				
Inventions, models of, and other improvements in the arts - - -	Free.	—	—	—
Iodine, crude - - - -	Free.	—	—	—
„ resublimed - - -	75 cts. per lb.	= per lb.	0 3 1½	—
„ salts of - - - -	15 per cent.	—	—	15 per cent.
Ipecacuanha - - - -	Free.	—	—	—
Iridium - - - - -	Free.	—	—	—
Iris or orris root - - - -	Free.	—	—	—
Iron, acetate or pyrolignate of - -	25 cts. per lb.	= per lb.	0 1 0½	—
„ anchors, or parts of - -	2¼ cts. per lb.	= per 100 lbs. = per ton	0 9 4½ 10 10 0	—
„ anchors and cable chains, broken, rusty, or old, unfit for use, dutiable as "scrap iron," but not so if fit for use as such by repairs -	$8 per ton	= per ton	1 13 4	—
„ andirons, cast - - -	1½ cts. per lb.	= per 100 lbs. = per ton	0 6 3 7 0 0	—
„ anvils - - - - -	2½ cts. per lb.	= per 100 lbs. = per ton	0 10 5 11 13 4	—
„ axles, or parts of - - -	2½ cts. per lb.	= per 100 lbs. = per ton	0 10 5 11 13 4	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Iron, band, hoop and scroll, from ½ to 6 inches in width, not thinner than ⅛ of an inch	1¼ ct. per lb.	= per 100 lbs. = per ton	0 5 2½ / 5 16 8	—
under ¼ inch in thickness, and not thinner than No. 20, wire gauge	1½ ct. per lb.	= per 100 lbs. = per ton	0 6 3 / 7 0 0	—
thinner than No. 20, wire gauge	1¾ ct. per lb.	= per 100 lbs. = per ton	0 7 3½ / 8 3 4	—
„ bar, round, less than ¾ in. diam., in coils	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ bar, rolled or hammered, as follows: flats, from 1 to 6 inches wide, from ⅜ in. to 2 ins. thick; rounds, from ¾ in. to 2 ins. diameter; and squares, from ¾ in. to 2 ins. square	1 ct. per lb.	= per 100 lbs. = per ton	0 4 2 / 4 13 4	—
flats, rounds, or squares, of either greater or less width, thickness, diameter, or square respectively than the above	1 per lb.	= per 100 lbs. = per ton	0 6 3 / 7 0 0	—
PROVIDED, that all iron in slabs, blooms,* loops or other forms, less finished than iron in bars, and more advanced than pig iron, except castings, shall be rated as iron in bars, and pay a duty accordingly.				
PROVIDED further, that none of the above iron in bars, rounds or squares shall pay a less rate of duty than	35 per cent.	—	—	35 per cent.
„ bars for railroads, and inclined planes, made to pattern and fitted to be laid without further manufacture	70 cts. per 100 lbs.	= per 100 lbs. = per ton	0 2 11 / 3 5 4	—
„ beams, as rolled or hammered, not otherwise provided for	1¼ ct. per lb.	= per 100 lbs. = per ton	0 5 2½ / 5 16 8	—

* "Certain so styled iron in muck, bar, or bloom, which by reason of its having been sunk in St. Lawrence Bay, for two years had become corroded, and in fact only fit to be re-manufactured, was refused admission to entry as old scrap iron. The department held that its character was not changed."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Iron, bed screws	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
„ bick irons	35 per cent.	—	—	35 per cent.
„ blacksmiths' hammers and sledges	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
„ board nails and spikes, cut	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ board nails, spikes, rivets, and bolts (rivet or screw), wrought	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
„ boiler or other plate, not less than 3–16 of an inch in thickness	1½ ct. per lb.	= per 100 lbs. =per ton	0 6 3 7 0 0	—
„ boiler or other plate, not otherwise provided for	$25 per ton	= per ton	5 4 2	—
„ bolts to fasten doors, &c.	35 per cent.	—	—	35 per cent.
„ brads, sprigs, and tacks, cut, not over 16 oz. to the 1,000	2½ cts. per 1,000	= per 1,000	0 0 1¼	—
same, exceeding 16 oz. to the 1,000	3 cts. per lb.	= per lb.	0 0 1½	—
„ bolts and hinges, cast	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
same, wrought	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
„ cables and cable chains, and parts of	2½ cts. per lb.	= per 100 lbs. =per ton	0 10 5 11 13 4	—
„ cable chains, broken, as anchors, broken. *See* page 105.				
„ casters, furniture	35 per cent.	—	—	35 per cent.
„ carbonate of	20 per cent.	—	—	20 per cent.
„ castings not otherwise provided for	30 per cent.	—	—	30 per cent.
„ chains, trace, halter, fence, and others, made of wire or rods, not less than ¼ inch in diameter	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
same, of wire or rods less than ¼ inch and not under No. 9 wire gauge	3 cts. per lb.	= per 100 lbs.	0 12 6	—
same, of wire or rods under No. 9	35 per cent.	—	—	35 per cent.
same, tinned or washed	35 per cent.	—	—	35 per cent.
„ coated or galvanized with any metal by electric batteries	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 9 6 8	—
other than by electric batteries	2½ cts. per lb.	= per 100 lbs. = per ton	0 10 5 11 13 4	—
„ cotton ties	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Iron curry combs	35 per cent.	—	—	35 per cent.
„ cutting knives, part steel	45 per cent.	—	—	45 per cent.
„ ferrules	30 per cent.	—	—	30 per cent.
„ ferrules, piano	35 per cent.	—	—	35 per cent.
„ filings	35 per cent.	—	—	35 per cent.
„ fish plates, fish joints or splice bars, wrought	2 cts. per lb.	= per 100 lbs. =per ton	0 8 4 9 6 8	—
„ flues, wrought	3½ cts. per lb.	= per 100 lbs.	0 14 7	—
„ frying pans, wrought and tinned	35 per cent.	—	—	35 per cent.
„ galvanized, for roofing purposes as iron coated or galvanized.				
„ gas strips, rolled iron in pieces 17 to 18 ft. long, 8 in. wide, and $\frac{3}{16}$ in. thick	1¼ cts. per lb.	= per 100 lbs.	0 5 2½	—
„ gas-pipe, cast	1½ cts. per lb.	= per 100 lbs. =per ton	0 6 3 7 0 0	—
„ gas tubes, wrought	3½ cts. per lb.	= per 100 lbs. = per ton	0 14 7 16 6 8	—
„ hammers, other than blacksmiths'	35 per cent.	—	—	35 per cent.
„ hammers, part steel	45 per cent.	—	—	45 per cent.
„ hatters' irons, cast	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ hollow-ware, glazed or tinned	3½ cts. per lb.	= per 100 lbs.	0 14 7	—
„ hoop, cut into lengths for hoops, but not further manufactured, classified as hoop iron. *See* page 174.				
„ hoops, fit for use	35 per cent.	—	—	35 per cent.
„ horseshoe, and all similar iron, should be classified as bar or flat iron, according to size, without regard to length of bars, designation, or quality. *See* page 181.				
„ horse-shoe nails	5 cts. per lb.	= per 100 lbs.	1 0 10	—
„ in pigs, called "Spiegel"	$7 per ton	= per ton	1 9 2	—
„ kentledge,* purchased in the United States, and used exclusively as ballast, if landed in the United States will, if of foreign produc-				

* Iron kentlidge, used for ballast, landed from wreck, dutiable.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Iron—*continued.* tion or manufacture, be liable to duty, and if of American production or manufacture, be entitled to free entry under regulations.			£ s. d.	
„ lappers	35 per cent.	—	—	35 per cent.
„ larding pins	35 per cent.	—	—	35 per cent.
„ liquor	10 per cent.	—	—	10 per cent.
„ locomotive tires, or parts of	3 cts. per lb.	= per 100 lbs.	0 12 6	—
„ malleable, in castings, not otherwise provided for	2½ cts. per lb.	= per 100 lbs. =per ton	0 10 5 11 13 4	—
„ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ moisic, same duty as on all other species of iron of like condition, grade, or stage of manufacture.				
„ mails	35 per cent.	—	—	35 per cent.
„ mill irons and mill cranks, wrought	2 cts. per lb.	= per 100 lbs.	0 8 4	—
„ nails, cut	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ „ patent wrought	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
„ nitrate of (chemical salt)	20 per cent.	—	—	20 per cent.
„ nuts, wrought	2 cts. per lb.	= per 100 lbs.	0 8 4	—
„ octagonal bar	1¼ ct. per lb.	= per 100 lbs. =per ton	0 5 2½ 5 16 8	—
„ octagonal shape, from Gothenberg	1¼ cts. per lb.	= per 100 lbs. = per ton	0 5 2½ 5 16 8	—
„ ore	20 per cent.	—	—	20 per cent.
„ oxide of, or dry colcothar	Free.	—	—	—
same, as a medicinal preparation	40 per cent.	—	—	40 per cent.
„ oxide of, or dry colcothar, as paint	25 per cent.	—	—	25 per cent.
„ pipes, steam, gas, and water, cast	1½ cts. per lb.	= per 100 lbs. = per ton	0 6 3 7 0 0	—
„ railroad chairs, wrought	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 9 6 8	—
„ rivets, wrought	2½ cts. per lb.	= per 100 lbs.	0 10 5	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Iron, sadirons, cast - - -	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ screws, all except bed and wood -	35 per cent.	—	—	35 per cent.
„ „ wood, of 2 inches or greater length - - -	8 cts. per lb.	= per 100 lbs.	1 13 4	—
same, less than 2 inches long -	11 cts. per lb.	= per 100 lbs.	2 5 10	—
„ scythes, part steel - - -	45 per cent.	—	—	45 per cent.
„ shot, cast - - - -	30 per cent.	—	—	30 per cent.
„ shovels and spades - -	35 per cent.	—	—	35 per cent.
same, part steel - - -	45 per cent.	—	—	45 per cent.
„ sickles, part steel - - -	45 per cent.	—	—	45 per cent.
„ scroll, maximum thickness of, if inch wide or over, is $\frac{5}{16}$ inch; if under 1 inch wide, ¼ inch.				
„ slab, so called, for manufacture of fire and burglar proof safes; dutiable either as plate or sheet iron according to its thickness.				
„ spikes and bolts for railroads -	2½ cts. per lb.	= per 100 lbs. = per ton	0 10 5 11 13 4	—
„ sprigs and tacks not over 16 oz. to the 1,000 - - -	2½ cts. per 1,000	= per 1,000	0 0 1¼	—
same, exceeding 16 oz. to the 1,000	3 cts. per lb.	= per lb.	0 0 1½	—
„ squares, marked on one side -	3 cts. per lb. and 30 per cent.	= per lb.	0 0 1½	+ 30 per cent.
same, iron or steel, all other than above - - - -	6 cts. per lb. and 30 per cent.	= per lb.	0 0 3	+ 30 per cent.
„ pieces of, new - - -	1 ct. per lb.	= per 100 lbs. =per ton	0 4 2 4 13 4	—
„ pig - - - -	$7 per ton	= per ton	1 9 2	—
„ powder, so called, or wire reduced to a fine powder by hydrogen -	40 per cent.	—	—	40 per cent.
„ reduced by hydrogen, other than above - - - -	40 per cent.	—	—	40 per cent.
„ rolled or hammered, not otherwise provided for - -	1¼ ct. per lb.	= per 100 lbs. =per ton	0 5 2½ 5 16 8	—
„ manufactured and imported specially for toe calks, classified as rolled or hammered iron.				
scrap, cast, of every description -	$6 per ton	= per ton	1 5 0	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Iron, scrap, wrought, of every description *Provided, that nothing shall be deemed scrap iron except waste or refuse iron that has been in actual use, and fit only to be re-manufactured.	$8 per ton	= per ton	1 13 4	—
sheet, common or black, not thinner than No. 20 wire gauge † -	1¼ ct. per lb.	= per 100 lbs. / =per ton	0 5 2½ / 5 16 8	—
same, thinner than No. 20, and not thinner than No. 25 wire gauge -	1½ ct. per lb.	= per 100 lbs. / =per ton	0 6 3 / 7 0 0	—
same, thinner than No. 25 wire gauge	1¾ ct. per lb.	= per 100 lbs. / =per ton	0 7 3½ / 8 3 4	—
„ sheet, coated with tin by chemical bath and sold by weight and size	2½ cts. per lb	= per 100 lbs. / =per ton	0 10 5 / 11 13 4	—
„ so called, manufactured by Siemen's process, classified as steel.				
„ sheet, smooth or polished, by whatever name designated - -	3 cts. per lb.	= per 100 lbs. / =per ton	0 12 6 / 14 0 0	—
„ sheet, Bessemer, as steel in sheets.‡				
„ slit rods - - - -	1½ cts. per lb.	= per 100 lbs. / =per ton	0 6 3 / 7 0 0	—
„ spiral springs for furniture -	2 cts. per lb. and 15 per cent.	= per lb.	0 0 1	+ 15 per cent.
„ steamers, small, imported as cargo -	35 per cent.	—	—	35 per cent.
„ stoves and stove plates, cast -	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ sulphate of - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
„ sulphuret of - - -	20 per cent.	—	—	20 per cent.
„ taggers - - - -	30 per cent.	—	—	30 per cent.
„ tailors' irons, cast - - -	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ telegraph wire, galvanized - -	2 cts. per lb. and 15 per cent.	= per 100 lbs.	0 8 4	+ 15 per cent.

* The Department held that where the officers of the customs are satisfied that pieces of new iron, whether more or less than six inches in length, are fit to be made into spikes or bolts, that is, could appropriately and with reasonable expectation of profit on the part of the manufacturer be put to such use . . . then they should not classify them as scrap iron. It was not intended, however, to limit the application of this principle to pieces of new iron fit only to be made into spikes or bolts, but it must be held to embrace all pieces of new iron, when in the condition in which imported they are fit to be manufactured directly into wire or any other article, and such new iron should not be classified as scrap iron.

† "Iron bands on sheet iron to be considered as tare, being of but trifling value and of the poorest iron, and are thought to be no more liable to duty than iron hoops around casks or boxes."

‡ "Metal converted, cast or made from iron by the Bessemer or pneumatic process, of whatever form or description, shall be classed as 'steel.'"

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Iron, telegraph cable, of iron, or iron chief value - - -	35 per cent.	—	—	35 per cent.
,, tubes, wrought, all kinds - -	3½ cts. per lb.	= per 100 lbs. =per ton	0 14 7 / 16 6 8	—
,, vessels of, cast, not otherwise provided for - - -	1½ cts. per lb.	= per 100 lbs. =per ton	0 6 3 / 7 0 0	—
,, washers, wrought, ready punched -	2 cts. per lb.	= per 100 lbs.	0 8 4	—
,, wire, in whole or part of iron, not otherwise specified and provided for, and round iron in coils and not over $\frac{3}{16}$-inch diameter, whether coated with metal or not, to pay same duty as iron wire, bright, coppered, or tinned.				
wire, drawn and finished, whether coppered, or tinned, or not, not over ¼-inch diameter, nor thinner than No. 16 wire gauge - -	$2 per 100 lbs. and 15 per cent.	= per 100 lbs.	0 8 4	+ 15 per cent.
same, over No. 16 and not over No. 25 - - - -	$3½ per 100 lbs. and 15 per cent.	= per 100 lbs.	0 14 7	+ 15 per cent.
same, over or finer than No. 25 -	$4 per 100 lbs. and 15 per cent.	= per 100 lbs.	0 16 8	+ 15 per cent.
same, over ¼-inch diameter, as manufactures of iron, not otherwise provided for - -	35 per cent.	—	—	35 per cent.
,, all bobbin, hat, ribbon, or other covered iron wire, pays 5 cts. per lb. *in addition* to the above rates.				
,, wire-rope, strand and chain, either bright, coppered, galvanized, or coated with other metals, pay the same rates of duty as the wire of which they are made.				
,, wire rods, in coils, as rolled or hammered iron, not otherwise provided for - - -	1¼ cts. per lb.	= per 100 lbs. =per ton	0 5 2½ / 5 16 8	—
,, wire ribbon, of strands of iron wire covered with cotton, and united by a cotton web - - -	35 per cent.	—	—	35 per cent.
,, wire, square, to make stretchers for umbrellas, sunshades, and parasols, cut into pieces not exceeding the length therefor - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Iron, same, part steel	45 per cent.	—	—	45 per cent.
„ wrought, for ships, steam engines, and locomotives, or parts thereof, weighing each 25 pounds or more	2 cts. per lb.	= per 100 lbs. =per ton	0 8 4 / 9 6 8	—
Isinglass or fish glue	Free.	—	—	—
Istle or tampico fibre, manufactures of, not suitable for cotton bagging	30 per cent.	—	—	30 per cent.
„ or tampico fibre	Free.	—	—	—
Italian cloths, imitation of, cotton, as cotton jeans, drillings, &c.				
„ *cloths, real or imitation, wholly or partly of wool, worsted, &c. :				
valued at not over 20 cts. per sq. yd.	6 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 0 3	+ 35 per cent.
valued higher	8 cts. per sq. yd. and 40 per cent.	= per sq. yd.	0 0 4	+ 40 per cent.
Provided that on all goods weighing 4 oz. or over per sq. yd., the duty shall be	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ flax, so called, but really hemp	$25 per ton	= per ton	5 4 2	—
Ivory and vegetable ivory, unmanufactured	Free.	—	—	—
„ bagatelle, billiard, and chess balls, chessman, dice, and draughts	50 per cent.	—	—	50 per cent.
„ combs	35 per cent.	—	—	35 per cent.
„ drop black	25 per cent.	—	—	25 per cent.
„ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ nuts, vegetable ivory	Free.	—	—	—
„ parallel rulers, not mounted	35 per cent.	—	—	85 per cent.
„ protractors	35 per cent.	—	—	35 per cent.
„ rules, without metal	35 per cent.	—	—	35 per cent.
„ scales	35 per cent.	—	—	35 per cent.
„ sectors	35 per cent.	—	—	35 per cent.
„ vegetable, manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.

* Italian cloths must be rigidly identified. "Striped and fancy Italians," so called, should be classified as manufactures of worsted not otherwise provided for.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
J.				
Jackets, woollen - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ Cardigan - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Jack knives - - - -	50 per cent.	—	—	50 per cent.
Jacks, clothiers, according to material.				
„ for pianofortes, spinets, &c., iron -	35 per cent.	—	—	35 per cent.
Jalap - - - - -	Free.	—	—	—
Japan wax - - - -	20 per cent.	—	—	20 per cent.
Japanese cloths and poplins, when they count less than 100 threads to the square inch - -	$5\frac{1}{2}$ cts. per sq. yd. and 20 per cent.	= per sq. yd.	0 0 $2\frac{3}{4}$	+ 20 per cent.
„ cloths and poplins, when threads cannot be counted - -	35 per cent.	—	—	35 per cent.
Japanned wares, all kinds, not otherwise provided for - -	40 per cent.	—	—	40 per cent.
„ coach and harness furniture and hardware, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ leather of all kinds - -	35 per cent.	—	—	35 per cent.
Jars, glass, filled, pay a separate duty of -	40 per cent.	—	—	40 per cent.
„ other (according to material).				
„ ordinary earthenware, containing carbonate of ammonia, not dutiable as jars.				
Jeans. *See* Cottons.				
Jeddo gum - - - -	Free.	—	—	—
Jellies, all kinds - - - -	50 per cent.	—	—	50 per cent.
„ bottles or glass jars containing jellies pay a separate duty of -	40 per cent.	—	—	40 per cent.
Jerked beef, as beef - - -	1 ct. per lb.	= per lb.	0 0 $0\frac{1}{2}$	—
Jet beads and bead ornaments - -	50 per cent.	—	—	50 per cent.
„ bracelets, mounted or ornamented with gold - - - -	35 per cent.	—	—	35 per cent.
„ goods, imitations of, if of glass or india rubber - - - -	35 per cent.	—	—	35 per cent.
„ manufactures and imitations of -	35 per cent.	—	—	35 per cent.
„ unmanufactured - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Jewellery, bog oak or bogwood, so called, being imitations of jet -	35 per cent.	—	—	35 per cent.
„ (The term jewellery embraces the manufacture of personal ornaments in gold, silver, and precious stones) - -	25 per cent.	—	—	25 per cent.
„ imitation of, or mock, of brass or other metal - -	25 per cent.	—	—	25 per cent.
„ of jet, or imitation of jet -	35 per cent.	—	—	35 per cent.
Jewels, watch - - - - -	10 per cent.	—	—	10 per cent.
Joints, fish, wrought iron. *See* note to Rail Road Chairs - -	2 cts. per lb.	= per 100 lbs.	0 8 4	—
„ Malacca or India, not further manufactured than cut into suitable lengths for the manufactures into which they are intended to be converted -	Free.	—	—	—
Joss-stick or joss-light - - -	Free.	—	—	—
Juice, lime and lemon - - -	10 per cent.	—	—	10 per cent.
„ fruit - - - - -	25 per cent.	—	—	25 per cent.
Juniper berries - - -	Free.	—	—	—
Junk, old - - - - -	Free.	—	—	—
Jute * - - - - -	$15 per ton	= per ton	3 2 6	—
„ and flax, bags and bagging, except bagging for cotton - -	40 per cent.	—	—	40 per cent.
„ bagging for cotton, wholly or partly of:				
valued at not over 7 cts. per sq.yd.	2 cts. per lb.	= per lb.	0 0 1	—
valued over 7 cts. per sq. yd. -	3 cts. per lb.	= per lb.	0 0 1½	—
„ butts† - - - - -	$6 per ton.	= per ton	1 5 0	—
„ carpeting - - - - -	8 cts. per sq. yd.	= per sq. yd.	0 0 4	—
„ manufactures of, not otherwise provided for, other than such as can be measured by the sq. yd. -	30 per cent.	—	—	30 per cent.
„ rags, for making paper - -	Free.	—	—	—
„ rejections, vegetable substances not otherwise provided for - -	$15 per ton	= per ton	3 2 6	—

* For tare on jute, see department letter of May 8, 1866, and decision of May 19, 1870.

† Provided that all machinery not now manufactured in the United States, adapted exclusively to manufactures from the fibre of the ramie, jute, or flax, may be admitted into the United States, free of duty, for two years, from July 1, 1875, and provided further that bags, other than of American manufacture, in which grain shall have been actually exported from the United States may be returned empty to the United States free of duty, under regulations to be prescribed by the Secretary of the Treasury.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in Englis Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Jute seed	20 per cent.	—	—	20 per cent.
„ thread waste, fit only for manufacture of paper	Free.	—	—	—
„ woven fabrics, wholly or part of jute, valued at 30 cts. or less per sq. yard	35 per cent.	—	—	35 per cent.
over 30 cts. per sq. yard	40 per cent.	—	—	40 per cent.
„ yarns of	25 per cent.	—	—	25 per cent.
K.				
Kainite or **Kalidunger**	as Dung Salt. *See* p. 140.			
Kaleidoscopes	40 per cent.	—	—	40 per cent.
Kaoline	$5 per ton	= per ton	1 0 10	—
Kelp (alkaline matter of sea-weeds)	Free.	—	—	—
Kermes, animal, crude	Free.	—	—	—
„ mineral	10 per cent.	—	—	10 per cent.
Kerosene oil	40 cts. per gall.	= per gall.	0 1 8	—
„ oil, residuum of, under 20° Beaumé	20 per cent.	—	—	20 per cent.
„ oil, residuum of, over 20° Beaumé	20 cts. per gall.	= per gall.	0 0 10	—
Kettles, brass	35 per cent.	—	—	35 per cent.
„ cast, of iron	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ copper chief value	45 per cent.	—	—	45 per cent.
Keys, watch, if jewellery	25 per cent.	—	—	25 per cent.
„ „ gilt, with iron pipes, as manufactures of iron, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ „ gilt, with steel pipes, as manufactures of steel, not otherwise provided for	45 per cent.	—	—	45 per cent.
„ „ all others according to material.				
„ all others of gold, silver, or German silver	40 per cent.	—	—	40 per cent.
Kieserite, crude mineral	20 per cent.	—	—	20 per cent.
Kine pox	Free.	—	—	—
Kirschwasser	$2 per proof gall.	= per proof gall.	0 8 4	—
Kitchen furniture	according to material.			
„ **machinery**				
„ **ranges**				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Knees, ship - - - -	Free.	—	—	—
Knife blades and fork tines, for table, complete, excepting not handled, as cutlery -	35 per cent.	—	—	35 per cent.
Knit goods, wholly or in part of wool, worsted, the hair of the alpaca, goat, or other like animals:				
valued at 40 cts. or less per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued above 40 cts. and not above 60 cts. per lb. - - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued above 60 cts. and not above 80 cts. per lb. - - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued above 80 cts. per lb. - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Knitting machines, part steel - -	45 per cent.	—	—	45 per cent.
,, machine needles - -	$1 per 1,000 and 35 per cent.	= per 1,000	0 4 2	+ 35 per cent.
,, needles - - - - -	25 per cent.	—	—	25 per cent.
Knives, butchers', bread, bowie, budding, cooks', farriers', fruit, pruning, shoe, and table, as cutlery -	35 per cent.	—	—	35 per cent.
,, beam, curriers', drawing, fleshers', hay, putty, straw, and tanners', as manufactures of steel -	45 per cent.	—	—	45 per cent.
,, pen, jack, and pocket - -	50 per cent.	—	—	50 per cent.
,, silver or gold - - -	40 per cent.	—	—	40 per cent.
Knobs, brass, gilt, iron, plated or washed	35 per cent.	—	—	35 per cent.
,, copper - - - - -	45 per cent.	—	—	45 per cent.
,, glass, cut - - - -	40 per cent.	—	—	40 per cent.
,, ,, not cut - - - -	35 per cent.	—	—	35 per cent.
,, ,, with brass, iron, or composition shanks - - -	40 per cent.	—	—	40 per cent.
,, steel - - - - -	45 per cent.	—	—	45 per cent.
Knockers, brass, iron, gilt, or plated -	35 per cent.	—	—	35 per cent.
Knots, metal - - - -	35 per cent.	—	—	35 per cent.
Kowrie gum - - - -	Free.	—	—	—
Kremnitz white - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Kreosote - - - -	40 per cent.	—	—	40 per cent.
Kreserite, crude mineral - -	20 per cent.	—	—	20 per cent.
Kryolite - - - -	Free.	—	—	—
Kyanite, or cyanite - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
L.			£ s. d.	
Labels, blank	25 per cent.	—	—	25 per cent.
„ decanter or other, copper chief value	45 per cent.	—	—	45 per cent.
„ „ „ gilt or plated	35 per cent.	—	—	35 per cent.
„ „ „ gold, silver, or German silver	40 per cent.	—	—	40 per cent
„ printed and figured paper	25 per cent.	—	—	25 per cent.
Lace, all articles of, worn on the person, and made or made up wholly or partly by hand, and containing no wool, worsted, mohair, silk, or linen	35 per cent.	—	—	35 per cent.
„ bobbinet, cotton	35 per cent.	—	—	35 per cent.
„ capes and collars, cotton, ready for use	35 per cent.	—	—	35 per cent.
„ caps, cotton	35 per cent.	—	—	35 per cent.
„ cazenous, cotton	35 per cent.	—	—	35 per cent.
„ chemisettes, cotton	35 per cent.	—	—	35 per cent.
„ cluney, linen	40 per cent.	—	—	40 per cent.
„ coach, of cotton	35 per cent.	—	—	35 per cent.
„ „ of worsted	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ collarettes, cotton	35 per cent.	—	—	35 per cent.
„ collars, cotton	35 per cent.	—	—	35 per cent.
„ edging, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ gimp, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ handkerchief, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ insertings, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ pelerines, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ purling, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ quillings, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ ready made clothing, cotton	35 per cent.	—	—	35 per cent.
„ shawls, cotton	35 per cent.	—	—	35 per cent.
„ „ silk	60 per cent.	—	—	60 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Lace, tatting, cotton	35 per cent.	—	—	35 per cent.
„ „ thread	30 per cent.	—	—	30 per cent.
„ veils, cotton	35 per cent.	—	—	35 per cent.
„ „ thread, not made up in part by hand	30 per cent.	—	—	30 per cent.
Laces, cotton	35 per cent.	—	—	35 per cent.
„ gold, silver, or other metal	35 per cent.	—	—	35 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ silk and cotton, known as silk lace	60 per cent.	—	—	60 per cent.
„ thread, all	30 per cent.	—	—	30 per cent.
„ for bonnets, hats, &c., not otherwise provided for	30 per cent.	—	—	30 per cent.
„ wool, worsted or mohair	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ other (according to material).				
Lacets, silk, part metal	50 per cent.	—	—	50 per cent.
Lacings, boot and shoe, or other, of cotton	35 per cent.	—	—	35 per cent.
Lacquered ware	35 per cent.	—	—	35 per cent.
Lac, crude, seed, button, stick, shell, or dye	Free.	—	—	—
„ spirits and sulphur	Free.	—	—	—
„ marine, artificial gum	Free.	—	—	—
Lactarine	Free.	—	—	—
Ladies' worked caps, trimmed, cotton	35 per cent.	—	—	35 per cent.
Ladles and ladle heads, brass, Britannia, iron, or tin	35 per cent.	—	—	35 per cent.
„ „ copper chief value	45 per cent.	—	—	45 per cent.
„ „ common gilt or plated	35 per cent.	—	—	35 per cent.
„ „ gilt on silver	40 per cent.	—	—	40 per cent.
„ „ gold, silver, or German silver	40 per cent.	—	—	40 per cent.
Lake, carmine, dry or liquid	35 per cent.	—	—	35 per cent.
Llama points	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Lamb skins, whether Astracan or Persian, dressed as fur	20 per cent.	—	—	20 per cent.
Lampblack	20 per cent.	—	—	20 per cent.
Lamp hooks and pulleys, iron or brass	35 per cent.	—	—	35 per cent.
Lamps (according to materials).				
Lancet cases, paper or leather	35 per cent.	—	—	35 per cent.
Lancets, as cutlery	35 per cent.	—	—	35 per cent.
Lance wood	Free.	—	—	—
Land fowls, living	Free.	—	—	—
Landscape plates, paintings on glass	40 per cent.	—	—	40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Lanterns (according to material).				
„ horn plates for - -	35 per cent.	—	—	35 per cent.
„ magic, if toys - - -	50 per cent.	—	—	50 per cent.
„ „ suitable for philosophical purposes or the amusement or instruction of adults - -	40 per cent.	—	—	40 per cent.
same, if copper component of chief value - -	45 per cent.	—	—	45 per cent.
Lapis calaminaris—calamine - -	Free.	—	—	—
„ infernalis—nitrate of silver -	40 per cent.	—	—	40 per cent.
„ tutia—oxide of zinc - -	1¾ cts. per lb.	= per 100 lb.	0 7 3½	—
same, medicinal preparation -	40 per cent.	—	—	40 per cent.
Lappers, iron - - - -	35 per cent.	—	—	35 per cent.
Lappets, cotton - - - -	90 per ct. of 24 cts. per lb. and 35 per ct.	= per lb.	0 0 11	+31½ per cent.
Lappings, according to material.				
Lard - - - - -	2 cts. per lb.	= per lb.	0 0 1	—
Larding pins, iron - - -	35 per cent.	—	—	35 per cent.
Last blocks - - - -	20 per cent.	—	—	20 per cent.
Lasting of various materials for buttons exclusively, not combined with india rubber - - -	10 per cent.	—	—	10 per cent.
„ other (according to material).				
Lastings, fit for shoes, slippers, boots, bootees, or gaiters, are liable to the rates prescribed for similar fabrics not intended for such use.				
Lasts, finished or rough - - -	35 per cent.	—	—	35 per cent.
Latches, brass, gilt, iron, plated, or washed	35 per cent.	—	—	35 per cent.
„ if copper chief value - -	45 per cent.	—	—	45 per cent.
Lathes, according to material.				
Laths - - - - -	15 cts. per 1,000 pieces	= 1,000 pieces.	0 0 7½	—
Laudanum - - - -	40 per cent.	—	—	40 per cent.
Laurel berries - - - -	Free.	—	—	—
„ oil, fixed or expressed - -	20 cts. per lb.	= per lb.	0 0 10	—
Lava, unmanufactured - - -	Free.	—	—	—
„ gas burners, so called, but composed of clay or earthy matter, found only in Bavaria - -	40 per cent.	—	—	40 per cent.
Lavatories, according to materials.				
Lavender, essence or oil of - -	Free.	—	—	—
„ flower - - -	20 per cent.	—	—	20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Lavender, water, cosmetic, alcohol or distilled spirits principal ingredient, as alcoholic perfumery	$3 per gall. and 50 per cent.	= per gall.	0 12 6	+ 50 per cent.
„ same, containing no alcohol	50 per cent.	—	—	50 per cent.
Lawns, cotton.				
„ linen, valued at not over 30 cts. per sq. yard	35 per cent.	—	—	35 per cent.
„ linen, valued at over 30 cts. per sq. yard	40 per cent.	—	—	40 per cent.
Lawn mowers, if iron the chief component part	35 per cent.	—	—	35 per cent.
Lead, acetate or pyrolignate of, brown	5 cts. per lb.	= per lb.	0 0 2½	—
„ acetate of, white	10 cts. per lb.	= per lb.	0 0 5	—
„ antimonial, as type metal	25 per cent.	—	—	25 per cent.
„ ashes of	10 per cent.	—	—	10 per cent.
„ black or plumbago	Free.	—	—	—
same, mixed with large quantities of earth, slate, and shaly substances	20 per cent.	—	—	20 per cent.
„ powdered	Free.	—	—	—
„ black, powder, or British lustre	20 per cent.	—	—	20 per cent.
„ casts of	35 per cent.	—	—	35 per cent.
„ combs	35 per cent.	—	—	35 per cent.
„ chromate of, or chrome yellow	25 per cent.	—	—	25 per cent.
„ dross, as ore	1½ ct. per lb.	= per lb.	0 0 0¾	—
„ in pigs and bars	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 9 6 8	—
„ in sheets, pipe, or shot	2¾ cts. per lb.	= per 100 lbs. = per ton	0 11 5½ 12 16 8	—
„ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ molten, old bullets, as lead in pigs or bars	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 9 6 8	—
„ nitrate of	3 cts. per lb.	= per lb.	0 0 1½	—
„ old scrap, fit only to be remanufactured	1½ ct. per lb.	= per 100 lbs. = per ton	0 6 3 7 0 0	—
„ ore	1½ ct. per lb.	= per lb.	0 0 0¾	—
„ pencils, not in wood	$1 per gross	= per gross	0 4 2	—
„ „ wood filled with lead	50 cts. per gross and 30 per cent.	= per gross	0 2 1	+ 30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Lead, sugar of, as acetate of - -	10 cts. per lb.	= per lb.	0 0 5	—
„ white and red, dry or ground in oil - - - - -	3 cts. per lb.	= per 100 lbs.	0 12 6	—
Leaders, as manufactures of leather -	35 per cent.	—	—	35 per cent.
Leaf, Dutch metal - - -	10 per cent.	—	—	10 per cent.
„ gold, per pkge. of 500 leaves -	$1½	= per pkge.	0 6 3	—
„ half gold, same as full gold.				
„ silver, per pkge. of 500 leaves -	75 cts.	= per pkge.	0 3 1½	—
Learned's charcoal capsules - -	50 per cent.	—	—	50 per cent.
Leather, bend or belting, and Spanish, or other sole - - -	15 per cent.	—	—	15 per cent.
„ boots, bootees, shoes, and slippers	35 per cent.	—	—	35 per cent.
„ bottles of - - -	35 per cent.	—	—	35 per cent.
„ braces or suspenders - -	35 per cent.	—	—	35 per cent.
„ calf skin, tanned or tanned and dressed - - -	25 per cent.	—	—	25 per cent.
„ caps of - - - -	35 per cent.	—	—	35 per cent.
„ cases containing books (each a prayer book and hymnal, and not an unusual covering or protection for the finer kinds of such books), dutiable as part of the books.				
„ glazed calf skins - -	35 per cent.	—	—	35 per cent.
„ gloves, of all kinds - -	50 per cent.	—	—	50 per cent.
„ hats - - - -	40 per cent.	—	—	40 per cent.
„ japanned, patent, or enamelled -	35 per cent.	—	—	35 per cent.
„ "leather waste," so called, being layers of scraps pressed and enclosed between thin skins of leather in imitation of sole leather, as manufactures of leather not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
„ manufactures wholly or partly of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ mitts or mittens, as gloves -	50 per cent.	—	—	50 per cent.
„ morocco, finished - -	35 per cent.	—	—	35 per cent.
„ new scrap, pieces of new leather (refuse splits), intended for the manufacture of sole leather, dutiable as sole leather	15 per cent.	—	—	15 per cent.
„ old scrap - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Leather, tanned, all, not otherwise provided for	25 per cent.	—	—	25 per cent.
„ upper of all kinds, and skins dressed and finished, of all kinds, except calf skins and skins for morocco	20 per cent.	—	—	20 per cent.
Leather working machines, according to material.				
Leaves, aconite, buchu, belladonna, hemlock, henbane, palm, rose, senna, and all not otherwise provided for	Free.	—	—	—
„ for dyeing, crude	Free.	—	—	—
„ medicinal, crude, not otherwise provided for	Free.	—	—	—
Leeches	Free.	—	—	—
Lees, wine, crystallized or argal, crude	Free.	—	—	—
„ wine, crystallized or argal, other than crude or partly refined, as brown tartar	6 cts. per lb.	= per lb.	0 0 3	—
Leghorn bonnets, hats, or hoods	40 per cent.	—	—	40 per cent.
„ braids, brims, crowns, flats, plaits, and trimmings for same	30 per cent.	—	—	30 per cent.
Leggings, made on frames, as articles made on frames	35 per cent.	—	—	35 per cent.
Lemon juice	10 per cent.	—	—	10 per cent.
„ „ concentrated	10 per cent.	—	—	10 per cent.
„ peel, candied, as comfits	35 per cent.	—	—	35 per cent.
„ peel, not preserved, candied, or otherwise prepared	Free.	—	—	—
Lemons. *See* Damage on Fruit	20 per cent.	—	—	20 per cent.
„ essential oil of	50 cts. per lb.	= per lb.	0 2 1	—
Leopard skins, dressed	20 per cent.	—	—	20 per cent.
„ „ raw	Free.	—	—	—
Levant nut, cocculus indicus	Free.	—	—	—
„ wormseed	Free.	—	—	—
Lichens, all, prepared or not prepared	Free.	—	—	—
Licorice juice	5 cts. per lb.	= per lb.	0 0 2½	—
„ paste or rolls	10 cts. per lb.	= per lb.	0 0 5	—
„ root	Free.	—	—	—
Liebig's extract of meat	20 per cent.	—	—	20 per cent.
Life boats and life saving apparatus, specially imported by societies incorporated to encourage the saving of human life	Free.	—	—	—
Lifting machinery, according to material.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Lignum vitæ - - - -	Free.	—	—	—
Lima bark - - - -	Free.	—	—	—
Lime - - - - -	10 per cent.	—	—	10 per cent.
„ acetate or pyrolignate of - -	25 per cent.	—	—	25 per cent.
„ bisulphate of, medicinal preparation	40 per cent.	—	—	40 per cent.
„ borate of - - - -	Free.	—	—	—
„ chloride of (bleaching powders) -	Free.	—	—	—
„ citrate of - - - -	Free.	—	—	—
„ hydrocarbonate - - -	1 ct. per lb.	= per lb.	0 0 0½	—
„ phosphate of, crude, as manure -	Free.	—	—	—
same, as medicinal preparation -	40 per cent.	—	—	40 per cent.
„ sulphate of, plaster of paris, unground - - - - -	Free.	—	—	—
same, ground and calcined - -	20 per cent.	—	—	20 per cent.
„ white - - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Limes. *See* Damage on Fruit - -	10 per cent.	—	—	10 per cent.
„ in salt and water, as pickles -	35 per cent.	—	—	35 per cent.
„ juice of - - - - -	10 per cent.	—	—	10 per cent.
Limestone, rough, for burning into lime, as crude mineral - -	20 per cent.	—	—	20 per cent.
„ used for sinking cribs for piers - - -	10 per cent.	—	—	10 per cent.
Linens, viz.:—				
All oil cloth foundations or floor cloth canvas of flax, jute, or hemp, or of which either shall be the component material of chief value - -	40 per cent.	—	—	40 per cent.
Black canvas, fit for buttons only, as button cloths - - -	10 per cent.	—	—	10 per cent.
Braids, as manufactures of flax not otherwise provided for - -	40 per cent.	—	—	40 per cent.
Burlaps, all, and like manufactures of flax, jute, or hemp, or of which flax, jute, or hemp shall be the component material of chief value,* excepting such as may be suitable for bagging for cotton - - -	30 per cent.	—	—	30 per cent.
Bagging for cotton, valued at not over 7 cts. per sq. yard - - -	2 cts. per lb.	= per lb.	0 0 1	—
same, valued over 7 cts. per sq. yard -	3 cts. per lb.	= per lb.	0 0 1½	—
Bagging and bags not suitable for baling cotton - - -	40 per cent.	—	—	40 per cent.

* This does not comprise canvas paddings, crash, damasks, diapers, huckabacks, towels, shirting linens, dress linens, &c.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	——	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Linens—*continued.*			£ s. d.	
Brown and bleached linens, canvas, (except canvas for sails, and for oil cloth foundations or floor cloth), cot bottoms, crash, diaper, ducks (except sail duck), handkerchiefs,* huckabacks, lawns, paddings, or other woven fabrics of flax, jute, or hemp, or of which flax, jute, or hemp shall be the component material of chief value, not otherwise provided for.				
value 30 cts. or less per sq. yard	35 per cent.	—	—	35 per cent.
value above 30 cts. per sq. yard -	40 per cent.	—	—	40 per cent.
Damask towelling, with coloured border, as bleached damasks, above.				
Linens, cambric handkerchiefs with cotton borders, same as above.				
,, canvas, for buttons - -	10 per cent.	—	—	10 per cent.
,, clothing, not otherwise provided for - - - - -	40 per cent.	—	—	40 per cent.
,, cluney lace, as manufactures of flax, not otherwise provided for	40 per cent.	—	—	40 per cent.
,, coatings and Genoese linen coatings, coloured, valued at not over 30 cts. per sq. yard -	35 per cent.	—	—	35 per cent.
,, drills, fancy, coloured, valued at not over 30 cts. per sq. yard -	35 per cent.	—	—	35 per cent.
,, ducks, half, for sails, as sail duck.				
,, duck, sail, or canvas for sails, including the heavy ducks of Russia, and English sail cloth and canvas - - -	30 per cent.	—	—	30 per cent.
,, handkerchiefs, hem stitched or hemmed - - -	40 per cent.	—	—	40 per cent.
,, manufactures wholly or partly of flax (flax chief value), other than such as can be measured by the square yard, and not otherwise provided for, including all made on frames -	40 per cent.	—	—	40 per cent.
,, mitts, made on frames - -	40 per cent.	—	—	40 per cent.
,, pack thread - - -	40 per cent.	—	—	40 per cent.
,, sheetings, Russia and other, of flax or hemp, brown or white -	35 per cent.	—	—	35 per cent.

* Handkerchiefs with small plain linen centre, and the rest of linen thread lace, dutiable, *not* as thread lace, but as handkerchiefs.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Linens, shirt bosoms, not tamboured or embroidered, and requiring to be sewed in the shirt before they can be used - -	40 per cent.	—	—	40 per cent.
„ shirt fronts, embroidered -	40 per cent.	—	—	40 per cent.
„ thread - - - -	40 per cent.	—	—	40 per cent.
„ twines - - - -	40 per cent.	—	—	40 per cent.
„ waste - - - -	20 per cent.	—	—	20 per cent.
„ rags, for making paper - -	Free.	—	—	—
„ yarns, for carpets, not over No. 8 Lea, value 24 cts. or less per lb.	30 per cent.	—	—	30 per cent.
„ yarns, value over 24 cts. per lb. -	35 per cent.	—	—	35 per cent.
Lines, fishing - - - -	40 per cent.	—	—	40 per cent.
Liniments - - - -	40 per cent.	—	—	40 per cent.
Links (according to material).				
Linseed, the bushel of 56 lbs. - -	20 cts. per bush.	= per bush.	0 0 10	—
„ cake (oil cake) - - -	Free.	—	—	—
„ meal - - - -	20 per cent.	—	—	20 per cent.
„ oil, per gallon of 7½lbs. -	30 cts. per gall.	= per gall.	0 1 3	—
Lint, cotton - - - -	35 per cent.	—	—	35 per cent.
„ linen - - - -	40 per cent.	—	—	40 per cent.
Liqueurs - - - -	$2 per proof gall.	= per pf. gall.	0 8 4	—
Liquorice, paste or in rolls - -	10 cts. per lb.	= per lb.	0 0 5	—
„ juice - - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ root - - - -	Free.	—	—	—
Liquor opii sed. (Battley's sedative) -	50 per cent.	—	—	50 per cent.
„ stands, according to component metal, and the bottles, when not in the stands, to be rated separately, under their appropriate classification.				
Liquors, malt, to wit:—				
Ale, porter, and beer in bottles, duty on bottles included	35 cts. per gall.	=per gall.	0 1 5½	—
„ „ otherwise than in bottles - -	20 cts. per gall.	=per gall.	0 0 10	—
Liquors, spirituous, as follows:—				
Alcohol, brandy, and other spirits not otherwise provided for, manufactured or distilled from grain or other material* - - -	$2 per pf. gall.	= per pf. gall.	0 8 4	—
Angostura and "aromatic" bitters -	$2 per pf. gall.	= per pf. gall.	0 8 4	—

* "The Department authorises the adoption of the practice of stating in entries of distilled spirits, the actual number of wine gallons, with the duty assessed thereon according to the number of degrees proof at 2 cts. a degree of each gallon, instead of

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Liquors, spirituous—*continued.*			£ s. d.	
PROVIDED, that each and every gauge or wine gallon of measurement shall be counted as at least one proof gallon.				
PROVIDED, that all imitations of brandy, or spirits, or of wines, shall be subject to the highest rate of duty provided for the genuine article intended to be represented, and in no case less than $1 per gall.				
Proof spirit shall be held and taken to be that alcoholic liquor which contains one-half its volume of alcohol of a specific gravity of seven thousand nine hundred and thirty-nine ten thousandths (·7939) at 60° Fahrenheit.				
PROVIDED, that any brandy or spirituous liquors imported in casks of less capacity than 14 gallons, shall be forfeited to the United States.*				
Colouring for brandy, if it contains spirits, dutiable as distilled spirits.				
Same, without spirits - -	50 per cent.	—	—	50 per cent.
Cordials, liqueurs, arrack, absinthe, kirschwasser, ratafia, and other similar spirituous beverages (except vermuth, which shall pay the same duty as on wines of the same cost) or bitters containing spirits, and not otherwise provided for† -	$2 per pf. gall.	= per pf. gall.	0 8 4	—

stating the number of proof gallons at two dollars per gallon, as now practised, as it is more simple and correct, in that it does away with fractional statements of gallons."

* "The restricted quantity which may be imported in a package applies only to brandy and other spirituous liquors, and that 'Wine,' other than that put up in bottles, may be imported in any capacity."

† Cordials, if they are compounds or preparations of which distilled spirits are a component part of chief value, will be liable to forfeiture if imported in casks or packages of less capacity than 30 gallons.

Spirituous liquors may be imported in packages of bottles containing not less than one dozen bottles in each package, in casks of a capacity of not less than 14 gallons, and in packages other than of bottles having a capacity of not less than 30 gallons.

The Department has decided to insist that hereafter the cask or package (other than of bottles) holding the liquor in immediate contact with its sides when imported, shall be of a capacity of not less than 14 gallons, or of 30 gallons, according to the nature of the case, also that there be an allowance of two per cent. for leakage on the quantity which shall appear by the gauge to be contained in any cask of liquors, subject to duty by the gallon, and ten per cent. on all beer, ale, and porter in bottles; and five per cent. on all other liquors, in bottles; to be deducted from the invoice quantity, in lieu of breakage; or it shall be lawful to compute the duties on the actual quantity, to be ascertained by tale, at the option of the importer, to be made at the time of entry.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Liquors, spirituous—*continued.*			£ s. d.	
In bottles, dutiable as above, with additional duty on bottles.				
"Essence of red beets," so called, dutiable as distilled spirits.				
None of the above shall pay a lower rate or amount of duty than that fixed for first proof, but to be increased in proportion for any greater strength; and none under first proof shall pay a less rate of duty than 50 per cent. ad valorem.				
Preparations or compounds of which distilled spirits is a component part of chief value, pay not less than distilled spirits.				
Each and every gauge or wine gallon of measurement to be counted as at least one *proof* gallon.				

In a letter to the collector at Baltimore, dated February 24, 1871, the Department authorised the adoption of the "practice of stating in entries of distilled spirits the actual number of wine gallons, with the duty assessed thereon, according to the number of degrees proof, at 4 cents a degree of each gallon, instead of stating the number of proof gallons at 2 dollars per gallon."

The Department further directs that in future entries the notation of the proof of spirituous liquors shall conform to the scale of Tagliabue's hydrometer, as corrected and explained in his manual, placing proof spirits at 100 degrees, instead of at 50 degrees according to Tralle. Under this rule the duty would, of course, be 2 cents a degree instead of 4 cents.

The following instructions, in reference to the branding or marking of imported distilled spirits in casks, are hereby issued for the future guidance of officers of the customs, and will be held by them to supersede all former regulations on the same subject, so far as they conflict therewith:—

1st. Upon the landing of distilled spirits in *casks* upon the wharf, and the due examination thereof by the gauger, each cask shall be marked by him, or under his supervision, so as to show the name of the port, date of importation, rate of proof, and number of gallons contained therein.

2nd. A record of these facts shall be made by the gauger who marks the casks, in a book to be furnished him by the surveyor, or other supervising officer, for that purpose. The records to be made at the time of marking, and the books when full, to be placed on file at the custom house for reference whenever necessary.

Of "a compound or preparation containing of alcohol about 90 per cent., and 10 per cent. of castor oil and alkanet root," the Department held that "it is an unenumerated article, and by virtue of the 20th section of the Act of August 30, 1842, it must pay duty according to the highest rate to which any of its component parts are liable," and affirmed "the decision of the collector in assessing duty on the said article at the rate of $2\frac{1}{2}$ dollars per gallon for 50 degrees, and 5 cents for each additional degree, being the rates to which alcohol is liable." But this was under the Acts of 1864 and 1865.

The article imported under the designation of "Essence of Red Beets," or "Essence of Vegetables," has been decided by the Department to be a "distilled spirit," and liable to duty as such; and if imported in packages of less capacity than prescribed by law, to become liable to forfeiture. See also decision of December 5, 1862, New York, as to bond required of distillers, that not over 30 per cent. of alcohol or proof spirits is used in the manufacture of cordials.

A "medical tincture," so called, which was found to be an alcoholic compound, of which alcohol formed the principal ingredient, was held to have been properly assessed at the rate of $2\frac{1}{2}$ dollars per gallon of 50 degrees proof, and 5 cents for each degree above 50.

Under the Act of July 28, 1866, cordials, if they were compounds or preparations, of which distilled spirits were a component part of chief value, were liable to forfeiture if imported in casks or packages of less capacity than 30 gallons.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Liquors, spirituous—*continued.*			£ *s.* *d.*	
To ascertain the number of "proof gallons" contained in any quantity of liquor stronger than first proof, multiply the actual quantity in wine gallons by the per-centage of alcohol, and divide by fifty.				
All liquors entered as wines, and containing over 22 per cent. of alcohol, to be forfeited.				
Bottles containing spirits pay an additional duty of - - -	3 cts. each	=per doz.	0 1 6	—
Liquors, vinous, as follows :—				
Wines, all still, imported in casks* -	40 cts. per gall.	= per gall.	0 1 8	—
Wines, in bottles, all kinds of, excepting champagne and other sparkling, per case of one dozen bottles containing each not more than one quart, and more than one pint, or 24 bottles containing each not more than one pint - - -	$1·60	=per doz. quarts, or two doz. pints.	0 6 8	—
Any excess beyond these quantities found in such bottles shall be subject to a duty of 5 cts. per pint or fractional part thereof. No separate duty shall be collected on the bottles.†‡				
All bottles containing one quart or less than one quart, and more than one pint, shall be held to contain one quart, and all bottles containing one pint or less shall be held to contain one pint.				

* "The cost of boxes, bottles, transportation, and all charges until on shipboard, shall be included in determining the value pe gallon."

† In an appeal as to the duty on claret wine, imported from Bordeaux, in bottles, and in the dutiable value of which the cost o bottles, corks, labels, caps, straw, and cases was included, the Department held that these constituted an integral part of the marke value, and that the duty was properly assessed.

‡ See Treasury Letter of January 4, 1865, to collector at San Francisco, as to the inclusion of the cost of boxes, bottles, &c., i ascertaining the dutiable value of wines, and see notes to 516. See also Letter of July 26, 1866, to W. E. B. & Co., by which th assessment of the separate duty of two cents per bottle *in addition*, under the Act of June 30, 1864, was affirmed.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Liquors, vinous—*continued.*				
Wines,* champagne and all sparkling, in bottles, containing each not more than one quart and more than one pint - - - -	$6 per doz. bottles	= per doz.	1 5 0	—
containing not more than one pint each, and more than one half pint - - -	$3 per doz. bottles	= per doz.	0 12 6	—
containing one half pint each, or less - - - -	$1·50 per doz. bottles	= per doz.	0 6 3	—
in bottles containing more than one quart each, shall pay, in addition to $6 per doz. bottles, on the quantity in excess of one quart per bottle at the rate of -	$2 per gall.	= per gall.	0 8 4	—
PROVIDED, that any liquors containing more than 24 per cent. of alcohol, which shall be entered under the name of wine, shall be forfeited to the United States.				
PROVIDED, that wines, brandy, and other spirituous liquors imported in bottles, shall be packed in packages containing not less than one dozen bottles (of not more than one quart each for wine, except champagne and sparkling wines) in each package.†				
PROVIDED, that there shall be an allowance of 5 per cent. and no more on all effervescing wines, liquors, cordials, and distilled spirits				

* Under the Act of 1864, it was held that "the duty on 'champagne or sparkling wines in bottles,' is not exclusively specific; the same schedule which governs all other wines as provided for in section 2, governs 'champagne or sparkling wines in bottles;' but a provision of the law directs that said wines shall pay a *less rate of duty* than six dollars per dozen bottles, &c. Unquestionably, if the value justifies it, they must pay *more*."

† "The importation of wines together with assorted spirituous liquors, or of an assortment of spirituous liquors in a case or package is not prohibited by sec. 21 of the Act of July 14, 1870, provided the package contains not less than one dozen bottles of liquor."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Liquors, vinous—*continued.*			£ *s.* *d.*	
Wines, &c.—*continued.*				
in bottles, to be deducted from the invoice quantity in lieu of breakage.				
For regulations for branding, marking or certifying casks, vessels and cases containing distilled spirits in bond, *see* Note below.*				
Vermuth, the same duty as wine of the same cost.				
Listings, woollen - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Literary societies and institutions, books, maps, and charts (not more than two copies in any one invoice), regalia, gems, statues, and specimens of sculpture, specially imported in good faith, for the use of - -	Free.	—	—	—
„ societies and institutions, all philosophical and scientific apparatus, instruments and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings,				

* The officers of inspection of any port where distilled spirits or wines shall be landed, shall, upon the landing thereof, and as soon as the casks, vessels, and cases containing the same shall be inspected, gauged, or measured, brand or otherwise mark in durable characters, the several casks, vessels, and cases containing the same, and the marks shall express the number of casks, vessels, or cases, whether of spirits or wines, marked by each officer respectively, in each year, in progressive numbers for each of the articles; also the port of importation, the name of the vessel, and the surname of the master; also each kind of spirits or wines, for which different rates of duty are or shall be imposed, the number of gallons in each cask or case, and the rate of proof if spirits; also the name of the surveyor or chief officer of inspection for the port, and the date of importation; of all which particulars the chief officers of inspection shall keep fair and correct accounts, in books to be provided for that purpose.

On the sale of any cask, vessel, or case, which has been or shall be marked as containing distilled spirits or wines, and which has been emptied of its contents, and prior to the delivery thereof to the purchaser, or any removal thereof, the marks and numbers, which shall have been set thereon by or under the direction of any officer of inspection, shall be defaced and obliterated in the presence of some officer of inspection or of the customs, who shall, on due notice being given, attend for that purpose, at which time the certificate which ought to accompany such chest, vessel, or case, shall also be returned and cancelled. Every person who shall obliterate, counterfeit, alter, or deface any mark or number placed by an officer of inspection upon any cask, vessel, or case, containing distilled spirits or wines, or any certificate thereof; or who shall sell or in any way alienate or remove any cask, vessel, or case, which has been emptied of its contents, before the marks and numbers, set thereon pursuant to the provisions of the preceding section, shall have been defaced or obliterated, in presence of an officer of inspection; or who shall neglect or refuse to deliver the certificate issued to accompany the cask, chest, vessel, or case, of which the marks and numbers shall have been defaced or obliterated in manner aforesaid, on being thereto required by an officer of inspection or of the customs, shall for every such offence be liable to a penalty of 100 dollars, with costs of suit.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Literary societies, &c.—*continued.* drawings, and etchings, specially imported in good faith, for the use of, and not intended for sale - - -	Free.	—	—	—
Litharge, dry or in oil - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Lithographs, coloured or not - -	25 per cent.	—	—	25 per cent.
,, printed in colours - -	25 per cent.	—	—	25 per cent.
Lithographic hand bills or show bills -	25 per cent.	—	—	25 per cent.
,, **presses,** according to material.				
,, stones (not engraved)* -	Free.	—	—	—
,, varnish, valued at $1½ or less per gallon -	50 cts. per gall. and 20 per cent.	= per gall.	0 2 1	+ 20 per cent.
,, ,, valued higher -	50 cts. per gall. and 25 per cent.	= per gall.	0 2 1	+ 25 per cent.
Litmus, prepared or not prepared -	Free.	—	—	—
Live stock - - - -	20 per cent.	—	—	20 per cent.
,, specially imported for breeding purposes† - - -	Free.	—	—	—
Loadstones - - - -	Free.	—	—	—
Locks, brass - - - -	35 per cent.	—	—	35 per cent.
,, copper chief value - -	45 per cent.	—	—	45 per cent.
,, gun - - - -	45 per cent.	—	—	45 per cent.
,, iron - - - -	35 per cent.	—	—	35 per cent.
,, with steel springs - -	45 per cent.	—	—	45 per cent.
,, wood and iron - - -	35 per cent.	—	—	35 per cent.
,, wood and steel - - -	45 per cent.	—	—	45 per cent.
Locomotive tires, or parts of, iron -	3 cts. per lb.	= per 100 lbs.	0 12 6	—
,, ,, steel - - -	45 per cent.	—	—	45 per cent.
Locomotives, if iron the chief component part - - - - -	35 per cent.	—	—	35 per cent.
Logs and round unmanufactured timber, not otherwise provided for -	Free.	—	—	—
,, rafts of - - - -	Free.	—	—	—
Logwood, extract or decoction of	10 per cent.	—	—	10 per cent.
,, in sticks - - -	Free.	—	—	—

* Lithographic stones *engraved*, old, and engraving worthless, are not exempt from duty.

† "Live stock, imported for breeding purposes, *whether for the importer's own use or for sale*, are entitled to free entry."

Before admitting animals to free entry, which are allowed to be specially imported for breeding purposes, a careful examination of them must be made by collectors, in order to ascertain if they are of superior stock, and that their importation will tend to improve the breed in the United States. As the prices paid for such animals are generally much higher than those paid for ordinary animals, the invoices thereof will be of great assistance in determining as to whether they are specially imported for breeding purposes or not.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Looking glass frames (as frames), according to material.				
„ plates, not over 10 × 15 in. square* - -	4 cts. per sq. ft.	=per sq. ft.	0 0 2	—
„ „ over 10 × 15 in. and not over 16 × 24 in.	6 cts. per sq. ft.	=per sq. ft.	0 0 3	—
„ „ over 16 × 24 in. and not over 24 × 30 in.	10 cts. per sq. ft.	=per sq. ft.	0 0 5	—
„ „ over 24 × 30 in. and not over 24 × 60 in.	35 cts. per sq. ft.	=per sq. ft.	0 1 5½	—
„ „ all above 24 × 60 in.	60 cts. per sq. ft.	=per sq. ft.	0 2 6	—
None of the above to pay a less rate when framed, but to pay in addition upon frames - - -	30 per cent.	—	—	30 per cent.
Looms, if iron the chief component part	35 per cent.	—	—	35 per cent.
„ if steel the chief component part	45 per cent.	—	—	45 per cent.
Lotions, as Cosmetics - - -	50 per cent.	—	—	50 per cent.
Lozenges, proprietary medicines - -	50 per cent.	—	—	50 per cent.
„ vichy, as medicinal preparations not otherwise provided for - - - -	40 per cent.	—	—	40 per cent.
Lumber (timber), viz.:				
boards sawed, plank, deal, and other lumber of hemlock, white wood, sycamore, and basswood - -	$1 per 1,000 ft. board measure.	=per 1,000 feet.	0 4 2	—
all other varieties of sawed lumber -	$2 per 1,000 ft. board measure.	=per 1,000 feet.	0 8 4	—
clapboards, rough hewn or sawed only, pine or spruce, per 1,000 pieces of 4 feet long, or 4,000 lineal feet, viz.:—				
pine - - - -	$2 per 1,000 pieces	=per 1,000	0 8 4	—
spruce - - - -	$1·50 per 1,000 pieces	=per 1,000	0 6 3	—
all other, rough hewn or sawed only -	20 per cent.	—	—	20 per cent.
PROVIDED, That when lumber of any sort is planed or finished, in addition to the rates above provided, there shall be levied and paid, for each side so planed or finished, 50 cts. per thousand feet; and if planed on				

* "The term 'looking glass plates' held to mean 'any kind of silvered glass used as looking glasses, although not, in fact, plate glass.'"

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Lumber (timber), viz.:—*continued.* one side, and tongued and grooved, $1·00 per thousand feet; and if planed on two sides and tongued and grooved $1·50 per thousand feet.			£ *s.* *d.*	
Lunar caustic moulds - - -	20 per cent.	—	—	20 per cent.
Lutes - - - - -	30 per cent.	—	—	30 per cent.
Lye, of wood ashes - - -	Free.	—	—	—
M.				
Maccaroni - - - -	2 cts. per lb.	= per lb.	0 0 1	—
„ preparations similar to -	2 cts. per lb.	= per lb.	0 0 1	—
Mace - - - - -	25 cts. per lb.	= per lb.	0 1 0½	—
„ oil of - - - -	Free.	—	—	—
Machine blanketing or felts, of wool, for paper and printing machines - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
Machinery* according to material, except when composed of iron and steel, in which case, if the value of each be stated separately on the invoice, and the parts composed of iron and steel are packed in distinct and separate parcels, the duty applicable to each *per se* (where iron is the chief component part, 35 per cent., where steel is so, 45 per cent.) should be separately levied.				
„ for carding wool, &c., iron chief value, as manufactures of iron not otherwise provided for -	35 per cent.	—	—	35 per cent.

* *Machinery* chiefly of iron and wood, though having small portions of steel, does not necessarily take the classification of a manufacture of steel; but retains that of a manufacture of iron or wood according to the leading material. *Separable* values or parts of steel, should, however, pay duty as manufactures of steel.

"Machinery manufactured wholly of iron, with the exception of an insignificant portion thereof (say 1–28 part of its value), which is of brass, is liable to duty at the rate of thirty-five per centum ad valorem, as a manufacture of iron. To constitute it subject to the rate of duty imposed on manufactures of copper, it must contain copper of more than fifty per centum in value of all the materials contained therein."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ *s.* *d.*	
Machinery, for the manufacture of ramie, jute, and flax fibres (for two years from July 1, 1875) - -	Free.	—	—	—
„ for the manufacture of beet sugar, and for that purpose only - -	Free.	—	—	—
„ for repairs, may be imported as provided in the note given below* -	Free.	—	—	—
„ of American manufacture, old and broken up, and so imported, to pay as scrap iron, viz. :—				
if cast - -	$6 per ton	= per ton	1 5 0	—
if wrought - -	$8 per ton	= per ton	1 13 4	—
„ models of, and other inventions - - -	Free.	—	—	—
Mackerel - - - -	$2 per bbl.	= per bbl.	0 8 4	—
Madder, and munjeet, ground or prepared	Free.	—	—	—
„ root - - - -	Free.	—	—	—
„ extracts of, all - - -	Free.	—	—	—
Magic lanterns, suitable for children's toys - -	50 per cent.	—	—	50 per cent.
„ suitable for philosophical purposes or the amusement or instruction of adults	40 per cent.	—	—	40 per cent.
„ same, if copper component of chief value - -	45 per cent.	—	—	45 per cent.
Magnesia, acetate of, or pyrolignate of -	50 cts. per lb.	= per lb.	0 2 1	—
„ calcined - - -	12 cts. per lb.	= per lb.	0 0 6	—
„ carbonate of - - -	6 cts. per lb.	= per lb.	0 0 3	—
„ chloride of - - -	20 per cent.	—	—	20 per cent.
„ Henry's - - -	50 per cent.	—	—	50 per cent.
„ sulphate of (Epsom salts) -	1 ct. per lb.	= per lb.	0 0 0½	—
Magnetic iron, sand, or ore, crude mineral substance - - - -	20 per cent.	—	—	20 per cent.

* Machinery for repair may be imported into the United States without payment of duty, under bond, to be given in double the appraised value thereof, to be withdrawn and exported after said machinery shall have been repaired; and the Secretary of the Treasury is authorised and directed to prescribe such rules and regulations as may be necessary to protect the revenue against fraud, and secure the identity and character of all such importations when again withdrawn and exported, restricting and limiting the export and withdrawal to the same port of entry where imported, and also limiting all bonds to a period of time of not more than six months from the date of the importation.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Magnets - - - -	Free.	—	—	—
Mahogany - - - -	Free.	—	—	—
„ manufactures of - -	35 per cent.	—	—	35 per cent.
„ saw dust, solely for dyeing or tanning - - -	Free.	—	—	—
Mails, iron - - - -	35 per cent.	—	—	35 per cent.
„ steel - - - -	45 per cent.	—	—	45 per cent.
„ weavers' iron - - -	35 per cent.	—	—	35 per cent.
Maize (Indian corn), per bushel of 56 lbs.	10 cts. per bush.	= per bush.	0 0 5	—
„ meal of - - - -	10 per cent.	—	—	10 per cent.
Majolica. *See* Earthenware.				
Malacca or India joints, as canes unfinished - - -	35 per cent.	—	—	35 per cent.
same, not further manufactured than cut into suitable lengths for the manufacture into which they are intended to be converted - - -	Free.	—	—	—
Malleable iron castings, not otherwise provided for - - - -	2½ cts. per lb.	= per 100 lbs.	0 10 5	—
Mallets, wood - - - -	35 per cent.	—	—	35 per cent.
Malt - - - - -	20 per cent.	—	—	20 per cent.
„ extract of, medicinal preparation -	40 per cent.	—	—	40 per cent.
„ **machinery,** according to material.				
Manganese, oxide and ore of - -	Free.	—	—	—
Mangles, according to material.				
Mangoes. *See* Damage on Fruit -	10 per cent.	—	—	10 per cent.
Manilla and other hemps of India -	$25 per ton	= per ton	5 4 2	—
Manna - - - - -	Free.	—	—	—
Mantels, slate - - - - -	40 per cent.	—	—	40 per cent.
Mantillas, silk - - - -	60 per cent.	—	—	60 per cent.
Manufactures unenumerated. *See* Note below.*				

* There shall be levied, collected, and paid on each and every non-enumerated article which bears a similitude, either in material, quality, texture, or the use to which it may be applied, to any article enumerated in this title, as chargeable with duty, the same rate of duty which is levied and charged on the enumerated article which it most resembles in any of the particulars before mentioned; and if any non-enumerated article equally resembles two or more enumerated articles on which different rates of duty are chargeable, there shall be levied, collected, and paid on such non-enumerated article the same rate of duty as is chargeable on the article which it resembles paying the highest duty; and on all articles manufactured from two or more materials, the duty shall be assessed at the highest rates at which any of its component parts may be chargeable.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Manufacture, materials for, when free. *See* Note below.*			£ s. d.	
,, all not otherwise provided for - - -	20 per cent.	—	—	20 per cent.
,, articles, vessels, and wares not otherwise provided for, of brass, iron, lead, pewter, tin or other metal, or of which either of these or any other metal not otherwise provided for shall be the component material of chief value	35 per cent.	—	—	35 per cent.
,, not otherwise provided for, of mixed materials, are now dutiable according to material or similitude.				
,, of bone, horn, and ivory	35 per cent.	—	—	35 per cent.
,, cedar wood, granadilla, ebony, mahogany, rosewood, and satin wood	35 per cent.	—	—	35 per cent.

* All medicines, preparations, compositions, perfumery, cosmetics, cordials, and other liquors manufactured wholly or in part of domestic spirits, intended for exportation, as provided by law, in order to be manufactured and sold or removed, without being charged with duty, and without having a stamp affixed thereto, shall, under such regulations as the Secretary of the Treasury may prescribe, be made and manufactured in warehouses similarly constructed to those known and designated in Treasury regulations as bonded warehouses, class two: *Provided*, that such manufacturer shall first give satisfactory bonds to the collector of internal revenue for the faithful observance of all the provisions of law and the regulations as aforesaid, in amount not less than half of that required by the regulations of the Secretary of the Treasury from persons allowed bonded warehouses. Such goods, when manufactured in such warehouses, may be removed for exportation, under the direction of the proper officer having charge thereof, who shall be designated by the Secretary of the Treasury, without being charged with duty, and without having a stamp affixed thereto. Any manufacturer of the articles aforesaid, or of any of them, having such bonded warehouse as aforesaid, shall be at liberty, under such regulations as the Secretary of the Treasury may prescribe, to convey therein any materials to be used in such manufacture which are allowed by the provisions of law to be exported free from tax or duty, as well as the necessary materials, implements, packages, vessels, brands, and labels for the preparation, putting up, and export of the said manufactured articles; and every article so used shall be exempt from the payment of stamp and excise duty by such manufacturer. Articles and materials so to be used may be transferred from any bonded warehouse in which the same may be, under such regulations as the Secretary of the Treasury may prescribe, into any bonded warehouse in which such manufacture may be conducted, and may be used in such manufacture, and when so used shall be exempt from stamp duty; and the receipt of the officer in charge, as aforesaid, shall be received as a voucher for the manufacture of such articles. Any materials imported into the United States may, under such rules as the Secretary of the Treasury may prescribe, and under the direction of the proper officer, be removed in original packages from on shipboard, or from the bonded warehouse in which the same may be, into the bonded warehouse in which such manufacture may be carried on, for the purpose of being used in such manufacture, without payment of duties thereon, and may there be used in such manufacture. No article so removed, nor any article manufactured in said bonded warehouse, shall be taken therefrom except for exportation, under the direction of the proper officer having charge thereof, as aforesaid, whose certificate, describing the articles by their marks, or otherwise, the quantity, the date of importation, and name of vessel, with such additional particulars as may from time to time be required, shall be received by the collector of customs in cancellation of the bonds, or return of the amount of foreign import duties. All labour performed and services rendered under these regulations shall be under the supervision of an officer of the customs, and at the expense of the manufacturer.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Manure, all animal - - -	Free.	—	—	—
„ substances expressly used for -	Free.	—	—	—
Manuscripts - - - -	Free.	—	—	—
Maps and charts - - - -	25 per cent.	—	—	25 per cent.
„ „ for Library of Congress, if duty not included in price paid - -	Free.	—	—	—
„ „ for use of United States, if duty not included in price paid - -	Free.	—	—	—
„ „ (not more than two copies in any one invoice) specially imported in good faith, for the use or by the order of any academy, college, school, or seminary of learning, or for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts -	Free.	—	—	—
Marble, manufactures of - - -	50 per cent.	—	—	50 per cent.
„ white statuary, brocatella, sienna, and verd antique, in block, rough or squared* - -	$1 per cubic ft. and 25 per cent.	= per cu. ft.	0 4 2	+25 per cent.
„ veined, and marble of all other descriptions, including "greenstone" in block, rough or squared, not otherwise provided for - - -	50 cts. per cubic ft. and 20 per cent.	= per cu. ft.	0 2 1	+ 20 per cent.
„ all sawed, dressed, or polished, marble slabs, and marble paving tiles, not exceeding two inches in thickness - - same, if more than two inches in thickness, for each inch or fractional part thereof in excess of two inches in thickness, 10 cts. per foot in addition to the above rate.	25 cts. per superficial sq. foot and 30 per cent.	= per sup. sq. ft.	0 1 0½	+30 per cent.

* In measuring marble in blocks to ascertain dutiable quantity, an allowance may be made for the rough outsides, in accordance with the mercantile usage of the port, not to exceed, however, one inch on each end, and three quarters of an inch on each of the four sides.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Marble, manufactures of—*continued.*			£ s. d.	
PROVIDED, that if exceeding six inches in thickness, shall be subject to the duty imposed on marble blocks.				
„ statuary, not otherwise provided for	10 per cent.	—	—	10 per cent.
„ „ the work of American artists residing abroad, duly verified - -	Free.	—	—	—
„ „ expressly for presentation to national institutions or to any state or municipal corporations	Free.	—	—	—
„ „ specially imported for academies, learned, artistic, or other societies, under regulations	Free.	—	—	—
„ casts of, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts and not intended for sale	Free.	—	—	—
Marbles as toys - - - -	50 per cent.	—	—	50 per cent.
Marine coral, unmanufactured - -	Free.	—	—	—
Marking ink - - - -	35 per cent.	—	—	35 per cent.
Markwick's spongio piline - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Marmalade - - - -	35 per cent.	—	—	35 per cent.
Marrow, crude - - - -	Free.	—	—	—
„ for toilet soap, perfumed -	50 per cent.	—	—	50 per cent.
Marquees, canvas - - -	35 to 40 per cent.	—	—	35 to 40 per cent.
Marqueterie, or inlaid work of wood -	35 per cent.	—	—	35 per cent.
Marshmallows, medicinal root - -	Free.	—	—	—
Masks, paper, for adults - -	35 per cent.	—	—	35 per cent.
„ paper, other, as toys - -	50 per cent.	—	—	50 per cent.
Mastic, gum - - - -	Free.	—	—	—
Matches, cotton, wax, and paper -	35 per cent.	—	—	35 per cent.
Materials imported for the manufacture of medicines, preparations, compositions, perfumery, cosmetics, cordials, and other liquors for exportation may be removed from shipboard or bonded warehouse to manufacturing warehouse under regulations free of duty. *See* Note, page 212.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Mathematical instruments, according to materials.			£ s. d.	
same, specially imported for academies, learned societies, &c. under regulations	Free.	—	—	—
Matico leaf	Free.	—	—	—
Mats, cocoanut or coir	30 per cent.	—	—	30 per cent.
same, with wool border	45 per cent.	—	—	45 per cent.
„ dunnage	20 per cent.	—	—	20 per cent.
„ of flags, jute or grass	30 per cent.	—	—	30 per cent.
„ India-rubber, not exclusively of vegetable matter	45 per cent.	—	—	45 per cent.
„ palm leaf	35 per cent.	—	—	35 per cent.
„ all other (not exclusively of vegetable material) screens, hassocks and rugs*	45 per cent.	—	—	45 per cent.
„ bast or bass	20 per cent.	—	—	20 per cent.
„ sheepskin	45 per cent.	—	—	45 per cent.
PROVIDED, That mats, rugs, screens, covers, hassocks, bedsides, and other portions of carpets or carpeting shall be subject to the rate of duty imposed on carpets or carpeting of like character or description.				
Matting, cocoa or coir, with narrow border, partly of wool	30 per cent.	—	—	30 per cent.
„ China, cocoa, coir, and other floor, not otherwise provided for	30 per cent.	—	—	30 per cent.
„ flag or grass	30 per cent.	—	—	30 per cent.
„ floor, hemp or jute	30 per cent.	—	—	30 per cent.
Meal, corn	10 per cent.	—	—	10 per cent.
„ oat	½ ct. per lb.	= per lb.	0 0 0¼	—
Meat, Liebig's extract of	20 per cent.	—	—	20 per cent.
Meats, prepared and potted	35 per cent.	—	—	35 per cent.
Medallion casts in plaster from antique gems	20 per cent.	—	—	20 per cent.
Medals, cabinets of	Free.	—	—	—
„ cabinets of, specially imported and not for sale	Free.	—	—	—
gold, silver, or copper	Free.	—	—	—
„ specially imported for academies and societies, under regulations	Free.	—	—	—
Medicinal balsams, not otherwise provided for	30 per cent.	—	—	30 per cent.

* Certain so-styled "railway rugs" of cows' hair and cotton, or calves' hair and cotton, held not to be "*rugs*" under this Act. They should be classified according to the materials of "which they are composed, to be determined by the appraiser on examination, &c."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Medicinal barks, flowers, leaves, plants, roots, and seeds, in a crude state, not otherwise provided for - -	Free.	—	—	—
same, not crude - -	20 per cent.	—	—	20 per cent.
„ preparations, not otherwise provided for - - -	40 per cent.	—	—	40 per cent.
„ preparations, examination and appraisement of. *See* Note below.*				
„ water, all not artificial -	Free.	—	—	—
„ waters, artificial, in bottles or jugs containing not over one quart - - -	3 cts. each and 25 per cent.	per bottle or jug	0 0 1½	+ 25 per cent.
„ waters, artificial, in bottles or jugs containing over one quart, for each additional quart or fractional part -	3 cts. and 25 per cent.	=per adl. quart	0 0 1½	+ 25 per cent.
same, not in bottles - -	30 per cent.	—	—	30 per cent.

* All drugs, medicines, medicinal preparations, including medicinal essential oils and chemical preparations, used wholly or in part as medicine, imported from abroad, shall, before passing the custom house, be examined and appraised, as well in reference to their quality, purity, and fitness for medical purposes, as to their value and identity specified in the invoice.

All medicinal preparations, whether chemical or otherwise, usually imported with the name of the manufacturer, shall have the true name of the manufacturer and the place where they are prepared, permanently and legibly affixed to each parcel by stamp, label, or otherwise; and all medicinal preparations imported without such names so affixed shall be adjudged to be forfeited.

If, on examination, any drugs, medicines, medicinal preparations, whether chemical or otherwise, including medicinal essential oils, are found, in the opinion of the examiner, to be so far adulterated, or in any manner deteriorated, as to render them inferior in strength and purity to the standard established by the United States, Edinburgh, London, French, and German pharmacopœias and dispensatories, and thereby improper, unsafe, or dangerous to be used for medicinal purposes, a return to that effect shall be made upon the invoice, and the articles so noted shall not pass the custom house, unless, on a re-examination of a strictly analytical character, called for by the owner or consignee, the return of the examiner shall be found erroneous, and it is declared as the result of such analysis, that the articles may properly, safely, and without danger, be used for medicinal purposes.

The owner or consignee shall at all times, when dissatisfied with the examiner's return, have the privilege of calling, at his own expense, for a re-examination; and the collector, upon receiving a deposit of such sum as he may deem sufficient to defray such expense, shall procure some competent analytical chemist possessing the confidence of the medical profession, as well as of the colleges of medicine and pharmacy, if any such institutions exist in the State in which the collection district is situated, [to make] a careful analysis of the articles included in the return, and a report upon the same under oath. In case this report, which shall be final, shall declare the return of the examiner to be erroneous, and the articles to be of the requisite strength and purity, according to the standards referred to in the next preceding section, the entire invoice shall be passed without reservation on payment of the customary duties.

If the examiner's return, however, shall be sustained by the analysis and report, the articles shall remain in charge of the collector, and the owner or consignee, on payment of the charges of storage, and other expenses necessarily incurred by the United States, and on giving a bond with sureties satisfactory to the collector to land the articles out of the limits of the United States, shall have the privilege of re-exporting them at any time within the period of six months after the report of the analysis; but if the articles shall not be sent out of the United States within the time specified, the collector, at the expiration of that time, shall cause the same to be destroyed, and hold the owner or consignee responsible to the United States for the payment of all charges, in the same manner as if the articles had been re-exported.

One of the assistant appraisers at the port of New York, to be appointed with special reference to his qualifications for such duties, shall, in addition to the duties that may be required of him by the appraiser, perform the duties of a special examiner of drugs, medicines, chemicals, and so forth.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Medicines and drugs, crude, not otherwise provided for. (*See* Note to Drugs, page 138.)	20 per cent.	—	—	20 per cent.
„ not crude or patent, as medicinal prep. not otherwise provided for - -	40 per cent.	—	—	40 per cent.
patent, viz.: pills, powders, tinctures, troches or lozenges, syrups, cordials, bitters, anodynes, tonics, plasters, liniments, salves, ointments, pastes, drops, waters, essences, spirits, oils, and other medicinal preparations or compositions, recommended to the public as proprietary medicines, or prepared according to some private formula or secret art, as remedies or specifics for any disease or diseases or affections whatever affecting the human or animal body - -	50 per cent.	—	—	50 per cent.
If spirits be of chief value pay as spirits - -	$2 per proof gall.	=per proof gall.	0 8 4	—
Meerschaum, crude or raw - -	Free.	—	—	—
Melada* - - - - - -	1⅞ cts. per lb.	=per 100lb.	7 9¾	—
„ concentrated, or concrete, to be classed as sugar, dutiable according to colour, by the Dutch standard.				
Melodeons - - - -	30 per cent.	—	—	30 per cent.
Melting pots, as earthenware - -	25 per cent.	—	—	25 per cent.
„ or glue pots, iron - -	35 per cent.	—	—	35 per cent.
Memorandum books - - -	25 per cent.	—	—	25 per cent.
„ „ blank, with fine leather covers, elastic band fastening, &c. as manufactures of leather not otherwise provided for	35 per cent.	—	—	35 per cent.

* This product shall be known and defined as an article made in the process of sugar making, being the cane juice boiled down to the sugar point, and containing all the sugar and molasses resulting from the boiling process and without any process of purifying or clarification.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Mercurial preparations not otherwise provided for - - - -	20 per cent.	—	—	20 per cent.
Mercury or quicksilver - - -	Free.	—	—	—
Merino dress goods, as dress goods, wholly or partly of wool, worsted, &c., valued at not over 20 cts. per sq. yard - - -	6 cts. per sq. yard and 35 per cent.	= per sq. yard.	0 0 3	+ 35 per cent.
valued higher - - -	8 cts. per sq. yard and 40 per cent.	= per sq. yard.	0 0 4	+ 40 per cent.
PROVIDED that on all goods weighing 4 ozs. or over per sq. yard the duty shall be - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ shawls, as woollen or worsted clothing - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Metal, bell - - - -	Free.	—	—	—
„ britannia, and pewter, old and fit only to be re-manufactured -	Free.	—	—	—
„ all converted, cast, or made from iron by the Bessemer or pneumatic process, of whatever form or description, to be classed as steel.				
„ bronze, in leaf - - -	10 per cent.	—	—	10 per cent.
„ clippings, of brass - -	20 per cent.	—	—	20 per cent.
„ „ or scraps of dutch metal made of brass, as manufactures of brass	35 per cent.	—	—	35 per cent.
same, made of copper, as manufactures of copper - -	45 per cent.	—	—	45 per cent.
„ dutch, in leaf. *See* notes to Manufactures of Brass - - -	10 per cent.	—	—	10 per cent.
„ embroideries of gold, silver, or other metal, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ epaulets, galloons, knots, laces, stars, tresses, wings, &c. -	35 per cent.	—	—	35 per cent.
„ wares, gilt or plated, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ wares, silver or German silver, gilt	40 per cent.	—	—	40 per cent.
„ manufactures of, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Metal sheathing or yellow,* not wholly of copper, nor wholly or in part of iron, ungalvanised. *See* note to Manufactures of Copper -	3 cts. per lb.	= per 100 lbs. = per ton	0 12 6 / 14 0 0	—
„ sheathing, all copper - -	45 per cent.	—	—	45 per cent.
„ sheathing, brass, old and fit only for re-manufacture - -	15 per cent.	—	—	15 per cent.
„ sheathing, zinc - - -	3 cts. per lb.	= per 100 lbs. = per ton	0 12 6 / 14 0 0	—
„ silver plated, in sheets or other form - - - -	35 per cent.	—	—	35 per cent.
„ threads - - - -	25 per cent.	—	—	25 per cent.
„ type - - - -	25 per cent.	—	—	25 per cent.
„ yellow (not sheathing), old and unfit for any other purpose than as a raw material to be re-worked	20 per cent.	—	—	20 per cent.
Metals, unmanufactured, not otherwise provided for - - - -	20 per cent.	—	—	20 per cent.
Meteorological instruments, as scientific apparatus - - - -	40 per cent.	—	—	40 per cent.
„ „ instruments for United States - -	Free.	—	—	—

* "Sheathing metal imported per British brig 'Chesapeake,' intended to be used in sheathing the bottom of the said brig, and no portion of which is intended to be landed or used for any other purpose, held to be liable to duty."

The Treasury Department decided July 14, 1869, that "the Act of 24th February 1869, providing that all manufactures of copper "or of which copper shall be a component of chief value, not otherwise herein provided for, requires that all articles made of the "composition usually known as brass—copper being the component of chief value, should be subject to the duty of 45 per cent. ad "valorem. The fact that brass and many other articles, of which copper forms the principal part, have other distinctive names "never known as manufactures of copper in commerce. does not affect the question of the duty imposed by the Act;" and further decided, July 19, 1869, that "the language of the Act of 24th February 1869, embraces every manufacture of which copper is the "component of chief value, whether the copper be the simple metal, or in the form of an alloy or combination, chemical or "otherwise, with any other articles."

The District Court of the United States, Southern District of New York, decided (Internal Rev. Record of March 4, 1871), that "Dutch Metal" 75 per cent. of which was copper, was liable only to "ten" per centum ad valorem, under section 19, Act of March 2, 1861, and not as a manufacture of which copper is of chief value at 45 per cent. under Act of February 24, 1869, it being a manufacture of which "brass" forms the chief value; that brass is recognised in commerce as also in the 22d section of the Act of March 2, 1861, and 13th section of the Act of July 14, 1862, as a distinct metal from copper, although brass as known in commerce contains generally 60 per cent. of copper. Under the ruling of said court, all articles, not otherwise provided for, of which the brass of commerce is the component of chief value, is a manufacture of brass and not a manufacture of copper, within the meaning of the Act of February 24, 1869. The Treasury Department has accepted court's ruling.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Meteorological instruments, specially imported in good faith for the use of any society incorporated or established for religious purposes -	15 per cent.	—	—	15 per cent.
same, specially imported in good faith for the use of any society or institutionincorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not for sale -	Free.	—	—	—
Metronomes, metal (iron or brass), and wood, metal chief value - -	35 per cent.	—	—	35 per cent.
Mica and mica waste - - -	Free.	—	—	—
,, manufactures of bronze powder -	20 per cent.	—	—	20 per cent.
Milk - - - - -	10 per cent.	—	—	10 per cent.
,, of india-rubber - - -	Free.	—	—	—
,, of roses, as cosmetics - -	50 per cent.	—	—	50 per cent.
,, preserved or condensed - -	20 per cent.	—	—	20 per cent.
,, sugar of - - - -	Free.	—	—	—
Mill irons and cranks, of wrought iron -	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 9 6 8	—
,, saws, not over 9 in. wide - -	12½ cts. per lineal foot.	= per lineal foot	0 0 6¼	—
,, ,, over 9 in. wide - -	20 cts. per lineal foot.	= per lineal foot	0 0 10	—
Millstones, burrstones, manufactured or bound up into millstones -	20 per cent.	—	—	20 per cent.
same, in blocks, rough or unmanufactured - -	Free.	—	—	—
same, known as "skeleton stones," manufactured but not bound up - -	20 per cent.	—	—	20 per cent.
,, not burrstone, manufactured wholly or in part - -	20 per cent.	—	—	20 per cent.
Mills, coffee, &c., wood and iron, as manufactures of iron not otherwise provided for - - - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Mineral and bituminous substances, in a crude state, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ blue and green, dry or moist	30 per cent.	—	—	30 per cent.
„ kermes	10 per cent.	—	—	10 per cent.
Mineralogy, specimens of, for cabinets, and not for sale	Free.	—	—	—
Mineral or medicinal waters, all, *not artificial* (from springs impregnated with minerals)	Free.	—	—	—
„ or medicinal waters, *if artificial*, in bottles or jugs containing one quart or less*	3 cts. each and 25 per ct.	= per doz.	0 1 6	+ 25 per cent.
More than one quart, 3 cts. for each additional quart or fractional part thereof and 25 per ct.	3 cts. and 25 per ct.	= per addit. quart	0 0 1½	+ 25 per cent.
Not in bottles or jugs	30 per cent.	—	—	30 per cent.
Miniature cases, according to material.				
„ sheets, ivory	35 per cent.	—	—	35 per cent.
„ theatres of paper (if not children's toys), dutiable as manufactures of paper not otherwise provided for	35 per cent.	—	—	35 per cent.
Miniatures	10 per cent.	—	—	10 per cent.
Mining tools (steel)	45 per cent.	—	—	45 per cent.
Mint, United States, copper for	Free.	—	—	—
Mirrors, glass for, or looking glass plate, not over 10 in. × 15 in. sq.	4 cts. per sq. foot	= per sq. foot	0 0 2	—
same, over 10 in. × 15 in., and not over 16 in. × 24 in.	6 cts. per sq. foot	= per sq. foot	0 0 3	—
same, over 16 in. × 24 in., and not over 24 in. × 30 in.	10 cts. per sq. foot	= per sq. foot	0 0 5	—
same, over 24 in. × 30 in., and not over 24 in. × 60 in.	35 cts. per sq. foot	= per sq. foot	0 1 5½	—
same, all above 24 in. × 60 in.	60 cts. per sq. foot	= per sq. foot	0 2 6	—
None of the above to pay a less rate when framed, but to pay in addition upon frames	30 per cent.	—	—	30 per cent.

* These are generally put up in half-pint and pint bottles, but it would seem to be the interest of the manufacturer to increase the size of the bottles, otherwise the duty would, in the case of many of these preparations, amount to nearly 75 per cent. of their value.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Mirrors, hand	40 per cent.	—	—	40 per cent.
Mitts, cotton, all kinds	35 per cent.	—	—	35 per cent.
„ flax material of chief value	40 per cent.	—	—	40 per cent.
„ hemp „ „	30 per cent.	—	—	30 per cent.
„ made on frames, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ woollen, knit, as follows :—				
valued at not over 40 cts. per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued over 40 and not over 60 cts. per lb.	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued over 60 and not over 80 cts. per lb.	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ wholly or partly of wool and made on frames	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Mock jewellery, of brass or other metal	25 per cent.	—	—	25 per cent.
„ pearls, not set	40 per cent.	—	—	40 per cent.
Modelling, according to component materials, unless specially exempted.				
Models of inventions, and other improvements in the arts ; PROVIDED, that no article shall be so deemed which can be fitted for use*	Free.	—	—	—
„ engines, &c., specially imported for instruction or illustration in schools, classified as philosophical apparatus	Free.	—	—	—
„ or imitations in papier mâché of anatomical and botanical specimens	35 per cent.	—	—	35 per cent.
Mohair and silk twist	40 per cent.	—	—	40 per cent.
„ button cloths	10 per cent.	—	—	10 per cent.
„ coating and doeskin mohair coating composed of cotton, worsted, and mohair, also mohair cloth of same material, as follows :—				
valued at not over 40 cts per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cen.

* Machinery imported to be used experimentally and fit for use is not entitled to exemption from duty as models of invention.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Mohair coating, &c.—*continued.*				
„ valued above 40 and not over 60 cts. per lb. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
„ above 60 and not over 80 cts. per lb. - ·	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
„ above 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ manufactures of, as above.*				
„ serges, as above.				
Moisic iron, same duty as on all other species of iron of like condition, grade, or stage of manufacture.				
Molasses † - - - -	6¼ cts. per gall.	= per 10 gals.	0 2 7¼	—
Concentrated molasses, and tank bottoms, syrup of sugar cane juice, and melada - - - -	1⅞ cts. per lb.	= per 100 lbs.	0 7 9¾	—
PROVIDED, that any of the same entered under the name of "molasses" shall be forfeited to the United States.				
Monumental stone, not marble - -	$1½ per ton	= per ton	0 6 3	—
Monuments of granite - - -	20 per cent.	—	—	20 per cent.
Moon or poppy seed - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
Mops, cotton and iron - - -	35 per cent.	—	—	35 per cent.
„ cotton and wood, wood chief value	35 per cent.	—	—	35 per cent.
„ sticks, wood, or wood and iron -	35 per cent.	—	—	35 per cent.
„ wood and cotton, cotton chief value	35 per cent.	—	—	35 per cent.
Morocco, skins, finished - -	35 per cent.	—	—	35 per cent.
„ skins for, tanned but unfinished	10 per cent.	—	—	10 per cent.
Morphia, and all salts of - -	$1 per oz.	= per oz.	0 4 2	—
Mortars, iron, brass, or metal composition	35 per cent.	—	—	35 per cent.
„ copper - - -	45 per cent.	—	—	45 per cent.
„ glass - - - -	40 per cent.	—	—	40 per cent.
„ marble - - -	50 per cent.	—	—	50 per cent.
„ other stone - - -	20 per cent.	—	—	20 per cent.
„ agate, as stoneware.				
Mosaic pictures, of marble, as manufactures of marble - - -	50 per cent.	—	—	50 per cent.
Mosaics, real, not set - - -	10 per cent.	—	—	10 per cent.
„ set in gold or other metal -	25 per cent.	—	—	25 per cent.
„ "Florentine," so styled, of slate, as ornaments for mantels, &c.	40 per cent.	—	—	40 per cent.

* "Under the Act of 1842, goats' hair, plush or mohair plush, though composed partly of cotton, was chargeable with duty as a manufacture of 'goats' hair or mohair.'"

† No allowance can be made for damage to molasses soured on the voyage of importation. Molasses on board a Spanish brig from Cuba is liable to the regular duties and the discriminating duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Mosaics, when in settings or frames not of metal - - -	20 per cent.	—	—	20 per cent.
Moss, crude - - - -	Free.	—	—	—
,, for beds or mattresses - -	Free.	—	—	—
,, Iceland - - - -	Free.	—	—	—
,, prepared, as artificial flowers -	50 per cent.	—	—	50 per cent.
Mother-of-pearl - - -	Free.	—	—	—
,, buttons, with metal eyes or shanks - -	30 per cent.	—	—	30 per cent.
,, knife handles, unfinished	35 per cent.	—	—	35 per cent.
,, shell boxes - -	35 per cent.	—	—	35 per cent.
,, manufactures of, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
,, studs - - -	35 per cent.	—	—	35 per cent.
Moulds, button - - - -	30 per cent.	—	—	30 per cent.
,, lunar caustic - - -	20 per cent.	—	—	20 per cent.
Mouse traps of wood and iron wire -	35 per cent.	—	—	35 per cent.
"**Mousseline** de laines," worsted or worsted and silk, and "de laines," cotton and worsted, as women's and children's dress goods :—				
valued at not over 20 cts. per sq. yard	6 cts. per sq. yard and 35 per cent.	= per sq. yard	0 0 3	+ 35 per cent.
valued higher - - -	8 cts. per sq. yard and 40 per cent.	= per sq. yard	0 0 4	+ 40 per cent.
PROVIDED that on all goods weighing 4 ozs. or over per sq. yard the duty shall be - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Mouth, perfumeries, cosmetics, or applications for the - - - -	50 per cent.	—	—	50 per cent.
Moveable picture books - - -	25 per cent.	—	—	25 per cent.
Mowing machines, according to material.				
Muffs, foot, dressed sheep skins, with wool on, and leather - -	35 per cent.	—	—	35 per cent.
,, fur - - - -	35 per cent.	—	—	35 per cent.
Mules, living - - - -	20 per cent.	—	—	20 per cent.
Mundic, iron pyrites or arsenical pyrites	20 per cent.	—	—	20 per cent.
,, copper pyrites - - -	5 cts. per lb.	= per lb.	0 0 $2\frac{1}{2}$	—
Munjeet, extract of - - -	Free.	—	—	—
,, or indian madder, ground or prepared - - -	Free.	—	—	—
,, root - - - -	Free.	—	—	—
Mungo, pulverized or not - -	12 cts. per lb.	= per 100 lbs.	2 10 0	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Murexide, a dye - - -	Free.	—	—	—
Muriate of barytes - - -	20 per cent.	—	—	20 per cent.
„ of cinchona - - -	40 per cent.	—	—	40 per cent.
„ of gold - - -	20 per cent.	—	—	20 per cent.
„ of potassa - - -	Free.	—	—	—
„ of strontium - - -	20 per cent.	—	—	20 per cent.
„ of tin - - - -	30 per cent.	—	—	30 per cent.
Muriatic acid - - - -	Free.	—	—	—
Museums, books, maps and charts (not more than two copies in any one invoice), regalia, gems, statues, and specimens of sculpture, specially imported in good faith for the use of -	Free.	—	—	—
„ all philosophical and scientific apparatus, instruments and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported in good faith for the use of, and not intended for sale - -	Free.	—	—	—
Mushrooms, dried - - -	10 per cent.	—	—	10 per cent.
Music, printed with lines, bound or unbound - - - -	20 per cent.	—	—	20 per cent.
„ sheet - - - -	20 per cent.	—	—	20 per cent.
Musical instruments,* metal, or metal chief value -	30 per cent.	—	—	30 per cent.
„ „ all other -	30 per cent.	—	—	30 per cent.
Same, if toys - - -	50 per cent.	—	—	50 per cent.
Same, strings for, gut - -	Free.	—	—	—
Same, strings for, silk - -	60 per cent.	—	—	60 per cent.
Same, strings for, silk and metal, silk not chief value - - -	35 per cent.	—	—	35 per cent.
Musk, crude, in natural pod - -	Free.	—	—	—
„ as perfume - - -	50 per cent.	—	—	50 per cent.
Musket barrels, part steel - -	45 per cent.	—	—	45 per cent.
„ bayonets - - -	45 per cent.	—	—	45 per cent.
„ bullets - - - -	35 per cent.	—	—	35 per cent.

* Parts of musical instruments, or articles appertaining thereto and which cannot be used for any other purpose, come within the provision of musical instruments.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Musket rods, iron	35 per cent.	—	—	35 per cent.
„ „ steel	45 per cent.	—	—	45 per cent.
„ stocks	35 per cent.	—	—	35 per cent.
Muskets	35 per cent.	—	—	35 per cent.
Muslin. *See* Cottons.				
Mustard, when enclosed in glass or tin	14 cts. per lb.	= per lb.	0 0 7	—
„ ground, in bulk	10 cts. per lb.	= per lb.	0 0 5	—
„ seed, brown and white	Free.	—	—	—
„ oil, not salad, expressed	25 cts. per gall.	= per gall.	0 1 $0\frac{1}{2}$	—
„ „ salad, in flasks or bottles, or not	$1 per gall.	= per gall.	0 4 2	—
Mutton, in carcase, dressed	20 per cent.	—	—	20 per cent.
Myrabolans, crude nut, for dyeing or tanning	Free.	—	—	—
Myrrh, gum	Free.	—	—	—
N.				
Nail plates, iron	35 per cent.	—	—	35 per cent.
Nails, board, iron, cut	$1\frac{1}{2}$ cts. per lb.	= per 100 lbs. = per ton	0 6 3 7 0 0	—
„ „ wrought iron	$2\frac{1}{2}$ cts. per lb.	= per 100 lbs. = per ton	0 10 5 11 13 4	—
„ brass. *See* note to Manufactures of Brass	35 per cent.	—	—	35 per cent.
„ china heads	45 per cent.	—	—	45 per cent.
„ copper	45 per cent.	—	—	45 per cent.
„ ornamental iron, with brass, gilt, or polished heads	35 per cent.	—	—	35 per cent.
„ silver and German silver	40 per cent.	—	—	40 per cent.
„ zinc	35 per cent.	—	—	35 per cent.
„ horseshoe	5 cts. per lb.	= per 100 lbs. = per ton	1 0 10 23 6 8	—
„ other (according to material).				
Nankeen uppers, for shoes or slippers	35 per cent.	—	—	35 per cent.
Naphtha	40 cts. per gall.	= per gall.	0 1 8	—
Naples soap	10 cts. per lb. and 25 per cent.	= per lb.	0 0 5	+ 25 per cent.
Narcotine	40 per cent.	—	—	40 per cent.
Natron, as soda ash	$\frac{1}{4}$ ct. per lb.	= per 100 lbs.	0 1 $0\frac{1}{2}$	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Natural grass flowers, being natural grasses, dried and prepared -	20 per cent.	—	—	20 per cent.
„ History, specimens of, for cabinets, and not for sale - -	Free.	—	—	—
Neatsfoot oil - - - - -	20 per cent.	—	—	20 per cent.
Necklace of pearl and diamonds, set in gold - - - - -	25 per cent.	—	—	25 per cent.
Necklaces, glass-bead - - -	50 per cent.	—	—	50 per cent.
Neckties, silk - - - - -	60 per cent.	—	—	60 per cent.
Needle cases, according to material.				
Needles, crochet, shell - - -	35 per cent.	—	—	35 per cent.
„ crochet, bone, ivory, or horn -	35 per cent.	—	—	35 per cent.
„ „ other, according to materials.				
„ for sewing, darning, knitting, and all other descriptions -	25 per cent.	—	—	25 per cent.
„ for knitting or sewing machines	$1 per 1,000 and 35 per cent.	= per 1,000	0 4 2	+ 35 per cent.
„ sail - - - - -	25 per cent.	—	—	25 per cent.
Negrohead cloth, cotton and worsted, as follows :—				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
„ at over 40 and not over 60 cts. per lb. -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
„ at over 60 and not over 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
„ at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Nets, fishing, dip or scoop, cotton -	35 per cent.	—	—	35 per cent.
same, of flax - - -	40 per cent.	—	—	40 per cent.
„ head, wool, worsted or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ head or hair, of silk and gum elastic	60 per cent.	—	—	60 per cent.
„ seine - - - - -	6½ cts. per lb.	= per lb.	0 0 3¼	—
„ spot, silk and cotton, but commercially known as silk lace -	60 per cent.	—	—	60 per cent.
Netting of human hair, foundation for wigs - - - - -	40 per cent.	—	—	40 per cent.
Newspapers, illustrated or not - -	25 per cent.	—	—	25 per cent.
New Zealand flax - - -	$5 per ton	= per ton	1 0 10	—
Nicholson pavement blocks, made wholly by sawing - - - - -	20 per cent.	—	—	20 per cent.
Nickel - - - - - -	30 cts. per lb.	= per lb.	0 1 3	—

* These nets were by decision of the Department Dec. 17, 1866, classified as "articles worn," &c., but as the Revised Statutes except Silk Manufactures, the above classification would seem to be now correct.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Nickel, alloy of, with copper - -	20 cts. per lb.	= per lb.	0 0 10	—
„ oxide - - - -	20 cts. per lb.	= per lb.	0 0 10	—
Nippers, iron - - - -	35 per cent.	—	—	35 per cent.
Nipples for guns, of iron and steel -	45 per cent.	—	—	45 per cent.
Nitrate of barytes - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
„ of iron - - - -	20 per cent.	—	—	20 per cent.
„ of lead - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ of potash, crude - -	1 ct. per lb.	= per lb.	0 0 0½	—
„ „ refined and partially refined - -	2 cts. per lb.	= per lb.	0 0 1	—
„ of silver - - - -	40 per cent.	—	—	40 per cent.
„ of tin - - - -	20 per cent.	—	—	20 per cent.
Nitrates, all, when prepared for medicinal purposes - - - -	40 per cent.	—	—	40 per cent.
Nitre, cubic, as nitrate of soda - -	Free.	—	—	—
Nitric acid, yellow and white - -	10 per cent.	—	—	10 per cent.
„ „ not chemically pure -	Free.	—	—	—
„ **ether,** spirits of - - -	50 cts. per lb.	= per lb.	0 2 1	—
Nitro-benzole - - - -	10 cts. per lb.	= per lb.	0 0 5	—
Nitro-glycerine - - -	—	—	—	—
Nitro-picric acid - - -	Free.	—	—	—
Non-enumerated Articles. *See* Note below.*				
Norfolk latches - - - -	35 per cent.	—	—	35 per cent.
Noyeau, duty same as on "absinthe" -	$2 per proof gall.	=per proof gall.	0 8 4	—
„ with additional duty of 3 cts. each for the bottles.				
Nursing bottles of moulded glass, finished, with all fixtures attached - -	40 per cent.	—	—	40 per cent.
Nutgalls - - - -	Free.	—	—	—
Nutmegs - - - -	20 cts. per lb.	= per lb.	0 0 10	—
Nuts, all kinds (except of metal) not otherwise provided for - -	2 cts. per lb.	= per lb.	0 0 1	—
„ cocoa - - - -	Free.	—	—	—
„ Brazil or cream - - -	Free.	—	—	—
„ palm - - - -	Free.	—	—	—
„ used in dyeing - - -	Free.	—	—	—
„ wrought iron - - -	2 cts. per lb.	= per 100 lbs. / = per ton	0 8 4 / 9 6 8	—
Nux vomica - - - -	Free.	—	—	—

* There shall be levied, collected, and paid on the importation of all raw or unmanufactured articles, not herein enumerated or provided for, a duty of 10 per centum ad valorem; and on all articles manufactured in whole or in part, not herein enumerated or provided for, a duty of 20 per centum ad valorem.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
O.			£ s. d.	
Oak-bark	Free.	—	—	—
Oakum	Free.	—	—	—
Oar blocks, rough hewn or sawed only	20 per cent.	—	—	20 per cent.
Oatmeal	½ ct. per lb.	= per lb.	0 0 0¼	—
Oats (32 lbs. to bush.)	10 cts. per bush.	= per bush.	0 0 5	—
„ for seed	10 cts. per bush.	= per bush.	0 0 5	—
„ ground for provender	10 cts. per bush.	= per bush.	0 0 5	—
Object glasses for telescopes, edges ground or cut	40 per cent.	—	—	40 per cent.
Obscene articles, importation prohibited.				
Ochres and ochrey earths, of whatever colour, not otherwise provided for:—				
dry	50 cts. per 100 lbs.	= per 100 lbs.	0 2 1	—
ground in oil	$1½ per 100 lbs.	= per 100 lbs.	0 6 3	—
Odor cases, glass and leather	40 per cent.	—	—	40 per cent.
Odors or perfumes	50 per cent.	—	—	50 per cent.
Œnanthic ether, or oil of cognac	$4 per oz.	= per oz.	0 16 8	—
Oilcake, linseed	Free.	—	—	—
Oilcloth, for carriage floors, too thin and frail for recognised floor oil-cloths	45 per cent.	—	—	45 per cent.
„ foundations or floor-cloth canvas, made of flax, jute, or hemp, or of which flax, jute, or hemp shall be the component material of chief value	40 per cent.	—	—	40 per cent.
„ medicated, not silk	45 per cent.	—	—	45 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ all other	45 per cent.	—	—	45 per cent.
„ table mats	45 per cent.	—	—	45 per cent.
„ lined with wool or woollens	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Oilcloths, for floors, stamped, painted or printed:				
valued at 50 cts. or less per sq. yd.	35 per cent.	—	—	35 per cent.
valued at over 50 cts. per sq. yd.	45 per cent.	—	—	45 per cent.
Oil seeds, of like character with hemp and rape seed, excepting flax and linseed	½ ct. per lb.	= per lb.	0 0 0¼	—
Oilsilk cloth	60 per cent.	—	—	60 per cent.
Oils, absinthe or wormwood	50 per cent.	—	—	50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Oils, all animal, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ all essential, not otherwise provided for	50 per cent.	—	—	50 per cent.
„ all expressed, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ allspice	50 per cent.	—	—	50 per cent.
„ almonds	Free.	—	—	—
„ „ artificial	10 cts. per lb.	= per lb.	0 0 5	—
„ amber, crude	Free.	—	—	—
„ amber, rectified	Free.	—	—	—
„ ambergris	Free.	—	—	—
„ amylic alcohol (fusel oil)	$2 per gall.	= per gall.	0 8 4	—
„ aniline, crude	Free.	—	—	—
„ animal, all	20 per cent.	—	—	20 per cent.
„ anise, or anise-seed	Free.	—	—	—
„ anthos or rosemary	Free.	—	—	—
„ antique	50 per cent.	—	—	50 per cent.
„ apple	$2.50 per lb.	= per lb.	0 10 5	—
„ apricot	$2.50 per lb.	= per lb.	0 10 5	—
„ asphaltum	40 cts. per gall.	= per gall.	0 1 8	—
„ "banks" or "straits," so called, crude, as fish oil	20 per cent.	—	—	20 per cent.
„ "banks" or "straits," refined, as medicinal preparations	40 per cent.	—	—	40 per cent.
„ bay leaves, essential	$17.50 per lb.	= per lb.	3 12 11	—
„ bay or laurel, fixed or expressed	20 cts. per lb.	= per lb.	0 0 10	—
„ bay rum, essence or oil	50 cts. per oz.	= per oz.	0 2 1	—
„ bears', hair oil	50 per cent.	—	—	50 per cent.
„ bene [cenne]	30 cts. per gall.	= per gall.	0 1 3	—
„ bergamot	Free.	—	—	—
„ bituminous	40 cts. per gall.	= per gall.	0 1 8	—
„ cajeput	Free.	—	—	—
„ carraway	Free.	—	—	—
„ cassæ	50 per cent.	—	—	50 per cent.
„ cassia	Free.	—	—	—
„ castor, expressed	$1 per gall.	= per gall.	0 4 2	—
„ cedrat	Free.	—	—	—
„ cenne	30 cts. per gall.	= per gall.	0 1 3	—
„ chamomile	Free.	—	—	—
„ Chinese pea-nut	20 per cent.	—	—	20 per cent.
„ cinnamon	Free.	—	—	—
„ citronella or lemon grass	Free.	—	—	—
„ civet	Free.	—	—	—
„ claimed as patent medicines	50 per cent.	—	—	50 per cent.
„ cloves	$2 per lb.	= per lb.	0 8 4	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Oils, coal, crude	15 cts. per gall.	= per gall.	0 0 7½	—
„ coal, refined or distilled	40 cts. per gall.	= per gall.	0 1 8	—
„ coal-tar, also known as nitro-benzole, oil or essence of mirbane, and artificial oil of almonds, made of benzole and nitric acid	10 cts. per lb.	= per lb.	0 0 5	—
„ cocoanut	Free.	—	—	—
„ codfish, for tanners' use	20 per cent.	—	—	20 per cent.
„ cod liver, fit for medical purposes	40 per cent.	—	—	40 per cent.
„ cod liver, brown or crude, or crude in barrels	20 per cent.	—	—	20 per cent.
„ cognac or œnanthic ether	$4 per oz.	= per oz.	0 16 8	—
„ colza or cabbage seed	20 per cent.	—	—	20 per cent.
„ cotton seed	30 cts. per gall.	= per gall.	0 1 3	—
„ croton	$1 per lb.	= per lb.	0 4 2	—
„ cubebs	$1 per lb.	= per lb.	0 4 2	—
„ cummin, essential	50 per cent.	—	—	50 per cent.
„ elder, essential	50 per cent.	—	—	50 per cent.
„ encalypte	50 per cent.	—	—	50 per cent.
„ enfleuraged, as hair oils, pomades, &c.	50 per cent.	—	—	50 per cent.
„ fennel	Free.	—	—	—
„ fish (foreign fisheries)	20 per cent.	—	—	20 per cent.
„ „ (American fisheries)	Free.	—	—	—
„ „ the product of the sea fisheries of Newfoundland	Free.	—	—	—
„ flaxseed, 7⅓ lbs. to gall	30 cts. per gall.	= per gall.	0 1 3	—
„ for cosmetics	50 per cent.	—	—	50 per cent.
„ fruit, ethers, essences or oils of apple, pear, peach, apricot, strawberry and raspberry, made of fusel oil or of fruit, or imitations thereof	$2·50 per lb.	= per lb.	0 10 5	—
„ fusel	$2 per gall.	= per gall.	0 8 4	—
„ gaultheria procumbens, or wintergreen oil, essential	50 per cent.	—	—	50 per cent.
„ ground bean, expressed	20 per cent.	—	—	20 per cent.
„ hair	50 per cent.	—	—	50 per cent.
„ Harlaem	50 per cent.	—	—	50 per cent.
„ hartshorn	50 per cent.	—	—	50 per cent.
„ hempseed	23 cts. per gall.	= per gall.	0 0 11½	—
„ illuminating, and naphtha, benzine, and benzole, refined or produced from the distillation of coal, asphaltum, shale, peat, petroleum, or rock oil, or other bituminous substances used for like purposes	40 cts. per gall.	= per gall.	0 1 8	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Oils, jasmine or jessamine - -	Free.	—	—	—
„ juglandium - - - -	Free.	—	—	—
„ juniper - - - -	Free.	—	—	—
„ kerosene - - - -	40 cts. per gall.	= per gall.	0 1 8	—
„ „ residuum of, if over 20° Beaumé - -	20 cts. per gall.	= per gall.	0 0 10	—
same, not over 20° Beaumé	20 per cent.	—	—	20 per cent.
„ laurel or bay, fixed or expressed -	20 cts. per lb.	= per lb.	0 0 10	—
„ lavender or spike - - -	Free.	—	—	—
„ lemon grass - - -	Free.	—	—	—
„ lemons, essential - - -	50 cts. per lb.	= per lb.	0 2 1	—
„ limets or limette, essential - -	50 per cent.	—	—	50 per cent.
„ linseed, 7½ lbs. to gall. -	30 cts. per gall.	= per gall.	0 1 3	—
„ macassar, essential - - -	50 per cent.	—	—	50 per cent.
„ mace - - - -	Free.	—	—	—
„ mineral - - - -	40 cts. per gall.	= per gall.	0 1 8	—
„ mint, essential - - -	50 per cent.	—	—	50 per cent.
„ mirbane - - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ mustard, not salad, expressed -	25 cts. per gall.	= per gall.	0 1 0½	—
„ mustard, salad - - -	$1 per gall.	= per gall.	0 4 2	—
„ neat's foot - - - -	20 per cent.	—	—	20 per cent.
„ neroli, or orangeflower, essential -	50 per cent.	—	—	50 per cent.
„ nitro-benzole - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ nutmegs, essential - - -	50 per cent.	—	—	50 per cent.
„ nuts, essential - - -	50 per cent.	—	—	50 per cent.
„ olive, in flasks or bottles, and salad*	$1 per gall.	= per gall.	0 4 2	—
„ olive, not salad, not in flasks or bottles - - - -	25 cts. per gall.	= per gall.	0 1 0½	—
„ olive, for perpetual lamp of a synagogue - - - -	$1 per gall.	= per gall.	0 4 2	—
„ orange, essential - - -	50 cts. per lb.	= per lb.	0 2 1	—
„ origanum, or red thyme - -	Free.	—	—	—
„ palm, or palm bean - - -	Free.	—	—	—
„ Palma Christi, or ricini, castor oil -	$1 per gall.	= per gall.	0 4 2	—
„ parsley, essential - - -	50 per cent.	—	—	50 per cent.
„ peach - - - -	$2.50 per lb.	= per lb.	0 10 5	—
„ peanuts, expressed - - -	20 per cent.	—	—	20 per cent.
„ pear - - - -	$2.50 per lb.	= per lb.	0 10 5	—
„ peat - - - -	40 cts. per gall.	= per gall.	0 1 8	—
„ pepper, essential - - -	50 per cent.	—	—	50 per cent.
„ peppermint, essential - -	50 per cent.	—	—	50 per cent.
„ perfumed by enfleurage process -	50 per cent.	—	—	50 per cent.

* "Olive oil fit for use as salad oil, duty $1 per gallon, under the special provision for salad oil, whether olive oil is salad depends upon its quality, and not upon the character of the package in which imported."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Oils, petroleum, crude or rock oil -	20 cts. per gall.	= per gall.	0 0 10	—
„ „ refined - - -	40 cts. per gall.	= per gall.	0 1 8	—
„ „ residuum of, if over 20° Beaumé - -	20 cts. per gall.	= per gall.	0 0 10	—
same, not over 20° Beaumé	20 per cent.	—	—	20 per cent.
„ pimento, essential - - -	50 per cent.	—	—	50 per cent.
„ pomades, as toilet articles - -	50 per cent.	—	—	50 per cent.
„ poppy - - - -	Free.	—	—	—
„ rapeseed - - - -	23 cts. per gall.	= per gall.	0 0 $11\frac{1}{2}$	—
„ raspberry - - - -	$2.50 per lb.	= per lb.	0 10 5	—
„ rhodium, essential - - -	50 per cent.	—	—	50 per cent.
„ ricini - - - -	$1 per gall.	= per gall.	0 4 2	—
„ rock, crude - - - -	20 cts. per gall.	= per gall.	0 0 10	—
„ „ refined - - -	40 cts. per gall.	= per gall.	0 1 8	—
„ „ residuum of, if over 20° Beaumé	20 cts. per gall.	= per gall.	0 0 10	—
same, not over 20° Beaumé -	20 per cent.	—	—	20 per cent.
„ rosemary - - - -	Free.	—	—	—
„ roses, attar of - - -	Free.	—	—	—
„ roses or attar - - -	Free.	—	—	—
„ rue, essential - - -	50 per cent.	—	—	50 per cent.
„ rum, or rum essence - -	50 cts. per oz.	= per oz.	0 2 1	—
„ saffron, essential - - -	50 per cent.	—	—	50 per cent.
„ sage, essential - - -	50 per cent.	—	—	50 per cent.
„ salad, all, whether in flasks or bottles, or not - - - -	$1 per gall.	= per gall.	0 4 2	—
„ sassafras, essential - - -	50 per cent.	—	—	50 per cent.
„ savine, essential - - -	50 per cent.	—	—	50 per cent.
„ seal - - - -	20 per cent.	—	—	20 per cent.
„ seal, from Canada - - -	20 per cent.	—	—	20 per cent.
„ sesame or sesamum seed - -	Free.	—	—	—
„ shale - - - -	40 cts. per gall.	= per gall.	0 1 8	—
„ sperm or spermaceti (foreign fisheries)	20 per cent.	—	—	20 per cent.
same, of American fisheries -	Free.	—	—	—
„ spike, essential - - -	50 per cent.	—	—	50 per cent.
„ spruce, essential - - -	50 per cent.	—	—	50 per cent.
„ spurge, essential - - -	50 per cent.	—	—	50 per cent.
„ " straits," so called, crude, as fish oil	20 per cent.	—	—	20 per cent.
„ strawberry - - - -	$2.50 per lb.	= per lb.	0 10 5	—
„ sweet marjoram, essential - -	50 per cent.	—	—	50 per cent.
„ tansy - - - -	50 per cent.	—	—	50 per cent.
„ thyme, red - - - -	Free.	—	—	—
„ thyme, white - - -	Free.	—	—	—
„ tuberose, essential - - -	50 per cent.	—	—	50 per cent.
„ turpentine - - - -	30 cts. per gall.	= per gall.	0 1 3	—
„ valerian - - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Oils, vanilla beans, essential	50 per cent.	—	—	50 per cent.
„ vegetable, if essential, not otherwise provided for	50 per cent.	—	—	50 per cent.
„ vegetable, if expressed, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ violets, essential	50 per cent.	—	—	50 per cent.
„ vitriol, or sulphuric acid	Free.	—	—	—
„ whale (foreign fisheries)	20 per cent.	—	—	20 per cent.
„ „ of American fisheries	Free.	—	—	—
„ wintergreen, essential	50 per cent.	—	—	50 per cent.
„ Ylang-ylang	50 per cent.	—	—	50 per cent.
Ointments, patent medicines	50 per cent.	—	—	50 per cent.
Olibanum, gum	Free.	—	—	—
Olives, green or prepared	Free.	—	—	—
„ stuffed, as prepared olives	Free.	—	—	—
Onions	10 per cent.	—	—	10 per cent.
Opium *	$1 per lb.	= per lb.	0 4 2	—
„ extract of, and all preparations of, not otherwise provided for, and retaining the form of opium, and used for like purposes	$6 per lb.	= per lb.	1 5 0	—
same, liquid, if medicinal	40 per cent.	—	—	40 per cent.
„ medicinal preparations of, proprietary, as patent medicines	50 per cent.	—	—	50 per cent.
„ prepared for smoking, and all other preparations of opium, not otherwise provided for	$6 per lb.	= per lb.	1 5 0	—
	40 per cent.	—	—	40 per cent.
Optical instruments	Free.	—	—	—
Orange buds and flowers	20 per cent.	—	—	20 per cent.
„ crystals	35 per cent.	—	—	35 per cent.
„ peel, candied	Free.	—	—	—
„ „ not preserved, candied, or otherwise prepared	3 cts. per lb.	= per lb.	0 0 1½	—
„ mineral, as red lead	20 per cent.	—	—	20 per cent.
Oranges.† *See* Damage on Fruit	Free.	—	—	—
Orchill, or archill, in the weed or liquid	Free.	—	—	—
„ extract of (persis)	35 per cent.	—	—	35 per cent.
Ordnance, brass or iron	Free.	—	—	—
Ore, antimony	Free.	—	—	—
„ cobalt				

* Opium is not entitled to the privilege of repacking in bond. This confines the duty of six dollars per pound to opium prepared for smoking, and to all other preparations of opium which retain the form of opium and are used for like purposes, and does not extend to any fluid, proprietary, or patent medicine.

† Boxes and bags containing oranges, lemons, and maccaroni, become merchandise when they enter into the value and are sold with the articles they contain; and their cost is properly included in the dutiable value of the contents.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Ore, corundum	$6 per ton	= per ton	1 5 0	—
„ gold and silver	Free.	—	—	—
„ iron	20 per cent.	—	—	20 per cent.
„ specimens of, for cabinets, and not for sale	Free.	—	—	—
„ „ not otherwise provided for	20 per cent.	—	—	20 per cent.
„ tin	20 per cent.	—	—	20 per cent.
Ore crushers, according to material.				
Organs	30 per cent.	—	—	30 per cent.
Orleans, or extracts of, as annatto	Free.	—	—	—
Ornamental feathers, not otherwise provided for	50 per cent.	—	—	50 per cent.
Ornamental flowers	50 per cent.	—	—	50 per cent.
Ornaments, alabaster and spar	30 per cent.	—	—	30 per cent.
„ bead	50 per cent.	—	—	50 per cent.
„ buttons for, wholly or partly of wool, worsted, or mohair	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ cut glass	40 per cent.	—	—	40 per cent.
„ dress, of silk or part silk	60 per cent.	—	—	60 per cent.
„ for bonnets, hats, &c., not silk or wool	30 per cent.	—	—	30 per cent.
„ or trimmings for same, silk	60 per cent.	—	—	60 per cent.
„ of metal, not for the person, and not otherwise provided for, according to material.				
Orpiment	Free.	—	—	—
Orris or iris root	Free.	—	—	—
Osier or willow, baskets and other manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ prepared for basket makers' use	30 per cent.	—	—	30 per cent.
Osmium, a metal	Free.	—	—	—
Osnaburgs. *See* Linens.				
Ottar of roses	Free.	—	—	—
Oxalic acid	Free.	—	—	—
Oxidizing paste	Free.	—	—	—
Oxyd of bismuth	20 per cent.	—	—	20 per cent.
„ of iron, crude	Free.	—	—	—
same, as medicinal preparation	40 per cent.	—	—	40 per cent.
same, as paint	25 per cent.	—	—	25 per cent.
„ of tin	30 per cent.	—	—	30 per cent.
„ of zinc, dry or ground in oil	1¾ cts. per lb.	= per 100 lbs.	0 7 3½	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Oxyd, of zinc, medicinal preparation -	40 per cent.	—	—	40 per cent.
Oxymuriate or chloride of lime - -	Free.	—	—	—
Oysters, as shellfish - - -	Free.	—	—	—
„ preserved in oil - -	35 per cent.	—	—	35 per cent.
P.				
Packing boxes, not otherwise provided for	30 per cent.	—	—	30 per cent.
Packthread, flax or linen - -	40 per cent.	—	—	40 per cent.
„ all other - - -	35 per cent.	—	—	35 per cent.
Padding, calf-hair and cotton, so called -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ canvas, 18 inches wide, for tailoring purposes, chair seats, &c.:— valued at not over 30 cts. per sq. yard - -	35 per cent.	—	—	35 per cent.
valued at over 30 cts. per sq. yard - -	40 per cent.	—	—	40 per cent.
„ linen, as canvas paddings.				
„ wool - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Paddy - - - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
Pad-screws - - - -	35 per cent.	—	—	35 per cent.
Pader, as steel - - - -	45 per cent.	—	—	45 per cent.
Painters' brushes - - -	40 per cent.	—	—	40 per cent.
„ colours, not otherwise provided for - - - -	25 per cent.	—	—	25 per cent.
Paintings, * and statuary, not otherwise provided for - -	10 per cent.	—	—	10 per cent.
„ Geneva, enamelled - -	20 per cent.	—	—	20 per cent.
„ in water colours, executed by the brush, without any use of the burin - -	10 per cent.	—	—	10 per cent.
„ obscene or indecent, importation prohibited.				
„ on glass or glasses - -	40 per cent.	—	—	40 per cent.

* "A Painting, within the meaning of the law, must be an object of taste, recognised as a painting in the usual acceptation of the term; and not paintings on glass, porcelain, or similar materials, or on plates, goblets, or any other utensil, or capable of being converted into breastpins, ear-drops, or other ornaments to be worn on the person."

Portraits "done in silk" are not to be considered as paintings.

Paintings, statuary, and photographic pictures, imported for exhibition only, are free of duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Paintings, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale - -	Free.	—	—	—
„ statuary, fountains, and other works of art, the production of American artists, if fact of such production be verified* - - -	Free.	—	—	—
„ if for presentation to national or other institutions -	Free.	—	—	—
„ for churches or religious institutions - - -	10 per cent.	—	—	10 per cent.
Paints, moist water colours, used in the manufacture of paper hangings, and coloured papers and cards, not otherwise provided for -	25 per cent.	—	—	25 per cent.
„ water colours, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
Paints and Colors:—				
All, not otherwise provided for -	25 per cent.	—	—	25 per cent.
Aniline - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Barytes (combinations of, with acid or water) - - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Berlin blue - - - - -	25 per cent.	—	—	25 per cent.
Blanc fixe - - - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Bone or ivory drop black - -	25 per cent.	—	—	25 per cent.
Bremen blue - - - - -	30 per cent.	—	—	30 per cent.
Carmine, dry - - - -	35 per cent.	—	—	35 per cent.
Carmine lake, dry or liquid - -	35 per cent.	—	—	35 per cent.
Chalk - - - - -	25 per cent.	—	—	25 per cent.
Chinese blue - - - - -	25 per cent.	—	—	25 per cent.
Chrome yellow (chromate of lead) -	25 per cent.	—	—	25 per cent.

* Frames of such paintings are exempt from duty only when they are of inconsiderable value, and obviously designed only for the preservation of the paintings from injury during its transportation.

Portraits "done in silk" are not to be considered "paintings," within the meaning of the law.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Paints, &c.—*continued.*			£ s. d.	
Cochineal	Free.	—	—	—
Cochineal lake	25 per cent.	—	—	25 per cent.
Desenna	25 per cent.	—	—	25 per cent.
Dutch pink	25 per cent.	—	—	25 per cent.
Drop black, as paint	25 per cent.	—	—	25 per cent.
Enamelled white	3 cts. per lb.	= per lb.	0 0 1½	—
Fig blue	25 per cent.	—	—	25 per cent.
Frankfort black	25 per cent.	—	—	25 per cent.
French green, dry or moist	30 per cent.	—	—	30 per cent.
Indian red	25 per cent.	—	—	25 per cent.
Ivory drop black	25 per cent.	—	—	25 per cent.
King's yellow	25 per cent.	—	—	25 per cent.
Kremnitz white, as white lead	3 cts. per lb.	= per lb.	0 0 1½	—
Lake, not carmine	25 per cent.	—	—	25 per cent.
Lampblack	20 per cent.	—	—	20 per cent.
Lead, red or white, and litharge, dry or ground in oil	3 cts. per lb.	= per lb.	0 0 1½	—
Lime white	3 cts. per lb.	= per lb.	0 0 1½	—
Mineral blue, dry or moist	30 per cent.	—	—	30 per cent.
Mineral green, dry or moist	30 per cent.	—	—	30 per cent.
Ochres and ochrey earths, not otherwise provided for, dry	½ ct. per lb.	= per lb.	0 0 0¼	—
Same, ground in oil	1⅓ cts. per lb.	= per lb.	0 0 0¾	—
Olympian green	25 per cent.	—	—	25 per cent.
Oxide of iron	25 per cent.	—	—	25 per cent.
Oxide of zinc, dry or in oil	1¾ cts. per lb.	= per 10 lb.	0 0 8¾	—
Paris green, dry or moist	30 per cent.	—	—	30 per cent.
Paris white, dry	1 ct. per lb.	= per lb.	0 0 0½	—
„ „ ground in oil	1½ cts. per lb.	= per lb.	0 0 0¾	—
Patent yellow	25 per cent.	—	—	25 per cent.
Prussian blue, dry or moist	30 per cent.	—	—	30 per cent.
Rose pink	25 per cent.	—	—	25 per cent.
Satin white	3 cts. per lb.	= per lb.	0 0 1½	—
Spanish brown, dry or ground in oil	25 per cent.	—	—	25 per cent.
Terra umbra, dry	¼ ct. per lb.	= per lb.	0 0 0¼	—
Same, in oil	1½ cts. per lb.	= per lb.	0 0 0¾	—
Tuscan red, as dry colcothar	Free.	—	—	—
Ultramarine	6 cts. per lb.	= per lb.	0 0 3	—
Umber	½ ct. per lb.	= per lb.	0 0 0¼	—
Vandyke brown	20 per cent.	—	—	20 per cent.
Venetian red, dry or ground in oil	25 per cent.	—	—	25 per cent.
Vermillion, dry or ground in oil	25 per cent.	—	—	25 per cent.
Wash blue	25 per cent.	—	—	25 per cent.
Whiting, dry	1 ct. per lb.	= per lb.	0 0 0½	—
„ ground in oil	2 cts. per lb.	= per lb.	0 0 1	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Paints, &c.—*continued.*				
Woad or pastel - - -	Free.	—	—	—
Wood lake - - - -	25 per cent.	—	—	25 per cent.
Palings, wood, rough - - -	20 per cent.	—	—	20 per cent.
same, manufactured - -	35 per cent.	—	—	35 per cent.
Palladium, metal, unmanufactured -	Free.	—	—	—
„ „ manufactures of - -	35 per cent.	—	—	35 per cent.
Pallettes, as cutlery - - -	35 per cent.	—	—	35 per cent.
Palm leaf fans - - - -	Free.	—	—	—
„ „ made of the leaf of the palm tree, with artificial handles - - -	35 per cent.	—	—	35 per cent.
„ „ hats, bonnets, and hoods -	40 per cent.	—	—	40 per cent.
„ „ trimmings, &c. of, for hats, bonnets, &c. - -	30 per cent.	—	—	30 per cent.
„ „ unmanufactured - -	Free.	—	—	—
„ „ manufactured - - -	35 per cent.	—	—	35 per cent.
„ nuts and palm nut kernels - -	Free.	—	—	—
„ oil - - - - - -	Free.	—	—	—
Pamphlets, bound or unbound - -	25 per cent.	—	—	25 per cent.
Panel saws, not over 24 inches long -	75 cts. per doz. and 30 per cent.	=per doz.	0 3 1½	+ 30 per cent.
„ over 24 inches long - -	$1 per doz. and 30 per cent.	=per doz.	0 4 2	+ 30 per cent.
Panoramic views, as paintings - -	10 per cent.	—	—	10 per cent.
Pans, frying, wrought iron, tinned -	35 per cent.	—	—	35 per cent.
„ frying, wrought iron, galvanized with metal - - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ glazed or tinned - - -	3½ cts. per lb.	= per 100 lbs. =per ton	0 14 7 / 16 6 8	—
Pantaloon stuffs, cotton, as follows:—				
Not exceeding 100 threads to the square inch, counting the warp and filling, and exceeding 5 oz. to the square yard:				
Unbleached - - -	6 cts. per sq. yd.	=per sq.yd.	0 0 3	—
Bleached - - -	6½ cts. per sq. yd.	=per sq.yd.	0 0 3¼	—
Coloured, stained, painted, or printed - - -	6½ cts. per sq. yd. and 10 per cent.	=per sq.yd.	0 0 3¼	+ 10 per cent.
Same, finer or lighter, not exceeding 200 threads to the square inch:				
Unbleached - - -	6 cts. per sq. yd.	=per sq.yd.	0 0 3	—
Bleached - - -	6½ cts. per sq. yd.	=per sq.yd.	0 0 3¼	—
Coloured, stained, painted, or printed - - -	6½ cts. per sq. yd. and 15 per cent.	=per sq.yd.	0 0 3¼	+ 15 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Pantaloon stuffs—*continued.*				
Same, exceeding 200 threads to the square inch :				
Unbleached - - -	7 cts. per sq. yd.	=per sq.yd.	0 0 $3\frac{1}{2}$	—
Bleached - - -	$7\frac{1}{2}$ cts. per sq. yd.	=per sq.yd.	0 0 $3\frac{3}{4}$	—
Coloured, stained, painted, or printed - - -	$7\frac{1}{2}$ cts. per sq. yd. and 15 per cent.	=per sq.yd.	0 0 $3\frac{3}{4}$	+ 15 per cent.
None of more than 200 threads to be admitted to a less rate of duty than those of 200.				
Paper, all grasses and pulp of grasses for the manufacture of - -	Free.	—	—	—
„ all kinds, not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
„ all manufactures of, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
all, sized or glued, suitable only for printing paper* - -	25 per cent.	—	—	25 per cent.
„ boxes, all kinds - - -	35 per cent.	—	—	35 per cent.
"cigarette paper" so called, in sheets and reams - -	35 per cent.	—	—	35 per cent.
cigars, same duty as cigars -	$2.50 per lb. and 25 per cent.	= per lb.	0 10 5	+25 per cent.
Also internal revenue tax of -	$6 per 1,000	= per 1,000	1 5 0	—
„ clippings and shavings, fit only for making paper - - -	Free.	—	—	—
„ envelopes - - -	35 per cent.	—	—	35 per cent.
„ Esparto or Spanish grass or fibre for making paper - -	Free.	—	—	—
„ fish and paper balloons, as children's toys - - - -	50 per cent.	—	—	50 per cent.
„ gold and silver (real) in sheets, strips, or other forms - -	40 per cent.	—	—	40 per cent.
„ gold and silver, imitation of -	35 per cent.	—	—	35 per cent.
„ "half stuff," pulp - -	20 per cent.	—	—	20 per cent.
„ hangings and paper for screens and fireboards - - -	35 per cent.	—	—	35 per cent.
„ in sheets covered with dutch metal - - - -	35 per cent.	—	—	35 per cent.
„ known as "plate paper" - -	35 per cent.	—	—	35 per cent.
„ masks used by adults - -	35 per cent.	—	—	35 per cent.

* Under this provision there will be entitled to entry such paper as is generally used for printing distinguished from that used for writing and other such purposes; fine glazed paper, such as is used for books, magazines, and illustrated weekly papers will be admitted at this rate of duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Paper, music, with printed lines, bound or in sheets	35 per cent.	—	—	35 per cent.
„ ornaments for trunks	25 per cent.	—	—	25 per cent.
„ pasteboard	35 per cent.	—	—	35 per cent.
„ photographic	35 per cent.	—	—	35 per cent.
„ printing, unsized, used for books and newspapers exclusively	20 per cent.	—	—	20 per cent.
„ rags, waste, wood, &c., for manufacture of paper	Free.	—	—	—
„ sheathing	10 per cent.	—	—	10 per cent.
„ slipper patterns, as printed matter	25 per cent.	—	—	25 per cent.
„ stock, crude, of every description	Free.	—	—	—
„ stock, pulp	20 per cent.	—	—	20 per cent.
Papers, cigarette, as smokers' articles	75 per cent.	—	—	75 per cent.
„ illustrated or not	25 per cent.	—	—	25 per cent.
Papier mâché, manufactures of	35 per cent.	—	—	35 per cent.
Paraffine	10 cts. per lb.	= per lb.	0 0 5	—
Parallel rules, ivory, not mounted	35 per cent.	—	—	35 per cent.
Parasol ribs and stretchers, frames, tips, runners, handles, or other parts, wholly or chiefly of metal	45 per cent.	—	—	45 per cent.
„ sticks, in the rough, or no further manufactured than cut into suitable lengths	Free.	—	—	—
sticks and frames, finished or not, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ wire, square, of iron, to make stretchers for, cut into pieces not exceeding the length therefor	35 per cent.	—	—	35 per cent.
same, of steel	45 per cent.	—	—	45 per cent.
Parasols, not silk or alpaca	45 per cent.	—	—	45 per cent.
„ silk or alpaca	60 per cent.	—	—	60 per cent.
Parchment	30 per cent.	—	—	30 per cent.
„ old manuscripts of, fit only for re-manufacture	10 per cent.	—	—	10 per cent.
Parian ware, plain white	45 per cent.	—	—	45 per cent.
„ gilded, ornamented, or decorated	50 per cent.	—	—	50 per cent.
Paris skirtings, worsted and cotton, as balmoral skirtings	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ white, dry	1 ct. per lb.	= per lb.	0 0 0½	—
„ „ ground in oil	1½ cts. per lb.	= per lb.	0 0 0¾	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Paris, green, dry or moist - -	30 per cent.	—	—	30 per cent.
Parisiennes, as silk veil goods - -	50 per cent.	—	—	50 per cent.
Parsley seeds - - - -	20 per cent.	—	—	20 per cent.
Paste, almond, cosmetic - - -	50 per cent.	—	—	50 per cent.
„ Brazil - - - -	Free.	—	—	—
„ or composition of glass, set -	30 per cent.	—	—	30 per cent.
„ for jewellers' use, not set - -	40 per cent.	—	—	40 per cent.
„ oxidizing - - - -	Free.	—	—	—
„ of sulphide of copper, as oxidizing paste - - - -	Free.	—	—	—
„ perfumed, as cosmetics - -	50 per cent.	—	—	50 per cent.
„ tooth, as cosmetics - -	50 per cent.	—	—	50 per cent.
Pasteboard - - - -	35 per cent.	—	—	35 per cent.
Pastel or woad - - - -	Free.	—	—	—
Patent medicines - - -	50 per cent.	—	—	50 per cent.
„ size - - - -	20 per cent.	—	—	20 per cent.
„ leather - - - -	35 per cent.	—	—	35 per cent.
„ thread or gill twine - -	40 per cent.	—	—	40 per cent.
„ floor-cloth, oil, as other floor oil-cloth, viz. :—				
valued at 50 cts. or less per square yard - - - -	35 per cent.	—	—	35 per cent.
valued over 50 cts. per square yard -	45 per cent.	—	—	45 per cent.
Patterns, cards of, if invoiced, subject to duty according to material				
„ for slippers, paper, engraved -	25 per cent.	—	—	25 per cent.
If wool, in whole or part - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Pavement blocks [Nicholson's] - -	20 per cent.	—	—	20 per cent.
Paving tiles - - - -	20 per cent.	—	—	20 per cent.
„ stones - - - -	10 per cent.	—	—	10 per cent.
Peanut, oil of, expressed - -	20 per cent.	—	—	20 per cent.
Peanuts or ground beans - -	1 ct. per lb.	= per lb.	0 0 0$\frac{1}{2}$	—
„ shelled - - - -	1$\frac{1}{3}$ cts. per lb.	= per lb.	0 0 0$\frac{3}{4}$	—
Pearl ash, as bicarbonate of soda -	1$\frac{1}{2}$ cts. per lb.	= per lb.	0 0 0$\frac{3}{4}$	—
„ barley - - - -	1 ct. per lb.	= per lb.	0 0 0$\frac{1}{2}$	—
„ beads - - - -	50 per cent.	—	—	50 per cent.
„ mother of (shell), unmanufactured	Free.	—	—	—
„ buttons, with metal eyes or shanks	30 per cent.	—	—	30 per cent.
„ studs - - - -	35 per cent.	—	—	35 per cent.
„ knife handles, unfinished - -	35 per cent.	—	—	35 per cent.
„ shell boxes - - -	35 per cent.	—	—	35 per cent.
„ mother of, manufactures of, not otherwise provided for - -	35 per cent.	—	—	35 per cent.
Pearls, not set - - - -	10 per cent.	—	—	10 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
P **Pearls,** set	25 per cent.	—	—	25 per cent.
„ on strings, used as beads	50 per cent.	—	—	50 per cent.
If imported strung on thread, for convenience of transportation and to be set in America, they are dutiable as pearls not set	10 per cent.	—	—	10 per cent.
„ composition, set	30 per cent.	—	—	30 per cent.
„ imitation or mock, not set	40 per cent.	—	—	40 per cent.
„ and pearl shells of American fisheries	Free.	—	—	—
P **Peas,** as seed	20 per cent.	—	—	20 per cent.
„ as vegetables	10 per cent.	—	—	10 per cent.
„ split	20 per cent.	—	—	20 per cent.
P **Peat,** or manufactured fuel	20 per cent.	—	—	20 per cent.
P **Pebbles,** glass, for spectacles, rough	Free.	—	—	—
Same, not rough	40 per cent.	—	—	40 per cent.
„ Brazil, for spectacles, rough	Free.	—	—	—
P **Pedestals** of marble or other material, if not surmounted or accompanied by figures, &c. according to material. same, if accompanied by figures, as statuary.				
P **Peel,** orange or lemon, candied, as comfits	35 per cent.	—	—	35 per cent.
„ „ not preserved, candied, or otherwise prepared	Free.	—	—	—
„ pomegranate	20 per cent.	—	—	20 per cent.
P **Pelerines,** silk	60 per cent.	—	—	60 per cent.
P **Pellitory** root	Free.	—	—	—
P **Pelts** (hides uncured)	Free.	—	—	—
P **Pencil** cases, gold, silver, or German silver	40 per cent.	—	—	40 per cent.
„ „ plated or gilt	35 per cent.	—	—	35 per cent.
P **Pencils,** wood, filled with lead or other materials	50 cts. per gross and 30 per cent.	= per gross	0 2 1	+ 30 per cent.
„ slate, not covered with wood	40 per cent.	—	—	40 per cent.
„ hair	35 per cent.	—	—	35 per cent.
„ lead, not covered with wood	$1 per gross	= per gross	0 4 2	—
P **Penknives**	50 per cent.	—	—	50 per cent.
P **Pens,** gold or silver	40 per cent.	—	—	40 per cent.
„ metallic, other than gold or silver	10 cts. per gross and 25 per cent.	= per gross	0 0 5	+ 25 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Pen tips and pen holders, or parts thereof	35 per cent.	—	—	35 per cent.
„ quills for	Free.	—	—	—
„ wipers, of woollen and cotton rags, combined with wood, brass, and leather	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Pepper, bird	5 cts. per lb.	= per lb.	0 0 2½	—
black, white, and red, or cayenne	10 cts. per lb.	= per lb.	0 0 5	—
The same when ground	5 cts. per lb.	= per lb.	0 0 2½	—
„ dust	20 per cent.	—	—	20 per cent.
Peppers, Haytien, in salt and water	40 per cent.	—	—	40 per cent.
Percussion caps. *See* note to Manufactures of Copper	50 per cent.	—	—	50 per cent.
Perfumery, not otherwise provided for	25 per cent.	—	—	25 per cent.
Periodicals, bound or unbound	20 per cent.	—	—	20 per cent.
Permanganate of potash	$2 per proof gall.	= per pf. gall.	0 8 4	—
Perry	Free.	—	—	—
Persis, or extract of archil	Free.	—	—	—
Personal effects, not merchandise and wearing apparel in actual use, of persons arriving in the United States *	Free.	—	—	—
Peruvian bark	20 cts. per gall.	= per gall.	0 0 10	—
Pestles (according to material).	Free.	—	—	—
Petroleum or rock oil	40 cts. per gall.	= per gall.	0 1 8	—
„ barrels, empty, re-imported	20 per cent.	—	—	20 per cent.
„ refined	20 cts. per gall.	= per gall.	0 0 10	—
„ residuum of, or tar, under 20° Beaumé	Free.	—	—	—
„ When over 20° Beaumé (ibid.)	35 per cent.	—	—	35 per cent.
Pewter and Britannia metal, old, and fit only to be remanufactured	Free.	—	—	—
„ manufactures of, of which pewter is chief value				
Phanglein				

* This embraces a carriage, wagon, sleigh, and harness used abroad by one immigrating into the United States, and to be used by himself there.

Personal effects must accompany the person "arriving."

Must have been in actual use abroad or in the United States by the persons owning them, prior to the shipment from the foreign port.

Iron safes, such as are used in an office or store, are not entitled to free entry as immigrants' effects.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Philosophical and scientific apparatus, instruments, and preparations, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale -	Free.	—	—	—
„ apparatus and instruments	40 per cent.	—	—	40 per cent.
„ apparatus and instruments for United States -	Free.	—	—	—
same, specially imported in good faith for the use of any society incorporated or established for religious purposes -	15 per cent.	—	—	15 per cent.
„ societies or institutions, all philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings and etchings, specially imported in good faith, for the use of, and not intended for sale - - -	Free.	—	—	—
same, books, maps, and charts (not more than two copies in any one invoice), regalia gems, statues and specimens of sculpture, specially imported in good faith for the use of - -	Free.	—	—	—
Phosphates, crude or native, for fertilizing purposes -	Free.	—	—	—
„ of lime, crude, as manure -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Phosphates of lime, as medicinal preparation	40 per cent.	—	—	40 per cent.
„ of soda, crude	20 per cent.	—	—	20 per cent.
„ „ as medicinal preparation	40 per cent.	—	—	40 per cent.
Phosphorus	20 per cent.	—	—	20 per cent.
Phosphuret of lime	20 per cent.	—	—	20 per cent.
Photographic albums, of leather and paper, as leather manufactures not otherwise provided for	35 per cent.	—	—	35 per cent.
same, unbound, as paper manufactures not otherwise provided for	35 per cent.	—	—	35 per cent.
„ baths and dippers	40 per cent.	—	—	40 per cent.
„ frames, paper and plain glass	35 per cent.	—	—	35 per cent.
„ views, for exhibition, under regulations	Free.	—	—	—
„ views	20 per cent.	—	—	20 per cent.
„ paper	35 per cent.	—	—	35 per cent.
Photographs	20 per cent.	—	—	20 per cent.
Photographic apparatus (as glass)	40 per cent.	—	—	40 per cent.
Piano covers, of wool, embroidered on the borders with silk, as woollen manufactures	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Pianoforte ferrules, iron	35 per cent.	—	—	35 per cent.
Pianofortes	30 per cent.	—	—	30 per cent.
Pickets, wood, rough	20 per cent.	—	—	20 per cent.
Pickled fish, all, not otherwise provided for, in barrels	$1½ per bbl.	= per bbl.	0 6 3	—
Pickles, all, not otherwise provided for	35 per cent.	—	—	35 per cent.
Picric, or nitro-picric acid	Free.	—	—	—
Picrotoxine	40 per cent.	—	—	40 per cent.
Pictorials, illustrated books and papers	25 per cent.	—	—	25 per cent.
Picture books, moveable	25 per cent.	—	—	25 per cent.
„ cards, printed in colours, as engravings	25 per cent.	—	—	25 per cent.
„ glass, as window glass.	35 per cent.	—	—	35 per cent.
Picture frames				
Pictures, obscene or indecent, importation prohibited.				
Pigments. *See* Paints.				
Piling, consisting of rough logs with bark on	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Pills, as proprietary medicines	50 per cent.	—	—	50 per cent.
Pimento	5 cts. per lb.	= per lb.	0 0 2½	—
„ ground	10 cts. per lb.	= per lb.	0 0 5	—
Pin or needle cases, according to material.				
„ cushions, cotton, as manufactures of cotton not otherwise provided for	35 per cent.	—	—	35 per cent.
„ cushions, silk chief value	60 per cent.	—	—	60 per cent.
Pincers, iron	35 per cent.	—	—	35 per cent.
„ part steel	45 per cent.	—	—	45 per cent.
„ shoe, case-hardened iron	35 per cent.	—	—	35 per cent.
Pine apples. *See* Damage on Fruit	20 per cent.	—	—	20 per cent.
„ apples, preserved in their own juice and sugar	35 per cent.	—	—	35 per cent.
„ apple slips, for propagation	Free.	—	—	Free.
Pink, rose	25 per cent.	—	—	25 per cent.
„ dutch	25 per cent.	—	—	25 per cent.
„ root, crude	20 per cent.	—	—	20 per cent.
Pink saucers (cosmetics)	50 per cent.	—	—	50 per cent.
Pins, hair, of iron wire	50 per cent.	—	—	50 per cent.
„ hair, gutta percha	40 per cent.	—	—	40 per cent.
„ „ india-rubber	35 per cent.	—	—	35 per cent.
„ gold or silver, not jewellery	40 per cent.	—	—	40 per cent.
„ gold or silver, jewellery	25 per cent.	—	—	25 per cent.
„ solid head or other	35 per cent.	—	—	35 per cent.
„ other (according to material).				
„ rest, iron, for inside of pianos	35 per cent.	—	—	35 per cent.
Pipe cases, pipe stems, tips, mouth pieces, and metallic mountings for pipes, and all parts of pipes or pipe fixtures, and all smokers' articles	75 per cent.	—	—	75 per cent.
„ bowls, or pipe heads of every description, including common clay	$1.50 per gross and 75 per cent.	= per gross	0 6 3	+75 per cent.
Pipeclay	$5 per ton	= per ton	1 0 10	—
Piperine	40 per cent.	—	—	40 per cent.
Pipes, clay, common or white*	35 per cent.	—	—	35 per cent.
„ coloured clay	$1.50 per gross and 75 per cent.	= per gross	0 6 3	+75 per cent.
„ meerschaum, wood, porcelain, lava, and all other tobacco smoking pipes and pipe bowls, not otherwise provided for	$1.50 per gross and 75 per cent.	= per gross	0 6 3	+75 per cent.

* White clay pipes with india-rubber bands at the tip, and coloured clay pipes, are not the articles known and commercially recognized as "common" or "white clay" pipes; but are provided for in the clause "on meerschaum, wood, porcelain, lava, and *all other* tobacco-smoking pipes, &c."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Pipes, steam, gas, and water, cast iron -	1½ ct. per lb.	= per 100 lbs.	0 6 3	—
„ white clay, with india-rubber bands at tips, or otherwise advanced beyond the common white clay - - -	$1.50 per gross and 75 per cent.	= per gross	0 6 3	+75 per cent.
Pistols - - - - -	35 per cent.	—	—	35 per cent.
Pitch - - - - -	20 per cent.	—	—	20 per cent.
„ burgundy - - - -	Free.	—	—	—
Plaids, as cotton denims, jeans, &c.				
Plaits, &c., for making and ornamenting bonnets, hats, &c. - - -	30 per cent.	—	—	30 per cent.
Planes, part steel - - -	45 per cent.	—	—	45 per cent.
Plane irons (steel) - - -	45 per cent.	—	—	45 per cent.
Plans - - - - -	25 per cent.	—	—	25 per cent.
Planks of hemlock, sycamore, whitewood, and basswood - - - -	$1 per 1,000 ft. board measure	= per 1,000 ft.	0 4 2	—
PROVIDED that when lumber of any sort is planed or finished, in addition to the rates herein provided, there shall be levied and paid for each side so planed or finished 50 cts. per 1,000 ft., and if planed on one side and tongued and grooved, $1 per 1,000 ft., and if planed on two sides and tongued and grooved, $1.50 per 1,000 feet.				
Planking, ship - - - -	Free.	—	—	—
Plantain grass or bark, as Manilla hemp	$25 per ton	= per ton	5 4 2	—
Plantains. *See* Damage on Fruit -	10 per cent.	—	—	10 per cent.
Plants for Department of Agriculture -	Free.	—	—	—
„ crude, for dyes or dyeing -	Free.	—	—	—
„ for Botanic Garden - -	Free.	—	—	—
„ bulbous roots - - -	30 per cent.	—	—	30 per cent.
„ and fruits, tropical and semi-tropical, for the purpose of propagation or cultivation - -	Free.	—	—	—
„ medicinal, crude, not otherwise provided for - -	Free.	—	—	—
„ „ not crude - -	20 per cent.	—	—	20 per cent.
„ trees, shrubs, not otherwise provided for, for fruit, shade, lawn, ornamental purposes - -	20 per cent.	—	—	20 per cent.
„ tea - - - -	Free.	—	—	—
„ vanilla - - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Plaques, compositions of porcelain and tinsel or foil laid on metallic base or plate, used in the manufacture of ornaments for the person - - -	20 per cent.	—	—	20 per cent.
Plaster of Paris, calcined - -	20 per cent.	—	—	20 per cent.
,, ,, casts of, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale - -	Free.	—	—	—
,, ,, when ground - -	20 per cent.	—	—	20 per cent.
,, ,, unground - -	Free.	—	—	—
,, ,, manufactures of -	40 per cent.	—	—	40 per cent.
,, ,, busts imported for the use of any philosophical or literary society or for the encouragement of the fine arts, and not for sale - - -	Free.	—	—	—
Plasters, as medicinal preparations -	40 per cent.	—	—	40 per cent.
,, if patent or proprietary -	50 per cent.	—	—	50 per cent.
,, part wool - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Plated coach and harness furniture -	35 per cent.	—	—	35 per cent.
,, epaulets, &c. - - -	35 per cent.	—	—	35 per cent.
,, metal, in sheets or other forms -	35 per cent.	—	—	35 per cent.
,, moulding - - - -	35 per cent.	—	—	35 per cent.
,, saddlery - - - -	35 per cent.	—	—	35 per cent.
,, slides - - - -	35 per cent.	—	—	35 per cent.
,, ware, all kinds - - -	35 per cent.	—	—	35 per cent.
Plate, paper - - - -	35 per cent.	—	—	35 per cent.
,, silver - - - -	40 per cent.	—	—	40 per cent.
Plates, engraved, of copper, steel, wood, or any other material - -	25 per cent.	—	—	25 per cent.
,, fashion, engraved on steel or on wood, coloured, plain - -	Free.	—	—	—
,, fashion (lithographic), as printed matter - - -	25 per cent.	—	—	25 per cent.
,, nail, iron - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Plates, prepared for engravers, copper or steel - - -	45 per cent.	—	—	45 per cent.
„ suitable for sheathing ships, copper	45 per cent.	—	—	45 per cent.
same, not wholly of copper, nor wholly or in part of iron, ungalvanized - - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ fish, wrought iron. *See* Note to railroad chairs* page 257 -	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 / 9 6 8	—
„ glass, or disks, unwrought, for optical instruments - -	10 per cent.	—	—	10 per cent.
„ landscape - -	40 per cent.	—	—	40 per cent.
„ stereotype - - -	25 per cent.	—	—	25 per cent.
same, broken, dutiable as type metal - - - -	25 per cent.	—	—	25 per cent.
Platina, unmanufactured † - -	Free.	—	—	—
„ manufactures of -	40 per cent.	—	—	40 per cent.
„ vases or retorts, or parts thereof, for chemical uses - -	Free.	—	—	—
Playing cards, costing not over 25 cts. per pack - -	25 cts. per pack	= per pack	0 1 0½	—
„ costing over 25 cts. per pack - -	35 cts. per pack	= per pack	0 1 5½	—
Pliers, iron - - - -	35 per cent.	—	—	35 per cent.
„ part steel - - -	45 per cent.	—	—	45 per cent.
Plough planes - - -	45 per cent.	—	—	45 per cent.
„ steel, so called, as steel in sheets, as follows:—				
valued at 7 cts. or less per lb.	2¼ cts. per lb.	= per lb.	0 0 1⅛	—
valued at above 7 cts. and not above 11 cts. per lb. -	3 cts. per lb.	= per lb.	0 0 1½	—
valued at above 11 cts. per lb. - - -	3½ cts. per lb. and 10 per cent.	= per lb.	0 0 1¾	+ 10 per cent.
Ploughs, part steel - - -	45 per cent.	—	—	45 per cent.
„ iron - - - -	35 per cent.	—	—	35 per cent.
„ brought by immigrants for their own use, having been used previously - - -	Free.	—	—	—
Plugs and nipples, iron and steel, for guns	45 per cent.	—	—	45 per cent.
Plumbago or black lead - - -	Free.	—	—	—

* Thus a consignment of 50 tons would be liable to a duty of 466*l.* 13*s.* 4*d.* in English currency.

†"Platina unmanufactured extends to and comprehends platina imported either in ingots or in the form of sheets, or in the form of wire or in any shape or form not constituting an article suitable for use without further manufacture."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Plumbago or black lead mixed with large quantities of earth, slate, and shaly substances - -	20 per cent.	—	—	20 per cent.
„ powdered - - -	Free.	—	—	—
Plumes, ornamental feathers, manufactured	50 per cent.	—	—	50 per cent.
Plums, dried - - - -	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ green - - - -	10 per cent.	—	—	10 per cent.
Plush, hatters, cotton and silk, cotton chief value - - -	25 per cent.	—	—	25 per cent.
same, silk chief value - -	60 per cent.	—	—	60 per cent.
„ mohair or worsted, as follows :—				
valued at not over 40 cts. per. lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 cts. and not over 60 cts. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 cts. and not over 80 cts. - - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ woollen - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ woollen blankets, or "railway rugs" - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Pneumatic apparatus, according to material.				
Pocket books, of whatever material composed, not otherwise provided for -	35 per cent.	—	—	35 per cent.
Pocket knives - - - -	50 per cent.	—	—	50 per cent.
„ „ blades for - -	45 per cent.	—	—	45 per cent.
Polishing powders - - -	25 per cent.	—	—	25 per cent.
„ stones - - - -	Free.	—	—	—
Polypodium, crude drug - -	Free.	—	—	—
Pomatum and pomades - - -	50 per cent.	—	—	50 per cent.
Pomegranate peel - - -	20 per cent.	—	—	20 per cent.
Pomegranates - - - -	10 per cent.	—	—	10 per cent.
Pongees, silk - - - -	60 per cent.	—	—	60 per cent.
Poplins, part wool, worsted or mohair, as dress goods, viz. :				
valued at not over 20 cts. per square yard - -	6 cts. per sq. yard and 35 per cent.	= per sq. yard	0 0 3	+ 35 per cent.
valued higher - -	8 cts. per sq. yard and 40 per cent.	= per sq. yard	0 0 4	+ 40 per cent.
PROVIDED that on all goods weighing 4 ozs. or over per square yard the duty shall be - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Poplins, silk and cotton, silk chief value	60 per cent.	—	—	60 per cent.
Poppy heads, crude drug - -	Free.	—	—	—
„ seeds - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
„ „ oil of - - -	Free.	—	—	—
Porcelain glass* - - -	40 per cent.	—	—	40 per cent.
„ slates - - -	45 per cent.	—	—	45 per cent.
„ ware, gilded, ornamented, or decorated - - -	50 per cent.	—	—	50 per cent.
„ plain white - - -	45 per cent.	—	—	45 per cent.
Pork - - - - -	1 ct. per lb.	= per lb.	0 0 0½	—
Portable desks, according to material.				
Porter, in bottles - - -	35 cts. per gall.	= per gall.	0 1 5½	—
„ otherwise than in bottles -	20 cts. per gall.	= per gall.	0 0 10	—
Portmanteaus, wholly or partly of leather - - - -	35 per cent.	—	—	35 per cent.
Posts, rough hewn or sawed only -	20 per cent.	—	—	20 per cent.
„ otherwise than rough hewn or sawed - - - -	35 per cent.	—	—	35 per cent.
Potash - - - - -	20 per cent.	—	—	20 per cent.
„ acetate of - - -	25 cts. per lb.	= per lb.	0 1 0½	—
„ bicarbonate of - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
same as medicinal preparation -	40 per cent.	—	—	40 per cent.
„ bichromate of - - -	4 cts. per lb.	= per lb.	0 0 2	—
„ black salts of - - -	Free.	—	—	—
„ calcined, as bicarbonate of soda -	1½ ct. per lb.	= per lb.	0 0 0¾	—
„ chlorate of - - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ chromate of - - -	4 cts. per lb.	= per lb.	0 0 2	—
„ hydriodate, iodate, and iodide of -	75 cts. per lb.	= per lb.	0 3 1½	—
„ hydrate of, as bicarbonate of soda	1½ cts. per lb.	= per lb.	0 0 0¾	—
same, or pure caustic potash, as medicinal preparations -	40 per cent.	—	—	40 per cent.
„ muriate of - - -	Free.	—	—	—
„ nitrate of, crude - - -	1 ct. per lb.	= per lb.	0 0 0½	—
same, refined and partially refined	2 cts. per lb.	= per lb.	0 0 1	—
„ permanganate of - - -	20 per cent.	—	—	20 per cent.
„ prussiate of, yellow - -	5 cts. per lb.	= per lb.	0 0 2½	—
„ prussiate of, red - - -	10 cts. per lb.	= per lb.	0 0 5	—
Potassium, bromide of, medicinal preparation - - - -	40 per cent.	—	—	40 per cent.
Potatoes - - - -	15 cts. per bus.	= per bus.	0 0 7½	—

* This comprehends all articles actually porcelain glass, whether the same be cut or otherwise.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Pots, cast iron	1½ ct. per lb.	= per 100 lbs. =per ton	0 6 3 / 7 0 0	—
Pottery ware. *See* Earthenware				
Poultry, dressed	10 per cent.	—	—	10 per cent.
„ not prepared, but with feathers plucked, and whether entrails drawn or not	10 per cent.	—	—	10 per cent.
„ prepared	35 per cent.	—	—	35 per cent.
„ live	Free.	—	—	—
Pounce	20 per cent.	—	—	20 per cent.
Powder, blue, cobalt	20 per cent.	—	—	20 per cent.
„ brass	35 per cent.	—	—	35 per cent.
„ bronze	20 per cent.	—	—	20 per cent.
„ bleaching (chloride of lime)	Free.	—	—	—
„ curry	Free.	—	—	—
„ finishing	20 per cent.	—	—	20 per cent.
„ gun, valued at not over 20 cts. per lb.	6 cts. per lb. and 20 per cent.	= per lb.	0 0 3	+ 20 per cent.
„ „ valued over 20 cts. per lb.	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.
„ hair, skin, and tooth	50 per cent.	—	—	50 per cent.
„ ink	35 per cent.	—	—	35 per cent.
„ insect	20 per cent.	—	—	20 per cent.
„ polishing, all kinds	25 per cent.	—	—	25 per cent.
„ puffs, according to materials.				
„ subtil, for the skin	50 per cent.	—	—	50 per cent.
Powdered acorns	3 cts. per lb.	= per lb.	0 0 1½	—
Precious stones, such as diamonds, cut, cameos, mosaics gems, pearls, rubies, &c., not set	10 per cent.	—	—	10 per cent.
When set	25 per cent.	—	—	25 per cent.
Imitation of above, composition of glass or paste, not set	40 per cent.	—	—	40 per cent.
When set	30 per cent.	—	—	30 per cent.
Precipitate, red	20 per cent.	—	—	20 per cent.
Preparations of anatomy	Free.	—	—	—
„ chemical, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ medicinal, not otherwise provided for	40 per cent.	—	—	40 per cent.
„ medicinal, if patent	50 per cent.	—	—	50 per cent.
„ mercurial, not otherwise provided for	20 per cent.	—	—	20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Preparations, philosophical and scientific, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale -	Free.	—	—	—
„ spirits chief value. Duty *not less* than upon distilled spirits.				
Prepared clay, for paper makers' use, and resembling kaolin - -	$5 per ton	= per ton	1 0 10	—
same, of different colours, resembling and used for same purposes as French chalk -	20 per cent.	—	—	20 per cent.
„ meats, vegetables, fish, poultry, and game, sealed or unsealed, in cans or otherwise - -	35 per cent.	—	—	35 per cent.
Presents* of works of art to national institutions or any state, county, or city	Free.	—	—	—
Preserved fruits or sweetmeats, as comfits - - - -	35 per cent.	—	—	35 per cent.
, ginger - - - -	35 per cent.	—	—	35 per cent.
„ milk - - - -	20 per cent.	—	—	20 per cent.
Preserves, glass bottles or jars filled with Contents of same rated separately.	40 per cent.	—	—	40 per cent.
Pressing boards, as manufactures of wood not otherwise provided for - -	35 per cent.	—	—	35 per cent.
Printed matter, all, not otherwise provided for - - - -	25 per cent.	—	—	25 per cent.
„ paper ornaments for trunks -	25 per cent.	—	—	25 per cent.
„ picture cards, as engravings -	25 per cent.	—	—	25 per cent.
Printing ink - - - -	35 per cent.	—	—	35 per cent.
„ **paper,** unsized, used for books and newspapers exclusively - -	20 per cent.	—	—	20 per cent.
„ sized and glued, suitable only for this purpose	25 per cent.	—	—	25 per cent.

* "Articles imported 'as presents,' other than such as are exempted by law from duty, are liable to duty."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ *s.* *d.*	
P **Printing types**	25 per cent.	—	—	25 per cent.
„ old, and fit only to be remanufactured	Free.	—	—	—
P **Prints,** as engravings	25 per cent.	—	—	25 per cent.
P **Prisms**	40 per cent.	—	—	40 per cent.
P **Professional** books, implements, &c. of persons arriving in the United States	Free.	—	—	—
P **Proprietary** medicines	50 per cent.	—	—	50 per cent.
P **Protractors,** ivory	35 per cent.	—	—	35 per cent.
P **Prune** wine, so styled, for fining liquors	20 per cent.	—	—	20 per cent.
P **Prunes**	1 ct. per lb.	= per lb.	0 0 $0\frac{1}{2}$	—
P **Prunella,** as lastings.				
P **Prussian** blue, dry or moist	30 per cent.	—	—	30 per cent.
P **Prussiate** of potash, red	10 cts. per lb.	= per lb.	0 0 5	—
„ yellow	5 cts. per lb.	= per lb.	0 0 $2\frac{1}{2}$	—
P **Pulley** blocks, wood	35 per cent.	—	—	35 per cent.
„ pattern, iron, if to be used exclusively as a model to mould from	Free.	—	—	—
P **Pulleys,** brass or iron	35 per cent.	—	—	35 per cent.
„ copper	45 per cent.	—	—	45 per cent.
P **Pulp,** dried	20 per cent.	—	—	20 per cent.
„ rag, in sheets or boards	35 per cent.	—	—	35 per cent.
„ for manufacture of paper	Free.	—	—	—
„ of wood, dried in sheets	20 per cent.	—	—	20 per cent.
P **Pulu,** vegetable substance for beds	Free.	—	—	—
P **Pulverised** wool waste, flocks or shoddy	12 cts. per lb.	= per lb.	0 0 6	—
P **Pumice** and pumice stones	Free.	—	—	—
P **Pumpkins**	10 per cent.	—	—	10 per cent.
P **Pumps,** stomach, according to material.				
„ all other, according to material.				
P **Punches,** shoe or other, part steel	45 per cent.	—	—	45 per cent.
P **Purple** tin liquor	20 per cent.	—	—	20 per cent.
P **Purses,** according to material.				
P **Putty**	$1\frac{1}{2}$ cts. per lb.	= per lb.	0 0 $0\frac{3}{4}$	—
„ knives	45 per cent.	—	—	45 per cent.
P **Pyrites** or sulphuret of iron	20 per cent.	—	—	20 per cent.
Q.				
Q **Quadrant** frames, brass	35 per cent.	—	—	35 per cent.
Q **Quadrants,** brass	35 per cent.	—	—	35 per cent.
„ other (according to material).				
Q **Quality** binding, manufacture of worsted	{ 50 cts. per lb. and 50 per cent. }	= per lb.	0 2 1	+ 50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Quassia wood - - - -	Free.	—	—	—
Queensware (earthenware) - -	40 per cent.	—	—	40 per cent.
Quickgrass root - - -	Free.	—	—	—
Quicksilver - - - -	Free.	—	—	—
Quilla bark - - - -	Free.	—	—	—
Quill tooth picks - - - -	20 per cent.	—	—	20 per cent.
Quills, prepared or unprepared - -	Free.	—	—	—
Quiltings, or bed quilts, of cotton -	35 per cent.	—	—	35 per cent.
Quinine, sulphate of - - -	20 per cent.	—	—	20 per cent.
,, other salts of - - -	45 per cent.	—	—	45 per cent.
,, amorphous - - -	20 per cent.	—	—	20 per cent.
Quoits, or curling stones - -	Free.	—	—	—
R.				
Rabbits, living - - - -	20 per cent.	—	—	20 per cent.
Rafts of logs - - - -	Free.	—	—	—
Rag pulp, in sheets or boards, as manufactures of paper - - -	35 per cent.	—	—	35 per cent.
Rag stones - - - -	10 per cent.	—	—	10 per cent.
Rags, cotton, linen, jute, and hemp, and paper waste, or waste or clippings of any kind, including waste rope and waste bagging, fit only for the manufacture of paper* - - - -	Free.	—	—	—
,, other than wool, paper stock, crude, of every description, including all grasses, fibres, waste, shavings, clippings, old paper, rope ends, waste rope, waste bagging, gunny bags and gunny cloth, old or refuse, to be used in making and fit only to be converted into paper, and unfit for any other manufacture, and cotton waste, whether for paper stock or other purposes - - -	Free.	—	—	—

* "Forty per cent. of woollen rags, in bundles of rags for the manufacture of paper, is too large a proportion to be admitted free of duty. The importer should, where no evidence of fraud appears, be made to separate the free from the dutiable rags on entry."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Rags, woollen*	12 cts. per lb.	= per 100 lbs.	2 10 0	—
„ other than as above	10 per cent.	—	—	10 per cent.
Railroad chairs, wrought iron†	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 / 9 6 8	—
„ bars, of iron	70 cts. per 100 lbs.	= per 100 lbs.	0 2 11	—
„ bars, of steel	1¼ cts. per lb.	= per 100 lbs.	0 5 2½	—
„ „ part steel	1 ct. per lb.	= per 100 lbs.	0 4 2	—
„ cars, American built, repairs to, in a foreign country	50 per cent.	—	—	50 per cent.
„ iron, for repairs, subject to regulations	Free.	—	—	—
„ ties, wood	Free.	—	—	—
Railway carriages, built in Canada and brought to the United States to be used only in the *through business* between Canada and the United States internationally	Free.	—	—	—
„ signals, if iron the chief component part	35 per cent.	—	—	35 per cent.
„ rugs, or plush woollen blankets	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Raisins	2½ cts. per lb.	= per lb.	0 0 1¼	—
Rakes, iron or wood	35 per cent.	—	—	35 per cent.
„ part steel	45 per cent.	—	—	45 per cent.
Rape seed	½ ct. per lb.	= per lb.	0 0 0¼	—
Rapiers	45 per cent.	—	—	45 per cent.
„ blades of	35 per cent.	—	—	35 per cent.
Ras cornu cervi	20 per cent.	—	—	20 per cent.
Raspberry oil, or essence of	$2·50 per lb.	= per lb.	0 10 5	—
„ vinegar, as raspberry or fruit juice	25 per cent.	—	—	25 per cent.
Rasps, not over 10 in. long	10 cts. per lb. and 30 per cent.	= per lb.	0 0 5	+30 per cent.
„ over 10 in. long	6 cts. per lb. and 30 per cent.	= per lb.	0 0 3	+30 per cent.
Ratafia	$2 per proof gall.	= per pf. gall.		—

* A package weighing (say) 10 cwt. would therefore be liable to a duty of 28*l.* in English currency.

† "Wrought iron fish plates, fish joints or splice bars should be classified by assimilation, by virtue of section 20, Act of July 30, 1842, as wrought iron railroad chairs at 2 cents per lb.; all spikes and bolts for like use, at two and one-half cents per lb."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Rattans, wholly or partially manufactured	25 per cent.	—	—	25 per cent.
„ if unmanufactured - -	Free.	—	—	—
Rattles, children's, silver or other, as toys	50 per cent.	—	—	50 per cent.
Ravens-duck:—				
valued at not over 30 cts. per square yard - - -	35 per cent.	—	—	35 per cent.
valued at over 30 cts. per square yard - - - -	40 per cent.	—	—	40 per cent.
Raw or unmanufactured articles, not otherwise provided for - - -	10 per cent.	—	—	10 per cent.
Razor cases, leather or paper - -	35 per cent.	—	—	35 per cent.
„ straps, wood and leather - -	35 per cent.	—	—	35 per cent.
Razors, as cutlery - -	35 per cent.	—	—	35 per cent.
Ready-made clothing (according to material).				
„ „ not otherwise provided for (excepting linen)	35 per cent.	—	—	35 per cent.
Reaping hooks - - - -	45 per cent.	—	—	45 per cent.
Reaping machines, according to material				
Red beets, essence of, so called, as distilled spirits - - -	$2 per proof gall.	= per proof gall.	0 8 4	—
„ chromate of potash - - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ or crude tartar, or wine lees -	Free.	—	—	—
„ sanders or saunders wood - -	Free.	—	—	—
„ wood - - - - -	Free.	—	—	—
„ lead, dry or ground in oil - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ precipitate - - - -	20 per cent.	—	—	20 per cent.
Reeds and rattans, unmanufactured -	Free.	—	—	—
„ weavers' - - - - -	35 per cent.	—	—	35 per cent.
„ wholly or partially manufactured -	25 per cent.	—	—	25 per cent.
„ for umbrellas, canes, &c. in the rough, or cut into suitable lengths	Free.	—	—	—
Reflectors, according to material -				
Refrigerators, according to material -				
Regalia,* where specially imported in good faith, for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts, or for the use or by the order of any college, academy, school, or seminary of learning -	Free.	—	—	—

* By the term "Regalia," however, the American custom authorities usually imply vestments for priests.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Regulus of antimony - - -	10 per cent.	—	—	10 per cent.
Re-importations. Dutiable merchandise is liable to duty on each re-importation.				
„ of exported United States products, identity being proved, may be made under regulations - - -	Free.	—	—	—
If internal tax upon such article has not been paid, or same has been refunded, a duty equal to such tax must be paid on re-importation.				
Reindeer tongues - - -	20 per cent.	—	—	20 per cent.
Religious societies, books, maps, and charts (not more than two copies in any one invoice) regalia, gems, statues, and specimens of sculpture, specially imported for the use of - - -	Free.	—	—	—
„ societies, philosophical apparatus and instruments, specially imported in good faith, for the use of any society incorporated or established for religious purposes - -	15 per cent.	—	—	15 per cent.
Rennets, raw or prepared - -	Free.	—	—	—
Repairs on vessels - - -	50 per cent.	—	—	50 per cent.
„ to railway cars in foreign countries	50 per cent.	—	—	50 per cent.
Repoussé work-artistic - - -	10 per cent.	—	—	10 per cent.
Reps, embroidered, same as on manufactures of worsted, viz.:—				
valued at not over 40 cts. per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
„ at over 40 cts. and not over 60 cts. per lb. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
„ at over 60 cts. and not over 80 cts. per lb. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
„ at over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ plain and fancy, partly of worsted, as above.				
„ silk, or silk chief value - -	60 per cent.	—	—	60 per cent.
„ natural silk and cotton - -	50 per cent.	—	—	50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Residuum of petroleum, or kerosene oil, if over 20° Beaumé	20 cts. per gall.	= per gall.	0 0 10	—
,, not over 20° Beaumé	20 per cent.	—	—	20 per cent.
Resins, crude, not otherwise provided for	Free.	—	—	—
,, gum, all, not otherwise provided for	20 per cent.	—	—	20 per cent.
Resin or rosin	20 per cent.	—	—	20 per cent.
,, jalap	40 per cent.	—	—	40 per cent.
,, nux vomica	40 per cent.	—	—	40 per cent.
,, of scammony	Free.	—	—	—
Retorts, gas (earthenware)	25 per cent.	—	—	25 per cent.
,, or vases of platinum for chemical uses, or parts of	Free.	—	—	—
Rhubarb	Free.	—	—	—
Ribbons, cotton velvet	35 per cent.	—	—	35 per cent.
,, silk	60 per cent.	—	—	60 per cent.
,, part silk	50 per cent.	—	—	50 per cent.
,, wire, of strands of iron wire covered with cotton and united by a cotton web	35 per cent.	—	—	35 per cent.
,, "Bozeaux" silk with cotton edge, and cord edge, or round edge	50 per cent.	—	—	50 per cent.
,, "Faille," silk	60 per cent.	—	—	60 per cent.
,, velvet, of silk and cotton, silk chief value	60 per cent.	—	—	60 per cent.
,, silk velvet, with cotton corded edge	50 per cent.	—	—	50 per cent.
Ribs for umbrellas, &c., wholly or chiefly of metal	45 per cent.	—	—	45 per cent.
Rice, cleaned	2½ cts. per lb.	= per lb.	0 0 1¼	—
,, uncleaned	2 cts. per lb.	= per lb.	0 0 1	—
Rifles	35 per cent.	—	—	35 per cent.
"Rimmel's Extract" alcoholic perfumery	$3 per gall. and 50 per cent.	= per gall.	0 12 6	+ 50 per cent.
Ringlets, hair	35 per cent.	—	—	35 per cent.
,, human hair	40 per cent.	—	—	40 per cent.
Rings, as jewellery	25 per cent.	—	—	25 per cent.
,, plated, for saddlery	35 per cent.	—	—	35 per cent.
,, other (according to material).				
Rivets, wrought iron	2¼ cts. per lb.	= per 100 lbs. = per ton	0 10 5 11 13 4	—
,, other (according to material).				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Rivet making machinery (according to material).				
Road engines (according to material).				
Robes, buffalo, dressed	20 per cent.	—	—	20 per cent.
„ other, according to material.				
Robe patterns, according to component materials.*				
"Robinson's patent groats"	20 per cent.	—	—	20 per cent.
Rochelle salts	5 cts. per lb.	= per lb.	0 0 2½	—
Rockingham earthenware	40 per cent.	—	—	40 per cent.
Rock moss, crude	Free.	—	—	—
„ oils, crude	20 cts. per gall.	= per gall.	0 0 10	—
„ oils, refined	40 cts. per gall.	= per gall.	0 1 8	—
„ salt	8 cts. per 100 lbs.	= per 100 lbs.	0 0 4	—
Rods, iron wire, in coils, as rolled or hammered iron†	1¼ ct. per lb.	= per 100 lbs. = per ton	0 5 2½ 5 16 8	—
„ iron, slit	1½ ct. per lb.	= per 100 lbs. = per ton	0 6 3 7 0 0	—
„ and eyes for stairs, of brass or iron	35 per cent.	—	—	35 per cent.
„ other (according to material).				
„ copper chief value	45 per cent.	—	—	45 per cent.
„ composition, copper not chief value	35 per cent.	—	—	35 per cent.
„ steel	45 per cent.	—	—	45 per cent.
„ steel, in coil, valued at 7 cts. or less per lb.	2¼ cts. per lb.	= per lb.	0 0 1⅛	—
same, valued at 7 cts. and not above 11 cts. per lb.	3 cts. per lb.	= per lb.	0 0 1½	—
same, valued at above 11 cts. per lb.	3½ cts. per lb. and 10 per cent.	= per lb.	0 0 1¾	+ 10 per cent.
Roller cloths, for paper machines, as worsted fabrics, viz.:—				
valued at not over 40 cts. per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.

* As to "Coburg robes aquille," composed of worsted with a narrow strip of cotton velvet loosely attached by a thread, and imported in pieces of proper size for ladies' dresses, the department held "that the two fabrics thus loosely attached ought not, "with a view to the assessment of duty, to be regarded as a single article, but that each of the component fabrics should bear its "proper duty according to its classification in the tariff."

† Round iron in coils and not over $\frac{3}{10}$ inch diameter, whether coated with metal or not, and wire in whole or part of iron, not otherwise specified and provided for, shall pay the same duty as iron wire, bright, coppered, or tinned.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Roller cloths, &c.—*continued.*			£ s. d.	
valued at over 40 cts. and not over 60 cts.	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
„ at over 60 cts. and not over 80 cts.	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
„ at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Rollers of wood	35 per cent.	—	—	35 per cent.
Roman cement	20 per cent.	—	—	20 per cent.
„ vitriol	4 cts. per lb.	= per lb.	0 0 2	—
Roncou, rocou, annatto, or Orleans	Free.	—	—	—
Roofing and patent asphalted felt	20 per cent.	—	—	20 per cent.
„ slates	35 per cent.	—	—	35 per cent.
„ tiles	20 per cent.	—	—	20 per cent.
„ tin, being tin plates with ends turned down and fastened together for use in roofing	35 per cent.	—	—	35 per cent.
Root or roots :—				
Aconite, alkanet, angelica, belladonna, china, cinchona, colombo, contrayerva, elecampane, galanga, gentian, ginger, ginseng, hellebore, hop for cultivation, iris or orris, liquorice, madder, pellitory, quick grass, sassafras	Free.	—	—	—
„ beet, waste, for manufacture of paper	Free.	—	—	—
„ bulbous	30 per cent.	—	—	30 per cent.
„ chickory, ground or unground	1 ct. per lb.	= per lb.	0 0 $0\frac{1}{2}$	—
„ „ prepared	5 cts. per lb.	= per lb.	0 0 $2\frac{1}{2}$	—
„ dandelion, as coffee substitutes	3 cts. per lb.	= per lb.	0 0 $1\frac{1}{2}$	—
„ flour	Free.	—	—	—
„ medicinal, crude, not otherwise provided	Free.	—	—	—
„ medicinal, not crude	20 per cent.	—	—	20 per cent.
„ for Department of Agriculture	Free.	—	—	—
Rope, bale, of hemp	30 per cent.	—	—	30 per cent.
„ hide	Free.	—	—	—
„ of cocoa nut hulls, coir, grass, or bark, as cordage untarred	$3\frac{1}{2}$ cts. per lb.	= per lb.	0 0 $1\frac{3}{4}$	—
„ wire, pays the rate of duty levied on the wire of which it is made.				
„ waste, fit only for making paper.	Free.	—	—	—
"Rosalic acid," so styled, not an acid, but an unenumerated manufacture	20 per cent.	—	—	20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Rosaries, as beads - - -	50 per cent.	—	—	50 per cent.
Rose leaves - - - -	Free.	—	—	—
Rose pink - - - -	25 per cent.	—	—	25 per cent.
Rosewater, as toilet articles - -	50 per cent.	—	—	50 per cent.
Rosewood - - - -	Free.	—	—	—
,, manufactures of - -	35 per cent.	—	—	35 per cent.
Rosin - - - -	20 per cent.	—	—	20 per cent.
Rosolio, a cordial - - -	$2 per proof gall.	= per proof gall.	0 8 4	—
Rotten stone - - - -	Free.	—	—	—
Rouge for the toilet - - -	50 per cent.	—	—	50 per cent.
Rubber jewellery, imitation of jet -	35 per cent.	—	—	35 per cent.
Rubies, set - - - -	25 per cent.	—	—	25 per cent.
,, not set - - - -	10 per cent.	—	—	10 per cent.
Rubrum bark, acer - - -	Free.	—	—	—
Rugs, cotton, for bed coverings - -	35 per cent.	—	—	35 per cent.
,, horse, of linen - - -	40 per cent.	—	—	40 per cent.
,, railway, so styled, or woollen plush blankets - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
railway, so styled, other, according to material.				
,, travelling, wholly or in part of wool -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
,, other (portions of carpeting), as carpets.				
Rules, bone or ivory - - -	35 per cent.	—	—	35 per cent.
same, with brass mountings -	35 per cent.	—	—	35 per cent.
,, brass - - - -	35 per cent.	—	—	35 per cent.
,, copper chief value - -	45 per cent.	—	—	45 per cent.
,, gutta-percha - - -	40 per cent.	—	—	40 per cent.
,, silver, or German silver - -	40 per cent.	—	—	40 per cent.
,, wood - - - -	35 per cent.	—	—	35 per cent.
,, wood and brass, brass chief value	35 per cent.	—	—	35 per cent.
Rum - - - - -	$2 per proof gall.	= per pf. gall.	0 8 4	—
,, essence, or oil of - - -	50 cts. per oz.	= per oz.	0 2 1	—
,, bay or bay water, of which distilled spirits are the component of chief value - - - -	$2 per proof gall.	= per pf. gall.	0 8 4	—
,, bay, essence or oil of -	50 cts. per oz.	= per oz.	0 2 1	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Rum, bay or bay water, whether distilled or compounded, if distilled spirits not the component of chief value, of first proof - - -	$1 per gall.	= per gall.	0 4 2	—
In proportion for any greater strength than first proof.				
„ cherry-, a cordial - - -	$2 per proof gall.	= per pf. gall.	0 8 4	—
Runners, for umbrellas, &c., wholly or chiefly of metal - - -	45 per cent.	—	—	45 per cent.
Russia hemp, unmanufactured - -	$25 per ton	= per ton	5 4 2	—
„ sheeting - - - -	35 per cent.	—	—	35 per cent.
Rust on iron and steel*.				
Rye (56 lbs. to bush.) - - -	15 cts. per bush.	= per bush.	0 0 7½	—
„ flour - - - -	10 per cent.	—	—	10 per cent.
„ shorts - - - -	10 per cent.	—	—	10 per cent.
S.				
Sabre blades - - - -	35 per cent.	—	—	35 per cent.
Sabres (swords) - - - -	45 per cent.	—	—	45 per cent.
Sacking, linen :—				
valued at not over 30 cts. per sq. yard - - - -	35 per cent.	—	—	35 per cent.
valued at over 30 cts. per sq. yard	40 per cent.	—	—	40 per cent.
Sacks, containing merchandise subject to an ad valorem duty, to pay the same rate of duty as their contents, provided the latter are usually imported in such sacks.				
Saddlery, coach and harness furniture, and hardware of all kinds - -	35 per cent.	—	—	35 per cent.
Saddle hooks, German silver, silver, or other metal, as saddlery -	35 per cent.	—	—	35 per cent.
„ trees, iron chief value - -	35 per cent.	—	—	35 per cent.
„ „ wood chief value - -	35 per cent.	—	—	35 per cent.
Saddles - - - - -	35 per cent.	—	—	35 per cent.
Sadirons, cast iron - - -	1½ ct. per lb.	= per 100 lbs.	0 6 3	—
Safes, fireproof - - - -	35 per cent.	—	—	35 per cent.

* No allowance can be made for damage from rust, except in the case of polished Russian sheet iron.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Safety lamps, according to material.				
Safflower - - - -	Free.	—	—	—
„ extract - - -	Free.	—	—	—
Saffron - - - - -	Free.	—	—	—
„ cake - - - -	Free.	—	—	—
Sago, crude - - - -	Free.	—	—	—
„ and sago flour - - -	Free.	—	—	—
Salad oil, all, whether in flasks or bottles, or not - - - - -	$1 per gall.	= per gall.	0 4 2	—
Sail needles - - - -	25 per cent.	—	—	25 per cent.
Sails, canvas and duck for* - -	30 per cent.	—	—	30 per cent.
Sal acetosella, chem. salt - -	20 per cent.	—	—	20 per cent.
Salacine, medicinal preparation - -	Free.	—	—	—
Sal ammoniac - - - -	10 per cent.	—	—	10 per cent.
Sal diuretic - - - -	20 per cent.	—	—	20 per cent.
Sal soda - - - -	¼ ct. per lb.	= per 100 lbs.	0 1 0½	—
Salep or saloup - - - -	Free.	—	—	—
Saleratus - - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
Salmon, dried or smoked - -	½ ct. per lb.	= per lb.	0 0 0¼	—
„ pickled - - - -	$3 per barrel.	= per brl.	0 12 6	—
„ preserved - - -	30 per cent.	—	—	30 per cent.
„ prepared - - -	35 per cent.	—	—	35 per cent.
Salt in bulk† - - - -	8 cts. per 100 lbs.	= per 100 lbs.	0 0 4	—
„ in bags, sacks, barrels or other packages - - - -	12 cts. per 100 lbs.	= per 100 lbs.	0 0 6	—
„ jars of brown earthenware containing, are dutiable as such - -	25 per cent.	—	—	25 per cent.
„ rock - - - -	8 cts. per 100 lbs.	= per 100 lbs.	0 0 4	—
„ sacking, of twilled jute, dutiable as bagging - - - -	40 per cent.	—	—	40 per cent.
Salted hides and skins - - -	Free.	—	—	—
„ skivers, roans or pelts - -	Free.	—	—	—
Saltpetre, crude - - -	1 ct. per lb.	= per lb.	0 0 0½	—
„ refined and partially refined -	2 cts. per lb.	= per lb.	0 0 1	—

* The usual width of sail duck is 24 inches. A manufacture of flax 33 inches wide is not the article recognised as sail duck, nor the article intended for vessels' sails; being much too wide for strength; but subject to duty as a manufacture of flax, &c.
As to duty on sails imported for the equipment of a vessel, *see* note to ships' equipments p. 276.

† Salt for curing fish, used by vessels licensed to engage in the fisheries.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Salts, black (of potash)	Free.	—	—	—
„ brown	20 per cent.	—	—	20 per cent.
„ Epsom	1 ct. per lb.	= per lb.	0 0 0½	—
, Glauber	½ ct. per lb.	= per lb.	0 0 0¼	—
„ of iodine	15 per cent.	—	—	15 per cent.
„ of morphia	$1 per oz.	= per oz.	0 4 2	—
„ of tin	30 per cent.	—	—	30 per cent.
„ Rochelle	5 cts. per lb.	= per lb.	0 0 2½	—
„ and preparations of salts, not otherwise provided for	20 per cent.	—	—	20 per cent.
same, unspecified, if medicinal preparations	40 per cent.	—	—	40 per cent.
Salves, patent medicines	50 per cent.	—	—	50 per cent.
Samples of goods having no intrinsic value as merchandise and which cannot be so used	Free.	—	—	—
Sand	10 per cent.	—	—	10 per cent.
„ French	20 per cent.	—	—	20 per cent.
„ magnetic iron	20 per cent.	—	—	20 per cent.
Sandal-wood	Free.	—	—	—
„ „ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
Sandarac, gum	Free.	—	—	—
Sandstone for building	$1½ per ton	= per ton	0 6 3	—
„ used for sinking cribs for piers	10 per cent.	—	—	10 per cent.
Sanitary apparatus (according to material).				
Santonine	$3 per lb.	= per lb.	0 12 6	—
Sarcocolla gum	Free.	—	—	—
Sarcophagus, red granite	20 per cent.	—	—	20 per cent.
Sardels, small fish, eviscerated and put up in brine in kegs, as sardines	60 per cent.	—	—	60 per cent.
Sardines, preserved in oil or otherwise as Anchovies similarly prepared. *See* page 82.				
Sarsaparilla	Free.	—	—	—
Sash cord, hemp	30 per cent.	—	—	30 per cent.
„ fastenings, copper chief value	45 per cent.	—	—	45 per cent.
„ „ iron or brass	35 per cent.	—	—	35 per cent.
Sassafras, bark and root	Free.	—	—	—
„ oil of, essential	50 per cent.	—	—	50 per cent.
Satin white	3 cts. per lb.	=per lb.	0 0 1½	—
„ wood	Free.	—	—	—
„ „ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Satins for buttons if of the same character as silk twist for buttons - -	10 per cent.	—	—	10 per cent.
Saucepans, copper - - -	45 per cent.	—	—	45 per cent.
„ iron, cast - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
„ „ glazed or tinned -	3½ cts. per lb.	= per lb.	0 0 1¾	—
„ „ (not cast) or tin -	35 per cent.	—	—	35 per cent.
Sauces, all kinds, except catsup, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
Sauerkraut - - - -	Free.	—	—	—
Sausages - - - -	35 per cent.	—	—	35 per cent.
„ bologna - - -	Free.	—	—	—
„ skins - - - -	Free.	—	—	—
Sawdust, mahogany, imported solely for dyeing or tanning - - -	Free.	—	—	—
Sawn logs - - - -	Free.	—	—	—
Saws, back, all, not over 10 inches in length - - - -	75 cts. per doz. and 30 per cent.	=per doz.	0 3 1½	+30 per cen
„ back, over 10 inches in length -	$1 per doz. and 30 per cent.	=per doz.	0 4 2	+30 per cent.
„ circular - - -	45 per cent.	—	—	45 per cent.
„ cross-cut - - -	10 cts. per lineal foot	= per lin. foot	0 0 5	—
„ hand, all, not over 24 inches in length - - - -	75 cts. per doz. and 30 per cent.	=per doz.	0 3 1½	+30 per cent.
„ hand, over 24 inches in length -	$1 per doz. and 30 per cent.	=per doz.	0 4 2	+30 per cent.
„ mill, pit, and drag, not over 9 inches wide - - -	12½ cts. per lineal foot	= per lin. foot	0 0 6¼	—
„ mill, pit, and drag, over 9 inches wide	20 cts. per lineal foot	= per lin. foot	0 0 10	—
Sawing machinery (according to material).				
Scaglioli table tops - - -	35 per cent.	—	—	35 per cent.
Scales and scale beams (according to material).				
Scammony, or resin of - - -	Free.	—	—	—
Scarfs, silk - - - -	60 per cent.	—	—	60 per cent.
„ manufactured several in a piece, but separated before importation, as wearing apparel.				
Schools, books, maps, and charts (not more than two copies in any one invoice), specimens of sculpture, regalia, and gems, and statues and specimens of				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Schools—*continued.*			£ s. d.	
sculpture, specially imported in good faith, for the use or by the order of, or of any college, academy, or seminary of learning - - -	Free.	—	—	—
„ philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported for the use of, or of any institution or society incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not for sale - -	Free.	—	—	—
Scientific apparatus and instruments -	40 per cent.	—	—	40 per cent.
„ apparatus, specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale -	Free.	—	—	—
„ societies or institutions, all philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings specially imported in good faith for the use of, and not intended for sale - -	Free.	—	—	—
Scilla or squills - - - -	Free.	—	—	—
Scissors, as cutlery - - -	35 per cent.	—	—	35 per cent.
„ garden, as cutlery - -	35 per cent.	—	—	35 per cent.
Scoop nets, cotton - - -	35 per cent.	—	—	35 per cent.
„ „ flax - - -	40 per cent.	—	—	40 per cent.
Scotch bagging, double warp, of jute, not fit for use in bagging cotton -	40 per cent.	—	—	40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
§**Scotch,** woollen caps - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
§**Scrapers,** part steel - - -	45 per cent.	—	—	45 per cent.
§**Scrap** iron, wrought - - -	$8 per ton	= per ton	1 13 4	—
„ „ cast - - - -	$6 per ton	= per ton	1 5 0	—
„ lead, fit only for re-manufacture -	1½ cts. per lb.	= per lb.	0 0 0¾	—
„ leather, new, pieces of new leather (refuse splits), intended for the manufacture of sole leather, dutiable as sole leather - -	15 per cent.	—	—	15 per cent.
„ „ old - - -	Free.	—	—	—
„ steel - - - -	30 per cent.	—	—	30 per cent.
§**Scraps** or clippings of Dutch metal, made of brass, as manufactures of brass - - - -	35 per cent.	—	—	35 per cent.
same, made of copper, as manufactures of copper - -	45 per cent.	—	—	45 per cent.
„ of silk, fit for use in making neckties, bows, buttons, &c. - -	60 per cent.	—	—	60 per cent.
§**Screens** (portions of carpeting), as carpeting of like character or description.				
„ fire, all kinds - - -	35 per cent.	—	—	35 per cent.
§**Screws,** iron (commonly called wood screws):—				
2 inches or over in length -	8 cts. per lb.	= per 100 lb.	1 13 4	—
less than 2 inches in length -	11 cts. per lb.	= per 100 lb.	2 5 10	—
„ bed, iron - - -	2½ cts. per lb.	= per 100 lb.	0 10 5	—
„ brass - - - -	35 per cent.	—	—	35 per cent.
„ iron or other metal, except as above - - - -	35 per cent.	—	—	35 per cent.
„ wooden - - - -	35 per cent.	—	—	35 per cent.
§**Sculpture,** specimens of, specially imported in good faith for the use or by the order of any academy, college, school, or seminary of learning, or for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts - - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Scythes - - - - -	45 per cent.	—	—	45 per cent.
Sealing wax - - - -	35 per cent.	—	—	35 per cent.
Sea-stores of vessels. *See* note below.*				
Seal oil - - - - -	20 per cent.	—	—	20 per cent.
„ „ from Canada - - -	20 per cent.	—	—	20 per cent.
„ skin mohair coating, cotton, worsted, and mohair, as worsted fabrics, viz. :				
valued at not over 40 cts. per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.

* In order to ascertain what articles ought to be exempt from duty as the sea-stores of a vessel, the master shall particularly specify the articles in the report or manifest to be by him made, designating them as the sea-stores of such vessel; and in the oath to be taken by such master, on making such report, he shall declare that the articles so specified as sea-stores are truly such and are not intended by way of merchandise or for sale; whereupon the articles shall be free from duty.

Whenever it appears to the collector to whom a report and manifest of sea-stores are delivered, together with the naval officer, where there is one, or alone, where there is no naval officer, that the quantities of the articles, or any part thereof, reported as sea-stores, are excessive, the collector, jointly with the naval officer, or alone, as the case may be, may in his discretion estimate the amount of the duty on such excess; which shall be forthwith paid by the master, to the collector, on pain of forfeiting the value of such excess.

If any other or greater quantity of articles are found on board such vessel as sea-stores than are specified in an entry of sea-stores, or if any of the articles are landed without a permit first obtained from the collector and naval officer, if any, for that purpose, all such articles as are not included in the report or manifest by the master, and all which are landed without a permit shall be forfeited, and may be seized; and the master shall moreover be liable to a penalty of treble the value of the articles omitted or landed.

The master of any vessel propelled by steam, arriving at any port in the United States, may retain all the coal such vessel may have on board at the time of her arrival, and may proceed with such coal to a foreign port, without being required to land the same in the United States, or to pay any duty thereon.

If any vessel enrolled or licensed to engage in the foreign and coasting trade on the northern, north eastern, and north-western frontiers of the United States shall touch at any port in the adjacent British provinces, and the master of such vessel shall purchase any merchandise for the use of the vessel, the master of the vessel shall report the same, with cost and quantity thereof, to the collector or other officer of the customs at the first port in the United States at which he shall next arrive, designating the same as "sea-stores;" and in the oath to be taken by such master of such vessel, on making such report, he shall declare that the articles so specified or designated "sea-stores" are truly intended for the use exclusively of the vessel, and are not intended for sale, transfer, or private use. If any other or greater quantity of dutiable articles shall be found on board such vessel than are specified in such report or entry of such articles, or any part thereof shall be landed without a permit from a collector or other officer of the customs, such articles, together with the vessel, her apparel, tackle, and furniture, shall be forfeited.

If, upon examination and inspection by the collector or other officer of the customs, such articles are not deemed excessive in quantity for the use of the vessel, until an American port may be reached by such vessel, where such sea-stores can be obtained, such articles shall be declared free of duty; but if it shall be found that the quantity or quantities of such articles, or any part thereof so reported, are excessive, it shall be lawful for the collector or other officer of the customs to estimate the amount of duty on such excess, which shall be forthwith paid by the master of the vessel, on penalty of paying a sum of not less than one hundred dollars, nor more than four times the value of such excess, or such master shall be punishable by imprisonment for not less than three months, and not more than two years.

Articles purchased for the use of or for sale on board any vessel, as saloon stores or supplies, shall be deemed merchandise, and shall be liable, when purchased at a foreign port, to entry and the payment of the duties found to be due thereon, at the first port of arrival of such vessel in the United States; and for a failure on the part of the saloon-keeper or person purchasing or owning such articles to report, make entries, and pay duties, as herein-before required, such articles, together with the fixtures and other merchandise found in such saloon, or on or about such vessel, belonging to and owned by such saloon-keeper or other person interested in such saloon, shall be seized and forfeited, and such saloon-keeper or other person so purchasing and owning shall be liable to a penalty of not less than one hundred dollars and not more than five hundred, and shall be punishable by imprisonment for not less than three months and not more than two years.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
§**Seal** skin, &c.—*continued.*				
valued at over 40 cts. and not over 60 cts. per lb.	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 cts. and not over 80 cts. per lb.	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ skins, dressed	20 per cent.	—	—	20 per cent.
§**Seating,** hair, 18 in. wide or over	40 cts. per sq. yard.	= per sq. yd.	0 1 8	—
„ „ less than 18 in. wide	30 cts. per sq. yard.	= per sq. yd.	0 1 3	—
§**Seaweed,** not otherwise provided for	Free.	—	—	—
„ used for beds and mattresses	Free.	—	—	—
§**Seed cane,** for Department of Agriculture	Free.	—	—	—
„ **lac**	Free.	—	—	—
§**Seeds,** viz.:—				
For agricultural purposes, not otherwise provided for	20 per cent.	—	—	20 per cent.
All, not otherwise provided for	Free.	—	—	—
Annatto, anise and star anise, canary, caraway, cardamon, chia, conium cicuta or hemlock, coriander, cummin, fennel, fenugreek, of forest trees, mustard, brown and white, sesamum, sugar cane, and other seeds not otherwise provided for	Free.	—	—	—
Castor* or castor beans (50 lbs. to bushel)	60 cts. per bush.	= per bush.	0 2 6	—
Celery	20 per cent.	—	—	20 per cent.
Cotton, for planting	20 per cent.	—	—	20 per cent.
Flax or linseed (56 lbs. to bushel)	20 cts. per bush.	= per bush.	0 0 10	—
PROVIDED, That no drawback shall be allowed on oil cake made from imported seed.				
Garden, flower, and all other, for horticultural and agricultural purposes, not otherwise provided for	20 per cent.	—	—	20 per cent.
Hemp	½ ct. per lb.	= per lb.	0 0 0¼	—
For horticultural purposes, not otherwise provided for	20 per cent.	—	—	20 per cent.
Jute	20 per cent.	—	—	20 per cent.

* An allowance can be made for weight of the pod as tare."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Seeds—*continued.*			£ s. d.	
For manufacturing purposes, not otherwise provided for - - -	Free.	—	—	—
Medicinal, crude, not otherwise provided for - - - -	Free.	—	—	—
Same, not crude - - -	20 per cent.	—	—	20 per cent.
Oil, of like character to hempseed and rapeseed, except linseed or flaxseed - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
Parsley - - - -	20 per cent.	—	—	20 per cent.
Poppy, as oil seeds - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
Rape - - - -	½ ct. per lb.	= per lb.	0 0 0¼	—
Sugar-beet - - - -	Free.	—	—	—
Seersucker cloth, silk and cotton, silk chief value - - - - -	60 per cent.	—	—	60 per cent.
Segars, cigarettes, and cheroots * -	$2·50 per lb. and 25 per cent.	= per lb.	0 10 5	+ 25 per cent
Also internal revenue tax as follows:—				
Segars and cheroots - - -	$6 per 1,000	= per 1,000	1 5 0	—
Cigarettes weighing not over 3 lbs. per 1,000 - - - - -	$1·75 per 1,000	= per 1,000	0 7 3½	—
Cigarettes weighing over 3 lbs. per 1,000 - - - - -	$6 per 1,000	= per 1,000	1 5 0	—
PROVIDED, That cigars shall be packed in boxes, not before used for that purpose, containing respectively, 25, 50, 100, 250, or 500 cigars each -				
PROVIDED FURTHER, That no cigars shall be imported unless the same are packed in boxes of not more than 500 in each box, and no entry of any imported cigars shall be allowed of less quantity than 3,000 in a single package.				
PROVIDED FURTHER, That all cigars on importation shall be placed in public store or bonded warehouse, and shall not be removed therefrom until they shall have been inspected, and a stamp affixed to each box indicating such inspections with the date thereof.				

* "No tare allowed for the mouth pieces of Russian cigarettes."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
§**Seines*** - - - - -	6½ cts. per lb.	= per lb.	0 0 3¼	—
§**Seneca** root - - - -	20 per cent.	—	—	20 per cent.
§**Senegal,** gum - - - -	Free.	—	—	—
§**Senna,** in leaves - - - -	Free.	—	—	—
§**Sepia** or cuttle fish bone - - -	Free.	—	—	—
§**Serges,** mohair or worsted, as worsted fabrics, viz. :—				
valued at not over 40 cts. per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
„ at over 40 cts. and not over 60 cts. per lb. -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 cts. and not over 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
„ at over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ silk, with a slight admixture of cotton, dutiable as "piece silks"	60 per cent.	—	—	60 per cent.
„ other (according to material).				
§**Sesame,** or sesamum seed - -	Free.	—	—	—
„ oil of - - - - -	Free.	—	—	—
§**Sewing** needles - - - -	25 per cent.	—	—	25 per cent.
„ machines, all iron, except the needle - -	35 per cent.	—	—	35 per cent.
„ „ iron, and 10 per cent. of steel - -	45 per cent.	—	—	45 per cent.
„ „ needles - -	$1 per 1,000 and 35 per cent.	=per 1,000	0 4 2	+35 per cent.
„ silk, in the gum or purified -	40 per cent.	—	—	40 per cent.
§**Sextants,** brass - - - -	35 per cent.	—	—	35 per cent.
„ glass and metal, only 5 per cent. glass - - -	40 per cent.	—	—	40 per cent.
§**Shaddocks.** *See* Damage on Fruit -	10 per cent.	—	—	10 per cent.
§**Shafts,** cast steel - - -	45 per cent.	—	—	45 per cent.
§**Shale,** per ton of 28 bushels, 80 lbs. to the bushel - - - -	75 cts. per ton	= per ton	0 3 1½	—
„ illuminating oil, distilled from -	40 cts. per gall.	= per gall.	0 1 8	—
§**Shark** skins - - - -	Free.	—	—	—
§**Shawls,** all (excepting linen, silk, and wool), even when manufactured several in a piece, but separated before importation, dutiable as wearing apparel.				

* An importation claimed to be a seine, but destitute of the usual weights, sinkers, and ropes necessary to constitute a complete "seine" within the meaning of the law imposing duties on "seines," was adjudged to be liable to duty as a flax wine at 40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Shawls, camels' hair, cashmere or Indian	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
„ cotton	35 per cent.	—	—	35 per cent.
„ Shetland, worsted	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
„ wool, worsted, and silk, embroidered	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
„ worsted, alpaca, or goat hair	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
„ worsted lace	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ woollen	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Shears, cloth	35 per cent.	—	—	35 per cent.
„ hedge or garden	45 per cent.	—	—	45 per cent.
„ pruning, as cutlery	35 per cent.	—	—	35 per cent.
„ sheep	45 per cent.	—	—	45 per cent.
Sheathing metal, all copper	45 per cent.	—	—	45 per cent.
„ or yellow metal *	3 cts. per lb.	= per lb.	0 0 1½	—
„ old brass, fit only for re-manufacture	15 per cent.	—	—	15 per cent.
„ paper	10 per cent.	—	—	10 per cent.
Sheep's casings, manufactured for sausage casings	Free.	—	—	—
Sheep, living	20 per cent.	—	—	20 per cent.
„ skin boas, as wool clothing	50 cts. per lb. and 40 per cent.	= per b.	0 2 1	+40 per cent.
„ skins, raw or unmanufactured, with the wool on (*see* also Wools on the Skin)	30 per cent.	—	—	30 per cent.
„ „ with wool on, finished, fit and intended for immediate use as rugs, dutiable as rugs	45 per cent.	—	—	45 per cent.
„ „ with wool on, dressed, but for other uses than as mats or rugs	20 per cent.	—	—	20 per cent.
Sheeting, Russia and other, of flax or hemp, brown and white	35 per cent.	—	—	35 per cent.

* Yellow sheathing metal and yellow metal bolts, of which the component part of chief value is copper, shall be deem manufactures of copper, and shall pay the duty now prescribed by law for manufactures of copper, and shall be entitled to t drawback allowed by law to copper and composition metal whenever the same shall be used in the construction or equipment repair of vessels built in the United States for the purpose of being employed in the foreign trade, including the trade betwe the Atlantic and Pacific ports of the United States.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Sheet brass - - - -	35 per cent.	—	—	35 per cent.
„ copper - - - -	45 per cent.	—	—	45 per cent.
„ iron, coated with tin by chemical bath and sold by weight and size	2½ cts. per lb.	= per lb.	0 0 1¼	—
„ „ common or black, not thinner than No. 20 wire gauge -	1¼ cts. per lb.	= per lb.	0 0 0⅝	—
„ „ common or black, thinner than No. 20, but not thinner than No. 25 - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
„ „ common or black, thinner than No. 25 - - -	1¾ cts. per lb.	= per lb.	0 0 0⅞	—
„ „ smooth or polished, all -	3 cts. per lb.	= per lb.	0 0 1½	—
„ lead - - - -	2¾ cts. per lb.	= per 100 lbs.	0 11 5½	—
„ music - - - -	20 per cent.	—	—	20 per cent.
Sheet rubber, coloured for dentists' use, partially vulcanized, but requiring further manufacture to fit it for use	20 per cent.	—	—	20 per cent.
„ rubber, rolled in sheets of uniform width and thickness, partially manufactured - - -	20 per cent.	—	—	20 per cent.
„ rubber, Para sheets, advanced beyond crude, but not vulcanized in any degree, or otherwise manufactured - - - -	10 per cent.	—	—	10 per cent.
„ steel, valued at 7 cts. or less per lb.	2¼ cts. per lb.	= per lb.	0 0 1⅛	—
„ „ valued at above 7 and not above 11 cts. per lb. -	3 cts. per lb.	= per lb.	0 0 1½	—
„ „ valued at above 11 cts. per lb.	3½ cts. per lb. and 10 per cent.	= per lb.	0 0 1¾	+ 10 per cent.
Sheets, willow, for making bonnets, hats, &c.	30 per cent.	—	—	30 per cent.
Shellac, gum - - - -	Free.	—	—	—
Shellfish - - - -	Free.	—	—	—
Shells, all kinds, unmanufactured, including those only cleansed and polished with acids - -	Free.	—	—	—
„ imported as merchandise, and that have undergone any process of manufacture by polishing or cutting - - -	35 per cent.	—	—	35 per cent.
„ ornamental and fancy, engraved, carved, printed, &c., except jewellery - - -	35 per cent.	—	—	35 per cent.
„ thin clippings of, called snail pearl, aurora pearl, &c., prepared for use in inlaid work -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Shell baskets and boxes - - -	35 per cent.	—	—	35 per cent.
„ gold - - - -	40 per cent.	—	—	40 per cent.
„ manufactures of, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ silver - - - -	40 per cent.	—	—	40 per cent.
„ tortoise, and other unmanufactured	Free.	—	—	—
Shingle bolts - - - -	Free.	—	—	—
Shingles, all - - - -	35 cts. per 1,000	= per 1,000	0 1 5½	—
Ship planking - - - -	Free.	—	—	—
„ timber - - - -	Free.	—	—	—
„ knees, as ship timber - -	Free.	—	—	—
Ships' equipments and repairs. *See* note below.*				

* The equipments,† or any part thereof, including boats, purchased for, or the expenses of repairs made in a foreign countr upon a vessel enrolled and licensed under the laws of the United States to engage in the foreign and coasting trade on th northern, north-eastern, and north-western frontiers of the United States, or a vessel intended to be employed in such trad shall, on the first arrival of such vessel in any port of the United States, be liable to entry and the payment of an ad-valore duty of fifty per centum on the cost thereof in such foreign country; and if the owner or master of such vessel shall wilfully a knowingly neglect or fail to report, make entry, and pay duties as herein required, such vessel, with her tackle, apparel, a furniture, shall be seized and forfeited.

If the owner or master of such vessel shall, however, furnish good and sufficient evidence that such vessel, while in the regul course of her voyage, was compelled, by stress of weather or other casualty, to put into such foreign port and purchase su equipments, or make such repairs, to secure the safety of the vessel to enable her to reach her port of destination, then it shall competent for the Secretary of the Treasury to remit or refund such duties, and such vessel shall not be liable to forfeiture, a no license or enrolment and license, or renewal of either, shall hereafter be issued to any such vessel until the collector to wh application is made for the same shall be satisfied, from the oath of the owner or master, that all such equipments and repa made within the year immediately preceding such application have been duly accounted for under the provisions of this and t preceding sections, and the duties accruing thereon duly paid; and if such owner or master shall refuse to take such oath, or ta it falsely, the vessel shall be seized and forfeited.

† Grain bags of foreign production and manufacture, which, under Department's ruling of November 28, 1871 (not publish in Synopsis), are exempted from payment of duty as part of the equipment of the vessel, cannot be transferred from the vessel which they belong to another vessel, without being first entered and subjected to the payment of duty.

As to duty on equipments of vessels *generally*, the Treasury Regulations of 1857 ruled that, "although no part of the prop
"equipment of a vessel arriving in the United States is liable to duty, such equipment is not to comprehend more than the us
"quantity of spare sails or other articles, and any redundancy becomes liable to duty, such as two sets of chains, for instance, wh
"one set constitutes a proper equipment of the vessel.

"If new sails or other articles procured abroad be claimed as a part of such equipment, it must be shown to the satisfaction
"the collector that they are necessary, with those on board, to complete her proper equipment, and are intended in good faith
"the exclusive use of the vessel, and to be retained for that use.

"If brought into the United States for the purpose of being sold, or transferred to another vessel, or any purpose other than
"use of the vessel bringing them, such sails or other articles procured abroad must be considered as merchandise, and subj
"either to the payment of duty or to seizure, as the facts may warrant.

"Anchors, sails, and chains, imported to be used for the equipment of a vessel, are liable to duty; and in a case where anch
"and chains were bonded on importation, entered for exportation, and placed on board the vessel as a part of her equipme
"it was decided by the Department that the export entry was a manifest evasion of the law, and that legal duties should
"collected."

Foreign chains imported to be left in the United States as mooring chains for a line of foreign steam-packets become liable, being landed, to duty as "manufactures of iron."

The free entry of a new rudder and stern-post imported to replace those lost by a vessel entering in distress was refused on ground that "there is no provision of law authorising such free entry."

Certain machinery of a vessel winter bound in the United States, exported for repair, was held to be dutiable on its return.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
§**Ships'** pumps, imported for repair of importing vessel	Free.	—	—	—
„ spyglasses or telescopes, any part steel	45 per cent.	—	—	45 per cent.
„ spyglasses or telescopes, all others, at the highest rates at which any of their component parts are liable.				
§**Shirt** fronts, linen, embroidered	40 per cent.	—	—	40 per cent.
§**Shirting** flannel, so-called, fulled	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
§**Shirts,** imitation merino*	35 per cent.	—	—	35 per cent.
„ bosoms for, not tamboured, linen	40 per cent.	—	—	40 per cent.
„ cotton	35 per cent.	—	—	35 per cent.
„ linen	40 per cent.	—	—	40 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ silk and cotton, silk chief value	60 per cent.	—	—	60 per cent.
„ woollen	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ woven or made on frames (except linen and silk)	35 per cent.	—	—	35 per cent.
§**Shoddy,** other than wool	20 per cent.	—	—	20 per cent.
„ woollen	12 cts. per lb.	= per lb.	0 0 6	—
§**Shoe** binding, cotton	35 per cent.	—	—	35 per cent.
„ „ linen	40 per cent.	—	—	40 per cent.
„ „ silk	60 per cent.	—	—	60 per cent.
„ cloths, duty the same as on like fabrics for other uses.				
„ horns	35 per cent.	—	—	35 per cent.
„ knives	35 per cent.	—	—	35 per cent.
„ lacets or lacings, of cotton	35 per cent.	—	—	35 per cent.
„ „ of silk and metal, silk chief value	60 per cent.	—	—	60 per cent.
„ patterns of bronzed leather, cut into form for upper part of shoe, and embroidered in silk	35 per cent.	—	—	35 per cent.
„ pincers or pinchers, of case hardened iron	35 per cent.	—	—	35 per cent.
„ thread	40 per cent.	—	—	40 per cent.
§**Shoes,** arctic, so-called, of rubber and wool, as wearing apparel	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ felt leather, part wool, as wearing apparel	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.

* "Cotton shirts, merino finish; this article, it seems, is composed wholly of cotton, and by raising a nap and some further application or process, a fine woolly surface and a close imitation of merino are produced."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Shoes, horse, iron - - -	35 per cent.	—	—	35 per cent.
„ „ part steel - - -	45 per cent.	—	—	45 per cent.
„ india rubber, with or without felted linings - - -	30 per cent.	—	—	30 per cent.
„ lasting or prunella - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ leather - - - -	35 per cent.	—	—	35 per cent.
„ nankeen or nankeen uppers -	35 per cent.	—	—	35 per cent.
„ silk, silk being component of chief value - - - - -	60 per cent.	—	—	60 per cent.
„ wholly or partly of wool - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Shooks, not otherwise provided for -	35 per cent.	—	—	35 per cent.
„ sugar box and packing cases, not otherwise provided for -	30 per cent.	—	—	30 per cent.
„ exported and returned to United States as barrels or boxes, either filled or empty, admitted under regulations -	Free.	—	—	—
Shot bags and shot belts, leather, or part leather - - - -	35 per cent.	—	—	35 per cent.
„ cast-iron - - - -	30 per cent.	—	—	30 per cent.
„ pouches, copper, or copper chief value	45 per cent.	—	—	45 per cent.
Shovels, fire, iron - - -	35 per cent.	—	—	35 per cent.
„ „ brass - - -	35 per cent.	—	—	35 per cent.
„ „ part steel - - -	45 per cent.	—	—	45 per cent.
„ „ with tongs and pokers, same as above.				
„ labourers' iron, with or without handles - -	35 per cent.	—	—	35 per cent.
„ „ steel, or part steel -	45 per cent.	—	—	45 per cent.
Show bills, lithographic - - -	25 per cent.	—	—	25 per cent.
Shrimps - - - - -	Free.	—	—	—
Shrubs, for Department of Agriculture or United States Botanical Garden	Free.	—	—	—
„ not otherwise provided for -	20 per cent.	—	—	20 per cent.
Shumac - - - - -	10 per cent.	—	—	10 per cent.
Shutters (steel) - - - -	45 per cent.	—	—	45 per cent.
Shuttlecocks and battledores - -	35 per cent.	—	—	35 per cent.
„ „ if toys for children -	50 per cent.	—	—	50 per cent.
Sickles, iron - - - -	35 per cent.	—	—	35 per cent.
„ steel, or part steel - -	45 per cent.	—	—	45 per cent.
Side-arms, except swords - -	35 per cent.	—	—	35 per cent.
Sieves, hair, lawn, or wire, wood chief component part - - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Silesias, as cottons.				
Silicates, alkaline, or of soda - -	½ ct. per lb.	= per lb.	0 0¼	—
Silk,* ærophanes, as silk veil goods -	60 per cent.	—	—	60 per cent.
„ all dress and piece - - -	60 per cent.	—	—	60 per cent.
„ all manufactures of, or of which silk shall be the component of chief value, not otherwise provided for -	60 per cent.	—	—	60 per cent.
„ all ready made clothing and wearing apparel of, or of which silk shall be a component material of chief value, not otherwise provided for -	60 per cent.	—	—	60 per cent.
„ and cotton binding - - -	50 per cent.	—	—	50 per cent.
„ and cotton hosiery, shirts and drawers, silk chief value - - -	60 per cent.	—	—	60 per cent.
„ and india-rubber, manufactures of, or of these and other materials -	50 per cent.	—	—	50 per cent.
„ and mohair twist - - -	50 per cent.	—	—	50 per cent.
„ and wood dress ornaments, silk chief value - - - -	60 per cent.	—	—	60 per cent.
„ aprons - - - -	60 per cent.	—	—	60 per cent.
„ barbe noires of black silk lace, ready for use, as silk clothing - -	60 per cent.	—	—	60 per cent.
„ bolting cloths - - -	Free.	—	—	—
„ bonnets - - - -	60 per cent.	—	—	60 per cent.
„ boots, bootees, shoes, and slippers, silk component of chief value -	60 per cent.	—	—	60 per cent.
„ braids - - - -	60 per cent.	—	—	60 per cent.
„ button cloths - - -	10 per cent.	—	—	10 per cent.
„ buttons, wholly or partly of (silk chief value), and which contain no wool, worsted, or goats' hair -	60 per cent.	—	—	60 per cent.
„ caps - - - -	60 per cent.	—	—	60 per cent.
„ " Chamberg blanch " - -	60 per cent.	—	—	60 per cent.
„ chemisettes - - - -	60 per cent.	—	—	60 per cent.
„ cocoons - - - -	Free.	—	—	—
„ cords - - - -	60 per cent.	—	—	60 per cent.
„ crapes for veils - - -	60 per cent.	—	—	60 per cent.
same, if piece silks, or for dresses -	60 per cent.	—	—	60 per cent.
„ crepe de chene - - -	60 per cent.	—	—	60 per cent.
„ " Donna Maria " (for veils) - -	60 per cent.	—	—	60 per cent.
„ drawers - - - -	60 per cent.	—	—	60 per cent.

* " Silk purified from the gum and dyed, and that can be used without further manufacture, for weaving and other purposes, cannot fall within the provision for ' silk in the gum,' &c., but is to be embraced in the classification of ' manufactures of silk, or ' of which silk is the component material of chief value, not otherwise provided for.' "

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Silk floss*	35 per cent.	—	—	35 per cent.
„ fringes	60 per cent.	—	—	60 per cent.
„ galloons	60 per cent.	—	—	60 per cent.
„ gloves	60 per cent.	—	—	60 per cent.
„ „ patent, silk and cotton, silk chief value, as silk clothing	60 per cent.	—	—	60 per cent.
„ grenadines, dress goods	60 per cent.	—	—	60 per cent.
„ „ for veils	60 per cent.	—	—	60 per cent.
„ handkerchiefs	60 per cent.	—	—	60 per cent.
„ hat bands (so known commercially, but having one or two cotton threads in the edge), as silk trimmings	60 per cent.	—	—	60 per cent.
„ hats	60 per cent.	—	—	60 per cent.
„ head nets, with gum elastic cords	60 per cent.	—	—	60 per cent.
„ hose	60 per cent.	—	—	60 per cent.
„ in the gum not more advanced than singles, tram, and thrown or organzine	35 per cent.	—	—	35 per cent.
„ Japanese silks or poplins, silk and cotton, silk chief value	60 per cent.	—	—	60 per cent.
„ lace parasol covers	60 per cent.	—	—	60 per cent.
„ laces	60 per cent.	—	—	60 per cent.
„ laces, commercially known as "silk laces"	60 per cent.	—	—	60 per cent.
„ lace shawls or "points"	60 per cent.	—	—	60 per cent.
„ lacets, silk and metal, silk chief value	60 per cent.	—	—	60 per cent.
„ mantillas	60 per cent.	—	—	60 per cent.
„ mitts	60 per cent.	—	—	60 per cent.
„ neckties	60 per cent.	—	—	60 per cent.
„ oil cloth	60 per cent.	—	—	60 per cent.
„ organzine, not in the gum	60 per cent.	—	—	60 per cent.
„ ornaments for head dresses	60 per cent.	—	—	60 per cent.
or part silk ornaments for dresses and outside ornaments, silk chief value, and which contain no wool, worsted, or goats' hair	60 per cent.	—	—	60 per cent.
„ pelerines	60 per cent.	—	—	60 per cent.
„ plush, hatters', silk and cotton, cotton chief value	25 per cent.	—	—	25 per cent.
same, silk chief value	60 per cent.	—	—	60 per cent.

* Floss-silk is "well known to the trade as a fine loose article without twist," and does not embrace "a double and twiste
"thread of silk." The latter is liable to 60 per centum duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Silk points, so called	60 per cent.	—	—	60 per cent.
„ pongees	60 per cent.	—	—	60 per cent.
„ quillings, with cotton edges	60 per cent.	—	—	60 per cent.
„ raw, or as reeled from the cocoon, not being doubled, twisted, or advanced in manufacture any way*	Free.	—	—	—
„ reps, natural silk and cotton	50 per cent.	—	—	50 per cent.
„ „ silk, or silk chief value	60 per cent.	—	—	60 per cent.
„ ribbons	60 per cent.	—	—	60 per cent.
„ „ "Bozeaux," or cotton edge, or cord edge, or round edge	50 per cent.	—	—	50 per cent.
„ „ "Faille"	60 per cent.	—	—	60 per cent.
„ „ velvet, of silk and cotton, silk chief value	60 per cent.	—	—	60 per cent.
„ „ „ with cotton corded edge	50 per cent.	—	—	50 per cent.
„ scarfs	60 per cent.	—	—	60 per cent.
„ scraps, or strips of, fit for use in making neckties, bows, buttons, &c.	60 per cent.	—	—	60 per cent.
„ seersucker cloth, silk and cotton, silk chief value	60 per cent.	—	—	60 per cent.
„ serges, with slight admixture of cotton, dutiable as "piece silks"	60 per cent.	—	—	60 per cent.
„ sewing, in the gum, or purified	40 per cent.	—	—	40 per cent.
„ shawls	60 per cent.	—	—	60 per cent.
„ shirts	60 per cent.	—	—	60 per cent.
„ single and tram	60 per cent.	—	—	60 per cent.
„ spot nets	60 per cent.	—	—	60 per cent.
„ spun, for filling, in skeins or cops	35 per cent.	—	—	35 per cent.
„ stockings	60 per cent.	—	—	60 per cent.
„ suspenders	60 per cent.	—	—	60 per cent.
„ tassels	60 per cent.	—	—	60 per cent.
„ "Taysaam, re-reeled"	Free.	—	—	—
„ trimmings, silk chief value	60 per cent.	—	—	60 per cent.
„ turbans	60 per cent.	—	—	60 per cent.
„ twist	60 per cent.	—	—	60 per cent.
„ „ exclusively for buttons	10 per cent.	—	—	10 per cent.
„ „ so called, used for tassels, fringes, and like purposes	60 per cent.	—	—	60 per cent.
„ veil goods	60 per cent.	—	—	60 per cent.
„ veils	60 per cent.	—	—	60 per cent.

* "When re-reeled in a country other than that of production, is subject to duty."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Silk velvets, or velvets of which silk is the component of chief value -	60 per cent.	—	—	60 per cent.
„ vestings* - - - -	60 per cent.	—	—	60 per cent.
„ vests - - - -	60 per cent.	—	—	60 per cent.
„ violin strings - - -	60 per cent.	—	—	60 per cent.
„ waste - - - -	Free.	—	—	—
„ watch chains - - -	60 per cent.	—	—	60 per cent.
„ „ guards, silk and cotton, silk chief value - - -	60 per cent.	—	—	60 per cent.
„ webbing - - - -	60 per cent.	—	—	60 per cent.
„ yarn - - - -	60 per cent.	—	—	60 per cent.
Silkworm eggs - - - -	Free.	—	—	—
„ gut - - - -	Free.	—	—	—
Silver, argentine or albata, unmanufactured - - - -	35 per cent.	—	—	35 per cent.
„ bullion - - - -	Free.	—	—	—
„ coins - - - -	Free.	—	—	—
„ embroideries in - - -	35 per cent.	—	—	35 per cent.
„ epaulets, galloons, &c. - -	35 per cent.	—	—	35 per cent.
„ German, manufactures of, not otherwise provided for -	40 per cent.	—	—	40 per cent.
„ leaf, package of 500 leaves -	75 cts. per package	= per package	0 3 1½	—
„ manufactures of, not otherwise provided for - - -	40 per cent.	—	—	40 per cent.
„ medals - - - -	Free.	—	—	—
„ nitrate of (med. prep.) - -	40 per cent.	—	—	40 per cent.
„ old and unfit for use without re-manufacture, as bullion -	Free.	—	—	—
„ ore - - - -	Free.	—	—	—
„ plated coach, harness and saddlery furniture and hardware -	35 per cent.	—	—	35 per cent.
„ plated metal - - -	35 per cent.	—	—	35 per cent.
„ rattles, for children - -	50 per cent.	—	—	50 per cent.
„ sweepings of - - -	Free.	—	—	—
„ watches, watch cases, and watch chains - - - -	25 per cent.	—	—	25 per cent.
„ wire - - - -	40 per cent.	—	—	40 per cent.
Silvered wire - - - -	35 per cent.	—	—	35 per cent.
Similitudes. *See* note to manufactures unenumerated.				
Sinews - - - - -	10 per cent.	—	—	10 per cent.
Singing birds - - - -	Free.	—	—	—

* Silk and cotton vestings so styled, but sold as a pure silk article, were found upon examination to contain a very small proportion of cotton, and were properly classified under this provision as silk vestings, subject to a duty of 60 per cent. ad valorem.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Sirup of sugar, and of sugar cane juice, melado, concentrated melado, concentrated molasses, and tank bottoms - - - -	1½ cts. per lb.	= per lb.	0 0 0¾	—
Sisal grass (as jute) - - -	$15 per ton	= per ton.	3 2 6	—
„ manufactures of, not otherwise provided for - - -	30 per cent.	—	—	30 per cent.
Size, gold - - - -	Free.	—	—	—
„ patent - - - -	20 per cent.	—	—	20 per cent.
Skates, at 20 cts. or less per pair -	8 cts. per pair	= per 100 pr.	1 13 4	—
„ at over 20 cts. per pair - -	35 per cent.	—	—	35 per cent.
Skeletons, and other preparations of anatomy - - -	Free.	—	—	—
Skins, asses', raw, unmanufactured -	Free.	—	—	—
„ asses' tanned - - -	25 per cent.	—	—	25 per cent.
„ raw or uncured, whether dried, salted, or pickled - -	Free.	—	—	—
„ bird, dressed with feathers on -	20 per cent.	—	—	20 per cent.
„ bird, imported for millinery purposes, being the entire skins, with plumage, bills, and feet of small birds, temporarily stuffed, &c., for preservation during voyage, dutiable as crude ornamental feathers - -	25 per cent.	—	—	25 per cent.
„ calf, tanned, or tanned and dressed	25 per cent.	—	—	25 per cent.
„ calf, glazed - - -	35 per cent.	—	—	35 per cent.
„ chamois - - - -	20 per cent.	—	—	20 per cent.
„ deer, raw - - - -	Free.	—	—	—
„ „ dressed and finished -	20 per cent.	—	—	20 per cent.
„ „ tanned - - -	25 per cent.	—	—	25 per cent.
„ dressed with alum only - -	20 per cent.	—	—	20 per cent.
„ dressed and finished, not otherwise provided for - - -	20 per cent.	—	—	20 per cent.
„ fish - - - -	20 per cent.	—	—	20 per cent.
„ fox, white, dressed - -	20 per cent.	—	—	20 per cent.
„ fox, white, undressed - -	Free.	—	—	—
„ fur, dressed - - -	20 per cent.	—	—	20 per cent.
„ fur, all kinds, not dressed in any manner - - -	Free.	—	—	—
„ goat, raw - - - -	Free.	—	—	—
„ goat, Angora, raw, or unmanufactured, with the wool on. *See* Wool on the Skin - -	30 per cent. on the skins alone.	—	—	30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Skins, goat, Angora, raw, without the wool, unmanufactured - -	Free.	—	—	—
„ goose and swan, dressed with feathers on - - -	20 per cent.	—	—	20 per cent.
„ goldbeaters* and moulds - -	Free.	—	—	—
„ in the hair, raw - - -	Free.	—	—	—
„ japanned, patent or enamelled -	35 per cent.	—	—	35 per cent.
„ lamb, whether Astracan or Persian, dressed as furs - - -	20 per cent.	—	—	20 per cent.
„ leopard, raw - - -	Free.	—	—	—
„ „ dressed - - -	20 per cent.	—	—	20 per cent.
„ mink, as fur skins.				
„ morocco finished - - -	35 per cent.	—	—	35 per cent.
„ for morocco, tanned, but unfinished	10 per cent.	—	—	10 per cent.
„ nutria, raw - - -	Free.	—	—	—
„ "pulled," that is, of the hair, which grows beyond the fur, classified as furs on the skin undressed -	Free.	—	—	—
„ sable fur, cleaned and tipped, or partly dyed, but pelts wholly undressed - - -	Free.	—	—	—
„ sausage - - - -	Free.	—	—	—
„ seal, dressed - - -	20 per cent.	—	—	20 per cent.
„ shark - - - -	Free.	—	—	—
„ sheep or goats', with wool or hair on, finished, fit and intended for immediate use as rugs, dutiable as rugs - - - -	45 per cent.	—	—	45 per cent.
„ sheep, raw or unmanufactured, with wool on. *See also* Wool on the Skin - - - -	30 per cent. on the skins alone.	—	—	30 per cent.
„ sheep, dressed, with wool on, for other uses than as mats or rugs	20 per cent.	—	—	20 per cent.
„ swan, with feathers on, dressed	20 per cent.	—	—	20 per cent.
„ tanned and dressed, all kinds, wholly or partially - -	25 per cent.	—	—	25 per cent.
„ vicuna, with the wool on. *See also* Wool on the Skin -	30 per cent. on the skin alone.	—	—	30 per cent.
Skirting, Paris, as balmorals - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Skivers, dried, salted, or pickled, as "skins"	Free.	—	—	—
„ tanned, not otherwise provided for	25 per cent.	—	—	25 per cent.

* "An article styled gold beaters' skins, but not made of the same material nor adapted to the same uses, was held to be dutiable as a manufacture of bladder at 30 per centum ad valorem."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Slab iron, so called, for manufacture of fire and burglar proof safes, dutiable either as plate or sheet iron, according to its thickness.			£ s. d.	
Slate, manufactures of, except roofing slates - - - -	40 per cent.	—	—	40 per cent.
„ split in the quarry, not skipped or trimmed nor fitted for use -	20 per cent.	—	—	20 per cent.
„ if fitted and ready for use - -	40 per cent.	—	—	40 per cent.
Slates - - - - - -	40 per cent.	—	—	40 per cent.
„ patent, iron plates coated with mineral powder, &c. - -	35 per cent.	—	—	35 per cent.
„ porcelain - - - - -	45 per cent.	—	—	45 per cent.
„ porcelain, decorated, for settings of jewellery, fancy boxes, and furniture, classified as porcelain ware - - - -	50 per cent.	—	—	50 per cent.
„ roofing - - - - -	35 per cent.	—	—	35 per cent.
Sledges, blacksmiths' - - -	2½ cts. per lb.	= per 100 lbs. =per ton	0 10 5 11 13 4	—
Sleeve buttons, glass - - -	40 per cent.	—	—	40 per cent.
„ „ if not jewellery, dutiable according to material, as personal ornaments without reduction.				
same, mother-of-pearl, as manufactures of shell, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
Sleighs of immigrants, brought for their own use, and having been used by them in the countries from which they have emigrated - - - - -	Free.	—	—	—
Slipper cloths, duty the same as on like fabrics for other uses.				
Slippers, as boots and shoes.				
Slippers, cotton velvet uppers for -	35 per cent.	—	—	35 per cent.
Slipper patterns, cotton velvet, embroidered with floss silk, silk chief value -	35 per cent.	—	—	35 per cent.
„ „ embroidered, containing no wool - -	35 per cent.	—	—	35 per cent.
„ „ embroidered, subject to same duty as like fabrics for other uses.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Slipper patterns, paper, engraved and printed in colours -	25 per cent.	—	—	25 per cent.
„ „ wool - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Smalts - - - - -	20 per cent.	—	—	20 per cent.
Smelts in oil, put up as sardines, and branded "Eperlans à l'huile," as sardines	50 per cent.	—	—	50 per cent.
Smokers' articles, viz. :—				
Cotton fuse, manufactured for and used by smokers - - -	75 per cent.	—	—	75 per cent.
Cases, pipe stems, mountings, and all parts of pipes and pipe fixtures, and all smokers' articles - -	75 per cent.	—	—	75 per cent.
Cases, &c., if copper or other metals are component of chief value -	75 per cent.	—	—	75 per cent.
Pipe bowls or pipe heads of every description, including common clay -	$1½ per gross and 75 per cent.	=per gross	0 6 3	+75 per cent.
Pipes, coloured clay - - -	$1½ per gross and 75 per cent.	=per gross	0 6 3	+75 per cent.
Pipes, meerschaum, wood, porcelain, lava, and all other tobacco smoking, except common white clay - -	$1½ per gross and 75 per cent.	=per gross	0 6 3	+75 per cent.
Pipes of common or white clay -	35 per cent.	—	—	35 per cent.
Pipes, white clay, with india-rubber bands at tips, or otherwise advanced beyond the common white clay -	$1½ per gross and 75 per cent.	=per gross	0 6 3	+75 per cent.
Smoking opium - - - -	$6 per lb.	= per lb.	1 5 0	—
Snails - - - - -	Free.	—	—	—
Snake root, crude drug - - -	20 per cent.	—	—	20 per cent.
Snuff, and snuff flour - - -	50 cts. per lb. and internal revenue tax of 32 cts. per lb.	= per lb.	0 3 5	—
„ flour, unprepared, in whole or in part - - - -	50 cts. per lb.	= per lb.	0 2 1	—
Snuffers and snuffer trays, according to material.				
Soap, fancy, perfumed, honey, transparent, and all descriptions of toilet and shaving soap - - -	10 cts. per lb. and 25 per cent.	= per lb.	0 0 5	+25 per cent.
„ all other, not otherwise provided for	1 ct. per lb. and 30 per cent.	= per lb.	0 0 0½	+ 30 per cent.
„ Castile - - - -	1 ct. per lb. and 30 per cent.	= per lb.	0 0 0½	+30 per cent.
„ pans, according to materials.				
„ soft - - - - -	1 ct. per lb. and 30 per cent.	= per lb.	0 0 0½	+30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Soap, stocks and stuffs - - -	Free.	—	—	—
„ turpentine, rosin or common -	1 ct. per lb. and 30 per cent.	= per lb.	0 0 0½	+30 per cent.
„ wash balls - - - - -	10 cts. per lb. and 25 per cent.	= per lb.	0 0 5	+25 per cent.
„ Windsor - - - - -	10 cts. per lb. and 25 per cent.	= per lb.	0 0 5	+25 per cent.
Socket chisels and other like edged tools -	45 per cent.	—	—	45 per cent.
Socks, cotton* - - - - -	35 per cent.	—	—	35 per cent.
„ linen or thread - - -	40 per cent.	—	—	40 per cent.
„ made on frames, except silk or linen, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ silk - - - - -	60 per cent.	—	—	60 per cent.
„ woollen or worsted, as woollen clothing - - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ knit goods, wholly or partly of wool, worsted, the hair of the alpaca, goat or other like animals:				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 and not over 60 cts. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 and not over 80 cts. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Societies, philosophical, educational, scientific, or literary, or for the encouragement of the fine arts, all philosophical and scientific apparatus, instruments, and preparations, statuary, casts of marble, bronze, alabaster, or plaster of Paris, paintings, drawings, and etchings, specially imported in good faith for the use of, and not intended for sale - - - -	Free	—	—	—
„ religious, philosophical apparatus and instruments, specially imported in good faith for the use of - - - - -	15 per cent.	—	—	15 per cent.

"Cotton socks with a narrow coloured stripe at the top for trade mark could not, under the Act of 1857, be classified with 'manufactures composed wholly of cotton which are bleached, printed, painted, or dyed,' but belong to the classification in schedule 'E.' of 'caps, gloves, leggings, &c., made on frames,' composed wholly of cotton."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Societies, philosophical, literary, or religious, or for the encouragement of the fine arts, books, maps, and charts (not more than two copies in any one invoice), regalia, gems, statues, and specimens of sculpture, specially imported in good faith, for the use of - - -	Free.	—	—	—
Soda, acetate or pyrolignate of, crude or refined - - - -	25 cts. per lb.	= per lb.	0 1 0½	—
„ all carbonates of, by whatever name designated, not otherwise provided for - - -	20 per cent.	—	—	20 per cent.
„ arseniate - - - -	20 per cent.	—	—	20 per cent.
„ ash - - - -	¼ ct. per lb.	= per 100 lbs.	0 1 0½	—
„ bicarbonate of - - -	1½ ct. per lb.	= per 100 lbs.	0 6 3	—
„ caustic - - - -	1½ ct. per lb.	= per 100 lbs.	0 6 3	—
„ iodate of - - - -	20 per cent.	—	—	20 per cent.
„ hydriodate of - - -	20 per cent.	—	—	20 per cent.
„ hyposulphate of - - -	20 per cent.	—	—	20 per cent.
„ lye - - - -	20 per cent.	—	—	20 per cent.
„ nitrate of, or cubic nitre - -	Free.	—	—	—
„ phosphate of, crude - -	20 per cent.	—	—	20 per cent.
„ „ as medicinal preparation	40 per cent.	—	—	40 per cent.
„ powders - - - -	20 per cent.	—	—	20 per cent.
„ sal - - - -	¼ ct. per lb.	= per 100 lbs.	0 1 0½	—
„ salts of, not otherwise provided for	20 per cent.	—	—	20 per cent.
„ salts of, not otherwise provided for, if medicinal preparations -	40 per cent.	—	—	40 per cent.
„ silicate of - - - -	½ ct. per lb.	= per 100 lbs.	0 2 1	—
„ stannate of, composed of peroxyd of tin and caustic soda, peroxyd chief value - - -	30 per cent.	—	—	30 per cent.
„ water machinery, according to material.				
water, in bottles or jugs containing not over 1 quart - -	3 cts. each and 25 per cent.	= per doz.	0 1 6	+ 25 per cent.
„ „ containing over 1 quart, for each additional quart or fractional part thereof -	3 cts. and 5 per cent.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
§ **Soda** water, not in bottles - -	30 per cent.	—	—	30 per cent.
§ **Sodium** (metal) - - - -	20 per cent.	—	—	20 per cent.
§ **Solanine** - - - -	40 per cent.	—	—	40 per cent.
§ **Soles,** cork, as manufactures of cork -	30 per cent.	—	—	30 per cent.
§ **Sounds,** of cod, hake, and other fish, dried, as fish glue - - -	Free.	—	—	—
„ cod, salted in barrels, as fish not specified, pickled in barrels	$1½ per barrel.	= per bbl.	0 6 3	—
§ **Souvenirs,** all - - - -	35 per cent.	—	—	35 per cent.
If cotton, wool, worsted, metals, paper, india rubber, straw, gutta percha, skins, bone, ivory, horn, or leather, chief value - - -	35 per cent.	—	—	35 per cent.
§ **Soy** - - - - -	35 per cent.	—	—	35 per cent.
§ **Spades,** iron - - - -	35 per cent.	—	—	35 per cent.
„ wholly or in part of steel -	45 per cent.	—	—	45 per cent.
§ **Spanish** brown - - - -	25 per cent.	—	—	25 per cent.
„ flies (cantharides) - -	Free.	—	—	—
„ grass (esparto), for manufacture of paper - - -	Free.	—	—	—
„ mackerel, thon marine, or tunny	50 cts. per 100 lbs.	= per 100lbs.	0 2 1	—
§ **Spar,** ornaments of - - -	30 per cent.	—	—	30 per cent.
§ **Spars,** wood - - - -	20 per cent.	—	—	20 per cent.
§ **Sparterre** for bonnets, hats, &c. - -	Free.	—	—	—
§ **Spatulas,** as cutlery - - -	35 per cent.	—	—	35 per cent.
§ **Specimens** of natural history,* botany and mineralogy, when for cabinets, as objects of taste or science, and not for sale - - - - -	Free.	—	—	—
§ **Spectacles,** glasses or pebbles for, manufactured - - -	40 per cent.	—	—	40 per cent.
„ pebbles for, Brazil or other, rough - - -	Free.	—	—	—
„ part steel - - -	45 per cent.	—	—	45 per cent.
„ all other - - -	40 per cent.	—	—	40 per cent.
§ **Spelter,** manufactured in blocks or pigs	1½ ct. per lb.	= per 100 lbs. = per ton	0 6 3 7 0 0	—

* "The term 'specimens of natural history' comprehends only articles imported for the cabinet of the naturalist, and has no application to living animals."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Spelter, in sheets	2¼ cts. per lb.	= per 100 lbs. = per ton	0 9 4½ / 10 10 0	—
„ manufactures of	35 per cent.	—	—	35 per cent.
Sperm or **Spermaceti** oil	20 per cent.	—	—	20 per cent.
Same of American fisheries	Free.	—	—	—
Spices, all kinds, not otherwise provided for, unground	20 cts. per lb.	= per lb.	0 0 10	—
when ground or prepared	30 cts. per lb.	= per lb.	0 1 3	—
Spiegel, as pig iron	$7 per ton.	= per ton.	1 9 2	—
Spikes, brass or composition	35 per cent.	—	—	35 per cent.
„ copper or copper chief value	45 per cent.	—	—	45 per cent.
„ for railroads. *See* note to Railroad chairs	2½ cts. per lb.	= per 100 lbs. = per ton	0 10 5 / 11 13 4	—
„ iron, wrought	2½ cts. per lb.	= per 100 lbs. = per ton	0 10 5 / 11 13 4	—
„ iron, cut	1½ cts. per lb.	= per 100 lbs. = per ton	0 6 3 / 7 0 0	—
Spiles for wharves, other than rough or round	20 per cent.	—	—	20 per cent.
Spinning machinery, according to material.				
Spindles, steel	45 per cent.	—	—	45 per cent.
Spirits, spirituous beverages and compounds. *See* Liquors	$2 per proof gall.	= per pf. gall.	0 8 4	—
„ lac	Free.	—	—	—
„ of nitric ether	50 cts. per lb.	= per lb.	0 2 1	—
„ of turpentine	30 cts. per gall.	= per gall.	0 1 3	—
„ yellow	20 per cent.	—	—	20 per cent.
Splicebars, iron, wrought	2 cts. per lb.	= per 100 lbs. = per ton	0 8 4 / 9 6 8	—
Spokeshaves, part steel	45 per cent.	—	—	45 per cent.
Spokes, for wheels, wood	35 per cent.	—	—	35 per cent.
Sponges	20 per cent.	—	—	20 per cent.
Spoons (according to material).				
Sporting gun wads, all kinds	35 per cent.	—	—	35 per cent.
Spot nets, silk	60 per cent.	—	—	60 per cent.
Sprigs, iron, cut, not over 16 ozs. to the 1,000	2½ cts. per 1,000	= per 1,000	0 0 1¼	—
„ exceeding 16 ozs. to the 1,000	3 cts. per lb.	= per lb.	0 0 1½	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Springs, iron wire, spiral, for furniture -	2 cts. per lb. and 15 per cent.	= per 100 lbs.	0 8 4	+ 15 per cent.
„ steel, for wigs - - -	45 per cent.	—	—	45 per cent.
„ „ known as "crinoline steel," classed as "steel crinoline wire"	9 cts. per lb. and 10 per cent.	= per lb.	0 0 4½	+ 10 per cent.
Spring steel, German - - -	30 per cent.	—	—	30 per cent.
Spunk - - - - -	Free.	—	—	—
Spurs, as saddlery - - -	35 per cent.	—	—	35 per cent.
Spurs and stilts, for manufacturing earthenware - - - - -	Free.	—	—	—
Spy glasses or telescopes, ships', any part steel - - - - -	45 per cent.	—	—	45 per cent.
„ glasses or telescopes, ships', all others, at the highest rates to which any of their component parts are liable.				
Squares, iron, marked on one side -	3 cts. per lb. and 30 per cent.	= per 100 lbs.	0 12 6	+ 30 per cent.
„ all other, of iron or steel -	6 cts. per lb. and 30 per cent.	= per 100 lbs.	1 5 0	+ 30 per cent.
Square wire, of iron, to make stretchers for umbrellas, sunshades, and parasols, cut into pieces not exceeding the length therefor -	35 per cent.	—	—	35 per cent.
same, of steel, or part steel -	45 per cent.	—	—	45 per cent.
Squills or scilla - - - -	Free.	—	—	—
Squirrel tails, dyed or dressed - -	20 per cent.	—	—	20 per cent.
Stained or coloured window glass, in sheets, for manufacturing church windows, is dutiable by the sq. foot, the same as uncoloured glass of the same kind				
Stair rods and eyes, brass - -	35 per cent.	—	—	35 per cent.
Stannate of soda, composed of peroxyd of tin and caustic soda, peroxyd chief value - - - - - -	30 per cent.	—	—	30 per cent.
Starch, of potatoes or corn - -	1 ct. per lb. and 20 per cent.	= per lb.	0 0 0½	+ 20 per cent.
Starch, of rice or other material -	3 cts. per lb. and 20 per cent.	= per lb.	0 0 1½	+ 20 per cent.
„ burnt or gum substitute - -	10 per cent.	—	—	10 per cent.
Stars, metal - - - -	35 per cent.	—	—	35 per cent.
Stationery - - - -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Statuary, all not otherwise provided for* The term "statuary" as used in the laws now in force imposing duties on foreign importations shall be understood to include professional productions of a statuary or of a sculptor only.	10 per cent.	—	—	10 per cent.
„ by American artists, duly certified as prescribed - -	Free.	—	—	—
„ imported for presentation to national institutions, or to any state or municipal corporation - - -	Free.	—	—	—
„ specially imported in good faith for the use of any society or institution incorporated or established for philosophical, educational, scientific, or literary purposes, or encouragement of the fine arts, and not intended for sale -	Free.	—	—	—
Statues, of alabaster, marble, or wood, carved - - -	10 per cent.	—	—	10 per cent.
„ of brass or bronze - -	35 per cent.	—	—	35 per cent.
„ plaster, cast - - -	40 per cent.	—	—	40 per cent.
„ terra cotta, in bas-relief -	40 per cent.	—	—	40 per cent.
„ specially imported in good faith for the use of any society incorporated or established for philosophical, literary, or religious purposes, or for the encouragement of the fine arts, or for the use or by the order of any college, academy, school, or seminary of learning - - -	Free.	—	—	—

* Vases adorned with figures, constituting their chief value, cannot be considered "statuary."

Nor can a pedestal, the work of an American artist abroad, which is neither surmounted nor accomponied by statues or figure, but designed for statuary made in the United States.

But in case of an importation of a marble monument composed of several pieces of statuary, entitled to free entry as the work or production of an American artist, the base or pedestal is also exempt from duty when imported with the statue, it being shown that the entire work is that of an American artist residing abroad.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Statuettes, bronze	35 per cent.	—	—	35 per cent.
„ copper	45 per cent.	—	—	45 per cent.
„ plaster, cast	40 per cent.	—	—	40 per cent.
„ silver	40 per cent.	—	—	40 per cent.
„ spelter	35 per cent.	—	—	35 per cent.
Stavebolts, including heading bolts	Free.	—	—	—
Stavesacre, crude	Free.	—	—	—
Staves for pipes, hogsheads, or other casks	10 per cent.	—	—	10 per cent.
„ other, undressed	20 per cent.	—	—	20 per cent.
„ shaved, grooved, and fitted for setting up into barrels, known as shooks	35 per cent.	—	—	35 per cent.
Steam, cranes, engines, hammers, hoists, ploughs, pumps, rollers, and other machinery worked by steam.				
„ if iron, the chief component part	35 per cent.	—	—	35 per cent.
„ if steel, the chief component part	45 per cent.	—	—	45 per cent.
„ engines, iron for, or parts of, wrought, weighing each 25 lbs. or more	2 cts. per lb.	= per lb.	0 0 1	—
„ flues, wrought	3½ cts. per lb.	= per 100 lbs.	0 14 7	—
„ pipes, cast	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
„ tubes, wrought	3½ cts. per lb.	= per 100 lbs.	0 14 7	—
Steamers, small iron, imported as cargo	35 per cent.	—	—	35 per cent.
Stearine, palm nut, as soap stock	Free.	—	—	—
Steel, made by Martin Siemen's process, and called "iron," classified as steel in bars, &c. All metal converted, cast, or made from iron by the Bessemer or pneumatic process, of whatever form or description, shall be classed as "steel."				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Steel, in bars, billets, coils, ingots, and sheets.				
valued at 7 cts. or less per lb.*	2¼ cts. per lb.	= per 100 lbs. = per ton	0 9 4½ / 10 10 0	—
valued at above 7 cts. and not above 11 cts. per lb. -	3 cts. per lb.	= per 100 lbs. = per ton	0 12 6 / 14 0 0	—
valued at above 11 cts. per lb.	3½ cts. per lb. and 10 per cent.	= per 100 lbs. = per ton	0 14 7 / 16 6 8	+ 10 per cent.
,, as cross cuts, as steel in sheets.				
,, "axe shaped" - - -	30 per cent.	—	—	30 per cent.
,, "Bessemer sheet iron," so called, as steel in sheets. [*See* above.]				
,, bars, slightly tapered - -	30 per cent.	—	—	30 per cent.
,, buttons - - - -	30 per cent.	—	—	30 per cent.
,, blooms - - - -	45 per cent.	—	—	45 per cent.
,, cast, tires, axles, shafts, and other forgings in the rough - -	45 per cent.	—	—	45 per cent.
same, manufactured, wholly or in part	45 per cent.	—	—	45 per cent.
,, cast, in coils - - -	30 per cent.	—	—	30 per cent.
,, chains, if neither jewellery nor personal ornaments - -	45 per cent.	—	—	45 per cent.
,, cutting or hay knives, reaping hooks, scythes, and sickles, wholly or partly of - - -	45 per cent.	—	—	45 per cent.
	45 per cent.	—	—	45 per cent.
,, fish plates - - -	45 per cent.	—	—	45 per cent.
,, foil blades - - -	45 per cent.	—	—	45 per cent.
,, gun-barrel moulds, not in bars -	45 per cent.	—	—	45 per cent.
,, hammers, wholly or partly of -	45 per cent.	—	—	45 per cent.
,, knife blades - - -	45 per cent.	—	—	45 per cent.
,, locomotive tires - - -	45 per cent.	—	—	45 per cent.
,, in any form, not otherwise provided for - - -	30 per cent.	—	—	30 per cent.
,, manufactures, wholly or partly of, not otherwise provided for -	45 per cent.	—	—	45 per cent.
,, pader, as a manufacture of steel -	45 per cent.	—	—	45 per cent.
,, plates, engraved - - -	25 per cent.	—	—	25 per cent.

* "Steel in sheets, invoiced as the best cross-cuts, though it may be used for saws, should *not* be classified as cross-cut saw partially manufactured, at ten cents. per lineal foot, since the same material may be used for hay-knives, mowing-machine knive and other purposes. It should be classified as 'steel in sheets,' and pay duty according to its value per pound."
So of steel sheets of a circular form.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Steel, plough, so called, as steel in sheets. [*See* previous page.]				
„ railway bars - - -	1¼ ct. per lb.	= per 100 lbs. = per ton	0 5 2½ / 5 16 8	—
„ railway bars, in part of steel -	1 ct. per lb.	= per 100 lbs. = per ton	0 4 2 / 4 13 4	—
„ scrap - - - -	30 per cent.	—	—	30 per cent.
„ shovels and spades, wholly or partly of - - - -	45 per cent.	—	—	45 per cent.
„ shutters - - - -	45 per cent.	—	—	45 per cent.
„ skates, costing 20 cts. or less per pair	8 cts. per pair	= per pair	0 0 4	—
same, costing more - -	35 per cent.	—	—	35 per cent.
„ spindles - - - -	45 per cent.	—	—	45 per cent.
„ spring, German - - -	30 per cent.	—	—	30 per cent.
„ springs, for wigs - - -	45 per cent.	—	—	45 per cent.
„ springs, known as "crinoline steel," classed as "steel crinoline wire"	9 cts. per lb. and 10 per cent.	= per lb.	0 0 4½	+ 10 per cent.
„ squares, other than marked on one side - - -	6 cts. per lb. and 30 per cent.	= per lb.	0 0 3	+ 30 per cent.
„ tires, cast - - - -	45 per cent.	—	—	45 per cent.
„ wire, square, to make stretchers for umbrellas, sunshades, and parasols, cut into pieces not exceeding the length therefor - -	45 per cent.	—	—	45 per cent.
„ wire rope, strand and chain, either bright, coppered, galvanized, or coated with other metals, pays the same rate of duty levied on the wire of which it is made.				
„ wire, not less than ¼ in. in diam.:— valued at 7 cts. per lb. or less -	2¼ cts. per lb.	= per lb.	0 0 1⅛	—
valued above 7 cts. per lb. and not above 11 cts. per lb. -	3 cts. per lb.	= per lb.	0 0 1½	—
valued above 11 cts. per lb. -	3½ cts. per lb. and 10 per cent.	= per lb.	0 0 1¾	+ 10 per cent.
„ wire, less than ¼ in. in diam. and not less than No. 16 wire gauge	2½ cts. per lb. and 20 per cent.	= per lb.	0 0 1¼	+ 20 per cent.
„ „ less or finer than No. 16 wire gauge - - -	3 cts. per lb. and 20 per cent.	= per lb.	0 0 1½	+ 20 per cent.
„ rods, round, less than ¼ in. in diam., classified as steel in forms not otherwise provided for - -	30 per cent.	—	—	30 per cent.
rust on. *See* Rust on steel.				
Steeled hoes - - - -	45 per cent.	—	—	45 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Steels, as cutlery - - -	35 per cent.	—	—	35 per cent.
Steelyards, iron - - -	35 per cent.	—	—	35 per cent.
„ part steel - - -	45 per cent.	—	—	45 per cent.
Stereoscopic views on glass - -	20 per cent.	—	—	20 per cent.
Same on paper - - -	20 per cent.	—	—	20 per cent.
Stereoscopes, with lenses of cut glass -	40 per cent.	—	—	40 per cent.
Stereotype plates - - -	25 per cent.	—	—	25 per cent.
„ „ broken, dutiable as type metal - -	25 per cent.	—	—	25 per cent.
Sticks, for umbrellas, in the rough -	Free.	—	—	—
„ finished or not, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ walking, in the rough - -	Free.	—	—	—
„ „ finished or not - -	35 per cent.	—	—	35 per cent.
Stick lac - - - -	Free.	—	—	—
Stilts used in the manufacture of earthen, stone, or crockery ware - -	Free.	—	—	—
Stilettos - - - -	35 per cent.	—	—	35 per cent.
St. John's beans - - -	Free.	—	—	—
Stockings, cotton - - -	35 per cent.	—	—	35 per cent.
„ linen and thread - -	40 per cent.	—	—	40 per cent.
„ made on frames, not otherwise provided for (except silk or linen) - - -	35 per cent.	—	—	35 per cent.
„ silk - - - -	60 per cent.	—	—	60 per cent.
„ woollen, as woollen clothing -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ knit goods, wholly or partly of wool, worsted, the hair of the alpaca, goat, or other like animal :—				
valued at not over 40 cts. per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 and not over 60 cts. - - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 and not over 80 cts. - - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Stock locks, if any part steel - -	45 per cent.	—	—	45 per cent.
Stomach pumps, according to material.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Stones, Ayr, as whetstones	Free.	—	—	—
„ Ayr, for polishing	Free.	—	—	—
„ bezoar	Free.	—	—	—
„ Bristol	10 per cent.	—	—	10 per cent.
„ burr, manufactured or bound up into millstones	20 per cent.	—	—	20 per cent.
„ „ in blocks, rough or unmanufactured	Free.	—	—	—
„ „ known as "skeleton stones," manufactured, but not bound up	20 per cent.	—	—	20 per cent.
„ building or monumental, except marble	$1·50 per ton	= per ton	0 6 3	—
„ clay	20 per cent.	—	—	20 per cent.
„ cornelian, unmanufactured	Free.	—	—	—
„ curling or quoits	Free.	—	—	—
„ filtering, unmanufactured	10 per cent.	—	—	10 per cent.
„ filtering, manufactured	20 per cent.	—	—	20 per cent.
„ for ballast, manufactured, not merchantable, if landed	20 per cent.	—	—	20 per cent.
„ for ballast, unmanufactured, not merchantable, if landed	10 per cent.	—	—	10 per cent.
„ free	$1·50 per ton	= per ton	0 6 3	—
„ glass cutters, as grindstones				
„ granite	$1·50 per ton	= per ton	0 6 3	—
„ „ dressed or polished	20 per cent.	—	—	20 per cent.
„ grind, finished*	$2 per ton	= per ton	0 8 4	—
„ „ rough or unfinished, or rough hand dressed	$1·50 per ton	= per ton	0 6 3	—
„ green, an inferior kind of marble, but dutiable as marble in block, rough or squared	50 cts. per cubic ft. and 20 per cent.	= per cubic ft.	0 2 1	+ 20 per cent.
„ lithographic, not engraved	Free.	—	—	—
„ lime, rough, for burning into lime	20 per cent.	—	—	20 per cent.
„ lime and sand, used in sinking cribs for piers	10 per cent.	—	—	10 per cent.
„ load	Free.	—	—	—
„ mill, as burrstones. [*See* above.]				
„ oil (whetstones)	Free.	—	—	—
„ paving	10 per cent.	—	—	10 per cent.
„ polishing	Free.	—	—	—

* "Line of distinction between wrought or finished and rough unwrought or unfinished grindstones."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Stones, precious, not set - -	10 per cent.	—	—	10 per cent.
„ „ set - - -	25 per cent.	—	—	25 per cent.
„ „ imitations of, not set -	40 per cent.	—	—	40 per cent.
„ „ imitations of, set -	30 per cent.	—	—	30 per cent.
„ pumice - - - -	Free.	—	—	—
„ rag - - - -	10 per cent.	—	—	10 per cent.
„ rotten - - - -	Free.	—	—	—
„ sand - - - -	$1·50 per ton	= per ton	0 6 3	—
„ touch - - - -	20 per cent.	—	—	20 per cent.
„ whet - - - -	Free.	—	—	—
„ dressing machines. *See* Machinery.				
Stone head nails - - - -	45 per cent.	—	—	45 per cent.
„ ink bottles, glazed - - -	40 per cent.	—	—	40 per cent.
„ and earthenwares, to wit:—brown, earthen, and common stoneware, gas retorts, and stoneware not ornamented - - -	25 per cent.	—	—	25 per cent.
Stoneware, above the capacity of 10 gallons - - -	20 per cent.	—	—	20 per cent.
„ or earthenware, all other, not otherwise provided for -	40 per cent.	—	—	40 per cent.
Storax, or styrax - - -	Free.	—	—	—
Stoves and stove plates, of cast iron -	1½ ct. per lb.	= per 100 lbs. / =per ton	0 6 3 / 7 0 0	—
Straits oils, so called, crude - -	20 per cent.	—	—	20 per cent.
same, refined, as medicinal preparations - - - -	40 per cent.	—	—	40 per cent.
Straw, unmanufactured - - -	Free.	—	—	—
„ baskets - - - -	35 per cent.	—	—	35 per cent.
„ hats, bonnets, or hoods - -	40 per cent.	—	—	40 per cent.
„ braids, &c., for bonnets, hats, &c. -	30 per cent.	—	—	30 per cent.
„ knives - - - -	45 per cent.	—	—	45 per cent.
„ manufactures of, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
„ twisted, for forming braids, &c. -	20 per cent.	—	—	20 per cent.
Straws, for juleps and other drinks -	35 per cent.	—	—	35 per cent.
Stretchers for umbrellas, &c., iron wire to make, cut into suitable lengths - - -	35 per cent.	—	—	35 per cent.
„ for umbrellas, cut in lengths, of steel or part steel -	45 per cent.	—	—	45 per cent.
Strings of gut cord, or cat gut (so called), for musical instruments -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
§**Strings** of metal and silk, for musical instruments, metal chief value	35 per cent.	—	—	35 per cent.
same, metal not chief value -	50 per cent.	—	—	50 per cent.
„ all other, of whip gut or cat gut	30 per cent.	—	—	30 per cent.
„ gut and worm gut - -	Free.	—	—	—
§**Strontia,** chemical preparation - -	20 per cent.	—	—	20 per cent.
„ acetate or pyrolignate of -	25 cts. per lb.	= per lb.	0 1 $0\frac{1}{2}$	—
„ muriate of - - -	20 per cent.	—	—	20 per cent.
„ nitrate of - - -	20 per cent.	—	—	20 per cent.
„ oxide of, or protoxide of strontium - - -	Free.	—	—	—
§**Strychnia** (strychnine) - - -	$1·00 per oz.	= per oz.	0 4 2	—
„ salts of, not otherwise provided for - - - -	$1·50 per oz.	= per oz.	0 6 3	—
§**Studs,** gold, silver, or set with precious stones, or imitation of - -	25 per cent.	—	—	25 per cent.
„ other than above, according to material.				
§**Stump** joints, iron - - -	35 per cent.	—	—	35 per cent.
„ steel - - -	45 per cent.	—	—	45 per cent.
§**Styrax** or storax - - -	Free.	—	—	—
§**Subacetate** of copper - - -	Free.	—	—	—
§**Substances** expressly used for manure -	Free.	—	—	—
§**Succinic** acid - - - -	Free.	—	—	—
§**Succory** root, ground or unground -	1 ct. per lb.	= per lb.	0 0 $0\frac{1}{2}$	—
„ prepared - - -	5 cts. per lb.	= per lb.	0 0 $2\frac{1}{2}$	—
§**Sugar,** all, not above No. 7 Dutch standard in colour * - -	$2\frac{3}{16}$ cts. per lb.	= per 100 lbs.	0 9 $1\frac{3}{8}$	—
„ above No. 7, and not above No. 10 - - - -	$2\frac{1}{2}$ cts. per lb.	= per 100 lbs.	0 10 5	—
„ above No. 10, and not above No. 13 - - - -	$2\frac{13}{16}$ cts. per lb.	= per 100 lbs.	0 11 $8\frac{5}{8}$	—
„ above No. 13, and not above No. 16 - - -	$3\frac{7}{16}$ cts. per lb.	= per 100 lbs.	0 14 $3\frac{7}{8}$	—
„ above No. 16, and not above No. 20 - - - -	$4\frac{1}{16}$ cts. per lb.	= per 100 lbs.	0 16 $11\frac{1}{8}$	—
„ above No. 20, and on all refined loaf, lump, crushed, powdered, and granulated - -	5 cts. per lb.	= per 100 lbs.	1 9 10	—
„ beet machinery - - -	Free.	—	—	—
„ beet seed - - -	Free.	—	—	—

* "Foreign sugars cannot be refined while in bond." Standard samples to be furnished by the Secretary of the Treasury. As to how sugar shall be sampled.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Sugar box-shooks - - -	30 per cent.	—	—	30 per cent.
„ cane * - - - -	10 per cent.	—	—	10 per cent.
„ cane slips - - -	20 per cent.	—	—	20 per cent.
„ of lead, brown - - -	5 cts. per lb.	= per lb.	0 0 $2\frac{1}{2}$	—
„ „ white - - -	10 cts. per lb.	= per lb.	0 0 5	—
„ of milk - - - -	Free.	—	—	—
„ refined loaf, lump, crushed, powdered, pulverised, or granulated Secretary of the Treasury to select and furnish standards from time to time, also to prescribe and require samples to be taken.	4 cts. per lb.	= per lb.	—	—
„ † syrup of, and sugar cane juice, melada, concentrated molasses, and tank bottoms - -	$1\frac{7}{8}$ cts. per lb.	= per 100lbs.	0 2 $9\frac{3}{4}$	—
„ "tank footings," so styled, as melada.				
„ refined, tinctured, coloured, or adulterated, valued at 30 cts. per lb. or less - -	15 cts. per lb.	= per lb.	0 0 $7\frac{1}{2}$	—
„ candy and all other confectionery, sold by the box, package, or otherwise than by the lb. -	50 per cent.	—	—	50 per cent.
candy and all other confectionery, all valued above 30 cts. per lb. -	50 per cent.	—	—	50 per cent.
„ candy, not coloured, nor sold otherwise than by the lb., nor valued above 30 cts. per lb. - -	10 cts. per lb.	= per lb.	0 0 5	—
„ all other confectionery not otherwise provided for, made wholly or in part of sugar, and sugars after being refined when tinctured, coloured, or in any way adulterated, valued at not over 30 cts. per lb., and not sold otherwise than by the lb. -	15 cts. per lb.	= per lb.	0 0 $7\frac{1}{2}$	—
Sulphate of alumina - - -	60 cts. per 100 lbs.	= per 100lbs.	0 2 6	—
„ ammonia, not entitled to free entry as a manure, although intended for that use -	20 per cent.	—	—	20 per cent.

* All products of the sugar cane, imported in mats, bags, baskets, or other than tight packages, shall be considered sugar, and be dutiable as such.

† Syrup of sugar, syrup of sugar cane juice, melada, concentrated melada, or concentrated molasses, entered under the name of molasses, shall be forfeited to the United States.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Sulphate of barytes	½ ct. per lb.	= per lb.	0 0 0¼	—
„ copper	4 cts. per lb.	= per lb.	0 0 2	—
„ iron	½ ct. per lb.	= per lb.	0 0 0¼	—
„ lime (plaster of Paris), calcined and ground	20 per cent.	—	—	20 per cent.
„ lime (plaster of Paris), unground	Free.	—	—	—
„ morphia	$1 per oz.	= per oz.	0 4 2	—
„ quinine	20 per cent.	—	—	20 per cent.
„ rhubarb	20 per cent.	—	—	20 per cent.
„ zinc	20 per cent.	—	—	20 per cent.
Sulphide of copper, paste	Free.	—	—	—
Sulphides or sulphurets not otherwise provided for	20 per cent.	—	—	20 per cent.
Sulphur, flour of*	$20 per ton and 15 per cent.	= per ton	4 3 4	+ 15 per cent.
Sulphuret of antimony, crude	Free.	—	—	—
„ iron, pyrites	20 per cent.	—	—	20 per cent.
„ arsenic	20 per cent.	—	—	20 per cent.
Sulphuric acid, fuming (Nordhausen)	1 ct. per lb.	= per lb.	0 0 0½	—
„ acid, other	Free.	—	—	—
„ ether	$1 per lb.	= per lb.	0 4 2	—
Sumac †	10 per cent.	—	—	10 per cent.
Sunn, or sunn hemp	$15 per ton	= per ton	3 2 6	—
Sunshades, not silk or alpaca	45 per cent.	—	—	45 per cent.
„ silk or alpaca	60 per cent.	—	—	60 per cent.
„ frames for, wholly or chiefly of metal	45 per cent.	—	—	45 per cent.
„ sticks or canes for, no further manufactured than cut into suitable lengths	Free.	—	—	—
„ sticks and frames, finished or not, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ square wire for stretchers of, iron, cut into pieces not exceeding the length therefor	35 per cent.	—	—	35 per cent.
„ square wire for stretchers of, steel, or part steel	45 per cent.	—	—	45 per cent.
Surgeons' instruments, not cutlery, according to material.				
Surplice pins	35 per cent.	—	—	35 per cent.

* 'A consignment of 50 tons would therefore be liable to a duty of 208*l.* 6*s.* 8*d.*, in addition to 15*l.* per 100*l.* of its declared value.

† "Grinding sumac, a dutiable charge.'

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Surveying instruments - -	40 per cent.	—	—	40 per cent.
Suspenders, cotton or leather - -	35 per cent.	—	—	35 per cent.
„ india-rubber, in whole or part, no part silk, wool, worsted, or mohair -	35 per cent.	—	—	35 per cent.
„ silk - - - -	60 per cent.	—	—	60 per cent.
„ silk and india-rubber, or silk, rubber, and cotton, silk not chief value -	50 per cent.	—	—	50 per cent.
„ webbing for, of india-rubber	35 per cent.	—	—	35 per cent.
„ webbing for, of silk -	60 per cent.	—	—	60 per cent.
„ webbing for, of silk and india-rubber - -	50 per cent.	—	—	50 per cent.
„ webbing for, of silk, rubber, and cotton, cotton chief value - -	50 per cent.	—	—	50 per cent.
„ worsted or part worsted, as worsted wearing apparel	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
Swans' down - - - -	Free.	—	—	—
„ skins, dressed, with feathers on -	20 per cent.	—	—	20 per cent.
Sweetmeats or fruits preserved in sugar, brandy, or molasses, not otherwise provided for -	35 per cent.	—	—	35 per cent.
„ glass jars or bottles filled with	40 per cent.	—	—	40 per cent.
Sweepings of gold or silver - -	Free.	—	—	—
Sword knots, metal - - -	35 per cent.	—	—	35 per cent.
Swords - - - - -	45 per cent.	—	—	45 per cent.
„ blades for - - -	35 per cent.	—	—	35 per cent.
Syrup of sugar and of sugar cane juice -	$1\frac{7}{8}$ cts. per lb.	= per 100 lbs.	0 7 $9\frac{3}{4}$	—

T.

Tables, wood, as manufactures of wood not otherwise provided for -	35 per cent.	—	—	35 per cent.
„ with tops, slabs, or ornaments of marble - - -	50 per cent.	—	—	50 per cent.
Table cloths, linen, valued at not over 30 cts. per sq. yard - -	35 per cent.	—	—	35 per cent.
valued at over 30 cts. -	40 per cent.	—	—	40 per cent.
„ others, according to material.				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Table covers, woollen	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ „ oil cloth	45 per cent.	—	—	45 per cent.
„ fasteners, brass or iron	35 per cent.	—	—	35 per cent.
„ „ copper	45 per cent.	—	—	45 per cent.
„ knives and forks, not gold, silver, or German silver	35 per cent.	—	—	35 per cent.
„ mats, as mats, according to material.				
„ tops, composition or scagliola	35 per cent.	—	—	35 per cent.
Tacks, brads and sprigs, iron, cut:—				
„ not over 16 ozs. to the 1,000	2½ cts. per 1,000	= per 10,000	0 1 0½	—
„ over 16 ozs. to the 1,000	3 cts. per lb.	= per 100 lbs.	0 12 6	—
„ steel	45 per cent.	—	—	45 per cent.
„ tinned	35 per cent.	—	—	35 per cent.
Taggers' iron	30 per cent.	—	—	30 per cent.
„ tin	1 1/10 cts. per lb.	= per 100 lbs.	0 9 2	—
Tailors' irons, cast	1½ cts. per lb.	= per 100 lbs.	0 6 3	—
Tails of squirrels, dyed or dressed	20 per cent.	—	—	20 per cent.
Talc, powdered or other	Free.	—	—	—
Tallow	1 ct. per lb.	= per lb.	0 0 0½	—
„ candles	2½ cts. per lb.	= per lb.	0 0 1¼	—
Tamarinds	Free.	—	—	—
„ preserved in sugar, brandy, or molasses	35 per cent.	—	—	35 per cent.
Tamboured articles. As Embroideries.				
Tambourines	30 per cent.	—	—	30 per cent.
Tampico fibre	Free.	—	—	—
„ cloth of	30 per cent.	—	—	30 per cent.
Tankfootings and tankbottoms	1 7/8 cts. per lb.	= per 100 lbs.	0 7 9¾	—
Tanned calf skins, or tanned and dressed	25 per cent.	—	—	25 per cent.
„ leather and skins	25 per cent.	—	—	25 per cent.
Tanners' knives	45 per cent.	—	—	45 per cent.
Tannin	$2 per lb.	= per lb.	0 8 4	—
Tannic acid	$1 per lb.	= per lb.	0 4 2	—
Tanning, articles for, crude, not otherwise provided for	Free.	—	—	—
„ articles for, not crude, not otherwise provided for	20 per cent.	—	—	20 per cent.
Tapers, adamantine	5 cts. per lb.	= per lb.	0 0 2½	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Tapers, paraffin, pure or mixed	8 cts. per lb.	= per lb.	0 0 4	—
„ spermaceti, pure or mixed	8 cts. per lb.	= per lb.	0 0 4	—
„ stearine	5 cts. per lb.	= per lb.	0 0 2½	—
„ wax, pure or mixed	8 cts. per lb.	= per lb.	0 0 4	—
„ all others	2½ cts. per lb.	= per lb.	0 0 1¼	—
Tape, cotton	35 per cent.	—	—	35 per cent.
„ Harlaem	35 per cent.	—	—	35 per cent.
„ leather	35 per cent.	—	—	35 per cent.
„ linen	40 per cent.	—	—	40 per cent.
„ silk or taste	60 per cent.	—	—	60 per cent.
„ measuring, linen	40 per cent.	—	—	40 per cent.
„ „ leather	35 per cent.	—	—	35 per cent.
„ tailors', leather	35 per cent.	—	—	35 per cent.
„ in silver or German silver cases	40 per cent.	—	—	40 per cent.
Tapestry, wool	50 cents. per lb. and 45 per cent.	= per lb.	0 2 1 +	45 per cent.
Tapioca	Free.	—	—	—
Tar	20 per cent.	—	—	20 per cent.
„ petroleum, or petroleum residuum :—				
if over 20° Beaumé	20 cts. per gall.	= per gall.	0 0 10	—
not over 20° Beaumé	20 per cent.	—	—	20 per cent.
Tares, vegetables	10 per cent.	—	—	10 per cent.
„ black	Free.	—	—	—
Tarlatine muslins, as cotton goods of the following description :—				
not exceeding 100 threads to the sq. inch, counting the warp and filling, and weighing over 5 ozs. per sq. yard :—				
unbleached	5 cts. per sq. yard.	= per sq. yd.	0 0 2½	—
bleached	5½ cts. per sq. yard.	= per sq. yd.	0 0 2¾	—
coloured, stained, painted, or printed	5½ cts. per sq. yard and 10 per cent.	= per sq. yd.	0 0 2¾ +	10 per cent.
exceeding 200 threads to the sq. inch, or being finer and lighter than above and not exceeding 200 threads :—				
unbleached	5 cts. per sq. yard.	= per sq. yd.	0 0 2½	—
bleached	5½ cts. per sq. yard.	= per sq. yd.	0 0 2¾	—
coloured, stained, painted, or printed	5½ cts. per sq. yard and 20 per cent.	= per sq. yd.	0 0 2¾ +	20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Tarpaulin, double warp, as a manufacture of jute not otherwise provided for, dutiable according to value, as follows :—			£ s. d.	
valued at 30 cts. or less per sq. yard -	35 per cent.	—	—	35 per cent.
,, above 30 cts. per sq. yard -	40 per cent.	—	—	40 per cent.
Tarpaulins, hats - - -	40 per cent.	—	—	40 per cent.
Tartar or argols, crude - - -	Free.	—	—	—
,, other than crude, or partially refined, as brown tartar - -	6 cts. per lb.	= per lb.	0 0 3	—
,, cream of - - - - -	10 cts. per lb.	= per lb.	0 0 5	—
,, emetic, or tartrate of antimony -	15 cts. per lb.	= per lb.	0 0 7½	—
Tartaric acid - - - -	15 cts. per lb.	= per lb.	0 0 7½	—
Tassels and cords, metal - - -	35 per cent.	—	—	35 per cent.
,, ,, silk - - -	60 per cent.	—	—	60 per cent.
,, ,, silk and cotton -	50 per cent.	—	—	50 per cent.
,, ,, wholly or partly of wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
Teams of immigrants, for their own use and having been previously used in the country from which they have emigrated	Free.	—	—	—
Teaplants - - - -	Free.	—	—	—
Teapots (according to material).				
Teas, all kinds - - - -	Free.	—	—	—
Teasels - - - - -	Free.	—	—	—
Teeth, elephants', unmanufactured, as ivory	Free.	—	—	—
,, other, manufactured - -	20 per cent.	—	—	20 per cent.
,, other, unmanufactured - -	Free.	—	—	—
Telegraph poles, with or without the bark	Free.	—	—	—
,, ,, cedar, unmanufactured, other than round -	20 per cent.	—	—	20 per cent.
,, wire, of galvanized wire -	2 cts. per lb. and 15 per cent.	= per lb.	0 0 1	+ 15 per cent.
,, cable, copper - - -	45 per cent.	—	—	45 per cent.
,, ,, iron, or iron chief value	35 per cent.	—	—	35 per cent.
Telegraphic apparatus - -	40 per cent.	—	—	40 per cent.
Telegraphy, insulators for use exclusively in, not of glass - - - -	25 per cent.	—	—	25 per cent.
Telescopes, any part steel - -	45 per cent.	—	—	45 per cent.
,, all others, at the highest rates to which any of their component parts are liable.				
Telescopic discs, partially finished -	40 per cent.	—	—	40 per cent.
,, object glasses, edges ground or cut - - - -	40 per cent.	—	—	40 per cent.
Tents, canvas - - - -	35 to 40 per cent.	—	—	35 to 40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Terra alba, crude - - -	10 per cent.	—	—	10 per cent.
„ „ aluminous - - -	Free.	—	—	—
„ cotta statues, in bas relief - -	40 per cent.	—	—	40 per cent.
„ japonica, as cutch - - -	Free.	—	—	—
„ de sienna and umbra, dry, as ochrey earths - - - -	50 cts. per 100 lbs.	= per 100 lbs.	0 2 1	—
„ de sienna and umbra, ground in oil	$1\frac{1}{2}$ per 100 lbs.	= per 100 lbs.	0 6 3	—
Terne tin plates and sheets - -	$1\frac{1}{10}$ cts. per lb.	= per 100 lbs.	0 9 2	—
Teutenague, manufactured in blocks or pigs - - -	$1\frac{1}{2}$ cts. per lb.	= per 100 lbs. = per ton	0 6 3 7 0 0	—
„ in sheets - - -	$2\frac{1}{4}$ cts. per lb.	= per 100 lbs. = per ton	0 9 $4\frac{1}{2}$ 10 10 0	—
„ manufactures of - -	35 per cent.	—	—	35 per cent.
Thermometers, at the highest rates to which any of their component parts are liable.				
Thimbles (according to material).				
Thon marine, or tunny, or Spanish mackerel - - - -	50 cts. per 100 lbs.	= per 100 lbs.	0 2 1	—
Thrashing machines (if wood and iron)	35 per cent.	—	—	35 per cent.
Thread buttons - - -	30 per cent.	—	—	30 per cent.
Thread, cotton, on spools, or spool thread, spools containing *not* over 100 yards each - - -	6 cts. per doz. spools and 30 per cent.	= per doz. spools	0 0 3	+ 30 per cent.
The same, when spools contain over 100 yards each, to pay for each additional 100 yards or fraction thereof - -	6 cts. per doz. spools and 35 per cent.	= per doz. spools	0 0 3	+ 35 per cent.
„ yarn, warps, or warp yarn, of cotton, *all* not wound upon spools, as follows:—				
valued at not over 40 cts. per lb. - - -	10 cts. per lb. and 20 per cent.	= per lb.	0 0 5	+ 20 per cent.
valued at over 40 cts. and not over 60 cts. per lb. -	20 cts. per lb. and 20 per cent.	= per lb.	0 0 10	+ 20 per cent.
valued at over 60 cts. and not over 80 cts. per lb. -	30 cts. per lb. and 20 per cent.	= per lb.	0 1 3	+ 20 per cent.
valued at over 80 cts per lb.	40 cts. per lb. and 20 per cent.	= per lb.	0 1 8	+ 20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Thread, flax or linen - - -	40 per cent.	—	—	40 per cent.
„ lacings and insertings - -	30 per cent.	—	—	30 per cent.
„ shoe, linen - - -	40 per cent.	—	—	40 per cent.
„ socks and stockings - -	40 per cent.	—	—	40 per cent.
„ patent, or gill twine - -	40 per cent.	—	—	40 per cent.
„ metal - - - -	25 per cent.	—	—	25 per cent.
„ pack, flax or linen - -	40 per cent.	—	—	40 per cent.
„ pack, all other - - -	35 per cent.	—	—	35 per cent.
Tica, crude - - - -	Free.	—	—	—
Tickings, cotton. *See* Cottons.				
Ties, cotton, of iron - - -	35 per cent.	—	—	35 per cent.
„ „ old and unfit for use, as scrap iron - - -	$8 per ton	= per ton	1 13 4	—
„ railroad, wood - - -	Free.	—	—	—
Tiles, encaustic - - - -	35 per cent.	—	—	35 per cent.
„ for draining - - -	20 per cent.	—	—	20 per cent.
„ marble, not exceeding 2 in. in thickness - - - -	25 cts. per superficial sq. ft. and 30 per ct.	= per super. sq. ft.	0 1 0½	+30 per cent.
The same, if more than 2 in. thick, for each in. or fractional part thereof, in excess of 2 in. in thickness, 10 cts. per foot in addition to above rates.				
The same, if exceeding 6 in. in thickness, subject to the duty on marble blocks - - -	$1 per cubic ft. and 25 per cent.	= per cubic ft.	0 4 2	+25 per cent.
„ paving and roofing, other than marble - - - -	20 per cent.	—	—	20 per cent.
„ slate - - - -	40 per cent.	—	—	40 per cent.
Timber, hewn and sawed, not otherwise provided for - - -	20 per cent.	—	—	20 per cent.
„ round, unmanufactured, not otherwise provided for -	Free.	—	—	—
„ used in building wharves -	20 per cent.	—	—	20 per cent.
„ ship - - - -	Free.	—	—	—
„ squared or sided, not otherwise provided for - - -	1 ct. per cubic ft.	= per cubic ft.	0 0 0½	—
Tin, in bars, blocks, or pigs, and grain tin - - - -	Free.	—	—	—
„ boxes - - - -	35 per cent.	—	—	35 per cent.
„ crystals of - - - -	30 per cent.	—	—	30 per cent.
„ liquor - - - -	20 per cent.	—	—	20 per cent.
„ manufactures wholly or partly of, not otherwise provided for - -	35 per cent.	—	—	35 per cent.
„ muriate of - - - -	30 per cent.	—	—	30 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Tin, nitrate of	20 per cent.	—	—	20 per cent.
„ oxide of	30 per cent.	—	—	30 per cent.
„ in plates or sheets	$1\frac{1}{10}$ cts. per lb.	= per 100 lbs.	0 9 2	—
„ plates, after reaching that condition, subsequently galvanized or coated with any metal by electric batteries	2 cts. per lb.	= per 100 lbs. =per ton	0 8 4 9 6 8	—
same, otherwise than by electric batteries	$2\frac{1}{2}$ cts. per lb.	= per 100 lbs. =per ton	0 10 5 11 13 4	—
„ roofing, continuous and fastened together, ready for use	35 per cent.	—	—	35 per cent.
„ salts of	30 per cent.	—	—	30 per cent.
„ tagger and terne	$1\frac{1}{10}$ cts. per lb.	= per 100 lbs.	0 9 2	—
Tinfoil	30 per cent.	—	—	30 per cent.
Tincal, or crude borax	Free.	—	—	—
Tinctures, fragrant, as toilet articles	50 per cent.	—	—	50 per cent.
„ medicinal	40 per cent.	—	—	40 per cent.
„ proprietary	50 per cent.	—	—	50 per cent.
Tippets, fur	35 per cent.	—	—	35 per cent.
„ others, dutiable according to material, as clothing or "articles worn."				
Tissues, for hats, &c.	30 per cent.	—	—	30 per cent.
Tips, horn	Free.	—	—	—
„ for umbrellas, &c., metal	45 per cent.	—	—	45 per cent.
Tires and parts thereof for locomotives	3 cts. per lb.	= per 100 lbs. =per ton	0 12 6 14 0 0	—
„ and parts thereof, cast steel	45 per cent.	—	—	45 per cent.
Toasters, cheese or bread	35 per cent.	—	—	35 per cent.
Tobacco, manufactured, of all descriptions, and stemmed tobacco, not otherwise provided for	50 cts. per lb. and internal revenue tax of 24 cts. per lb.	= per lb.	0 3 1	—
„ in leaf, unmanufactured and not stemmed	35 cts. per lb.	= per lb.	0 1 $5\frac{1}{2}$	—
„ stems, unmanufactured	15 cts. per lb.	= per lb.	0 0 $7\frac{1}{2}$	—
„ unmanufactured, not otherwise provided for	30 per cent.	—	—	30 per cent.
Toilet articles, viz. :—Essences, extracts, toilet waters, cosmetics, hair-oils, pomades, hair dressings and restoratives, hair dyes, tooth washes, tooth pastes,				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
Toilet articles—*continued.*			£ s. d.	
dentifrices, aromatic cachous, or other perfumeries or cosmetics used or applied as perfumes or applications to the hair, mouth, or skin -	50 per cent.	—	—	50 per cent.
„ „ Cologne water, and other perfumeries, of which alcohol forms the principal ingredient - -	$3 per gal. and 50 per cent.	= per gall.	0 12 6	+ 50 per cent.
„ „ lavender water, and toilet vinegar, alcohol or distilled spirits principal ingredient, as alcoholic perfumery including toilet accessory known as "Rimmel's Extract" -	$3 per gal. and 50 per cent.	= per gall.	0 12 6	+ 50 per cent.
„ „ same, containing no alcohol	50 per cent.	—	—	50 per cent.
Toilet vials and bottles, cut or ornamented	40 per cent.	—	—	40 per cent.
Toilets, miniature, for dolls, as toys -	50 per cent.	—	—	50 per cent.
Tomatoes - - - -	10 per cent.	—	—	10 per cent.
Tongues, neats and reindeer - -	20 per cent.	—	—	20 per cent.
Tongs, iron - - - -	35 per cent.	—	—	35 per cent.
„ brass - - - -	35 per cent.	—	—	35 per cent.
„ others, according to material.				
Tonquin beans - - - -	Free.	—	—	—
Tools of trade, immigrants'* - -	Free.	—	—	—
Tooth brushes - - - -	40 per cent.	—	—	40 per cent.
„ paste, washes, &c. - - -	50 per cent.	—	—	50 per cent.
„ picks, quill - - -	20 per cent.	—	—	20 per cent.
„ picks, other (according to materials).				
Topaz, real - - - -	10 per cent.	—	—	10 per cent.
„ imitation - - -	40 per cent.	—	—	40 per cent.
Tops for furniture, composition or scagliola	35 per cent.	—	—	35 per cent.
Tortoise shell, unmanufactured - -	Free.	—	—	—
Touchstones - - - -	20 per cent.	—	—	20 per cent.
Tow, of flax - - - -	$10 per ton	= per ton	2 1 8	—
„ of hemp or codilla - - -	$10 per ton	= per ton	2 1 8	—
„ yarn, called "green tow yarn," duty as on flax yarns - - -	40 per cent.	—	—	40 per cent.
Toys for children, except dolls - -	50 per cent.	—	—	50 per cent.
Traces, leather - - - -	35 per cent.	—	—	35 per cent.
Tracing cloth, vellum cloth - -	35 per cent.	—	—	35 per cent.

* "The law authorising the admission of tools of trade is limited; it does not cover machinery or any article to be worked by any other than manual power, and is restricted as to numbers, quantity, and value to what is considered reasonable for the actual use of the person to whom they belong.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Traction engines, according to material.				
Tragacanth, gum - - -	Free.	—	—	—
Traps, iron and wood, or iron wire -	35 per cent.	—	—	35 per cent.
„ steel - - - -	45 per cent.	—	—	45 per cent.
Travelling rugs, wholly or partly of wool - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Trays, salvers, or waiters, copper -	45 per cent.	—	—	45 per cent.
„ japanned - - - -	40 per cent.	—	—	40 per cent.
„ gilt or plated - - -	35 per cent.	—	—	35 per cent.
„ wood, lacquered - - -	35 per cent.	—	—	35 per cent.
„ gold, silver, or German silver -	40 per cent.	—	—	40 per cent.
Treacle (molasses) - - -	5 cts. per gall.	=per gall.	0 0 2½	—
Trees and scions, all, not otherwise provided for - -	20 per cent.	—	—	20 per cent.
„ „ for Department of Agriculture or United States Botanical Garden - - -	Free.	—	—	—
Tresses, metal - - - -	35 per cent.	—	—	35 per cent.
Trimmings, bead, silk and metal -	50 per cent.	—	—	50 per cent.
„ cotton - - -	35 per cent.	—	—	35 per cent.
„ cotton and worsted - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+50 per cent.
„ crape, silk chief value -	50 per cent.	—	—	50 per cent.
„ chip, &c., for bonnets, hats, &c.	30 per cent.	—	—	30 per cent.
„ silk - - -	60 per cent.	—	—	60 per cent.
„ viz.: epaulets, galloons, laces, knots, stars, tassels, tresses, and wings, of gold, silver, or other metal. (*See* Note to Manufactures of Brass)	35 per cent.	—	—	35 per cent.
„ viz.: bouillons or cannetille, and metal threads, filé or gespinst - - -	25 per cent.	—	—	25 per cent.
„ viz.: webbings, beltings, bindings, braids, galloons, fringes, gimps, cords, cords and tassels, dress trimmings, head nets, buttons or barrel buttons, or buttons of other forms for tassels or ornaments, wrought by hand or braided by machinery, made of wool, worsted, or mohair, or of which either is a component material -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Tripoli (polishing powder) - -	Free.	—	—	—
Troches, or lozenges, patent or proprietary medicines - - -	50 per cent.	—	—	50 per cent.
Trowels, part steel - - -	45 per cent.	—	—	45 per cent.
Truffles, preserved - - -	35 per cent.	—	—	35 per cent.
Trunks, wholly or partially of leather -	35 per cent.	—	—	35 per cent.
Trunk handles, iron - - -	35 per cent.	—	—	35 per cent.
Trusses, leather and iron - -	35 per cent.	—	—	35 per cent.
,, with steel springs, steel chief value - - -	45 per cent.	—	—	45 per cent.
Tubes, steam, gas, and water, wrought-iron. *See* Note to Flues -	3½ cts. per lb.	= per 100 lbs. / =per ton	0 14 7 / 16 6 8	—
,, bone or ivory - - -	35 per cent.	—	—	35 per cent.
,, condenser, of brass, for vessels built in the United States, for employment in the foreign trade	Free.	—	—	—
,, condenser, of brass, for vessels not exempt as above - -	35 per cent.	—	—	35 per cent.
,, earthenware, brown - -	25 per cent.	—	—	25 per cent.
,, silver - - - -	40 per cent.	—	—	40 per cent.
Tulles malines, silks in piece - -	60 per cent.	—	—	60 per cent.
Tumblers,* glass, not cut - -	35 per cent.	—	—	35 per cent.
,, glass, cut - - -	40 per cent.	—	—	40 per cent.
Tunny - - - - -	50 cts. per 100 lbs.	= per 100 lbs.	0 2 1	—
Turbans, silk - - - -	60 per cent.	—	—	60 per cent.
Turkish red salts - - -	20 per cent.	—	—	20 per cent.
Turmeric - - - -	Free.	—	—	—
Turpentine, spirits of - - -	30 cts. per gall.	= per gall.	0 1 3	—
,, Venice - - -	Free.	—	—	—
Turtles - - - - -	Free.	—	—	—
Tweezers, gold or silver - - -	40 per cent.	—	—	40 per cent.
,, steel - - - -	45 per cent.	—	—	45 per cent.
Twilled cottons or silesias.				
Twills, "rainbow stripe printed, worsted and cotton," as manufactures of worsted, viz.:				
valued at not over 20 cts. per sq. yard - - -	6 cts. per sq. yard and 35 per cent.	= per sq. yard	0 0 3 +	35 per cent.
valued at higher than 20 cts. per sq. yard - -	8 cts. per sq. yard and 40 per cent.	= per sq. yard	0 0 4 +	40 per cent.

* "Glass tumblers smoothed by cutting or grinding or with engraved sides, are subject to duty as 'glass cut.'"

DESCRIPTION OF ARTICLES.	Date of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Twills, &c.—*continued.*				
PROVIDED that on all goods weighing 4 ozs. or over per sq. yard the duty shall be -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Twine, flax or linen - - -	40 per cent.	—	—	40 per cent.
„ gill - - - -	40 per cent.	—	—	40 per cent.
„ jute - - - -	35 per cent.	—	—	35 per cent.
„ seine or game, flax - -	40 per cent.	—	—	40 per cent.
„ any other material - -	35 per cent.	—	—	35 per cent.
Twist, for buttons - - -	10 per cent.	—	—	10 per cent.
„ silk, or silk and mohair - -	40 per cent.	—	—	40 per cent.
„ silk for fringes, not commercially known as silk twist - -	60 per cent.	—	—	60 per cent.
Twisting machinery, according to material.				
Type metal - - - - -	25 per cent.	—	—	25 per cent.
Types, new - - - - -	25 per cent.	—	—	25 per cent.
„ old, and fit only to be re-manufactured - - - -	Free.	—	—	—
Tyrian dye - - - -	20 per cent.	—	—	20 per cent.
U.				
Ultramarine - - - - -	.6 cts. per lb.	= per lb.	0 0 3	—
Umber - - - - - -	50 cts. per 100 lbs.	= per 100 lbs.	0 2 1	—
Umbrellas, parasols, and sunshades, silk or alpaca - - - -	60 per cent.	—	—	60 per cent.
other material - - -	45 per cent.	—	—	45 per cent.
ribs and stretchers, frames, tips, runners, handles, or other parts thereof, when made in whole or chief part of iron, steel, or any other metal -	45 per cent.	—	—	45 per cent.
bamboo reeds, and sticks of partridge, hair wood, pimento, orange, myrtle, and other sticks, in the rough, or no further manufactured than cut into lengths suitable for umbrella, parasol, or sunshade sticks - -	Free.	—	—	—
frames and sticks for umbrellas, parasols, and sunshades, finished or unfinished, not otherwise provided for	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Umbrellas, &c.—*continued.*			£ s. d.	
square iron wire for stretchers of, cut into pieces not exceeding the length therefor - - - -	35 per cent.	—	—	35 per cent.
same, of steel or part steel - -	45 per cent.	—	—	45 per cent.
Unenumerated articles, unmanufactured	10 per cent.	—	—	10 per cent.
if manufactured - - -	20 per cent.	—	—	20 per cent.
articles of similar character to articles enumerated herein, shall pay the same rate of duty as the articles to which they bear a similitude.				
United States, articles imported for the use of, PROVIDED, That the price of the same did not include the duty - -	Free.	—	—	—
articles the growth, produce, and manufacture of the United States when returned *in the same condition as exported:* PROVIDED, that proof of the identity of such articles be made under regulations; and if such articles were subject to internal tax at the time of exportation, such tax shall be proved to have been paid before exportation, and not refunded * - - -	Free.	—	—	—
if no internal tax has been assessed or paid, or upon which such tax has been paid and refunded by allowance or drawback, shall pay a duty equal to the tax imposed by internal revenue laws upon such articles.†				
botanical garden, plants, trees, shrubs, roots, seed cane, and seed imported for - - - -	Free.	—	—	—
casks, barrels, or carboys, and other vessels, and grain bags, the manufacture of the United States, if exported, containing American produce, and declaration be made of intent to return the same empty,				

* "Dutiable merchandise imported into the United States and afterwards exported, although it may have paid duty on the first importation, is liable to duty on every subsequent importation into the United States."

† "This being a customs duty, is payable in coin."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
United States, articles imported, &c.—*cont.*				
under such regulations as shall be prescribed by Secretary of the Treasury - - - -	Free.	—	—	—
fisheries, products of - - -	Free.	—	—	—
personal and household effects, not merchandise, of citizens of, dying abroad - - - -	Free.	—	—	—
Unrotted flax - - - -	$15 per ton	= per ton	3 2 6	—
Uranium, oxide of - - -	Free.	—	—	—
V.				
Vaccine virus - - - -	Free.	—	—	—
Valenciennes (thread lace) - -	30 per cent.	—	—	30 per cent.
Valerianate of zinc, medicinal preparation	40 per cent.	—	—	40 per cent.
Valises, wholly or partly of leather -	35 per cent.	—	—	35 per cent.
Valonia (for tanning) - - -	Free.	—	—	—
Valuation of different articles of cotton or wool imported in the same package, and charged at an average price. It shall be the duty of the appraisers to adopt the value of the best article contained in such package, and so charged, as the average value of the whole.	20 per cent.	—	—	20 per cent.
Vandyke brown - - - -	Free.	—	—	—
Vanilla beans and plants - -				
Varnish (8 lbs. to the gallon):—				
valued at $1·50 or less per gallon - -	50 cts. per gall. and 20 per cent.	= per gall.	0 2 1	+ 20 per cent.
valued at above $1·50 per gall. -	50 cts. per gall. and 25 per cent.	= per gall.	0 2 1	+ 25 per cent.
Vases of metal adorned with figures, dutiable as manufactures of metal	35 per cent.	—	—	35 per cent.
„ parian or porcelain, gilded, ornamented, or decorated - -	50 per cent.	—	—	50 per cent.
„ plain white - - -	45 per cent.	—	—	45 per cent.
Vegetable ivory or nuts, unmanufactured	Free.	—	—	—
„ „ all manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ „ buttons - - -	30 per cent.	—	—	30 per cent.
„ oils, all essential, not otherwise provided for -	50 per cent.	—	—	50 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Vegetable oils, all expressed, not otherwise provided for -	20 per cent.	—	—	20 per cent.
„ substances used for beds and mattresses -	Free.	—	—	—
„ „ if used for cordage, not otherwise provided for - -	$15 per ton	= per ton	3 2 6	—
„ „ for hats, bonnets, or hoods -	40 per cent.	—	—	40 per cent.
„ „ for plaits, braids, &c., for hats -	30 per cent.	—	—	30 per cent.
„ „ raw and unmanufactured, not enumerated and other than above	10 per cent.	—	—	10 per cent.
Vegetables, crude or raw, not otherwise provided for - -	10 per cent.	—	—	10 per cent.
„ desiccated or compressed	35 per cent.	—	—	35 per cent.
„ prepared - - -	35 per cent.	—	—	35 per cent.
„ used for dyeing - -	Free.	—	—	—
„ "essence of red beets," as distilled spirits - -	$2 per proof gall.	= per proof gall.	0 8 4	—
Veils, silk - - - -	60 per cent.	—	—	60 per cent.
Vellum (parchment) - - -	30 per cent.	—	—	30 per cent.
„ cloth, cotton - - -	35 per cent.	—	—	35 per cent.
Velocipedes, iron - - -	35 per cent.	—	—	35 per cent.
„ steel - - -	45 per cent.	—	—	45 per cent.
Velvet binding, cotton - - -	35 per cent.	—	—	35 per cent.
„ cotton - - - -	35 per cent.	—	—	35 per cent.
„ „ printed or painted - -	35 per cent.	—	—	35 per cent.
„ ribbons, cotton - - -	35 per cent.	—	—	35 per cent.
„ „ silk and cotton, silk chief value - - -	60 per cent.	—	—	60 per cent.
„ silk and cotton, cotton chief value	35 per cent.	—	—	35 per cent.
„ silk, or silk chief value - -	60 per cent.	—	—	60 per cent.
„ uppers for slippers, cotton - -	35 per cent.	—	—	35 per cent.
Velveteens, cotton - - -	35 per cent.	—	—	35 per cent.
Veneering rods - - - -	35 per cent.	—	—	35 per cent.
Veneers of maple and walnut from Canada, as cabinet woods, unmanufactured - -	Free.	—	—	—
„ produced by cutting, dutiable as manufactures of wood, not otherwise provided for -	35 per cent.	—	—	35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Verdigris (subacetate of copper) -	Free.	—	—	—
Venetian red* - - - -	25 per cent.	—	—	25 per cent.
Venice turpentine - - -	Free.	—	—	—
Venison hams - - - -	2 cts. per lb.	= per lb.	0 0 1	—
Veratrine - - - -	40 per cent.	—	—	40 per cent.
Verditer, or Bremen green - -	30 per cent.	—	—	30 per cent.
Vermicelli - - - -	2 cts. per lb.	= per lb.	0 0 1	—
Vermillion - - - -	25 per cent.	—	—	25 per cent.
Vermuth, spirits, as absinthe - -	$2 per proof gall.	= per proof gall.	0 8 4	—
„ wine bitters, as wines of the same cost.				
Vessels, cast iron, not otherwise provided for - - - -	1½ cts. per lb.	= per 100 lbs. / =per ton	0 6 3 / 7 0 0	—
„ brass, britannia metal, pewter, sheet-iron, tin, or zinc -	35 per cent.	—	—	35 per cent.
„ copper - - - -	45 per cent.	—	—	45 per cent.
„ exported, containing American produce, and returned empty under regulations - -	Free.	—	—	—
„ japanned - - -	40 per cent.	—	—	40 per cent.
„ repairs on† - - -	50 per cent.	—	—	50 per cent.
Vestings, silk‡ - - - -	60 per cent.	—	—	60 per cent.
„ silk and cotton, but sold as a pure silk article - -	60 per cent.	—	—	60 per cent.
„ wool - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
„ cotton - - - -	35 per cent.	—	—	35 per cent.
„ "fibre and cotton," so called, of grass and cotton, cotton chief value - - -	35 per cent.	—	—	35 per cent.
„ other (according to material).				
Vesuvin, as aniline dyes - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
Vetches, dried for fodder - -	10 per cent.	—	—	10 per cent.
„ for seed - - -	20 per cent.	—	—	20 per cent.

* *Colcothar and Venetian Red* are separate and distinct articles of commerce; colcothar being a dry oxide of iron produced by chemical action (but not chemically pure), containing small quantities of lime, sulphuric acid, and sulphate of lime as impurities, while Venetian red is a native or prepared oxide of iron, ground with 25 to 40 per centum of whiting to make it fit for use as a paint. Colcothar is much heavier and darker in colour than Venetian red, and of nearly triple its value in England.

† *See* note to Ships' Equipments and Repairs.

‡ Silk and cotton vestings so styled, but sold as a pure silk article, were found upon examination to contain a very small proportion of cotton, and were properly classified under this provision as silk vestings, subject to a duty of 60 per cent. ad valorem.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ *s.* *d.*	
Vials, cut	40 per cent.	—	—	40 per cent.
„ plain	35 per cent.	—	—	35 per cent.
Vichy lozenges, medicinal preparation	40 per cent.	—	—	40 per cent.
Vicuña skins, with the wool on. *See also* wool on the skin	30 per cent. on skins alone.	—	—	30 per cent.
Vices, part steel	45 per cent.	—	—	45 per cent.
Vinegar	10 cts. per gall.	= per gall.	0 0 5	—
For all purposes the standard for vinegar shall be taken to be that strength which requires 35 grains of bicarbonate of potash to neutralize 1 ounce troy of vinegar.				
„ concentrated or acetous acid :—				
exceeding the specific gravity 1·047	30 cts. per lb.	= per lb.	0 1 3	—
not exceeding the specific gravity of 1·047, known as No. 8	5 cts. per lb.	= per lb.	0 0 2½	—
„ demijohns containing	40 per cent.	—	—	40 per cent.
„ raspberry	25 per cent.	—	—	25 per cent.
„ toilet, alcohol or distilled spirits principal ingredient, as alcoholic perfumery	$3 per gall. and 50 per cent.	= per gall.	0 12 6	+ 50 per cent.
„ toilet, without alcohol	50 per cent.	—	—	50 per cent.
„ wine, in bottles, dutiable by the gallon as vinegar in bulk.				
Violins	30 per cent.	—	—	30 per cent.
Violin boxes, when empty, according to material.				
„ strings, gut	Free.	—	—	—
„ „ gut, covered with fine metal wire, wire chief value	35 per cent.	—	—	35 per cent.
„ „ metal and silk, metal chief value	35 per cent.	—	—	35 per cent.
„ „ metal and silk, metal *not* chief value	60 per cent.	—	—	60 per cent.
Virus, vaccine	Free.	—	—	—
Vitriol, oil of (sulphuric acid)	Free.	—	—	—
„ blue or Roman (sulphate of copper)	4 cts. per lb.	= per lb.	0 0 2	—
„ green	½ ct. per lb.	= per lb.	0 0 0¼	—
„ white	20 per cent.	—	—	20 per cent.
Volatile oils, as essential oils not otherwise provided for	50 per cent.	—	—	50 per cent.
Vomic nut	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
W.			£ s. d.	
Wadding, cotton - - -	35 per cent.	—	—	35 per cent.
„ paper - - - -	35 per cent.	—	—	35 per cent.
Wads, gun, not sporting, of paper, cattle hair and wool waste (the latter of no merchantable value), as manufactures of paper - -	35 per cent.	—	—	35 per cent.
„ gun not sporting, of wool or wool waste of any merchantable value	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ gun, sporting, all kinds - -	35 per cent.	—	—	35 per cent.
Wafers - - - -	Free.	—	—	—
Wagon blocks - - - -	20 per cent.	—	—	20 per cent.
„ boxes, iron, rough castings -	30 per cent.	—	—	30 per cent.
„ „ „ prepared for use -	35 per cent.	—	—	35 per cent.
Wagons, sleighs, harness, ploughs, and other implements brought by farmers arriving in the United States from foreign countries as immigrants, for their own use, the same having been used by them in such foreign countries - -	Free.	—	—	—
Waiters, copper - - - -	45 per cent.	—	—	45 per cent.
„ gilt or plated - - -	35 per cent.	—	—	35 per cent.
„ gold, silver, or German silver -	40 per cent.	—	—	40 per cent.
„ japanned - - -	40 per cent.	—	—	40 per cent.
„ wood - - - -	35 per cent.	—	—	35 per cent.
Walking sticks or canes, finished or not -	35 per cent.	—	—	35 per cent.
„ „ unmanufactured -	Free.	—	—	—
Walnuts, all kinds - - -	3 cts. per lb.	= per lb.	0 0 1½	—
Wardrobes for dolls, as toys - -	50 per cent.	—	—	50 per cent.
Ware, china, porcelain and parian, gilded, ornamented, or decorated -	50 per cent.	—	—	50 per cent.
same, plain white - - -	45 per cent.	—	—	45 per cent.
„ earthen and stone, to wit: brown earthen and common stone ware, gas retorts and stone ware not ornamented - - -	25 per cent.	—	—	25 per cent.
„ earthen, stone, or crockery, all other not otherwise provided for, white, glazed, edged, printed, painted, dipped, or cream coloured, composed of earthy or mineral substances, and including "Rockingham ware" - - -	40 per cent.	—	—	40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Ware, japanned, all kinds, not otherwise provided for	40 per cent.	—	—	40 per cent.
„ stone, above the capacity of 10 gallons	20 per cent.	—	—	20 per cent.
Warming pans, brass or tin	35 per cent.	—	—	35 per cent.
„ „ copper	45 per cent.	—	—	45 per cent.
Warps or warp yarn, as cotton thread.				
Wash balls	10 cts. per lb. and 25 per cent.	= per lb.	0 0 5	+ 25 per cent.
„ blue	25 per cent.	—	—	25 per cent.
Washing apparatus, according to material.				
„ crystals, as sal soda	¼ ct. per lb.	= per lb.	0 0 0⅛	—
Waste, all not otherwise provided for	20 per cent.	—	—	20 per cent.
„ bagging, for manufacturing paper	Free.	—	—	—
„ flocks or shoddy of wool	12 cts. per lb.	= per lb.	0 0 6	—
same, pulverized	12 cts. per lb.	= per lb.	0 0 6	—
„ fur	20 per cent.	—	—	20 per cent.
„ jute thread, fit only for manufacture of paper	Free.	—	—	—
„ of every kind, fit only for manufacture of paper	Free.	—	—	—
„ silk	Free.	—	—	—
Washes, tooth	50 per cent.	—	—	50 per cent.
Watches, gold, silver, and other*	25 per cent.	—	—	25 per cent.
Watch cases, watch movements, parts of watches, and watch materials	25 per cent.	—	—	25 per cent.
„ chains, of gold or silver	25 per cent.	—	—	25 per cent.
„ crystals, glass	40 per cent.	—	—	40 per cent.
„ guards, of human hair	35 per cent.	—	—	35 per cent.
„ guards or chains, silk	60 per cent.	—	—	60 per cent.
„ guards, silk and cotton, silk chief value	60 per cent.	—	—	60 per cent.
„ hands and chain hooks, as watch materials	25 per cent.	—	—	25 per cent.
„ jewels	25 per cent.	—	—	25 per cent.

* Duty must be demanded on all watches but one brought by a single passenger. Seizure would only be made upon denial by the passenger that he has any other watch than one, or upon a false statement of the number in his possession. If all the watches are old, the passenger may choose the one to be treated as personal effects. If some are old and some new, the new are to be included among those to be treated as subject to duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Watch keys, gilt, with iron pipes, as manufactures of iron, not otherwise provided for - - -	35 per cent.	—	—	35 per cent.
Same with steel pipes, as manufactures of steel, not otherwise provided for -	45 per cent.	—	—	45 per cent.
„ keys, if jewellery - - -	25 per cent.	—	—	25 per cent.
„ „ all others, according to materials.				
Water colours, moist, used in the manufacture of paper-hangings and coloured papers and cards, not otherwise provided for - -	25 per cent.	—	—	25 per cent.
„ colours, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ flues, wrought iron - -	3½ cts. per lb.	= per lb.	0 0 1¾	—
„ fowls, living - - -	Free.	—	—	—
„ proof cloth, not otherwise provided for - - -	45 per cent.	—	—	45 per cent.
„ tubes, wrought iron - -	3½ cts. per lb.	= per lb.	0 0 1¾	—
Waters, mineral or medicinal, artificial, in bottles or jugs :—				
„ containing not over one quart	3 cts. each and 25 per cent.	= per doz. bots.	0 1 6	+ 25 per cent.
„ containing over one quart, for each additional quart or fractional part - -	3 cts. and 25 per cent.	—	—	—
„ same, not in bottles -	30 per cent.	—	—	30 per cent.
„ mineral, not artificial - -	Free.	—	—	—
„ toilet - - - - -	50 per cent.	—	—	50 per cent.
Wax, bay or myrtle - - -	Free.	—	—	—
„ beads - - - - -	50 per cent.	—	—	50 per cent.
„ bees', bleached or not - -	20 per cent.	—	—	20 per cent.
„ Brazilian - - - -	Free.	—	—	—
„ Chinese - - - -	Free.	—	—	—
„ flowers - - - -	50 per cent.	—	—	50 per cent.
„ Japan - - - -	20 per cent.	—	—	20 per cent.
„ manufactures of, not otherwise provided for - - - -	20 per cent.	—	—	20 per cent.
„ sealing - - - -	35 per cent.	—	—	35 per cent.
„ shoemakers' - - -	20 per cent.	—	—	20 per cent.
„ candles and tapers - - -	8 cts. per lb.	= per lb.	0 0 4	—
Wearing apparel in actual use of persons arriving in the United States - -	Free.	—	—	—
„ „ linen - - -	40 per cent.	—	—	40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	— —	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Wearing apparel, other than linen, silk, or wool, made up or manufactured by the tailor, seamstress, or manufacturer, and not otherwise provided for -	35 per cent.	—	—	35 per cent.
, „ other than linen or silk, made on frames, not otherwise provided for*	35 per cent.	—	—	35 per cent.
„ „ silk, or partly silk, or of which silk shall be the component material of chief value, not otherwise provided for -	60 per cent.	—	—	60 per cent.
„ „ wholly or in part of wool, worsted, alpaca, or goat hair, except knit goods	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
„ „ knit goods, of wool, worsted, alpaca, &c.:—				
valued at not over 40 cts. per lb. -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued over 40 cts. and not over 60 cts. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued over 60 cts. and not over 80 cts. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb. - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Weaving looms, according to materials.				
Weighing machines, according to materials.				
Webbing, cotton, flax, or any other materials not otherwise provided for - - -	35 per cent.	—	—	35 per cent.

* Dresses imported for "Sisters of Charity" who were nursing the soldiers in the hospitals of Philadelphia and elsewhere, were held to be dutiable.

"Such exemption of wearing apparel cannot be without limit as to the character and quantity of the articles which are to be admitted to free entry; and it is for the Department or its officers to determine whether articles for which exemption is claimed are entitled thereto under a reasonable construction of the law.

"Clothing or wearing apparel, or personal ornaments accompanying persons arriving in the United States, cannot be admitted free of duty, unless it appear by declaration of the party, under oath, that they have been in his or her actual use."

The rule by which the Department usually determines the dutiable or free character of wearing apparel in such cases is as follows:—

1st. Did the owner visit the foreign country for the purpose or with the direct intention of purchasing the article or articles?

2nd. Were the articles intended for the sole use of the person purchasing the same.

3rd. Was such purchase actually necessary for the health or comfort of the person or persons purchasing the same?

These questions must be answered under oath."

"By the term 'wearing apparel,' Congress intended to make the *purpose, adaptation, and use* of an article, and *not* its commercial designation, the test of its dutiable description."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Webbing, silk	60 per cent.	—	—	60 per cent.
„ silk and india-rubber	50 per cent.	—	—	50 per cent.
„ silk, rubber, and cotton, cotton chief value	50 per cent.	—	—	50 per cent.
„ wool, worsted, or mohair	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ any other material, and india-rubber	35 per cent.	—	—	35 per cent.
„ wholly or partly of india-rubber	35 per cent.	—	—	35 per cent.
Wedgwood ware. *See* Earthenware.				
Weights (according to material).				
Weld	Free.	—	—	—
Whalebone, all, of American fisheries	Free.	—	—	—
„ unmanufactured, of foreign fisheries	Free.	—	—	—
„ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ hats, bonnets, or hoods of	40 per cent.	—	—	40 per cent.
„ braids, &c. of, for bonnets and hats	30 per cent.	—	—	30 per cent.
Whale oil, of American fisheries	Free.	—	—	—
„ „ of foreign fisheries	20 per cent.	—	—	20 per cent.
Wharves, timber for, viz.:—				
piling, consisting of rough logs with bark on	Free.	—	—	—
spiles, other than round or rough	20 per cent.	—	—	20 per cent.
Wheat (60 lbs. to bushel)	20 cts. per bush.	= per bush.	0 0 10	—
„ flour of	20 per cent.	—	—	20 per cent.
Wheelbarrows (iron and wood)	35 per cent.	—	—	35 per cent.
Wheels, hubs for, rough-hewn, or sawed only	20 per cent.	—	—	20 per cent.
„ hubs for, manufactured	35 per cent.	—	—	35 per cent.
Whetstones	Free.	—	—	—
Whipgut or catgut, unmanufactured	Free.	—	—	—
Whips (according to material).				
Whisky	$2 per proof gall.	= per proof gall.	0 8 4	—
Whistles for children, as toys	50 per cent.	—	—	50 per cent.
White, enamelled, satin, and lime	3 cts. per lb.	= per lb.	0 0 1½	—
„ enamel for manufacture of watch faces	40 per cent.	—	—	40 per cent.
„ chalk	Free.	—	—	—
„ fox skins, undressed	Free.	—	—	—
„ lead, dry or in oil	3 cts. per lb.	= per lb.	0 0 1½	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
White vitriol	20 per cent.	—	—	20 per cent.
„ stone, crude mineral	20 per cent.	—	—	20 per cent.
Whiting, dry	1 ct. per lb.	= per lb.	0 0 0½	—
„ ground in oil	2 cts. per lb.	= per lb.	0 0 1	—
Wicks, cotton	35 per cent.	—	—	35 per cent.
Wigs, human hair	40 per cent.	—	—	40 per cent.
„ netting of human hair, foundation for	40 per cent.	—	—	40 per cent.
„ springs for	45 per cent.	—	—	45 per cent.
Willow or osier, prepared for basketmakers' use	30 per cent.	—	—	30 per cent.
„ braids, &c., for bonnets, hats, &c.	30 per cent.	—	—	30 per cent.
„ hats, bonnets, &c.	40 per cent.	—	—	40 per cent.
„ manufactures of, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ split, for coopers' use	20 per cent.	—	—	20 per cent.
Wine lees, crystallized or crude tartar	Free.	—	—	—
„ „ liquid	20 per cent.	—	—	20 per cent.
Wines, all still, in casks and containing not over 24 per cent. of alcohol	40 cts. per gall.	= per gall.	0 1 8	—
„ champagne and all other sparkling, in bottles of ½ pint or less each	$1·50 per doz.	= per doz.	0 6 3	—
same, in bottles of over ½ pint and not over 1 pint each	$3 per doz.	= per doz.	0 12 6	—
same, in bottles of over 1 pint and not over 1 quart each	$6 per doz.	= per doz.	1 5 0	—
same, in bottles of over 1 quart each	$6 per doz. and $2 per gall. on excess	= per doz.	1 5 0 and 8s. 4d. per gall. on excess	—
„ all still wines in bottles, per case of 1 dozen bottles, containing each not more than 1 quart, and more than 1 pint, or 24 bottles, containing each not more than 1 pint	$1·60.	= per doz. qts. or 2 doz. pints.	0 6 8	—
Any excess beyond these quantities found in such bottles shall be subject to a duty of 5 cents. per pint, or fractional part				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B
			£ s. d.	
Wines—*continued.* thereof. No separate duty shall be collected on the bottles.* PROVIDED that there shall be an allowance of 5 per cent. and no more on all effervescing wines, liquors, cordials, and distilled spirits in bottles, to be deducted from the invoice quantity in lieu of breakage.				
„ containing over 24 per cent. of alcohol to be forfeited.				
Wings, metal - - - -	35 per cent.	—	—	35 per cent
Winnowing machines, according to material.				
Wire, binding, for saddlery, rolled and flattened, or other - -	35 per cent.	—	—	35 per cent
„ brass - - - -	35 per cent.	—	—	35 per cent
„ copper - - - -	45 per cent.	—	—	45 per cent
„ gilt, plated, or silvered - -	35 per cent.	—	—	35 per cent
„ gold, silver, or platinum - -	40 per cent.	—	—	40 per cent
„ iron, bright, coppered, or tinned, drawn and finished, not more than $\frac{1}{4}$ of an inch in diameter.†				
not less than No. 16 wire gauge	2 cts. per lb. and 15 per cent.	= per 100 lbs.	0 8 4	+15 per cent
		= per ton	9 6 8	+15 per cent
over No. 16 and not over No. 25 wire guage - - -	$3\frac{1}{2}$ cts. per lb. and 15 per cent.	= per 100 lbs.	0 14 7	+15 per cent
		= per ton	16 6 8	+15 per cent

* In an appeal as to the duty on claret wine imported from Bordeaux in bottles, and in the dutiable value of which the cost bottles, corks, labels, caps, straw, and cases was included, the Department held that these constituted an integral part of the mar value, and that the duty was properly assessed.

Under the Act of 1864 it was held that, "The duty on 'champagne or sparkling wines in bottles,' is not exclusively speci "the same schedule which governs all other wines, as provided for in section 2, governs 'champagne or sparkling wines "'bottles;' but a provision of the law directs that said wines shall not pay a *less rate of duty* than six dollars per dozen bott "&c., &c. Unquestionably, if the value justifies it, they must pay *more*."

† "That round iron coils, three-sixteenths of an inch or less in diameter, whether coated with metal or not so coated, and descriptions of iron wire, and wire of which iron is a component part, not otherwise specifically enumerated and provided for, sl pay the same duty as iron wire, bright, coppered, or tinned."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Wire, iron, &c.—*continued.*				
over No. 25 wire gauge	4 cts. per lb. and 15 per cent.	= per 100 lbs.	0 16 8	+15 per cent.
		= per ton	18 13 4	+15 per cent.
same, over ¼ in. diameter, as manufactures of iron, not otherwise provided for	35 per cent.	—	—	35 per cent.
PROVIDED that wire covered with cotton, silk, or other material, shall pay 5 cts. per lb. in addition to the foregoing rates.				
„ "iron wire rods," in coils, as rolled or hammered iron not otherwise provided for	1¼ cts. per lb.	= per 100 lbs.	0 5 2½	—
„ spiral springs	2 cts. per lb. and 15 per cent.	= per lb.	0 0 1	+ 15 per cent.
„ ribbons, of strands of iron wire covered with cotton and united by a cotton web	35 per cent.	—	—	35 per cent.
„ square, of iron, to make stretchers for umbrellas, sunshades, and parasols, cut into pieces not exceeding the length therefor	35 per cent.	—	—	35 per cent.
same, of steel or part steel	45 per cent.	—	—	45 per cent.
„ rope, wire strand, and chain of iron or steel wire, either bright, coppered, galvanized, or coated with other metals, pay the same rates of duty levied on the wire of which they are made.				
„ steel, not less than ¼ of an inch in diameter:—				
valued at 7 cts. or less per lb.	2¼ cts. per lb.	= per 100 lbs.	0 9 4½	—
		=per ton	10 10 0	
valued at above 7 cts. and not above 11 cts.	3 cts. per lb.	= per 100 lbs.	0 12 6	—
		=per ton	14 0 0	
valued at above 11 cts. per lb.	3½ cts. per lb. and 10 per cent.	= per 100 lbs.	0 14 7	+10 per cent.
		= per ton	16 6 8	+10 per cent.
„ steel rods in coils, as steel wire.				
„ steel, less than ¼ of an inch in diameter:—				
not less than No. 16 wire gauge	2½ cts. per lb. and 20 per cent.	= per 100 lbs.	0 10 5	+20 per cent.
		= per ton	11 13 4	+20 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Wire, steel—*continued.*				
less than No. 16 wire gauge -	3 cts. per lb. and 20 per cent.	= per 100 lbs.	0 12 6	+20 per cent.
		= per ton	14 0 0	+20 per cent.
„ of steel, commercially known as crinoline, corset, and hat steel wire - - - -	9 cts. per lb. and 10 per cent.	= per 100 lbs.	1 17 6	+10 per cent.
		= per ton	42 0 0	+10 per cent.
„ steel wire rods, round, less than ¼ inch diameter, classified as steel in forms not otherwise provided for - - - -	30 per cent.	—	—	30 per cent.
„ telegraph, galvanized iron - -	2 cts. per lb. and 15 per cent.	= per lb.	0 0 1	+15 per cent.
„ telegraph cable, copper - -	45 per cent.	—	—	45 per cent.
same, of iron, or iron chief value -	35 per cent.	—	—	35 per cent.
Woad or pastel - - - -	Free.	—	—	—
Wooden moulds or cores for dress ornaments, as manufactures of wood not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
Wood ashes, and lye of - - -	Free.	—	—	—
„ cedar fence posts and telegraph poles, unmanufactured, other than round - - -	20 per cent.	—	—	20 per cent.
„ cedar logs and posts, round and unmanufactured - -	Free.	—	—	—
„ fire - - - -	Free.	—	—	—
„ handle-bolts - - -	Free.	—	—	—
„ hop poles of, unmanufactured -	20 per cent.	—	—	20 per cent.
„ lake - - - -	25 per cent.	—	—	25 per cent.
„ logs and round unmanufactured timber not otherwise provided for, and ship timber - -	Free.	—	—	—
„ logs, rafts of - - -	Free.	—	—	—
„ manufactures of, the following :—				
„ all manufactures of cabinet woods not otherwise specified -	35 per cent.	—	—	35 per cent.
„ all manufactures of other woods not otherwise provided for -	35 per cent.	—	—	35 per cent.
„ piling, consisting of rough logs with bark on - - -	Free.	—	—	—
„ spiles for wharves, other than rough or round - -	20 per cent.	—	—	20 per cent.
„ telegraph poles, with or without the bark, as round unmanufactured timber - - -	Free.	—	—	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Wood casks and barrels, empty, not otherwise provided for - -	30 per cent.	—	—	30 per cent.
,, cedar boards, for making cigar boxes (not cabinet wood), classified as common lumber.	35 per cent.	—	—	35 per cent.
,, chessmen - - - - -				
,, clapboards, rough-hewn or sawed only, pine or spruce, per 1,000 pieces of 4 ft. long, or 4,000 lineal feet, viz.:—				
pine - - - -	$2 per 1,000 pieces	= per 1,000 pieces	0 8 4	—
spruce - - -	$1·50 per 1,000 pieces	= per 1,000 pieces	0 6 3	—
,, all other, rough-hewn or sawed only - - - -	20 per cent.	—	—	20 per cent.
When planed or finished, all the above are subject to the additional duty prescribed for planed or finished lumber.				
,, manufactures of, the following :—				
,, headings of barrels, casks, &c., as manufactures of wood not otherwise provided for - -	35 per cent.	—	—	35 per cent.
,, heading, unmanufactured, except being sawed or split into sizes convenient for manufacture, as wood unmanufactured - -	20 per cent.	—	—	20 per cent.
,, hogsheads, as casks - -	30 per cent.	—	—	30 per cent.
,, hoops - - - -	35 per cent.	—	—	35 per cent.
,, hubs for wheels, posts, last blocks, wagon blocks, oar blocks, gun blocks, heading blocks, and all like blocks and sticks, rough-hewn or sawed only - -	20 per cent.	—	—	20 per cent.
,, hubs, manufactured - -	35 per cent.	—	—	35 per cent.
,, lasts, finished or rough - -	35 per cent.	—	—	35 per cent.
,, laths, per 1,000 pieces - -	15 cts.	= per 1,000 pieces	0 0 7½	—
,, lumber, as follows: sawed boards, plank, deals, and other lumber of hemlock, whitewood, sycamore, and bass wood - - -	$1 per 1,000 ft. board measure	= per 1,000 ft.	0 4 2	—

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Wood, lumber—*continued.*			£ s. d.	
all other varieties of rough sawed lumber* - -	$2 per 1,000 ft. board measure	= per 1,000 ft.	0 8 4	—
PROVIDED, that when lumber of any sort is planed or finished, in addition to the rates herein provided, there shall be levied and paid, for each side so planed or finished, 50 cts. per 1,000 ft.; and if planed on one side and tongued and grooved, $1 per 1,000 ft.; and if planed on two sides and tongued and grooved, $1·50 per 1,000 ft.				
„ pickets and palings, rough -	20 per cent.	—	—	20 per cent.
„ „ manufactured - -	35 per cent.	—	—	35 per cent.
„ pulp, dried in sheets - -	20 per cent.	—	—	20 per cent.
„ pulp for paper manufacture -	Free.	—	—	—
„ rafts of logs - - -	Free.	—	—	—
„ shingle-bolts - - -	Free.	—	—	—
„ shingles - - - -	35 cts. per 1,000	= per 1,000	0 1 5½	—
„ ship-planking - - -	Free.	—	—	—
„ shooks, not otherwise provided for	35 per cent.	—	—	35 per cent.
„ shooks, exported and returned as barrels or boxes empty or covering importations, admitted under regulations - - -	Free.	—	—	—
„ spars - - - -	20 per cent.	—	—	20 per cent.
„ spokes for wheels - -	35 per cent.	—	—	35 per cent.
„ stave-bolts, including heading-bolts	Free.	—	—	—
„ staves for pipes, hogsheads, and other casks - - -	10 per cent.	—	—	10 per cent.
other, undressed - - -	20 per cent.	—	—	20 per cent.
„ sugar-box shooks, and packing boxes not otherwise provided for - - - -	30 per cent.	—	—	30 per cent.
„ railroad ties of - - -	Free.	—	—	—
„ timber, hewn or sawed, not otherwise provided for - -	20 per cent.	—	—	20 per cent.

* Red Sanders wood from beyond the Cape of Good Hope imported from London, liable to 10 per cent. duty.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Wood, squared or sided, not otherwise provided for - - -	1 ct. per cubic foot.	= per cubic foot	0 0 0½	—
„ used in building wharves - -	20 per cent.	—	—	20 per cent.
„ unmanufactured, not otherwise provided for - - -	20 per cent.	—	—	20 per cent.
Wood's patent dry or boiler felt - -	30 per cent.	—	—	30 per cent.
Woods, bar, in sticks - - -	Free.	—	—	—
Woods, box, cedar, ebony, granadilla, lignum-vitæ, lance, mahogany, rose, satin, and all cabinet woods, unmanufactured -	Free.	—	—	—
„ Brazil, brazilletto, and all other dyewoods, in sticks - -	Free.	—	—	—
„ Campeachy, in sticks - -	Free.	—	—	—
„ camwood, in sticks - -	Free.	—	—	—
„ cedar, Spanish, so-called (not cabinet wood) - -	20 per cent.	—	—	20 per cent.
„ ebony, green, a dye - -	Free.	—	—	—
„ fustic, in sticks - - -	Free.	—	—	—
„ log, in sticks - - -	Free.	—	—	—
„ manufactures of, not otherwise provided for, of cedar-wood, granadilla, ebony, mahogany, rose-wood, and satin-wood -	35 per cent.	—	—	35 per cent.
„ Nicaragua, in sticks - -	Free.	—	—	—
„ poplar and other woods for the manufacture of paper - -	Free.	—	—	—
„ quassia - - - -	Free.	—	—	—
„ red - - - -	Free.	—	—	—
„ sandal - - - -	Free.	—	—	—
Wool, hair of the alpaca, goat, and other like animals, unmanufactured, unscoured, and unwashed, shall be divided, for the purpose of fixing the duties, into *three classes*,—				
Class 1.—Clothing wools, viz.:— Merino, mestiza, metz, metis, or other wools of any merino blood, down clothing wools, and wools of like character with any of the above (including all wools not described or designated in Classes 2 and 3).				

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Wool, hair of the alpaca, &c.—*continued.*				
CLASS 2.—Combing wools, viz.:—				
Leicester, Cotswold, Lincolnshire, Down combing, Canada long wools, or other like combing wools of English blood, usually known by these terms, and all hair of the alpaca, goat, and other like animals.				
Value at the last port or place whence exported to the United States, excluding charges in such port, 32 cts. or less per lb.* - - -	10 cts. per lb. and 11 per cent.	= per 100 lbs.	2 1 8	+11 per cent.
exceeding 32 cts. per lb. -	12 cts. per lb. and 10 per cent.	= per 100 lbs.	2 10 0	+10 per cent.
CLASS 3.—Carpet wools, and all other similar wools, such as Donskoi, native South American, Cordova, Valparaiso, native Smyrna, and others of like character, the value whereof at the last port or place whence exported to the United States, excluding charges in such port, shall be 12 cts. or less per lb.*	3 cts. per lb.	= per 100 lbs.	0 12 6	—
exceeding 12 cts. per lb. -	6 cts. per lb.	= per 100 lbs.	1 5 0	—
PROVIDED, if the above be imported other than in the ordinary condition, or mixed with dirt, &c., to evade the duty, they shall pay twice the amount they would be otherwise subjected to.				
PROVIDED, further, when wool is imported of different qualities in same package,				

* "The commissions, &c., required to be included by section 9, Act of July 28, 1866, in the dutiable value of imported merchandise, are to be *included* in the dutiable value of wool, but *excluded* in determining the classification or rate of duty under the above Act. This view was taken by Department's decision of September 21, 1869, which held that the above words '*excluding charges in such port,*' have reference only to determining the *rate of duty* to which imported wools are liable, and do not exclude such charges from entering into and forming part of their *dutiable value.*" See also Dept. decision of April 9, 1868 as to inclusion of the packing or bailing of Cordova wool in hide covers, in ascertaining the dutiable value.

The per-centage of allowance for increase of weight of wool should be ascertained by the appraisers and reported to collector in the same manner as estimates of damage.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
Wool, hair of the alpaca, &c.—*continued.* it is appraised at the average aggregate value; when invoiced at the same price, whereby the average price shall be reduced more than 10 per cent. below the value of the bale of the best quality, the whole appraised according to best quality; and no package shall be liable to a less rate in consequence of being invoiced with wool of lower value.			£ *s.* *d.*	
PROVIDED, further, that wool of Class 1, imported *washed*, shall be twice the amount of duty as when imported *unwashed*, and that wool of all Classes imported *scoured* shall be three times the amount of duty as when imported *unwashed.*				
„ noils, being short pieces and knots of wool, classed as wool.				
Same, fine, imported in the oily state, dutiable as washed wools.				
Same, of coarse wool, as washed wools of the 3rd class				
„ on the skin,* same rate as on other wools.				

* "The wool should be properly classified for duty according to its grade by the standard samples, and that the skins be also "entered for duty under the proper classification."

Duty on wool is according to class and value as a distinct article, and the skins to a separate duty of 10 per centum ad valorem. The proper way to ascertain the allowance to be made for the pelts is by pulling (not shearing) the wool from the skins, for the purpose of estimating the correct weight of the same.

The following rules for estimating the weight of the following wools on skins, being deduced from several careful experiments made under the instructions of this Department will be adopted at the several ports, to wit:

Those imported from the Cape of Good Hope.

4-pound skins, 59 per cent. wool; 4½-pound skins, 60 per cent. wool; 5-pound skins, 61 per cent. wool; 5½-pound skins, 62 per cent. wool; 6-pound skins, 63 per cent. wool.

Those imported from South America.

3-pound skins, 71 per cent. wool; 3½-pound skins, 72 per cent. wool; 4-pound skins, 72 per cent. wool; 4½-pound skins, 73 per cent. wool; 5-pound skins, 74 per cent. wool; 5½-pound skins, 75 per cent. wool; 6-pound skins, 76 per cent. wool; 6½-pound skins, 77 per cent. wool; 7-pound skins, 78 per cent. wool; 7½-pound skins, 78 per cent. wool; 8-pound skins, 79 per cent. wool.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Wool pickings - - - -	10 cts. per lb. and 11 per cent.	= per 100 lbs.	2 1 8	+11 per cent.
Woollens and manufactures of wool, as follows :—				
All manufactures wholly or partially of wool, not otherwise provided for - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Woollen bags - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
,, Balmoral skirts and skirting and goods of similar description, or used for like purposes, wholly or in part of wool, worsted, hair of alpaca, goat, or other like animals, made up or manufactured wholly or in part by the tailor, seamstress, or manufacturer - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	40 per cent.
,, balmorals, wholly or in part of wool, worsted, hair of the alpaca, goat, or other like animals :—				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at above 40 cts. and not above 60 cts. per lb. - - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at above 60 cts. per lb. and not above 80 cts. per lb. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at above 80 cts. per lb. - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
,, bedsides (carpeting) are subject to the rate of duty imposed on carpets or carpeting of like character or description.				
,, *beltings, bindings, braids, buttons or barrel buttons, or buttons of other forms for tassels or ornaments, wholly or partly of wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.

* This includes braids of cotton and worsted, and galloons and fringes of mohair and bugles, and gimps or trimmings of worsted and beads, and dress trimmings of worsted and beads.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Woollen belts, endless, or felts, for paper or printing machines - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
„ blankets, wholly or partly of wool, worsted, the hair of the alpaca, goat, or other like animal :—				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 cts. and not over 60 cts. per lb. - - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 cts. and not over 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ bunion or corn plasters of wool -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ bunting - - -	20 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 0 10	+ 35 per cent.
„ calf hair and cotton paddings, so called - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ card cloth - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ Cardigan jackets, cuffs, &c., wholly or partly of wool -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ carpets, carpeting, and covers for, of wool or cotton, or of parts of either, or flax or other materials, not otherwise specified	40 per cent.	—	—	40 per cent.
„ cassimere - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ cloth gloves or mitts - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ clothing, ready made and wearing apparel of every description, wholly or partly of wool, worsted, the hair of the alpaca, goat, or other like animals, except knit goods - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Woollen cloths* - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ cords, and cords and tassels, wholly or partly of wool, worsted, or mohair - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ covers, embroidered - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ dress goods, women's and children's, and real or imitation Italian cloths, wholly or partly of wool, worsted, the hair of the alpaca, goat, or other like animals, as follows:—				
valued at not over 60 cts. per sq. yard - -	6 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 0 3	+ 35 per cent.
valued higher - -	8 cts. per sq. yd. and 40 per cent.	= per sq. yd.	0 0 4	+ 40 per cent.
PROVIDED, that on all goods weighing four ounces or over per sq. yd. the duty shall be -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
dress trimmings, wholly or partly of wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ embroidered or tamboured -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ flannels, value not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 cts. and not over 60 cts. per lb. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.

* "*Classification of certain Imitation Astrakhan Cloths, Seal Skin Cloakings, and similar Goods.*—The materials of which certain railway rugs, imitation Astrakhan cloth, seal skin cloakings, and other similar goods, are composed, manufactured partly of hair, having been found to be so blended that it was impracticable to determine by an examination whether said goods contained any wool or worsted, or wool or worsted waste, the Department decided that they should be classified as a manufacture of wool, under the second clause of section 2, Act March 2, 1867, except in cases where the invoice is accompanied by a certificate from the manufacturer of the goods in the following form, viz.:

"CERTIFICATE.

"It is hereby certified, that all of the goods described in the accompanying invoices, of the value of £——, delivered to ——— for shipment to the port of ———, in the United States, per ship ———, were manufactured by the undersigned at his works at ———; that they are all made wholly of cow hair, calf hair, cotton, and vegetable fibres, and contain no wool or worsted, or wool or worsted waste, either new or old, or shoddy.

"This certificate, duly sworn to before an officer competent to administer oaths, whose capacity to act is attested by a United States consul, should be attached to the invoice to which it refers by seal and ribbon, may be accepted as proof of the character of the goods, and upon production of such certificate they may be classified as manufactures of hair and cotton, dutiable at 35 per centum ad valorum."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Woollen flannels—*continued.*				
valued at over 60 and not over 80 cts. per lb. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+35 per cent.
valued at over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
„ flocks, mungo, shoddy, or waste -	12 cts. per lb.	= per lb.	0 0 6	—
„ „ pulverised - -	12 cts. per lb.	= per lb.	0 0 6	—
„ foot muffs, of dressed sheep's skin, with wool on and leather	35 per cent.	—	—	35 per cent.
„ fringes, wholly or partly of wool, worsted, or mohair - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+50 per cent.
„ galloons and gimps, wholly or partly of wool, worsted, or mohair - - - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+50 per cent.
„ gun-wads, other than sporting, partly of wool or wool waste, of any merchantable value -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
same, wool of no merchantable value - - - -	35 per cent.	—	—	35 per cent.
„ gun-wads, sporting - -	35 per cent.	—	—	35 per cent.
„ hassocks, as the carpeting of which they are made.				
„ hats, of wool, valued at not over 40 cts. per lb. - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+35 per cent.
valued at over 40, and not over 60 cts. per lb. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+35 per cent.
valued at over 60 and not over 80 cts. per lb. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+35 per cent.
valued at over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
„ head nets, wholly or partly of wool, worsted, or mohair -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+50 per cent.
„ hosiery, knit, as knit goods.				
„ „ wholly or partly of wool, and made on frames -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+40 per cent.
„ Italian cloths, real or imitation, as dress goods.				
„ knit goods, wholly or partly of wool, worsted, the hair of the alpaca, goat, or other like animals :—				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency. Upon Quantities. A. £ s. d.	Upon declared Value. B.
Woollen knit goods—*continued.*				
valued at over 40 cts. and not over 60 cts. per lb. -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 cts. and not over 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ listings - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ Markwick's spongiopiline, of wool	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ mats, rugs, and screens are subject to the rate of duty imposed on carpets or carpeting of like character or description.				
„ mitts, knit. *See* Knit Goods, above.				
„ „ others, wholly or partly of wool, and made on frames	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ padding of wool - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ piano and table covers, of wool, embroidered on the borders with silk, classified as woollen manufactures - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ plush - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ plush blankets or "railway rugs"	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ poplins, part wool, worsted, or mohair, as dress goods, viz.:—				
valued at not over 20 cts. per sq. yard - - -	6 cts. per sq. yd. and 35 per cent.	= per sq. yd.	0 0 3	+ 35 per cent.
valued at over 20 cts. per sq. yard - - -	8 cts. per sq. yd. and 40 per cent.	= per sq. yd.	0 0 4	+ 40 per cent.
on all goods weighing 4 ozs. and over per sq. yard -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ rags - - - - -	12 cts. per lb.	= per lb.	0 0 6	—
„ shawls - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
same, of wool, worsted, and silk, embroidered - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ shoes, of wool, or partly of wool -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Woollen, slipper patterns, of wool -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ vestings - - - - -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ vests, wholly or partly of wool, worsted, alpaca, or goat hair -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ webbings - - - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ yarns, woollen and worsted :—				
valued at not over 40 cts. per lb. - - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued over 40 cts. and not over 60 cts. per lb. - -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued over 60 cts. and not over 80 cts. per lb. - -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued over 80 cts. per lb. -	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Works of Art, imported specially for presentation to national institutions, or to any state, or to any municipal corporation - - - - -	Free.	—	—	—
Wormgut - - - -	Free.	—	—	—
Wormseed, Levant - - -	Free.	—	—	—
***Worsted,** all manufactures wholly or partly of, or of the hair of the alpaca, goat, or other like animals, not part wool, and not otherwise provided for, as follows :—				
valued at not over 40 cts. per lb. - - -	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+ 35 per cent.
valued at over 40 cts. and not over 60 cts. per lb. -	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+ 35 per cent.
valued at over 60 cts. and not over 80 cts. per lb. -	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+ 35 per cent.
valued at over 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
„ and cotton braids, for boot and shoe straps, chiefly cotton, as manufactures partly of worsted. *See* above.				

* "Worsted being a distinct article, known in commerce under that name, worsted shawls with cotton borders, and suspenders with cotton ends, are not liable to be rated for duties as manufactures of wool."

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Worsted and cotton reps, as manufactures of worsted. *See ante.*				
„ lastings partly worsted, and not any wool, as manufactures of worsted. *See ante.*				
„ mohair serges for lining coats. as manufactures of worsted. *See ante.*				
„ serges, part worsted and not part wool, as manufactures of worsted. *See ante.*				
„ reps, plain and fancy, partly of, as manufactures of worsted. *See ante.*				
„ umbrella cloths, as manufactures of worsted. *See ante.*				
„ and cotton trimmings - -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ and cotton twills, rainbow stripe, printed, as woollen dress goods. [*See* page 334.]				
„ caps, comforters, &c., made on frames, not otherwise provided for - - - -	35 per cent.	—	—	35 per cent.
„ clothing, ready made - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ knit goods, as woollen knit goods. [*See* page 335.]				
„ lace for dress trimmings -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ lace shawls - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ Llama points - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ shawls, or of alpaca or goat hair -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.
„ Shetland shawls - - -	50 cts. per lb. and 40 per cent.	= per lb.	0 2 1	+ 40 per cent.

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Worsted webbings, beltings, bindings, braids, galloons, fringes, gimps, cords, cords and tassels, dress trimmings, head nets, buttons or barrel buttons, or buttons of other forms, for tassels or ornaments, wholly or partly of wool, worsted, or mohair* -	50 cts. per lb. and 50 per cent.	= per lb.	0 2 1	+ 50 per cent.
„ women's dress goods, &c., as Woollen dress goods. [*See* page 334.]				
Wrecks, merchandize recovered from, sunk in United States waters two years and abandoned by owners, may be brought into the nearest port under regulations, free of duty, and without making entry.				
Writing desks, according to material.				
X.				
Xylonite or xylotile - - -	Free.	—	—	—
„ partially manufactured, as knife handles - - -	20 per cent.	—	—	20 per cent.
Y.				
Yams - - - - - -	Free.	—	—	—
Yarn, carpet, of wool waste, cows' hair, &c., as woollen yarn [*See* page 337.]				
„ coir - - - - -	Free.	—	—	—
„ cotton, as cotton thread.				
„ „ on spools, arranged to constitute warp - -	35 per cent.	—	—	35 per cent.
„ cow and calf hair - - -	20 per cent.	—	—	20 per cent.
„ flax and jute, flax chief value† -	40 per cent.	—	—	40 per cent.
„ flax - - - - -	40 per cent.	—	—	40 per cent.

* This includes braids of cotton and worsted, and galloons and fringes of mohair and bugles, and gimps or trimmings of worsted and beads, and dress-trimmings of worsted and beads.

† "*Yarn* is a single thread more or less twisted, and used for warp or weft in manufacture, when, by the packing of the loom "it is held together without much twisting, and answers too a better purpose than twine."

"*Twine* is a double and retwisted thread. Sometimes the manufacturer will designate a poor and slightly twisted twine as yarn, "because not fit for the purposes for which twine is used, and only fit for the purposes for which yarn is used, *this, however, does* "*not make it 'yarn.'*"

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Yarn, hemp	5 cts. per lb.	= per lb.	0 0 2½	—
„ jute*	25 per cent.	—	—	25 per cent.
„ flax or linen, for carpets, not exceeding No. 8 Lea— valued at 24 cts. or less per lb.	30 per cent.	—	—	30 per cent.
„ flax or linen— valued at above 24 cts. per lb.	35 per cent.	—	—	35 per cent.
„ silk	60 per cent.	—	—	60 per cent.
„ tow of flax	40 per cent.	—	—	40 per cent.
„ woollen and worsted— valued at 40 cts. or less per lb.	20 cts. per lb. and 35 per cent.	= per lb.	0 0 10	+35 per cent.
valued above 40 cts. and not above 60 cts. per lb.	30 cts. per lb. and 35 per cent.	= per lb.	0 1 3	+35 per cent.
valued above 60 cts. and not above 80 cts. per lb.	40 cts. per lb. and 35 per cent.	= per lb.	0 1 8	+35 per cent.
valued above 80 cts. per lb.	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+ 35 per cent.
Yarns, not otherwise provided for	20 per cent.	—	—	20 per cent.
Yeast cakes	Free.	—	—	—
Yellow berries	Free.	—	—	—
„ crystals, so styled, manufactured from naphthaline	50 cts. per lb. and 35 per cent.	= per lb.	0 2 1	+35 per cent.
„ metal. *See* note to Sheating Metal.	3 cts. per lb.	= per lb.	0 0 1½	—
„ ochre, dry	50 cts. per 100 lbs.	= per 100 lbs.	0 2 1	—
„ ochre, ground in oil	$1·50 per 100 lbs.	= per 100 lbs.	0 6 3	—
„ salt of chrome	20 per cent.	—	—	20 per cent.
„ spirits	20 per cent.	—	—	20 per cent.
Z.				
Zaffer	Free.	—	—	—
Zante currants	1 ct. per lb.	= per lb.	0 0 0½	—
Zinc, acetate, or pyrolignate of	25 cts. per lb.	= per lb.	0 1 0½	—
„ corrugated	35 per cent.	—	—	35 per cent.
„ manufactured in blocks or pigs	1½ ct. per lb.	= per 100 lbs.	0 6 3	—
		=per ton	7 0 0	

* "Jute yarn in balls reported by appraisers, that said article was commercially known as twine, bought, sold, and used as such, liable to duty as twine."—*See footnote to twine.*

DESCRIPTION OF ARTICLES.	Rate of Duty according to the American Official Tariff.	—	Duty charged in English Currency.	
			Upon Quantities. A.	Upon declared Value. B.
			£ s. d.	
Zinc, in sheets - - - -	2¼ cts. per lb.	= per 100 lbs. =per ton	0 9 4½ / 10 10 0	—
„ manufactures of - - -	35 per cent.	—	—	35 per cent.
„ old and fit only to be re-manufactured	20 per cent.	—	—	20 per cent.
„ oxide of, dry or ground in oil -	1¾ cts. per lb.	= per 100lbs.	0 7 3½	—
„ oxide of, medicinal preparation -	40 per cent.	—	—	40 per cent.
„ sheating metal - - -	3 cts. per lb.	= per lb.	0 0 1½	—
„ sulphate of - - -	20 per cent.	—	—	20 per cent.
„ valerianate of, medicinal preparation	40 per cent.	—	—	40 per cent.
Zwetschenwasser, spirituous liquor -	$2 per proof gall.	= per pf. gall.	0 8 4	—

THE PATENT LAWS OF THE UNITED STATES OF AMERICA, PASSED JULY 8, 1870, WITH REVISED STATUTES APPROVED BY CONGRESS, JUNE 22, 1874, AND RULES OF PRACTICE, IN THE UNITED STATES PATENT OFFICE, DATED 1st APRIL 1875, IN ACCORDANCE WITH THE AMENDED LAWS RELATING TO PATENTS, AND TRADE MARKS.

An Act to revise, consolidate, and amend the Statutes relating to Patents and Copyrights.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That there shall be attached to the Department of the Interior the office, heretofore established, known as the Patent Office, wherein all records, books, models, drawings, specifications, and other papers and things pertaining to patents shall be safely kept and preserved.

Officers, Salaries, and Sureties.

Sec. 2. And be it further enacted, That the officers and employés of said office shall continue to be: one Commissioner of Patents, one Assistant Commissioner, and three examiners-in-chief, to be appointed by the President, and by and with the advice and consent of the Senate; one chief clerk, one examiner in charge of interferences, twenty-two principal examiners, twenty-two first-assistant examiners, twenty-two second-assistant examiners, one librarian, one machinist, five clerks of class four, six clerks of class three, fifty clerks of class two, forty-five clerks of class one, and one messenger and purchasing clerk, all of whom shall be appointed by the Secretary of the Interior, upon nomination of the Commissioner of Patents.

Sec. 3. And be it further enacted, That the Secretary of the Interior may also appoint, upon like nomination, such additional clerks of classes two and one, and of lower grades, copyists of drawings, female copyists, skilled laborers, laborers, and watchmen, as may be from time to time appropriated for by Congress.

Sec. 4. And be it further enacted, That the annual salaries of the officers and employés of the Patent Office shall be as follows:

Of the Commissioner of Patents, four thousand five hundred dollars.
Of the Assistant Commissioner, three thousand dollars.
Of the examiners-in-chief, three thousand dollars each.
Of the chief clerk, two thousand five hundred dollars.
Of the examiner in charge of interferences, two thousand five hundred dollars.
Of the principal examiners, two thousand five hundred dollars each.
Of the first assistant examiners, one thousand eight hundred dollars each.
Of the second assistant examiners, one thousand six hundred dollars each.
Of the librarian, one thousand eight hundred dollars.
Of the machinist, one thousand six hundred dollars.
Of the clerks of class four, one thousand eight hundred dollars each.
Of the clerks of class three, one thousand six hundred dollars each.
Of the clerks of class two, one thousand four hundred dollars each.
Of the clerks of class one, one thousand two hundred dollars each.
Of the messenger and purchasing clerk, one thousand dollars.
Of laborers and watchmen, seven hundred and twenty dollars each.
Of the additional clerks, copyists of drawings, female copyists, and skilled laborers, such rates as may be fixed by the acts making appropriations for them.

SEC. 5. And be it further enacted, That all officers and employés of the Patent Office shall, before entering upon their duties, make oath for affirmation truly and faithfully to execute the trusts committed to them.

SEC. 6. And be it further enacted, That the Commissioner and chief clerk, before entering upon their duties, shall severally give bond, with sureties, to the Treasurer of the United States, the former in the sum of ten thousand dollars, and the latter in the sum of five thousand dollars, conditioned for the faithful discharge of their duties, and that they will render to the proper officers of the Treasury a true account of all money received by virtue of their office.

DUTIES OF COMMISSIONER, AND OTHERS.

SEC. 7. And be it further enacted, That it shall be the duty of the Commissioner, under the direction of the Secretary of the Interior, to superintend or perform all the duties respecting the granting and issuing of patents which herein are, or may hereafter be, by law directed to be done; and he shall have charge of all books, records, papers, models, machines, and other things belonging to said office.

SEC. 8. And be it further enacted, That the Commissioner may send and receive by mail, free of postage, letters, printed matter, and packages relating to the business of his office, including Patent Office reports.

SEC. 9. And be it further enacted, That the Commissioner shall lay before Congress, in the month of January, annually, a report giving a detailed statement of all moneys received for patents, for copies of records or drawings, or from any other source whatever; a detailed statement of all expenditures for contingent and miscellaneous expenses; a list of all patents which were granted during the preceding year, designating under proper heads the subjects of such patents; an alphabetical list of the patentees with their places of residence; a list of all patents which have extended during the year; and such other information of the condition of the Patent Office as may be useful to Congress or the public.

EXAMINERS-IN-CHIEF.

SEC. 10. And be it further enacted, That the examiners-in-chief shall be persons of competent legal knowledge and scientific ability, whose duty it shall be, on the written petition of the appellant, to revise and determine upon the validity of the adverse decisions of examiners upon applications for patents, and for re-issues of patents, and in interference cases; and when required by the Commissioner, they shall hear and report upon claims for extensions, and perform such other like duties as he may assign them.

SEC. 11. And be it further enacted, That in case of the death, resignation, absence, or sickness of the Commissioner, his duties shall devolve upon the Assistant Commissioner until a successor shall be appointed, or such absence or sickness shall cease.

SEC. 12. And be it further enacted, That the Commissioner shall cause a seal to be provided for said office, with such device as the President may approve, with which all records or papers issued from said office, to be used in evidence, shall be authenticated.

MODELS.

SEC. 13. And be it further enacted, That the Commissioner shall cause to be classified and arranged in suitable cases, in the rooms and galleries provided for that purpose, the models, specimens of composition, fabrics, manufactures, works of art, and designs, which have been or shall be deposited in said office; and said rooms and galleries shall be kept open during suitable hours for public inspection.

SEC. 14. And be it further enacted, That the Commissioner may restore to the respective applicants such of the models belonging to rejected applications as he shall not think

necessary to be preserved, or he may sell or otherwise dispose of them after the application has been finally rejected for one year, paying the proceeds into the Treasury, as other patent moneys are directed to be paid.

SEC. 15. And be it further enacted, That there shall be purchased, for the use of said office, a library of such scientific works and periodicals, both foreign and American, as may aid the officers in the discharge of their duties, not exceeding the amount annually appropriated by Congress for that purpose.

OFFICERS AND EMPLOYÉS NOT TO HOLD PATENTS.

SEC. 16. And be it further enacted, That all officers and employés of the Patent Office shall be incapable during the period for which they shall hold their appointments, to acquire or take, directly or indirectly, except by inheritance or bequest, any right or interest in any patent issued by said office.

SEC. 17. And be it further enacted, That for gross misconduct the Commissioner may refuse to recognize any person as a patent agent, either generally or in any particular case; but the reasons for such refusal shall be duly recorded, and be subject to the approval of the Secretary of the Interior.

SEC. 18. And be it further enacted, That the Commissioner may require all papers filed in the Patent Office, if not correctly, legibly, and clearly written, to be printed at the cost of the party filing them.

SEC. 19. And be it further enacted, That the Commissioner, subject to the approval of the Secretary of the Interior, may from time to time establish rules and regulations, not inconsistent with law, for the conduct of proceedings in the Patent Office.

PATENTS.

SEC. 20. And be it further enacted, That the Commissioner may print or cause to be printed copies of the specifications of all letters patent, and of the drawings of the same, and copies of the claims of current issues, and copies of such laws, decisions, rules, regulations, and circulars as may be necessary for the information of the public.

SEC. 21. And be it further enacted, That all patents shall be issued in the name of the United States of America, under the seal of the Patent Office, and shall be signed by the Secretary of the Interior and countersigned by the Commissioner, and they shall be recorded, together with the specification, in said office, in books to be kept for that purpose.

SEC. 22. And be it further enacted, That every patent shall contain a short title or description of the invention or discovery, correctly indicating its nature and design, and a grant to the patentee, his heirs or assigns, for the term of seventeen years, of the exclusive right to make, use, and vend the said invention or discovery throughout the United States and the Territories thereof, referring to the specification for the particulars thereof; and a copy of said specifications and of the drawings shall be annexed to the patent and be a part thereof.

DATE OF PATENTS.

SEC. 23. And be it further enacted, That every patent shall date as of a day not later than six months from the time at which it was passed and allowed, and notice thereof was sent to the applicant or his agent; and if the final fee shall not be paid within that period, the patent shall be withheld.

WHAT MAY BE PATENTED.

SEC. 24. And be it further enacted, That any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and

useful improvement thereof, not known or used by others in this country, and not patented or described in any printed publication in this or in any foreign country, before his invention or discovery thereof, and not in public use or on sale for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the duty required by law, and other due proceedings had, obtain a patent therefor.

FOREIGN INVENTIONS MAY BE PATENTED.

SEC. 25. And be it further enacted, That no person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country; provided the same shall not have been introduced into public use in the United States for more than two years prior to the application, and that the patent shall expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term; but in no case shall it be in force more than seventeen years.

DESCRIPTION AND SPECIFICATION.

SEC. 26. And be it further enacted, That before any inventor or discoverer shall receive a patent for his invention or discovery, he shall make application therefor, in writing, to the Commissioner, and shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery; and said specification and claim shall be signed by the inventor and attested by two witnesses.

DRAWINGS.

SEC. 27. And be it further enacted, That when the nature of the case admits of drawings, the applicant shall furnish one copy signed by the inventor or his attorney in fact, and attested by two witnesses, which shall be filed in the Patent Office; and a copy of said drawings, to be furnished by the Patent Office, shall be attached to the patent as a part of the specification.

COMPOSITIONS.

SEC. 28. And be it further enacted, That when the invention or discovery is of a composition of matter, the applicant, if required by the Commissioner, shall furnish specimens of ingredients and of the composition, sufficient in quantity for the purpose of experiment.

MODELS.

SEC. 29. And be it further enacted, That in all cases which admit of representation by model, the applicant, if required by the Commissioner, shall furnish one of convenient size to exhibit advantageously the several parts of his invention or discovery.

OATH OF INVENTION.

SEC. 30. And be it further enacted, That the applicant shall make oath or affirmation that he does verily believe himself to be the original and first inventor or discoverer of the art, machine, manufacture, composition, or improvement for which he solicits a

patent; that he does not know and does not believe that the same was ever before known or used; and shall state of what country he is a citizen. And said oath or affirmation may be made before any person in the United States authorized by law to administer oaths; or when the applicant resides in a foreign country, before any minister, chargé d'affaires, consul, or commercial agent, holding commission under the government of the United States, or before any notary public of the foreign country in which the applicant may be.

Official Examination.

Sec. 31. And be it further enacted, That on the filing of any such application and the payment of the duty required by law, the Commissioner shall cause an examination to be made of the alleged new invention or discovery; and if on such examination it shall appear that the claimant is justly entitled to a patent under the law, and that the same is sufficiently useful and important, the Commissioner shall issue a patent therefor.

Completion of Application.

Sec. 32. And be it further enacted, That all applications for patents shall be completed and prepared for examination within two years after the filing of the petition, and in default thereof, or upon failure of the applicant to prosecute the same within two years after any action therein, of which notice shall have been given to the applicant, they shall be regarded as abandoned by the parties thereto, unless it be shown to the satisfaction of the Commissioner that such delay was unavoidable.

Rights of Assignees.

Sec. 33. And be it further enacted, That patents may be granted and issued or reissued to the assignee of the inventor or discoverer, the assignment thereof being first entered of record in the Patent Office; but in such case the application for the patent shall be made and the specification sworn to by the inventor or discoverer; and also, if he be living, in case of an application for reissue.

Patents after Decease of Inventor.

Sec. 34. And be it further enacted, That when any person, having made any new invention or discovery for which a patent might have been granted, dies before a patent is granted, the right of applying for and obtaining the patent shall devolve on his executor or administrator, in trust for the heirs at law of the deceased, in case he shall have died intestate; or if he shall have left a will, disposing of the same, then in trust for his devisees, in as full manner and on the same terms and conditions as the same might have been claimed or enjoyed by him in his lifetime; and when the application shall be made by such legal representatives, the oath or affirmation required to be made shall be so varied in form that it can be made by them.

Lapsed and Rejected Cases.

Sec. 35. And be it further enacted, That any person who has an interest in an invention or discovery, whether as inventor, discoverer, or assignee, for which a patent was ordered to issue upon the payment of the final fee, but who has failed to make payment thereof within six months from the time at which it was passed and allowed, and notice thereof was sent to the applicant or his agent, shall have a right to make an application for a patent for such invention or discovery the same as in the case of an original application: provided, that the second application be made within two years after the allowance of the original application. But no person shall be held responsible

in damages for the manufacture or use of any article or thing for which a patent, as aforesaid, was ordered to issue, prior to the issue thereof: and provided further, that when an application for a patent has been rejected or withdrawn, prior to the passage of this Act, the applicant shall have six months from the date of such passage to renew his application, or to file a new one; and if he omit to do either, his application shall be held to have been abandoned. Upon the hearing of such renewed applications abandonment shall be considered as a question of fact.

Assignments, Grants, and Conveyances.

Sec. 36. And be it further enacted, That every patent or any interest therein shall be assignable in law, by an instrument in writing; and the patentee or his assigns or legal representatives may, in like manner, grant and convey an exclusive right under his patent to the whole or any specified part of the United States; and said assignment, grant, or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent Office within three months from the date thereof.

Purchasers' Rights before Patent.

Sec. 37. And be it further enacted, That every person who may have purchased of the inventor, or with his knowledge and consent may have constructed any newly invented or discovered machine, or other patentable article, prior to the application by the inventor or discoverer for a patent, or sold or used one so constructed, shall have the right to use, and vend to others to be used, the specific things so made or purchased, without liability therefor.

Patented Articles to be Stamped.

Sec. 38. And be it further enacted, That it shall be the duty of all patentees, and their assigns and legal representatives, and of all persons making or vending any patented article for or under them, to give sufficient notice to the public that the same is patented, either by fixing thereon the word "patented," together with the day and year the patent was granted; or when, from the character of the article, this can not be done, by fixing to it or to the package wherein one or more of them is inclosed, a label containing the like notice; and in any suit for infringement, by the party failing so to mark, no damages shall be recovered by the plaintiff, except on proof that the defendant was duly notified of the infringement, and continued, after such notice, to make, use, or vend the article so patented.

Penalty for False Marking.

Sec. 39. And be it further enacted, That if any person shall, in any manner, mark upon any thing made, used, or sold by him for which he has not obtained a patent, the name or any imitation of the name of any person who has obtained a patent therefor, without the consent of such patentee, or his assigns or legal representatives; or shall in any manner mark upon or affix to any such patented article the word "patent" or "patentee," or the words "letters patent," or any word of like import, with intent to imitate or counterfeit the mark or device of the patentee, without having the license or consent of such patentee or his assigns or legal representatives; or shall in any manner mark upon or affix to any unpatented article the word "patent," or any word importing that the same is patented, for the purpose of deceiving the public, he shall be liable for every such offence to a penalty of not less than one hundred dollars, with costs; one moiety of said penalty to the person who shall sue for the same, and the other to the use of the United States, to be recovered by suit in any district court of the United States within whose jurisdiction such offence may have been committed.

Caveats.

Sec. 40. And be it further enacted, That any citizen of the United States, who shall have made any new invention or discovery, and shall desire further time to mature the same, may, on payment of the duty required by law, file in the Patent Office a caveat setting forth the design thereof, and of its distinguishing characteristics, and praying protection of his right until he shall have matured his invention; and such caveat shall be filed in the confidential archives of the office and preserved in secrecy, and shall be operative for the term of one year from the filing thereof; and if application shall be made within the year by any other person for a patent with which such caveat would in any manner interfere, the Commissioner shall deposit the description, specifications, drawings, and model of such application in like manner in the confidential archives of the office, and give notice thereof, by mail, to the person filing the caveat, who, if he would avail himself of his caveat, shall file his description, specifications, drawings, and model within three months from the time of placing said notice in the post office in Washington, with the usual time required for transmitting it to the caveator added thereto, which time shall be indorsed on the notice. And an alien shall have the privilege herein granted, if he shall have resided in the United States one year next preceding the filing of his caveat, and made oath of his intention to become a citizen.

Rejections.

Sec. 41. And be it further enacted, That whenever, on examination, any claim for a patent is rejected for any reason whatever, the Commissioner shall notify the applicant thereof, giving him briefly the reasons for such rejections, together with such information and references as may be useful in judging of the propriety of renewing his application or of altering his specification; and if, after receiving such notice, the applicant shall persist in his claim for a patent, with or without altering his specifications, the Commissioner shall order a re-examination of the case.

Interferences.

Sec. 42. And be it further enacted, That whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the primary examiner to proceed to determine the question of priority of invention. And the Commissioner may issue a patent to the party who shall be adjudged the prior inventor, unless the adverse party shall appeal from the decision of the primary examiner, or of the board of examiners-in-chief, as the case may be, within such time, not less than twenty days, as the Commissioner shall prescribe.

Affidavits and Depositions.

Sec. 43. And be it further enacted, That the Commissioner may establish rules for taking affidavits and depositions required in cases pending in the Patent Office, and such affidavits and depositions may be taken before any officer authorized by law to take depositions to be used in the courts of the United States, or of the State where the officer resides.

Duty of Clerk of Court.

Sec. 44. And be it further enacted, That the clerk of any court of the United States, for any district or territory wherein testimony is to be taken for use in any contested case pending in the Patent Office, shall, upon the application of any party thereto, or his agent or attorney, issue subpœna for any witness residing or being within said district or territory, commanding him to appear and testify before any officer in said district or

territory authorized to take depositions and affidavits, at any time and place in the subpœna stated; and if any witness, after being duly served with such subpœna, shall neglect or refuse to appear, or after appearing shall refuse to testify, the judge of the court whose clerk issued the subpœna may, on proof of such neglect or refusal, enforce obedience to the process, or punish the disobedience as in other like cases.

Fees and Rights of Witnesses.

Sec. 45. And be it further enacted, That every witness duly subpœnaed and in attendance shall be allowed the same fees as are allowed to witnesses attending the courts of the United States, but no witness shall be required to attend at any place more than forty miles from the place where the subpœna is served upon him, nor be deemed guilty of contempt for disobeying such subpœna, unless his fees and travelling expenses in going to, returning from, and one day's attendance at the place of examination, are paid or tendered him at the time of the service of the subpœna; nor for refusing to disclose any secret invention or discovery made or owned by himself.

Appeals.

Sec. 46. And be it further enacted, That every applicant for a patent or the re-issue of a patent, any of the claims of which have been twice rejected, and every party to an interference, may appeal from the decision of the primary examiner, or of the examiner in charge of interference, in such case to the board of examiners-in-chief, having once paid the fee for such appeal provided by law.

Sec. 47. And be it further enacted, That if such party is dissatisfied with the decision of the examiners-in-chief, he may, on payment of the duty required by law, appeal to the Commissioner in person.

Sec. 48. And be it further enacted, That if such party, except a party to an interference is dissatisfied with the decision of the Commissioner, he may appeal to the Supreme Court of the District of Columbia, sitting in banc.

Sec. 49. And be it further enacted, That when an appeal is taken to the Supreme Court of the District of Columbia, the appellant shall give notice thereof to the Commissioner, and file in the Patent Office, within such time as the Commissioner shall appoint, his reasons of appeal, specifically set forth in writing.

Sec. 50. And be it further enacted, That it shall be the duty of said court, on petition, to hear and determine such appeal, and to revise the decision appealed from in a summary way, on the evidence produced before the Commissioner, at such early and convenient time as the court may appoint, notifying the Commissioner of the time and place of hearing; and the revision shall be confined to the points set forth in the reasons of appeal. And after hearing the case, the court shall return to the Commissioner a certificate of its proceedings and decision, which shall be entered of record in the Patent Office, and govern the further proceedings in the case. But no opinion or decision of the court in any such case shall preclude any person interested from the right to contest the validity of such patent in any court wherein the same may be called in question.

Sec. 51. And be it further enacted, That on receiving notice of the time and place of hearing such appeal, the Commissioner shall notify all parties who appear to be interested therein, in such manner as the court may prescribe. The party appealing shall lay before the court certified copies of all the original papers and evidence in the case, and the Commissioner shall furnish it with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal. And at the request of any party interested, or of the court, the Commissioner and the examiners may be examined under oath, in explanation of the principles of the machine or other thing for which a patent is demanded.

Bill in Equity.

Sec. 52. And be it further enacted, That whenever a patent on application is refused, for any reason whatever, either by the Commissioner or by the Supreme Court of the District of Columbia upon appeal from the Commissioner, the applicant may have remedy by bill in equity; and the court having cognizance thereof, on notice to adverse parties and other due proceedings had, may adjudge that such applicant is entitled, according to law, to receive a patent for his invention, as specified in his claim, or for any part thereof, as the facts in the case may appear. And such adjudication, if it be in favor of the right of the applicant, shall authorize the Commissioner to issue such patent, on the application filing in the Patent Office a copy of the adjudication, and otherwise complying with the requisitions of law. And in all cases where there is no opposing party a copy of the bill shall be served on the Commissioner, and all the expenses of the proceeding shall be paid by the applicant, whether the final decision is in his favour or not.

Re-issues.

Sec. 53. And be it further enacted, That whenever any patent is inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the Commissioner shall, on the surrender of such patent and the payment of the duty required by law, cause a new patent for the same invention, and in accordance with the corrected specification, to be issued to the patentee, or, in the case of his death or assignment of the whole or any undivided part of the original patent, to his executors, administrators, or assigns, for the unexpired part of the term of the original patent, the surrender of which shall take effect upon the issue of the amended patent; and the Commissioner may, in his discretion, cause several patents to be issued for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for a reissue for each of such re-issued letters patent. And the specifications and claim in every such case shall be subject to revision and restriction in the same manner as original applications are. And the patent so re-issued, together with the corrected specification, shall have the effect and operation in law, on the trial of all actions for causes thereafter arising, as though the same had been originally filed in such corrected forms; but no new matter shall be introduced into the specification, nor in case of a machine patent shall the model or drawings be amended, except each by the other; but when there is neither model nor drawing, amendments may be made upon proof satisfactory to the Commissioner that such new matter or amendment was a part of the original invention, and was omitted from the specification by inadvertence, accident, or mistake, as aforesaid.

Disclaimers.

Sec. 54. And be it further enacted, That whenever, through inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, a patentee has claimed more than that of which he was the original or first inventor or discoverer, his patent shall be valid for all that part which is truly and justly his own, provided the same is a material or substantial part of the thing patented; and any such patentee, his heirs, or assigns, whether of the whole or any sectional interest therein, may, on payment of the duty required by law, make disclaimer of such parts of the thing patented as he shall not choose to claim or to hold by virtue of the patent or assignment, stating therein the extent of his interest in such patent; said disclaimer shall be in writing, attested by one or more witnesses, and recorded in the Patent Office, and it shall thereafter be considered as part of the original specification to the extent of the interest possessed by the claimant and by those claiming under him after the record thereof. But no such disclaimer shall

affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing it.

INFRINGEMENT, SUITS FOR.

SEC. 55. And be it further enacted, That all actions, suits, controversies, and cases arising under the patent laws of the United States shall be originally cognizable, as well in equity as at law, by the circuit courts of the United States, or any district court having the powers and jurisdiction of a circuit court, or by the Supreme Court of the District of Columbia, or of any territory; and the court shall have power, upon bill in equity filed by any party aggrieved, to grant injunctions according to the course and principles of courts of equity, to prevent the violation of any right secured by patent, on such terms as the court may deem reasonable; and upon a decree being rendered in any such case for an infringement, the claimant shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has sustained thereby, and the court shall assess the same or cause the same to be assessed under its direction, and the court shall have the same powers to increase the same in its discretion that are given by this Act to increase the damages found by verdicts in actions upon the case; but all actions shall be brought during the term for which the letters patent shall be granted or extended, or within six years after the expiration thereof.

APPEALS TO SUPREME COURT.

SEC. 56. And be it further enacted, That a writ of error or appeal to the Supreme Court of the United States shall lie from all judgments and decrees of any circuit court, or of any district court exercising the jurisdiction of a circuit court, or of the Supreme Court of the District of Columbia, or of any territory, in any action, suit, controversy, or case, at law or in equity, touching patent rights, in the same manner and under the same circumstances as in other judgments and decrees of such circuit courts, without regard to the sum of value in controversy.

RECORD EVIDENCE.

SEC. 57. And be it further enacted, That written or printed copies of any records, books, papers, or drawings belonging to the Patent Office, and of letters patent under the signature of the Commissioner or Acting Commissioner, with the seal of office affixed, shall be competent evidence in all cases wherein the originals could be evidence, and any person making application therefor, and paying the fee required by law, shall have certified copies thereof. And copies of the specifications and drawings of foreign letters patent, certified in like manner, shall be *prima facie* evidence of the fact of the granting of such foreign letters patent, and of the date and contents thereof.

INTERFERENCE EQUITY PROCEEDINGS.

SEC. 58. And be it further enacted, That whenever there shall be interfering patents, any person interested in any of such interfering patents, or in the working of the invention claimed under either of such patents, may have relief against the interfering patentee, and all parties interested under him, by suit in equity against the owners of the interfering patent; and the court having cognizance thereof, as herein-before provided, on notice to adverse parties, and other due proceedings had according to the course of equity, may adjudge and declare either of the patents void in whole or in part, or inoperative, or invalid in any particular part of the United States, according to the interest of the parties in the patent or the invention patented. But no such judgment or adjudication shall affect the rights of any person except the parties to the suit and those deriving title under them subsequent to the rendition of such judgment.

Damages for Infringement.

Sec. 59. And be it further enacted, That damages for the infringement of any patent may be recovered by action on the case in any circuit court of the United States, or district court exercising the jurisdiction of a circuit court, or in the Supreme Court of the District of Columbia, or of any territory, in the name of the party interested, either as patentee, assignee, or grantee. And whenever in any such action a verdict shall be rendered for the plaintiff, the court may enter judgment thereon for any sum above the amount found by the verdict as the usual damages sustained, according to the circumstances of the case, not exceeding three times the amount of such verdict, together with the costs.

Part Infringement, Suit for.

Sec. 60. And be it further enacted, That whenever, through inadvertence, accident, or mistake, and without any wilful default or intent to defraud or mislead the public, a patentee shall have (in his specification) claimed to be the original and first inventor or discoverer of any material or substantial part of the thing patented, of which he was not the original and first inventor or discoverer as aforesaid, every such patentee, his executors, administrators, and assigns, whether of the whole or any sectional interest in the patent, may maintain a suit at law or in equity for the infringement of any part thereof which was *bonâ fide* his own, provided it shall be a material and substantial part of the thing patented, and be definitely distinguishable from the parts so claimed, without right as aforesaid, notwithstanding the specifications may embrace more than that of which the patentee was the original or first inventor or discoverer. But in every such case in which a judgment or decree shall be rendered for the plaintiff, no costs shall be recovered unless the proper disclaimer has been entered at the Patent Office before the commencement of the suit; nor shall he be entitled to the benefits of this section if he shall have unreasonably neglected or delayed to enter said disclaimer.

Pleadings in Infringement.

Sec. 61. And be it further enacted, That in any action for infringement the defendant may plead the general issue, and, having given notice in writing to the plaintiff or his attorney, thirty days before, may prove on trial any one or more of the following special matters:

First. That for the purpose of deceiving the public the description and specification filed by the patentee in the Patent Office was made to contain less than the whole truth relative to his invention or discovery, or more than is necessary to produce the desired effect; or,

Second. That he had surreptitiously or unjustly obtained the patent for that which was in fact invented by another, who was using reasonable diligence in adapting and perfecting the same; or,

Third. That it has been patented or described in some printed publication prior to his supposed invention or discovery thereof; or,

Fourth. That he was not the original and first inventor or discoverer of any material and substantial part of the thing patented; or,

Fifth. That it had been in public use or on sale in this country for more than two years before his application for a patent, or had been abandoned to the public.

And in notice as to proof of previous invention, knowledge, or use of the thing patented, the defendant shall state the names of the patentees and the dates of their patents, and when granted, and the names and residences of the persons alleged to have invented or to have had the prior knowledge of the thing patented, and where and by whom it had been used; and if any one or more of the special matters alleged shall be found for the defendant, judgment shall be rendered for him with costs. And the like defences may

be pleaded in any suit in equity for relief against an alleged infringement; and proofs of the same may be given upon like notice in the answer of the defendant, and with the like effect.

Patent not void because known in a Foreign Country.

Sec. 62. And be it further enacted, That whenever it shall appear that the patentee, at the time of making his application for the patent, believed himself to be the original and first inventor or discoverer of the thing patented, the same shall not be held to be void on account of the invention or discovery, or any part thereof, having been known or used in a foreign country, before his invention or discovery thereof, if it had not been patented, or described in a printed publication.

Extension of Patents.

Sec. 63. And be it further enacted, That where the patentee of an invention or discovery, the patent for which was granted prior to the second day of March, eighteen hundred and sixty-one, shall desire an extension of his patent beyond the original term of its limitation, he shall make application therefor, in writing, to the Commissioner, setting forth the reason why such extension should be granted; and he shall also furnish a written statement under oath of the ascertained value of the invention or discovery, and of his receipts and expenditures on account thereof, sufficiently in detail to exhibit a true and faithful account of the loss and profit in any manner accruing to him by reason of said invention or discovery. And said application shall be filed not more than six months nor less than ninety days before the expiration of the original term of the patent, and no extension shall be granted after the expiration of said original term.

Sec. 64. And be it further enacted, That upon the receipt of such application, and the payment of the duty required by law, the Commissioner shall cause to be published in one newspaper in the city of Washington, and in such other papers published in the section of the country most interested adversely to the extension of the patent as he may deem proper, for at least sixty days prior to the day set for hearing the case, a notice of such application, and of the time and place when and where the same will be considered, that any person may appear and show cause why the extension should not be granted.

Sec. 65. And be it further enacted, That on the publication of such notice, the Commissioner shall refer the case to the principal examiner having charge of the class of inventions to which it belongs, who shall make to said Commissioner a full report of the case, and particularly whether the invention or discovery was new and patentable when the original patent was granted.

Sec. 66. And be it further enacted, That the Commissioner shall, at the time and place designated in the published notice, hear and decide upon the evidence produced, both for and against the extension; and if it shall appear to his satisfaction that the patentee, without neglect or fault on his part, has failed to obtain from the use and sale of his invention or discovery a reasonable remuneration for the time, ingenuity, and expense bestowed upon it, and the introduction of it into use, and that it is just and proper, having due regard to the public interest, that the term of the patent should be extended, the said Commissioner shall make a certificate thereon, renewing and extending the said patent for the term of seven years from the expiration of the first term, which certificate shall be recorded in the Patent Office, and thereupon the said patent shall have the same effect in law as though it had been originally granted for twenty-one years.

Sec. 67. And be it further enacted, That the benefit of the extension of a patent shall extend to the assignees and grantees of the right to use the thing patented to the extent of their interest therein.

Official Fees.

Sec. 68. And be it further enacted, That the following shall be the rates for patent fees:

On filing each original application for a patent, fifteen dollars.

On issuing each original patent, twenty dollars.

On filing each caveat, ten dollars.

On every application for the reissue of a patent, thirty dollars.

On filing each disclaimer, ten dollars.

On every application for the extension of a patent, fifty dollars.

On the granting of every extension of a patent, fifty dollars.

On an appeal for the first time from the primary examiners to the examiners-in-chief, ten dollars.

On every appeal from the examiners-in-chief to the Commissioner, twenty dollars.

For certified copies of patents and other papers, ten cents per hundred words.

For recording every assignment, agreement, power of attorney, or other paper, of three hundred words or under, one dollar; of over three hundred and under one thousand words, two dollars; of over one thousand words, three dollars.

For copies of drawings, the reasonable cost of making them.

Sec. 69. And be it further enacted, That patent fees may be paid to the Commissioner, or to the Treasurer, or any of the Assistant Treasurers of the United States, or to any of the designated depositaries, national banks, or receivers of public money, designated by the Secretary of the Treasury for that purpose, who shall give the depositor a receipt or certificate of deposit therefor. And all money received at the Patent Office, for any purpose, or from any source whatever, shall be paid into the Treasury as received, without any deduction whatever; and all disbursements for said office shall be made by the disbursing clerk of the Interior Department.

Money paid by Mistake returned.

Sec. 70. And be it further enacted, That the Treasurer of the United States is authorized to pay back any sum or sums of money to any person who shall have paid the same into the Treasury, or to any receiver or depositary, to the credit of the Treasurer, as for fees accruing at the Patent Office through mistake, certificate thereof being made to said Treasurer by the Commissioners of Patents.

Design Patents.

Sec. 71. And be it further enacted, That any person who, by his own industry, genius, efforts, and expense, has invented or produced any new and original design for a manufacture, bust, statue, alto-relievo, or bas-relief; any new and original design for the printing of woollen, silk, cotton, or other fabrics; any new and original impression, ornament, pattern, print, or picture, to be printed, painted, cast, or otherwise placed on or worked into any article of manufacture; or any new, useful, and original shape or configuration of any article of manufacture, the same not having been known or used by others before his invention or production thereof, or patented or described in any printed publication, may, upon payment of the duty required by law, and other due proceedings had the same as in cases of inventions or discoveries, obtain a patent therefor.

Sec. 72. And be it further enacted, That the Commissioner may dispense with models of designs when the design can be sufficiently represented by drawings or photographs.

Sec. 73. And be it further enacted, That patents for designs may be granted for the term of three years and six months, or for seven years, or for fourteen years, as the applicant may, in his application, elect.

Sec. 74. And be it further enacted, That patentees of designs issued prior to March two eighteen hundred and sixty-one, shall be entitled to extension of their respective

patents for the term of seven years, in the same manner and under the same restrictions as are provided for the extension of patents for inventions or discoveries, issued prior to the second day of March, eighteen hundred and sixty-one.

SEC. 75. And be it further enacted, That the following shall be the rates of fees in design cases:

For three years and six months, ten dollars.
For seven years, fifteen dollars.
For fourteen years, thirty dollars.
For all other cases in which fees are required, the same rates as in cases of inventions or discoveries.

SEC. 76. And be it further enacted, That all the regulations and provisions which apply to the obtaining or protection of patents for inventions or discoveries, not inconsistent with the provisions of this Act, shall apply to patents for designs.

TRADE-MARKS.

SEC. 77. And be it further enacted, That any person or firm domiciled in the United States, and any corporation created by the authority of the United States, or of any State or Territory thereof, and any person, firm, or corporation resident of or located in any foreign country which by treaty or convention affords similar privileges to citizens of the United States, and who are entitled to the exclusive use of any lawful trade-mark, or who intend to adopt and use any trade-mark for exclusive use within the United States, may obtain protection for such lawful trade-mark by complying with the following requirements, to wit:

First. By causing to be recorded in the Patent Office the names of the parties and their residences and place of business, who desire the protection of the trade-mark.
Second. The class of merchandise and the particular description of goods comprised in such class, by which the trade-mark has been or is intended to be appropriated.
Third. A description of the trade-mark itself, with fac-similes thereof, and the mode in which it has been or is intended to be applied or used.
Fourth. The length of time, if any, during which the trade-mark has been used.
Fifth. The payment of a fee of twenty-five dollars, in the same manner and for the same purpose as the fee required for patents.
Sixth. The compliance with such regulations as may be prescribed by the Commissioner of Patents.
Seventh. The filing of a declaration, under the oath of the person, or of some member of the firm or officer of the corporation, to the effect that the party claiming protection for the trade-mark has a right to the use of the same, and that no other person, firm, or corporation has the right to such use, either in the identical form or having such near resemblance thereto as might be calculated to deceive, and that the description and fac-similes presented for record are true copies of the trade-mark sought to be protected.

DURATION OF TRADE-MARKS.

SEC. 78. And be it further enacted, That such trade-mark shall remain in force for thirty years from the date of such registration, except in cases where such trade-mark is claimed for and applied to articles not manufactured in this country and in which it receives protection under the laws of any foreign country for a shorter period, in which case it shall cease to have any force in this country by virtue of this Act at the same time that it becomes of no effect elsewhere; and during the period that it remains in force it shall entitle the person, firm, or corporation registering the same to the exclusive use thereof so far as regards the description of goods to which it is appropriated in the statement filed under oath as aforesaid, and no other person shall lawfully use the same trade-mark, or substantially the same, or so nearly resembling it as to be calculated

to deceive, upon substantially the same description of goods: Provided, that six months prior to the expiration of said term of thirty years, application may be made for a renewal of such registration, under regulations to be prescribed by the Commissioner of Patents, and the fee for such renewal shall be the same as for the original registration; certificate of such renewal shall be issued in the same manner as for the original registration, and such trade-mark shall remain in force for a further term of thirty years: And provided further, that nothing in this section shall be construed by any court as abridging or in any manner affecting unfavorably the claim of any person, firm, corporation, or company to any trade-mark after the expiration of the term for which such trade-mark was registered.

DAMAGES FOR IMITATING TRADE-MARKS.

SEC. 79. And be it further enacted, That any person or corporation who shall reproduce, counterfeit, copy, or imitate any such recorded trade-mark, and affix the same to goods of substantially the same descriptive properties and qualities as those referred to in the registration, shall be liable to an action in the case for damages for such wrongful use of said trade-mark, at the suit of the owner thereof, in any court of competent jurisdiction in the United States, and the party aggrieved shall also have his remedy according to the course of equity to enjoin the wrongful use of his trade-mark and to recover compensation therefor in any court having jurisdiction over the person guilty of such wrongful use. The Commissioner of Patents shall not receive and record any proposed trade-mark which is not and can not become a lawful trade-mark, or which is merely the name of a person, firm, or corporation only, unaccompanied by a mark sufficient to distinguish it from the same name when used by other persons, or which is identical with the trade-mark appropriate to the same class of merchandise, and belonging to a different owner, and already registered or received for registration, or which so nearly resembles such last-mentioned trade-mark as to be likely to deceive the public: Provided that this section shall not prevent the registry of any lawful trade-mark rightfully used at the time of the passage of this Act.

REGISTRATION OF TRADE-MARKS.

SEC. 80. And be it further enacted, That the time of the receipt of any trade-mark at the Patent Office for registration shall be noted and recorded, and copies of the trade-mark and of the date of the receipt thereof, and of the statement filed therewith, under the seal of the Patent-Office, certified by the Commissioner, shall be evidence in any suit in which such trade-mark shall be brought in controversy.

TRANSFER OF TRADE-MARKS.

SEC. 81. And be it further enacted, That the Commissioner of Patents is authorized to make rules, regulations, and prescribe forms for the transfer of the right to the use of such trade-marks, conforming as nearly as practicable to the requirements of law respecting the transfer and transmission of copy-rights.

FRAUDULENT TRADE-MARKS.

SEC. 82. And be it further enacted, That any person who shall procure the registry of any trade-mark, or of himself as the owner thereof, or an entry respecting a trade-mark in the Patent Office under this Act, by making any false or fraudulent representations or declarations, verbally or in writing, or by any fraudulent means, shall be liable to pay damages in consequence of any such registry or entry to the person injured thereby, to be recovered in an action on the case before any court of competent jurisdiction within the United States.

SEC. 83. And be it further enacted, That nothing in this Act shall prevent, lessen, impeach, or avoid any remedy at law or in equity, which any party aggrieved by any wrongful use of any trade-mark might have had if this Act had not been passed.

SEC. 84. And be it further enacted, That no action shall be maintained under the provisions of this Act by any person claiming the exclusive right to any trade-mark which

is used or claimed in any unlawful business, or upon any article which is injurious in itself, or upon any trade-mark which has been fraudulently obtained, or which has been formed and used with the design of deceiving the public in the purchase or use of any article of merchandise.

Repealing Clause and Schedule.

Sec. 111. And be it further enacted, That the Acts and parts of Acts set forth in the Schedule of Acts cited, hereto annexed, are hereby repealed, without reviving any Acts or parts of Acts repealed by any of said Acts, or by any clause or provision therein; provided, however, that the repeal hereby enacted shall not affect, impair, or take away any right existing under any of said laws; but all actions and causes of action, both in law and in equity, which have arisen under any of said laws may be commenced and prosecuted; and if already commenced, may be prosecuted to final judgment and execution, in the same manner as though this Act had not been passed, excepting that the remedial provisions of this Act shall be applicable to all suits and proceedings hereafter commenced; and provided also, that all applications for patents pending at the time of the passage of this Act, in cases where the duty has been paid, shall be proceeded with and acted on in the same manner as though filed after the passage thereof; and provided further, that all offences which are defined and punishable under any of said Acts, and all penalties and forfeitures created thereby, and incurred before this Act takes effect, may be prosecuted, sued for, and recovered, and such offences punished according to the provisions of said Acts, which are continued in force for such purpose.

PATENT LAWS.

(Revised Statutes, forty-third Congress, approved June 22, 1874.)

Organization of the Patent Office.

Title XI., Rev. Stat., sec. 440, p. 74.

There shall be in the Department of the Interior—

In the Patent Office:

One chief clerk, at a salary of two thousand five hundred dollars a year.

One examiner in charge of interferences, at a salary of two thousand five hundred dollars a year.

One examiner in charge of trade-marks, at a salary of two thousand five hundred dollars a year.

Twenty-four principal examiners, at a salary of two thousand five hundred dollars a year each.

Twenty-four first assistant examiners, at a salary of one thousand eight hundred dollars a year each.

Twenty-four second assistant examiners (two of whom may be women), at a salary of one thousand six hundred dollars a year each.

Twenty-four third assistant examiners, at a salary of one thousand four hundred dollars a year each.

One librarian, at a salary of two thousand dollars a year.

One machinist, at a salary of one thousand six hundred dollars a year.

Three skilled draughtsmen, at a salary of one thousand two hundred dollars a year each.

Thirty-five copyists of drawings, at a salary of one thousand dollars a year each.
One messenger and purchasing clerk, at a salary of one thousand dollars a year.
One skilled labourer, at a salary of one thousand two hundred dollars a year.
Eight attendants in the model-room, at a salary of one thousand dollars a year each.
Eight attendants in the model-room, at a salary of nine hundred dollars a year each.

Establishment of the Patent Office.

Sec. 475. There shall be in the Department of the Interior an office known as the Patent Office, where all records, books, models, drawings, specifications, and other papers and things pertaining to patents shall be safely kept and preserved.

Officers and Employés.

Sec. 476. There shall be in the Patent Office a Commissioner of Patents, one Assistant Commissioner, and three examiners-in-chief, who shall be appointed by the President, by and with the advice and consent of the Senate. All other officers, clerks, and employés authorized by law for the Office shall be appointed by the Secretary of the Interior, upon the nomination of the Commissioner of Patents.

Salaries.

Sec. 477. The salaries of the officers mentioned in the preceding section shall be as follows:
The Commissioner of Patents, four thousand five hundred dollars a year.
The Assistant Commissioner of Patents, three thousand dollars a year.
Three examiners-in-chief, three thousand dollars a year each.

Seal.

Sec. 478. The seal heretofore provided for the Patent Office shall be the seal of the Office, with which letters patent and papers issued from the Office shall be authenticated.

Bonds of Commissioner and Chief Clerk.

Sec. 479. The Commissioner of Patents and the chief clerk, before entering upon their duties, shall severally give bond, with sureties, to the Treasurer of the United States, the former in the sum of ten thousand dollars, and the latter in the sum of five thousand dollars, conditioned for the faithful discharge of their respective duties, and that they shall render to the proper officers of the Treasury a true account of all money received by virtue of their offices.

Restrictions upon Officers and Employés.

Sec. 480. All officers and employés of the Patent Office shall be incapable, during the period for which they hold their appointments, to acquire or take, directly or indirectly, except by inheritance or bequest, any right or interest in any patent issued by the Office.

Duties of Commissioner.

Sec. 481. The Commissioner of Patents, under the direction of the Secretary of the Interior, shall superintend or perform all duties respecting the granting and issuing of patents directed by law; and he shall have charge of all books, records, papers, models, machines, and other things belonging to the Patent Office.

Duties of Examiners-in-Chief.

Sec. 482. The examiners-in-chief shall be persons of competent legal knowledge and scientific ability, whose duty it shall be, on the written petition of the appellant, to revise

and determine upon the validity of the adverse decisions of examiners upon applications for patents, and for reissues of patents, and in interference cases; and, when required by the Commissioner, they shall hear and report upon claims for extensions, and perform such other like duties as he may assign them.

Establishment of Regulations.

Sec. 483. The Commissioner of Patents, subject to the approval of the Secretary of the Interior, may from time to time establish regulations, not inconsistent with law, for the conduct of proceedings in the Patent Office.

Arrangement and Exhibition of Models, &c.

Sec. 484. The Commissioner of Patents shall cause to be classified and arranged in suitable cases, in the rooms and galleries provided for that purpose, models, specimens of compositions, fabrics, manufactures, works of art, and designs, which have been or shall be disposited in the Patent Office; and the rooms and galleries shall be kept open during suitable hours for public inspection.

Disposals of Models on rejected Applications.

Sec. 485. The Commissioner of Patents may restore to the respective applicants such of the models belonging to rejected applications as he shall not think necessary to be preserved, or he may sell or otherwise dispose of them after the application has been finally rejected for one year, paying the proceeds into the Treasury, as other patent moneys are directed to be paid.

Library.

Sec. 486. There shall be purchased for the use of the Patent Office a library of such scientific works and periodicals, both foreign and American, as may aid the officers in the discharge of their duties, not exceeding the amount annually appropriated for that purpose.

Patent-agents may be refused recognition.

Sec. 487. For gross misconduct the Commissioner of Patents may refuse to recognize any person as a patent-agent, either generally or in any particular case; but the reason for such refusal shall be duly recorded, and be subject to the approval of the Secretary of the Interior.

Printing of Papers filed.

Sec. 488. The Commissioner of Patents may require all papers filed in the Patent Office, if not correctly, legibly, and clearly written, to be printed at the cost of the party filing them.

Printing Copies of Claims, Laws, Decisions, &c.

Sec. 489. The Commissioner of Patents may print, or cause to be printed, copies of the claims of current issues, and copies of such laws, decisions, regulations, and circulars as may be necessary for the information of the public.

Printing Specifications and Drawings.

Sec. 490. The Commissioner of Patents is authorized to have printed, from time to time, for gratuitous distribution, not to exceed one hundred and fifty copies of the complete specifications and drawings of each patent hereafter issued, together with suitable indexes, one copy to be placed for free public inspection in each capitol of every State and Territory, one for the like purpose in the clerk's office of the district court of each

judicial district of the United States, except when such offices are located in State or territorial capitols, and one in the Library of Congress, which copies shall be certified under the hand of the Commissioner and seal of the Patent Office, and shall not be taken from the depositories for any other purpose than to be used as evidence.

Additional Specifications and Drawings.

Sec. 491. The Commissioner of Patents is authorized to have printed such additional numbers of copies of specifications and drawings, certified as provided in the preceding section, at a price not to exceed the contract price for such drawings, for sale, as may be warranted by the actual demand for the same; and he is also authorized to furnish a complete set of such specifications and drawings to any public library which will pay for binding the same into volumes to correspond with those in the Patent Office, and for the transportation of the same, and which shall also provide for proper custody for the same, with convenient access for the public thereto, under such regulations as the Commissioner shall deem reasonable.

Lithographing and Engraving.

Sec. 492. The lithographing and engraving required by the two preceding sections shall be awarded to the lowest and best bidders for the interests of the Government, due regard being paid to the execution of the work, after due advertising by the Congressional Printer under the direction of the Joint Committee on Printing; but the Joint Committee on Printing may empower the Congressional Printer to make immediate contracts for engraving, whenever, in their opinion, the exigencies of the public service will not justify waiting for advertisement and award; or if, in the judgment of the Joint Committee on Printing, the work can be performed under the direction of the Commissioner of Patents more advantageously than in the manner above prescribed, it shall be so done, under such limitations and conditions as the Joint Committee on Printing may from time to time prescribe.

Price of Copies of Specifications and Drawings.

Sec. 493. The price to be paid for uncertified printed copies of specifications and drawings of patents shall be determined by the Commissioner of Patents, within the limits of ten cents as the minimum and fifty cents as the maximum price.

Annual Report of the Commissioner.

Sec. 494. The Commissioner of Patents shall lay before Congress, in the month of January, annually, a report, giving a detailed statement of all moneys received for patents, for copies of records or drawings, or from any other source whatever; a detailed statement of all expenditures for contingent and miscellaneous expenses; a list of all patents which were granted during the preceding year, designating under proper heads the subjects of such patents; an alphabetical list of all the patentees, with their places of residence; a list of all patents which have been extended during the year; and such other information of the condition of the Patent Office as may be useful to Congress or the public.

Custody of Collections of Exploring Expeditions.

Sec. 495. The collections of the Exploring Expedition, now in the Patent Office, shall be under the care and management of the Commissioner of Patents.

Disbursements for Patent Office.

Sec. 496. All disbursements for the Patent Office shall be made by the disbursing clerk of the Interior Department.

TITLE XIII., Rev. Stat., p. 168.

Copies of Records, &c. of Patent Office.

Sec. 892. Written or printed copies of any records, books, papers, or drawings belonging to the Patent Office, and of letters patent authenticated by the seal and certified by the Commissioner or Acting Commissioner thereof, shall be evidence in all cases wherein the originals could be evidence; and any person making application therefor, and paying the fee required by law, shall have certified copies thereof.

Copies of Foreign Letters Patent.

Sec. 893. Copies of the specifications and drawings of foreign letters patent, certified as provided in the preceding section, shall be primâ facie evidence of the fact of the granting of such letters patent, and of the date and contents thereof.

Printed Copies of Specifications and Drawings of Patents.

Sec. 894. The printed copies of specifications and drawings of patents, which the Commissioner of Patents is authorized to print for gratuitous distribution, and to deposit in the capitols of the States and Territories, and in the clerk's offices of the district courts, shall, when certified by him and authenticated by the seal of his office, be received in all courts as evidence of all matters therein contained.

TITLE XV., Rev. Stat., p. 261.

Patented Articles connected with Marine Engines.

Sec. 1537. No patented article connected with marine engines shall hereafter be purchased or used in connection with any steam vessels of war until the same shall have been submitted to a competent board of naval engineers, and recommended by such board, in writing, for purchase and use.

TITLE XVII., Rev. Stat., p. 292.

No Royalty to be paid by United States to its Officers for Patent mentioned in preceding Section.

Sec. 1673. No royalty shall be paid by the United States to any one of its officers or employés for the use of any patent for the system, or any part thereof, mentioned in the preceding section, nor for any such patent in which said officers or employés may be directly or indirectly interested.

PATENTS.

TITLE LX., Rev. Stat., chap. 1, p. 953.

Patents, how issued, attested, and recorded.

Sec. 4883. All patents shall be issued in the name of the United States of America, under the seal of the Patent Office, and shall be signed by the Secretary of the Interior and countersigned by the Commissioner of Patents, and they shall be recorded, together with the specifications, in the Patent Office, in books to be kept for that purpose.

Contents and Duration.

Sec. 4884. Every patent shall contain a short title or description of the invention or discovery, correctly indicating its nature and design, and a grant to the patentee, his heirs

or assigns, for the term of seventeen years, of the exclusive right to make, use, and vend the invention or discovery throughout the United States, and the Territories thereof, referring to the specification for the particulars thereof. A copy of the specification and drawings shall be annexed to the patent and be a part thereof.

Date of Patent.

Sec. 4885. Every patent shall bear date as of a day not later than six months from the time at which it was passed and allowed and notice thereof was sent to the applicant or his agent; and if the final fee is not paid within that period the patent shall be withheld.

What Inventions are patentable.

Sec. 4886. Any person who has invented or discovered any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement thereof, not known or used by others in this country, and not patented or described in any printed publication in this or any foreign country, before his invention or discovery thereof, and not in public use or on sale for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law, and other due proceedings had, obtain a patent therefor.

Patents for Inventions previously Patented Abroad.

Sec. 4887. No person shall be debarred from receiving a patent for his invention or discovery, nor shall any patent be declared invalid, by reason of its having been first patented or caused to be patented in a foreign country, unless the same has been introduced into public use in the United States for more than two years prior to the application. But every patent granted for an invention which has been previously patented in a foreign country shall be so limited as to expire at the same time with the foreign patent, or, if there be more than one, at the same time with the one having the shortest term, and in no case shall it be in force more than seventeen years.

Requisites of Application, Description, Specification, and Claim.

Sec. 4888. Before any inventor or discoverer shall receive a patent for his invention or discovery, he shall make application therefor, in writing, to the Commissioner of Patents, and shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle, so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery. The specification and claim shall be signed by the inventor and attested by two witnesses.

Drawings, when requisite.

Sec. 4889. When the nature of the case admits of drawings, the applicant shall furnish one copy signed by the inventor or his attorney in fact, and attested by two witnesses, which shall be filed in the Patent Office; and a copy of the drawing, to be furnished by the Patent Office, shall be attached to the patent as a part of the specification.

Specimens of Ingredients, &c.

Sec. 4890. When the invention or discovery is of a composition of matter, the applicant, if required by the Commissioner, shall furnish specimens of ingredients and of the composition, sufficient in quantity for the purpose of experiment.

Model, when requisite.

Sec. 4891. In all cases which admit of representation by model, the applicant, if required by the Commissioner, shall furnish a model of convenient size to exhibit advantageously the several parts of his invention or discovery.

Oath required from Applicant.

Sec. 4892. The applicant shall make oath that he does verily believe himself to be the original and first inventor or discoverer of the art, machine, manufacture, composition, or improvement for which he solicits a patent ; that he does not know and does not believe that the same was ever before known or used ; and shall state of what country he is a citizen. Such oath may be made before any person within the United States authorized by law to administer oaths, or when the applicant resides in a foreign country, before any minister, chargé d'affaires, consul, or commercial agent, holding commission under the Government of the United States, or before any notary public of the foreign country in which the applicant may be.

Examination and Issuing Patent.

Sec. 4893. On the filing of any such application and the payment of the fees required by law, the Commissioner of Patents shall cause an examination to be made of the alleged new invention or discovery ; and if on such examination it shall appear that the claimant is justly entitled to a patent under the law, and that the same is sufficiently useful and important, the Commissioner shall issue a patent therefor.

Limitation upon Time of completing Applications.

Sec. 4894. All applications for patents shall be completed and prepared for examination within two years after the filing of the application, and in default thereof, or upon failure of the applicant to prosecute the same within two years after any action therein, of which notice shall have been given to the applicant, they shall be regarded as abandoned by the parties thereto, unless it be shown to the satisfaction of the Commissioner of Patents that such delay was unavoidable.

Patents granted to Assignee.

Sec. 4895. Patents may be granted and issued or reissued to the assignee of the inventor or discoverer ; but the assignment must first be entered of record in the Patent Office. And in all cases of an application by an assignee for the issue of a patent, the application shall be made and the specification sworn to by the inventor or discoverer ; and in all cases of an application for a reissue of any patent, the application must be made and the corrected specification signed by the inventor or discoverer, if he is living, unless the patent was issued and the assignment made before the eighth day of July, eighteen hundred and seventy.

When and on what Oath Executor or Administrator may obtain Patent.

Sec. 4896. When any person, having made any new invention or discovery for which a patent might have been granted, dies before a patent is granted, the right of applying for and obtaining the patent shall devolve on his executor or administrator, in trust for the heirs-at-law of the deceased, in case he shall have died intestate ; or if he shall have left a will, disposing of the same, then in trust for his devisees, in as full manner and on the same terms and conditions as the same might have been claimed or enjoyed by him in his life-time ; and when the application is made by such legal representatives, the oath or affirmation required to be made shall be so varied in form that it can be made by them.

Renewal of Application in Cases of Failure to Pay Fees in Season.

Sec. 4897. Any person who has an interest in an invention or discovery, whether as inventor, discoverer, or assignee, for which a patent was ordered to issue upon the payment of the final fee, but who fails to make payment thereof within six months from the time at which it was passed and allowed, and notice thereof was sent to the applicant or his agent, shall have a right to make an application for a patent for such invention or discovery the same as in the case of an original application. But such second application must be made within two years after the allowance of the original application. But no person shall be held responsible in damages for the manufacture or use of any article or thing for which a patent was ordered to issue under such renewed application prior to the issue of the patent. And upon the hearing of renewed applications preferred under this section, bandonment shall be considered as a question of fact.

Assignments of Patents.

Sec. 4898. Every patent or any interest therein shall be assignable in law by an instrument in writing; and the patentee or his assigns or legal representatives may, in like manner, grant and convey an exclusive right under his patent to the whole or any specified part of the United States. An assignment, grant, or conveyance shall be void as against any subsequent purchaser or mortgagee for a valuable consideration, without notice, unless it is recorded in the Patent Office within three months from the date thereof.

Persons purchasing of Inventor, before Application, may Use or Sell the Thing purchased.

Sec. 4899. Every person who purchases of the inventor or discoverer, or with his knowledge and consent constructs any newly invented or discovered machine, or other patentable article, prior to the application by the inventor or discoverer for a patent, or who sells or uses one so constructed, shall have the right to use, and vend to others to be used, the specific thing so made or purchased, without liability therefor.

Patented Articles must be Marked as such.

Sec. 4900. It shall be the duty of all patentees, and their assigns and legal representatives, and of all persons making or vending any patented article for or under them, to give sufficient notice to the public that the same is patented; either by fixing thereon the word "patented," together with the day and year the patent was granted; or when, from the character of the article, this cannot be done, by fixing to it, or to the package wherein one or more of them is inclosed, a label containing the like notice; and in any suit for infringement, by the party failing so to mark, no damages shall be recovered by the plaintiff, except on proof that the defendant was duly notified of the infringement, and continued, after such notice, to make, use, or vend the article so patented.

Penalty for Falsely Marking or Labelling Articles as Patented.

Sec. 4901. Every person who, in any manner, marks upon anything made, used, or sold by him for which he has not obtained a patent, the name or any imitation of the name of any person who has obtained a patent therefor, without the consent of such patentee, or his assigns or legal representatives; or

Who, in any manner, marks upon or affixes to any such patented article the word "patent" or "patentee," or the words "letters patent," or any word of like import, with intent to imitate or counterfeit the mark or device of the patentee, without having the license or consent of such patentee or his assigns or legal representatives; or

Who, in any manner, marks upon or affixes to any unpatented article the word "patent," or any word importing that the same is patented, for the purpose of deceiving the public,

shall be liable, for every such offence, to a penalty of not less than one hundred dollars, with costs ; one half of the said penalty to the person who shall sue for the same, and the other to the use of the United States, to be recovered by suit in any district court of the United States within whose jurisdiction such offence may have been committed.

Filing and Effect of Caveats.

Sec. 4902. Any citizen of the United States who makes any new invention or discovery, and desires further time to mature the same, may, on payment of the fees required by law, file in the Patent Office a caveat setting forth the design thereof, and of its distinguishing characteristics, and praying protection of his right until he shall have matured his invention. Such caveat shall be filed in the confidential archives of the offices and preserved in secrecy, and shall be operative for the term of one year from the filing thereof ; and if application is made within the year by any other person for a patent with which such caveat would in any manner interfere, the Commissioner shall deposit the description, specification, drawings, and model of such application in like manner in the confidential archives of the office, and give notice thereof, by mail, to the person by whom the caveat was filed. If such person desires to avail himself of his caveat, he shall file his description, specifications, drawings, and model within three months from the time of placing the notice in the post-office in Washington, with the usual time required for transmitting it to the caveator added thereto ; which time shall be indorsed on the notice. An alien shall have the privilege herein granted, if he has resided in the United States one year next preceding the filing of his caveat, and has made oath of his intention to become a citizen.

Notice of Rejection of Claim for Patent to be given to Applicant.

Sec. 4903. Whenever, on examination, any claim for a patent is rejected, the Commissioner shall notify the applicant thereof, giving him briefly the reasons for such rejection, together with such information and references as may be useful in judging of the propriety of renewing his application or of altering his specification ; and if, after receiving such notice, the applicant persists in his claim for a patent, with or without altering his specifications, the Commissioner shall order a re-examination of the case.

Interferences.

Sec. 4904. Whenever an application is made for a patent which, in the opinion of the Commissioner, would interfere with any pending application, or with any unexpired patent, he shall give notice thereof to the applicants, or applicant and patentee, as the case may be, and shall direct the primary examiner to proceed to determine the question of priority of invention. And the Commissioner may issue a patent to the party who is adjudged the prior inventor, unless the adverse party appeals from the decision of the primary examiner, or of the board of examiners-in-chief, as the case may be, with such time, not less than twenty days, as the Commissioner shall prescribe.

Affidavits and Depositions.

Sec. 4905. The Commissioner of Patents may establish rules for taking affidavits and depositions required in cases pending in the Patent Office, and such affidavits and depositions may be taken before any officer authorized by law to take depositions to be used in the courts of the United States, or of the State where the officer resides.

Subpœnas to Witnesses.

Sec. 4906. The clerk of any court of the United States, for any district or Territory wherein testimony is to be taken for use in any contested case pending in the Patent Office, shall, upon the application of any party thereto, or of his agent or attorney, issue a sub-

pœna for any witness residing or being within such district or Territory, commanding him to appear and testify before any officer in such district or Territory authorized to take depositions and affidavits, at any time and place in the subpœna stated. But no witness shall be required to attend at any place more than forty miles from the place where the subpœna is served upon him.

Witness Fees.

Sec. 4907. Every witness duly subpœnaed and in attendance shall be allowed the same fees as are allowed to witnesses attending the courts of the United States.

Penalty for Failing to Attend or Refusing to Testify.

Sec. 4908. Whenever any witness, after being duly served with such subpœna, neglects or refuses to appear, or after appearing refuses to testify, the judge of the court whose clerk issued the subpœna may, on proof of such neglect or refusal, enforce obedience to the process, or punish the disobedience, as in other like cases. But no witness shall be guilty of contempt for disobeying such subpœna, unless his fees and travelling expenses in going to, returning from, and one day's attendance at the place of examination, are paid or tendered him at the time of the service of the subpœna; nor for refusing to disclose any secret invention or discovery made or owned by himself.

Appeals from Primary Examiners to Examiners-in-Chief.

Sec. 4909. Every applicant for a patent or for the reissue for a patent, any of the claims of which have been twice rejected, and every party to an interference, may appeal from the decision of the primary examiner, or of the examiner in charge of interferences in such case, to the board of examiners-in-chief; having once paid the fee for such appeal.

From Examiners-in-Chief to Commissioner.

Sec. 4910. If such party is dissatisfied with the decision of the examiners-in-chief, he may, on payment of the fee prescribed, appeal to the Commissioner in person.

From the Commissioner to the Supreme Court.—District of Columbia.

Sec. 4911. If such party, except a party to an interference, is dissatisfied with the decision of the Commissioner, he may appeal to the Supreme Court of the District of Columbia, sitting in banc.

Notice of such Appeal.

Sec. 4912. When an appeal is taken to the Supreme Court of the District of Columbia, the appellant shall give notice thereof to the Commissioner, and file in the Patent Office, within such time as the Commissioner shall appoint, his reasons of appeal, specifically set forth in writing.

Proceedings on appeal to Supreme Court.

Sec. 4913. The court shall, before hearing such appeal, give notice to the Commissioner of the time and place of the hearing, and on receiving such notice the Commissioner shall give notice of such time and place, in such manner as the court may prescribe, to all parties who appear to be interested therein. The party appealing shall lay before the court certified copies of all the original papers and evidence in the case, and the Commissioner shall furnish the court with the grounds of his decision, fully set forth in writing, touching all the points involved by the reasons of appeal. And at the request of any party interested, or of the court, the Commissioner and the examiners may be examined under oath, in explanation of the principles of the thing for which a patent is demanded.

Determination of such Appeal, and its Effect.

Sec. 4914. The court, on petition, shall hear and determine such appeal, and revise the decision appealed from in a summary way, on the evidence produced before the Commissioner, at such early and convenient time as the court may appoint; and the revision shall be confined to the point set forth in the reasons of appeal. After hearing the case the court shall return to the Commissioner a certificate of its proceedings and decision, which shall be entered of record in the Patent Office, and shall govern the further proceedings in the case. But no opinion or decision of the court in any such case shall preclude any person interested from the right to contest the validity of such patent in any court wherein the same may be called in question.

Patents obtainable by Bill in Equity.

Sec. 4915. Whenever a patent on application is refused, either by the Commissioner of Patents or by the Supreme Court of the District of Columbia upon appeal from the Commissioner, the applicant may have remedy by bill in equity; and the court having cognizance thereof, on notice to adverse parties and other due proceedings had, may adjudge that such applicant is entitled, according to law, to receive a patent for his invention as specified in his claim, or for any part thereof, as the facts in the case may appear. And such adjudication, if it be in favour of the right of the applicant, shall authorize the Commissioner to issue such patent on the applicant filing in the Patent Office a copy of the adjudication and otherwise complying with the requirements of law. In all cases, where there is no opposing party, a copy of the bill shall be served on the Commissioner; and all the expenses of the proceeding shall be paid by the applicant, whether the final decision is in his favour or not.

Re-issue of Defective Patents.

Sec. 4916. Whenever any patent is inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, the Commissioner shall on the surrender of such patent and the payment of the duty required by law, cause a new patent for the same invention, and in accordance with the corrected specification, to be issued to the patentee, or, in the case of his death or of an assignment of the whole or any undivided part of the original patent, then to his executors, administrators, or assigns, for the unexpired part of the term of the original patent. Such surrender shall take effect upon the issue of the amended patent. The Commissioner may, in his discretion, cause several patents to be issued for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for a reissue for each of such reissued letters patent. The specifications and claim in every such case shall be subject to revision and restriction in the same manner as original applications are. Every patent so reissued, together with the corrected specification, shall have the same effect and operation in law, on the trial of all actions for causes thereafter arising, as if the same had been originally filed in such corrected form; but no new matter shall be introduced into the specification, nor in case of a machine patent shall the model or drawings be amended, except each by the other; but when there is neither model nor drawing, amendments may be made upon proof satisfactory to the Commissioner that such new matter or amendment was a part of the original invention, and was admitted from the specification by inadvertence, accident, or mistake, as aforesaid.

Disclaimer.

Sec. 4917. Whenever, through inadvertence, accident, or mistake, and without any fraudulent or deceptive intention, a patentee has claimed more than that of which he was

the original or first inventor or discoverer, his patent shall be valid for all that part which is truly and justly his own, provided the same is a material or substantial part of the thing patented; and any such patentee, his heirs or assigns, whether of the whole or any sectional interest therein, may, on payment of the fee required by law, make disclaimer of such parts of the thing patented as he shall not choose to claim or to hold by virtue of the patent or assignment, stating therein the extent of his interest in such patent. Such disclaimer shall be in writing, attested by one or more witnesses, and recorded in the Patent Office; and it shall thereafter be considered as part of the original specification to the extent of the interest possessed by the claimant and by those claiming under him after the record thereof. But no such disclaimer shall affect any action pending at the time of its being filed, except so far as may relate to the question of unreasonable neglect or delay in filing it.

Suits touching interfering Patents.

Sec. 4918. Whenever there are interfering patents, any person interested in any one of them, or in the working of the invention claimed under either of them, may have relief against the interfering patentee, and all parties interested under him, by suit in equity against the owners of the interfering patent; and the court, on notice to adverse parties, and other due proceedings had according to the course of equity, may adjudge and declare either of the patents void in whole or in part, or inoperative, or invalid in any particular part of the United States, according to the interest of the parties in the patent or the invention patented. But no such judgment or adjudication shall affect the right of any person except the parties to the suit and those deriving title under them subsequent to the condition of such judgment.

Suits for Infringement; Damages.

Sec. 4919. Damages for the infringement of any patent may be recovered by action on the case, in the name of the party interested, either as patentee, assignee, or grantee. And whenever in any such action a verdict is rendered for the plaintiff, the court may enter judgment thereon for any sum above the amount found by the verdict as the actual damages sustained, according to the circumstances of the case, not exceeding three times the amount of such verdict, together with the costs.

Pleading and Proof in Actions for Infringement.

Sec. 4920. In any action for infringement the defendant may plead the general issue, and having given notice in writing to the plaintiff or his attorney, thirty days before, may prove, on trial, any one or more of the following special matters:

First. That for the purpose of deceiving the public the description and specification filed by the patentee in the Patent Office was made to contain less then the whole truth relative to his invention or discovery, or more than is necessary to produce the desired effect; or,

Second. That he had surreptitiously or unjustly obtained the patent for that which was in fact invented by another, who was using reasonable diligence in adapting and perfecting the same; or,

Third. That it had been patented or described in some printed publication prior to his supposed invention or discovery thereof; or

Fourth. That he was not the original and first inventor or discoverer of any material and substantial part of the thing patented; or,

Fifth. That it had been in public use or on sale in this country for more than two years before his application for a patent, or had been abandoned to the public.

And in notices as to proof of previous invention, knowledge, or use of the thing patented, the defendant shall state the names of patentees and the dates of their patents, and when granted, and the names and residences of the persons alleged to have invented, or to have

had the prior knowledge of the thing patented, and where and by whom it had been used; and if any one or more of the special matters alleged shall be found for the defendant, judgment shall be rendered for him with costs. And the like defences may be pleaded in any suit in equity for relief against an alleged infringement; and proofs of the same may be given upon like notice in the answer of the defendant, and with the like effect.

Power of Courts to grant Injunctions and estimate Damages.

Sec. 4921. The several courts vested with jurisdiction of cases arising under the patent laws shall have power to grant injunctions according to the course and principles of courts of equity, to prevent the violation of any right secured by patent, on such terms as the court may deem reasonable; and upon a decree being rendered in any such case for an infringement, the complainant shall be entitled to recover, in addition to the profits to be accounted for by the defendant, the damages the complainant has obtained thereby; and the court shall assess the same or cause the same to be assessed under its direction. And the court shall have the same power to increase such damages, in its discretion, as is given to increase the damages found by verdicts in actions in the nature of actions of trespass upon the case.

Suit for Infringement where Specification is too broad.

Sec. 4922. Whenever, through inadvertence, accident, or mistake, and without any wilful default or intent to defraud or mislead the public, a patentee has, in his specification, claimed to be the original and first inventor, or discoverer of any material or substantial part of the thing patented, of which he was not the original and first inventor or discoverer, every such patentee, his executors, administrators, and assigns, whether of the whole or any sectional interest in the patent, may maintain a suit at law or in equity, for the infringement of any part thereof, which was bonâ fide his own, if it is a material and substantial part of the thing patented, and definitely distinguishable from the parts claimed without right, notwithstanding the specifications may embrace more than that of which the patentee was the first inventor or discoverer. But in every such case in which a judgment or decree shall be rendered for the plaintiff no costs shall be recovered unless the proper disclaimer has been entered at the Patent Office before the commencement of the suit. But no patentee shall be entitled to the benefits of this section if he has unreasonably neglected or delayed to enter a disclaimer.

Patent not Void on account of previous use in Foreign Country.

Sec. 4923. Whenever it appears that a patentee, at the time of making his application for the patent, believed himself to be the original and first inventor or discoverer of the thing patented, the same shall not be held to be void on account of the invention or discovery, or any part thereof, having been known or used in a foreign country, before his invention or discovery thereof, if it had not been patented or described in a printed publication.

Operation of Extensions.

Sec. 4928. The benefit of the extension of a patent shall extend to the assignees and grantees of the right to use the thing patented, to the extent of their interest therein.

DESIGNS.

Patents for Designs authorised.

Sec. 4929. Any person who, by his own industry, genius, efforts, and expense, has invented and produced any new and original design for a manufacture, bust, statue,

alto-relievo, or bas-relief; any new and original design for the printing of woollen, silk, cotton, or other fabrics; any new and original impression, ornament, patent [pattern], print, or picture to be printed, painted, cast, or otherwise placed on or worked into any article of manufacture; or any new, useful, and original shape or configuration of any article of manufacture, the same not having been known or used by others before his invention or production thereof, or patented or described in any printed publication, may, upon payment of the fee prescribed, and other due proceedings had the same as in cases of inventions or discoveries, obtain a patent therefor.

Models of Designs.

Sec. 4930. The Commissioner may dispense with models of designs when the design can be sufficiently represented by drawings or photographs.

Duration of Patents for Designs.

Sec. 4931. Patents for designs may be granted for the term of three years and six months, or for seven years, or for fourteen years, as the applicant may, in his application elect.

Extension of Patents for Designs.

Sec. 4932. Patentees of designs issued prior to the second day of March, eighteen hundred and sixty-one, shall be entitled to extension of their respective patents for the term of seven years, in the same manner and under the same restrictions as are provided for the extension of patents for inventions or discoveries, issued prior to the second day of March, eighteen hundred and sixty-one.

Patents for Designs subject to General Rules of Patent Law.

Sec. 4933. All the regulations and provisions which apply to obtaining or protecting patents for inventions or discoveries not inconsistent with the provisions of this title, shall apply to patents for designs.

FEES.

Fees in obtaining Patents, &c.

Sec. 4934. The following shall be the rates for patent fees:

On filing each original application for a patent, except in design cases, fifteen dollars.

On issuing each original patent, except in design cases, twenty dollars.

In design cases: For three years and six months, ten dollars; for seven years, fifteen dollars; for fourteen years, thirty dollars.

On filing each caveat, ten dollars.

On every application for the reissue of a patent, thirty dollars.

On filing each disclaimer, ten dollars.

On every application for the extension of a patent, fifty dollars.

On the granting of every extension of a patent, fifty dollars.

On an appeal for the first time from the primary examiners to the examiners-in-chief, ten dollars.

On every appeal from the examiners-in-chief to the Commissioner, twenty dollars.

For certified copies of patents and other papers, including certified printed copies, ten cents per hundred words.

For recording every assignment, agreement, power of attorney, or other paper, of three hundred words or under, one dollar; of over three hundred and under one thousand words, two dollars; of over one thousand words, three dollars.

For copies of drawings, the reasonable cost of making them.

Mode of Payment.

Sec. 4935. Patent fees may be paid to the Commissioner of Patents, or to the Treasurer or any of the assistant treasurers of the United States, or to any of the designated depositories, national banks, or receivers of public money, designated by the Secretary of the Treasury for that purpose; and such officer shall give the depositor a receipt or certificate of deposit therefor. All money received at the Patent Office, for any purpose, or from any source whatever, shall be paid into the Treasury as received, without any deduction whatever.

Refunding.

Sec. 4936. The Treasurer of the United States is authorized to pay back any sum or sums of money to any person who has through mistake paid the same into the Treasury, or to any receiver or depositary, to the credit of the Treasury, as for fees accruing at the Patent Office, upon a certificate thereof being made to the Treasurer by the Commissioner of Patents.

Trade-Mark.

Title LX., Rev. Stat., Chap. 2, p. 963.

Registration of Trade-Marks authorized.

Sec. 4937. Any person or firm domiciled in the United States and any corporation created by the authority of the United States, or of any State or Territory thereof, and any person, firm, or corporation resident of or located in any foreign country which by treaty or convention affords similar privileges to citizens of the United States, and who are entitled to the exclusive use of any lawful trade-mark, or who intend to adopt and use any trade-mark for exclusive use within the United States, may obtain protection for such lawful trade-mark by complying with the following requirements:

First. By causing to be recorded in the Patent Office a statement specifying the names of the parties, and their residences and place of business, who desire the protection of the trade-mark; the class of merchandise, and the particular description of goods comprised in such class, by which the trade-mark has been or is intended to be appropriated; a description of the trade-mark itself, with fac-similes thereof, showing the mode in which it has been or is intended to be applied and used; and the length of time, if any, during which the trade-mark has been in use.

Second. By making payment of a fee of twenty-five dollars in the same manner and for the same purpose as the fee required for patents.

Third. By complying with such regulations as may be prescribed by the Commissioner of Patents.

Accompanying Declaration under Oath.

Sec. 4938. The certificate prescribed by the preceding section must, in order to create any right whatever in favor of the party filing it, be accompanied by a written declaration verified by the person, or by some member of the firm or officer of the corporation by whom it is filed, to the effect that the party claiming protection for the trade-mark has a right to the use of the same, and that no other person, firm, or corporation has the right to such use, either in the identical form or in any such near resemblance thereto as might be calculated to deceive; and that the description and fac-similes presented for record are true copies of the trade-mark sought to be protected.

Restriction on the Registration of Trade-Marks.

Sec. 4939. The Commissioner of Patents shall not receive and record any proposed trade-mark which is not and cannot become a lawful trade-mark, or which is merely the

name of a person, firm, or corporation unaccompanied by a mark sufficient to distinguish it from the same name when used by other persons, or which is identical with a trade-mark appropriate to the same class of merchandise and belonging to a different owner, and already registered or received for registration, or which so nearly resembles such last-mentioned trade-mark as to be likely to deceive the public. But this section shall not prevent the registry of any lawful trade-mark rightfully in use on the eighth day of July, eighteen hundred and seventy.

Time of Receipt of Trade-Mark for Registration to be certified.

Sec. 4940. The time of the receipt of any trade-mark at the Patent Office for registration shall be noted and recorded. Copies of the trade-mark and of the date of the receipt thereof, and of the statement filed therewith, under the seal of the Patent Office, certified by the Commissioner, shall be evidence in any suit in which such trade-mark shall be brought in controversy.

Duration of Protection of Registered Trade-Mark and Renewal.

Sec. 4941. A trade-mark registered as above prescribed shall remain in force for thirty years from the date of such registration; except in cases where such trade-mark is claimed for and applied to articles not manufactured in this country and in which it receives protection under the laws of any foreign country for a shorter period, in which case it shall cease to have any force in this country by virtue of this Act at the same time that it becomes of no effect elsewhere. Such trade-mark during the period that it remains in force shall entitle the person, firm, or corporation registering the same to the exclusive use thereof so far as regards the description of goods to which it is appropriated in the statement filed under oath as aforesaid, and no other person shall lawfully use the same trade-mark, or substantially the same, or so nearly resembling it as to be calculated to deceive, upon substantially the same description of goods. And at any time during the six months prior to the expiration of the term of thirty years, application may be made for a renewal of such registration, under regulations to be prescribed by the Commissioner of Patents. The fee for such renewal shall be the same as for the original registration; and a certificate of such renewal shall be issued in the same manner as for the original registration; and such trade-mark shall remain in force for a further term of thirty years.

Remedy for Infringement of Registered Trade-Marks.

Sec. 4942. Any person who shall reproduce, counterfeit, copy, or imitate any recorded trade-mark and affix the same to goods of substantially the same descriptive properties and qualities as those referred to in the registration, shall be liable to an action on the case for damages for such wrongful use of such trade-mark, at the suit of the owner thereof; and the party aggrieved shall also have his remedy according to the course of equity to enjoin the wrongful use of his trade-mark and to recover compensation therefor in any court having jurisdiction over the person guilty of such wrongful use.

Restriction upon Actions for Infringement.

Sec. 4943. No action shall be maintained under the provisions of this chapter by any person claiming the exclusive right to any trade-mark which is used or claimed in any unlawful business, or upon any article which is injurious in itself, or upon any trade-mark which has been fraudulently obtained, or which has been formed and used with the design of deceiving the public in the purchase or use of any article of merchandise.

Penalty for False Registration of Trade-Marks.

Sec. 4944. Any person who shall procure the registry of any trade-mark, or of himself as the owner of a trade-mark, or an entry respecting a trade-mark in the Patent Office,

by making any false or fraudulent representations or declarations, verbally or in writing, or by any fraudulent means, shall be liable to pay any damages sustained in consequence of any such registry or entry, to the person injured thereby; to be recovered in an action on the case.

Former Rights and Remedies Preserved.

Sec. 4945. Nothing in this chapter shall prevent, lessen, impeach, or avoid any remedy at law or in equity, which any party aggrieved by any wrongful use of any trade-mark might have had if the provisions of this chapter had not been enacted.

Saving as to Rights after Expiration of Term for which a Trade-Mark has been Registered.

Sec. 4946. Nothing in this chapter shall be construed by any court as abridging or in any matter affecting unfavourably the claim of any person to any trade-mark after the expiration of the term for which such trade-mark was registered.

Regulations for Transfer of Rights to Trade-Marks.

Sec. 4947. The Commissioner of Patents is authorized to make rules, regulations, and prescribe forms for the transfer of the right to the use of trade-marks, conforming as nearly as practicable to the requirements of law respecting the transfer and transmission of copyrights.

CHAPTER 301.

AN Act to amend the Law relating to Patents, Trade-Marks, and Copyrights.

BE it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That no person shall maintain an action for the infringement of his copyright unless he shall give notice thereof by inserting in the several copies of every edition published, on the title page or the page immediately following, if it be a book; or if a map, chart, musical composition, print, cut, engraving, photograph, printing, drawing, chromo, statue, statuary, or model or design intended to be perfected and completed as a work of the fine arts, by inscribing upon some visible portion thereof, or of the substance on which the same shall be mounted, the following words, viz.: "Entered "according to act of Congress, in the year ——, by A.B., in the office of the Librarian "of Congress, at Washington;" or, at his option, the word "Copyright," together with the year the copyright was entered, and the name of the party by whom it was taken out thus—"Copyright, 18—, by A.B."

Sec. 2. That for recording and certifying any instrument of writing for the assignment of a copyright, the Librarian of Congress shall receive from the persons to whom the service is rendered, one dollar; and for every copy of an assignment, one dollar; said fee to cover in either case, a certificate of the record, under seal of the Librarian of Congress; and all fees so received shall be paid into the Treasury of the United States.

Restriction on Application of Words "Engraving," "Cut," and "Print."—Other Prints and Labels may be Registered in Patent Office.—Commissioner of Patents charged with Supervision.—Fees.

Sec. 3. That in the construction of this act, the words "engraving," "cut," and "print, shall be applied only to pictorial illustrations or works connected with the fine arts, and no prints or labels designed to be used for any other articles of manufacture shall be entered under the copyright law, but may be registered in the Patent Office. And the

Commissioner of Patents is hereby charged with the supervision and control of the entry or registry of such prints or labels, in conformity with the regulations provided by law as to copyright of prints, except that there shall be paid for recording the title of any print or label not a trade-mark, six dollars, which shall cover the expense of furnishing a copy of the record, under the seal of the Commissioner of Patents, to the party entering the same.

Sec. 4. That all laws and parts of laws inconsistent with the foregoing provisions be and the same are hereby repealed.

Sec. 5. That this act shall take effect on and after the first day of August, eighteen hundred and seventy-four.

RULES OF PRACTICE IN THE UNITED STATES PATENT OFFICE, APRIL, 1875.

Mode of Proceeding to obtain a Patent.

Application.

When Application takes date.

7. For all purposes of Office practice, the date of an application for a patent will be fixed at the time when *the first fee has been paid, an acceptable drawing or model received, and a specification properly signed, witnessed, and sworn to, filed. After* such date, and during the pendency of an application, either the drawing or model (but not both at the same time) may be withdrawn for correction, but the specification will not be permitted to be withdrawn for any purpose whatever.

Drawings.

New Drawings on Re-issues.

22. All re-issue applications must be accompanied by new thick paper drawings, as in original applications.

Model.

Models, when required.

24. A model will be required in every case where the nature of the invention admits of such illustration, except in applications upon designs. It must clearly exhibit every feature of the machine which forms the subject of a claim of invention, but should not include other matter than that covered by the actual invention or improvement, unless it is necessary to the exhibition of the working model. When the invention is a composition of matter, a specimen of each of the ingredients and of the composition, properly marked, must accompany the application.

Interferences.

Prerequisite to, and dissolving Interferences.

59. An interference will not be declared until the subject-matter involved is decided to be patentable. If after being declared it is found that no interference in fact exists, or that there has been such irregularity in declaring the same as will preclude the proper determination of the question of right between the parties, *it will be dissolved, and an appeal may be taken to the Commissioner in person.*

Concessions of Priority.

If, during the continuance of an interference, it shall appear that neither party is entitled to a patent by reason of abandonment, public use, or any other statutory bar, the examiner of interferences, or examiners-in-chief, as the case may be, will direct the attention of the Commissioners to the facts, either by a report, if before the hearing, or in the decision of the question of priority, if the interference comes to a regular hearing. The Commissioner, if in his judgment it is necessary, will then suspend the interference and remand the cases to the principal examiner for the determination of any of these questions.

If the judgment be based upon a concession of priority by either of the parties, such concession must be in writing, and under the signature of the inventor himself; and if there has been an assignment, the assignee must join in the concession.

EXTENSIONS.

Remonstrants, what is required of them.

71. Any person who intends to oppose an application for extension must give notice of such intention to the applicant or his attorney of record within the time hereafter named, and furnish him with a statement of his reasons of opposition. After this he will be regarded as a party in the case, and will be entitled to notice of the time and place of taking testimony, to a list of the names and residences of the witnesses whose testimony may have been taken previous to his service of notice of opposition, and to a copy of the application and of any other papers on file, upon paying the cost of copying. He must also immediately file a copy of such notice and reasons of opposition, with proof of service of the same, in the Patent Office.

OFFICE FEES, AND HOW PAYABLE.

Tariff of Fees.

107. The following is the tariff of fees established by law:

	$
On filing every application for a design patent for three years and six months	10 00
On filing every application for a design patent for seven years	15 00
On filing every application for a design patent for fourteen years	30 00
On filing every caveat	10 00
On filing every application for a patent for an invention or discovery	15 00
On issuing each original patent for an invention or discovery	20 00
On filing a disclaimer	10 00
On filing every application for a reissue	30 00
On filing every application for a division of a reissue	30 00
On filing every application for an extension	50 00
On the grant of every extension	50 00
On filing the first appeal from a primary examiner to examiners-in-chief	10 00
On filing an appeal to the Commissioner from examiners-in-chief	20 00
On depositing a trade-mark for registration	25 00
On depositing a label for registration	6 00
For every certified copy of a patent or other instrument, for every 100 words	10
For certified copies of drawings, the reasonable cost of making them.	
For recording every assignment of 300 words or under	1 00
For recording every assignment, if over 300 and not over 1,000 words	2 00
For recording every assignment, if over 1000 words	3 00
For uncertified copies of the specifications and accompanying drawings of patents issued since July 1, 1871—	
Single copies	25
Twenty copies or more, whether of one or several patents, per copy	10
For uncertified copies of the specifications and drawings of patents issued prior to July 1, 1871, the reasonable cost of making the same.	

109. The weekly issue [of patents] will close on Saturday at 12 o'clock.

When patents are to issue to assignees the assignment must be on record before the closing of the issue, and the request to issue to an assignee must be made in writing at the time of paying the final fee.

Taking and Transmitting Testimony.

Printing of it required.

118. As a general rule printed copies of the testimony will be required, but this requirement may be dispensed with on special application to the Commissioner, and showing satisfactory reasons therefor.

Three printed copies should be furnished, two for the use of the Office and one for the use of the opposing party. These copies must be filed not less than one week previous to the day of hearing.

It is also desirable that all arguments should be submitted in printed form, and all arguments filed at least two days previous to the day of hearing.

J. M. Thacher,
Commissioner.

Approved:
C. Delano,
Secretary of the Interior.

APPENDIX OF FORMS.

Petitions.

6. *Assent of Assignee to Reissue.*

The undersigned, assignee of the entire [or an undivided] interest in the above-mentioned letters patent, hereby assents to the accompanying application.

C.D.

Specification.

16. *For a Machine.*

To all whom it may concern:

Be it known that I, [here insert the name of the inventor,] of ———, in the county of ———, and state of ———, have invented a new and useful improvement in saw-toothing machines, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings:

17. *For a Process.*

To all whom it may concern:

Be it known that I, [here insert the name of the inventor,] of ———, in the county of———, and state of ———, have invented a new and useful process for separating smut and other impurities from wheat, which process is fully set forth in the following specification:

18. *For a Composition of Matter.*

To all whom it may concern:

Be it known that I, [here insert the name of the inventor,] of ———, in the county of ———, and state of ———, have invented a new and useful compound, called "wood oil," which compound is fully described in the following specification:

19. *For a Design.*

To all whom it may concern:

Be it known that I, [here insert the name of the originator of the design,] of ——, in the county of ——, and state of ——, have originated and designed a pattern for carpets, or other fabrics, of which the following is a full, clear, and exact description, reference being had to the accompanying photographic illustration or drawing, making part of this specification:

20. *For a Trade-mark.*

To all whom it may concern:

Be it known that I, [here insert the name of the applicant,] of ——, in the county of ——, and state of ——, have adopted for —— use a trade-mark for cotton sheetings, of which the following specification is a full, clear, and exact description:

OATHS.

30. *Oath of Applicant for Registration of Trade-mark.*

State of ——, } *ss:*
County of —— }

A. B., being duly sworn, deposes and says that he is a member of the firm of A. B., C. D., and Co., above named; that he verily believes that said firm has the right to the use of the trade-mark described in the foregoing specification, and that no other person, firm, or corporation has the right to such use, either in the identical form or having such near resemblance thereto as might be calculated to deceive; and that the description and fac-simile presented for record are true copies of the trade-mark sought to be protected, and that he resides in ——, and all the other members of the firm reside at ——, in the state of ——; and that they are all domiciled in ——, and are citizens of ——.

A. B.

Sworn to and subscribed before me, this 15th day of July, 1870. E. F.,
Justice of the Peace.

APPEALS.

31*a*. *From the Examiner of Trade-marks to the Commissioner.*

To the Commissioner of Patents:

SIR: I hereby appeal to you in person from the decision of the examiner of trade-marks, dated November 15, 1872, in the matters of my application for the registration of a trade-mark for cigars. The following are the reasons assigned: (Here follow the reasons).

APPENDIX.

REGISTRATION OF PRINTS AND LABELS.

By an Act of Congress approved June 18, 1874, (to take effect on and after the 1st day of August 1874,) it is provided that certain prints and labels may be registered in this Office.

Sec. 3. That in the construction of this act the words "engraving," "cut," and "print," shall be applied only to pictorial illustrations or works connected with the fine arts, and no prints or labels designed to be used for any other articles of manufacture shall be entered under the copyright law, but may be registered in the Patent Office. And the Commissioner of Patents is hereby charged with the supervision and control of the entry or registry of such prints or labels, in conformity with the regulations provided by law as to copyright of prints, except that there shall be paid for recording the title of any print, or label, not a trade-mark, six dollars, which shall cover the expense for furnishing a copy of the record under the seal of the Commissioner of Patents, to the party entering the same.

Sec. 4. That all laws and parts of laws inconsistent with the foregoing provisions be, and the same are hereby repealed.

Sec. 5. That this act shall take effect on and after the 1st day of August, eighteen hundred and seventy-four.

Approved, June 18, 1874.

By the word "print," as used in the said act, is meant any device, picture, word or words, figure or figures (not a trade-mark) impressed or stamped directly upon the articles of manufacture, to denote the name of the manufacturer, or place of manufacture, style of goods, or other matter.

By the word "label," as therein used, is meant a slip or piece of paper, or other material to be attached in any manner to manufactured articles, or to bottles, boxes, and packages containing them, and bearing an inscription, (not a trade-mark,) as, for example, the name of the manufacturer or the place of manufacture, the quality of goods, directions for use, &c.

By the words "articles of manufacture," to which such print or label is applicable by said act, are meant all vendible commodities produced by hand, machinery, or art.

But no such print or label can be registered unless it properly belong to an article of commerce, and be as above defined; nor can the same be registered as such print or label when it amounts in law to a technical trade-mark.

To entitle the owner of any such print or label to register the same in this office, it is necessary that five copies of the same be filed, one of which copies shall be certified under the seal of the Commissioner of Patents, and returned to the registrant.

FORM OF APPLICATION FOR REGISTRATION.

[Making necessary changes to suit each case.]

[*For an Individual.*]

To the Commissioner of Patents:

The undersigned, John Fisher, of the city of Brooklyn, county of Kings, and state of New York, and a citizen of the United States, [or resident therein, as the case may be,] hereby furnishes five copies of a print, [*or* "label," *as the case may be*,] of which he is the sole proprietor.

The said print [*or* "label"] consists of the words and figures as follows, to wit: [Description.]

And he hereby requests that the said print be registered in the Patent Office, in accordance with the act of Congress to that effect, approved June 18, 1874.

Brooklyn, N.Y., August 1, 1874.

_____ _____, Proprietor.

[*For a Corporation.*]

The applicant, a corporation created by authority of the laws of the state of New York, [or other authority, as the case may be,] and doing business in said state, hereby furnishes five copies of a label, [*or* "print" *as the case may be*,] of which it is the sole proprietor.

The said label consists of the words and figures as follows, to wit: [Description.]

And it is hereby requested that the said label be registered in the Patent Office, in accordance with the act of Congress to that effect, approved June 18, 1874.

Witness the seal of the said corporation at ———, ———, 1874.

[Seal] _____ _____,

President, [or other officer.]

The certificate of such registration will continue in force for twenty-eight years.

The fee for registration of a print or label is six dollars, to be paid in the same manner as fees for patents.

The benefits of this act seem to be confined to citizens, or residents, of the United States.

*** The Compiler is indebted to Dr. George Haseltine, of the Firm of Haseltine, Lake, & Co., of 8, Southampton Buildings, London, for the preceding information on the Patent and Trade-Mark Laws, as at present in force in the United States.

AMERICAN CONSULAR REGULATIONS RELATING TO THE AUTHENTICATION OF INVOICES.

Prescribed by the President of the United States, October 1, 1870.

All invoices of importations from countries in which there are such officers, must, before shipment of the merchandise, be produced to and authenticated by the United States consular officer nearest the place of shipment for the United States. In countries without a United States consular officer, the authentication is made, 1st, by a consul of a country in amity with the United States, who resides there, or, 2nd, if there be no such consul, then by two respectable resident merchants.

By the place of shipment is meant the place where the merchandise has been manufactured, finished, or finally prepared for exportation, and where the journey to the United States commences; and is not necessarily the place where it is actually put on board ship.

Countries adjacent to the United States are excepted from the above rules. The authentication *there* may be by the consular officer at or nearest to the port or place of clearance for the latter.

All such invoices must be triplicate; the three copies to be regarded as *one invoice*, and subject to only one charge for consular certificate.

The authentication must be by certificate under the consular seal, and must be either indorsed on each copy of the invoice, or attached by tape, cord, or ribbon, passed under the seal in such manner as to secure integrity.

The certificate must state that the invoice has been produced to the officer certifying; also the date of such production, the name and identity of the person producing, and the intended port of destination of the merchandise in the United States, as declared by such person.

It is desirable that it should also, as far as practicable, indicate the facts in regard to market values at the principal markets of the country, of all merchandise the duty on which is in any respect or part based on such values.

The Act of March 3, 1865, fully recognizes the solemnity of these certificates, and the importance of consular fidelity in regard to them; but consular officers are not to consider themselves authorised under its provisions absolutely to withhold their certificates, *even* when they believe the cost or market values set forth in the invoice to be too low, but in such cases they will, on due investigation, certify on the invoice what, in their opinion, is such true market value, and let the importer take the hazard of satisfying customs officers of the contrary.

To facilitate this, it is recommended that every invoice should, upon its face, at the right hand margin, have a blank column for "consular corrections of invoices;" in which, when he deems it necessary, the consul may enter in figures what he regards as the true values at the principal markets of the country, and certify accordingly, as set forth in forms.

It is the duty of consular officers to acquaint themselves as thoroughly as possible with market values at the principal markets of their districts; with the weights, measures, tares, bounties, &c. there used; and in general with all requisites to enable them to certify intelligently. They may retain invoices for a reasonable time for proper inquiry.

To judge correctly the market value of any given article, it will often be important to inquire carefully as to prices in sales thereof for other markets than our own. When the United States are the principal consumers, and fictitious sales to create nominal values are detected, consuls should ascertain the actual cost of production, and add the customary percentage for profits. In such cases especial care is enjoined as to certificates.

They will, in all proper cases, require samples of the merchandise to be deposited with them, especially when the invoice descriptions of merchandise are not specific and full enough to enable them, or customs officers, intelligently to judge of the market value without inspection of the merchandise itself. It is particularly enjoined upon consular officers at London, Manchester, Leeds, Glasgow, Belfast, Paris, Lyons, Zurich, Basle, Aix-la-

Chapelle, Berlin, Leipsic, Dresden, Vienna, Frankfort, and Brussels, *generally* to require samples of all merchandise imported from there, of a nature to be sampled.

All samples must be accompanied by a card or statement, which, if practicable, shall be attached thereto, containing the particulars indicated on the form prescribed by the department, including the certificate at the bottom thereof, which must be signed by the shipper or his agent; and samples of textiles must be of such size as may be indicated by the proper revenue officer of the Treasury department.

All samples must be carefully preserved, together with the cards or statements accompanying them, and must not be suffered to be inspected or seen by others than officers or agents of the Government, except in cases of exhibition for the purpose of ascertaining or establishing the market value or price; in which case the name of the shipper will not be made known.

Every invoice must be signed by the owners or shippers of the merchandise invoiced, if the same has been actually purchased; or by the manufacturers or owners, if the same has been otherwise obtained; or, if in either case this is impracticable, then by a duly authorised agent.

It must, when produced to the consul, be indorsed with a declaration signed by such purchaser, manufacturer, owner, or agent, setting forth—

(*a.*) That it is in all respects true.

(*b.*) That no different invoice of the articles therein mentioned has been, or will be, furnished to any one.

(*c.*) That it sets forth the actual quantity, respectively, of all articles therein named which are subject to specific duty.

(*d.*) That as to all articles therein named, which are subject, either wholly or partly, to a duty based upon their value, *and obtained by purchase*, it contains a true and full statement of the time and place of purchase, their actual cost, and all charges upon them in the currency paid therefor; *and when otherwise obtained*, the actual market value thereof, respectively, at the principal markets of the country in which they were obtained or manufactured.

(*e.*) That no discounts, bounties, or drawbacks are contained in said invoice but such as have been actually allowed.

This declaration on the part of the owner, manufacturer, purchaser, or agent, whether under oath or not, is the verification of the invoice before shipment, recognised and prescribed by the Acts of March 3, 1863, and March 3, 1865, and must not be confounded with consular authentication.

The declaration should, if possible, be made by the actual owner, manufacturer, or shipper of the merchandise. No agent must be permitted to make it, or otherwise verify the invoice, without having first filed with the consul a duly executed power of attorney, authorising him to act for and bind his principal.

When a verification by oath or affirmation of the owner, shipper, manufacturer, or agent, is deemed necessary by the consular officer, the affiant may, in countries where an oath, to be of legal force, must be taken before a local magistrate, or other officer, take the same before any such officer. The language and form of the oath, if taken by foreigners, should be those of their country. For the authentication of a signature in these cases, the fee of two dollars, prescribed by the consular tariff, is to be charged.

Consular officers are forbidden to be in any way interested in the fees, or to interfere with the selection of such magistrate, or other officer. They may, in their discretion, on points on which they are in doubt, examine experts and others, either on affidavit or orally, without charge or expense to the United States Government.

To facilitate the operations of the custom-house, consuls will take care that, when practicable, all invoices are properly folded and indorsed, and all blanks properly filled.

One invoice must not embrace merchandise shipped by two or more vessels.

Every invoice must truly state quantities in the weights and measures of the country or place from which the importations are made, without respect to those of the United States

and should set forth the quantity by weight of all woollen, worsted, mohair, and mixed goods, (excepting carpeting and bunting); also of cotton bagging, of crinoline, corset, and hat steel wire, and the quantity by weight, measure, or tale, respectively, of all other goods the duty of which is estimated partly on either weight, measure, or tale.

When the value of a foreign currency mentioned in the invoice is not fixed by United States laws, as set forth in the "Table of Equivalents," or shall have depreciated, or have been debased subsequently to the passage of such laws, the invoice must be accompanied by a consular certificate, showing the value of such currency in United States silver dollars. No such certificates are required as to invoices of Swiss goods, made out in the *franc federal;* the franc of France being the standard value thereof.

The consular officer must return one of the triplicates to the person producing them; file one in his office for careful preservation; and, as soon as practicable, transmit the remaining one directly to the collector of the port of destination of the merchandise, either by the master of the vessel in which shipment is made, or by mail, and without the intervention of any party in interest.

Prior to forwarding the last named copy, the consul shall stamp, near the bottom of its first page, at the left-hand corner, and upon his certificate (on which he shall personally write his name,) the amount of the invoice, its consular number, the name of the consulate, and the amount and number of the fee received for the consular authentication.

The said copy (or copies, if there are two or more invoices to be forwarded by the same vessel or mail) must then be placed in an envelope, carefully addressed to the collector, and stamped with the name of the consulate and the date. The blank for the numbers of the invoices must be filled in writing. A small silk cord or narrow ribbon must then be passed through the envelope, near the ends and sides, and under the consular seal, with which the envelope must be carefully sealed.

When invoices are transmitted from a consulate in the interior, or place of purchase, or manufacture, to the consul of the port of shipment therein designated, to be thence forwarded to the proper collector, the package must be accompanied with a descriptive list to facilitate comparison with the ship's manifest, before taking the master's receipt, as per form. The latter consul must see that the integrity of the package is duly secured in the manner prescribed in the preceding paragraph.

The copy filed at the consulate must be carefully folded, and indorsed with its number, date, the name of the owner or shipper, and the name of the vessel in which the merchandise is shipped.

Consular officers will, on request of the proper collectors, supply them, free of charge, with copies of any such documents on file in their offices as they may need in the discharge of their official duties. Copies prepared by other persons for their own use will, on request, be certified on payment of two dollars. When, however, duplicates of originals are required, or the copy is prepared by the consul, the schedule fee will be exacted as for original service.

If a consular officer ascertains and has reliable evidence of the falsity of an oath, administered either by himself or by a local magistrate whose certificate he has authenticated, he should notify the Treasury Department; which will transmit to him the original invoice and oath, to be used, if deemed expedient, in a prosecution for perjury. He should also promptly inform the Treasury Department, and the collector of the port to which goods may be destined, of all errors and frauds discovered in invoices that have been certified by him.

The Act of June 27, 1864, authorises the Secretary of the Treasury to make regulations for sealing vessels, cars, and other vehicles coming into the United States with dutiable merchandise from any contiguous foreign lands or countries.

CUSTOM-HOUSE FEES AT ALL PORTS EXCEPTING THOSE ON THE NORTHERN, NORTH-EASTERN, AND NORTH-WESTERN FRONTIERS OF THE UNITED STATES.

Treasury Regulations of 1874.

	$ cts.
1. For the admeasurement of tonnage and certifying the same, for every transverse section under the tonnage deck	1 50
2. For each between-decks, above tonnage deck	3 00
3. For each poop or closed-in space above the upper or spar deck, required by law to be admeasured	1 50
4. Certificate of registry or record, including bond and oath	2 25
5. Indorsement of change of master on certificate of registry or of record	1 00
6. For every bond under the Registry Act	0 25
7. Certificate of enrolment	0 50
8. Each indorsement on certificate of enrolment of change of master	0 20
9. License and granting the same, including bond and oath, to a vessel of not over 20 tons	0 25
If above 20 and not over 100 tons	0 50
If over 100 tons	1 00
10. Indorsement on a license of change of master	0 20
11. Certifying manifest, and granting permit for licensed vessel to go from district to district, if under 50 tons	0 25
Of 50 tons or over	0 50
12. Receiving certified manifest, and granting permit on arrival of such vessel, if under 50 tons	0 25
Of 50 tons or over	0 50
13. Certifying manifest, and granting permission to registered vessel to go from district to district	1 50
14. Receiving certified manifest, and granting permit on arrival of registered vessel	1 50
15. Granting permit to a vessel not belonging to a citizen of the United States, to go from district to district, and for receiving manifest	2 00
16. Receiving manifest, and granting permit to unload, for last-mentioned vessel on arrival at one district from another	2 00
17. Granting permit to a vessel engaged in the fishery, to trade at a foreign port	0 25
18. Report and entry of foreign goods imported in such vessel	0 25
19. Entry of vessel of 100 tons or more, from a foreign port	2 50
Entry of vessel under 100 tons	1 50
Clearance of vessel of 100 tons or more, for a foreign port	2 50
Clearance of vessel under 100 tons	1 50
20. Post entry	2 00
21. Permit to land or deliver goods or baggage	0 20
22. Bond taken officially	0 40
23. Permit to lade goods for exportation	0 30
24. Permit to lade goods for exportation, entitled to drawback	0 30
25. Debenture, or other official certificate	0 20
26. Bill of health	0 20
27 Receipt for tonnage dues	0 20

	$ cts.
28. Official documents, registers excepted, required by any merchant, owner, or master of any vessel, not before enumerated, as orders, permits, and other documents requiring the collector's signature, including certificates on invoices, and shipper's manifests; and for every jurat or verification on oath, not otherwise provided for - - - - - - -	0 20
29. Services other than admeasurement, to be performed by the surveyor in foreign-going vessels of 100 tons or more, having on board merchandise subject to duty - - - - - - - - -	3 00
30. For like services in vessels under 100 tons, having similar merchandise -	1 50
31. For like services on all foreign-going vessels not having merchandise subject to duty - - - - - - - - - -	0 67
32. Protection - - - - - - - - - -	0 25
33. Crew list - - - - - - - - - -	0 25
34. Weighing of weighable articles exported, upon which a drawback or return duty is allowed, or withdrawn from bonded warehouse for export, per 100 pounds. (*To be accounted for to the Treasury as miscellaneous custom receipts*) - - - - - - - - -	0 03
35. Weighing of salt to cure fish. (See Treasury Regulations of 1874, Arts. 739, 743, and 744. See also Regs. of 1868, Part V., Art. 122, and Supplementary Regs. of July 27th, 1872.)	
36. Measuring salt withdrawn in quantities less than an entire importation, for the curing of fish, per hundred bushels - - - - - -	0 75
37. Weighing of other weighable articles in the districts of Boston, New York, Philadelphia, and Baltimore, per 112 lbs. - - - - - -	0 01⅞
38. Weighing of other weighable articles in the district of Norfolk - -	0 02¼
39. Weighing of other weighable articles in all other districts - - -	0 03
[Weighers' fees are not to be collected, unless weighing is necessary to determine dutiable value; and goods entered for immediate exportation, and not actually deposited in warehouse, are exempted from such fees.]	
40. Gauging of gaugeable articles exported, upon which drawback or return duty is allowed, and gauging of goods withdrawn from bonded warehouse for export, per cask - - - - - - - - -	0 10
[Fee not applicable to goods exported in cases.]	
41. Gauging of other articles :—	
Casks, each - - - - - - - - - -	0 12
Cases and baskets containing wines and distilled spirits, each - - -	0 04½
42. For counting the number of bottles of cider, beer, ale, porter, &c. contained in any package, per dozen bottles - - - - - -	0 01½
43. Measuring, per hundred bushels :—	
Coal, chalk, brimstone, &c. - - - - - - -	0 90
Salt - - - - - - - - - -	0 75
Potatoes, grain, and all similar measurable articles - - - -	0 45
Marble, lumber, and all similar articles, the actual expense incurred - -	—
[Measurers, weighers, and gaugers are to be paid monthly by the collector, and the amount so paid should be charged to the United States.]	
44. For recording bill of sale, mortgage, hypothecation, or conveyance of a vessel under Act of July 29, 1850 - - - - - -	0 50
45. For recording certificate for discharging and cancelling any such conveyance -	0 50
46. For furnishing a certificate setting forth the names of the owners of any registered or enrolled vessel, the parts or proportions owned by each, and also the material facts of any existing bill of sale, mortgage, hypothecation, or other encumbrance, the date, amount of such encumbrance, and from and to whom made - - - - - - - - -	1 00

	$ cts.
47. For furnishing copies of such records, for each bill of sale, mortgage, or other conveyance - - - - - - - - -	0 50

Fees for the Inspection of Steam Vessels.

In addition to the fees above-mentioned for issuing enrolments, licenses, or registers to vessels, the following fees are to be collected under the Act to provide for the better security of life on board of vessels propelled in whole or in part by steam. They should be paid over to the chief officer of the Customs, under such regulations as may be prescribed by the Treasury Department, and by him be deposited to the credit of the Treasurer of the United States, to create a fund for the payment of the expenses of enforcing the Act above cited. They are to be accounted for as other revenue receipts, and should not be included in the emolument account.

48. For the inspection and examination of steam vessels made for the year, and for furnishing the inspection certificate :—	
For each steam vessel of 100 tons or under - - - - -	25 00
49. For every ton in excess of 100 tons - - - - - -	0 05
50. For the licensing of each captain, chief engineer, and first-class pilot of a steam vessel - - - - - - - -	10 00
51. For the licensing of every engineer and pilot of inferior grade - -	5 00
52. For the licensing of a chief mate of a steam vessel - - - -	5 00

For the Services mentioned below Fees are Collectible as follows:—

53. Entry of a vessel, American or Foreign, from a foreign port with passengers :—	
Entry of a vessel of 100 tons or upwards - - - - -	2 50
Entry of a vessel, if of less than 100 tons - - - - -	1 50
Duties performed by the surveyor on vessel of 100 tons or upwards, if there be dutiable cargo - - - - - - - - -	3 00
Duties performed by surveyor on vessel of less than 100 tons, if there be dutiable cargo - - - - - - - - -	1 50
Duties performed by surveyor on vessel of whatever tonnage with free cargo	0 67
Jurat to passenger list - - - - - - - -	0 20
Permit to land old sails, chronometers, and water casks if required - -	0 20
Permit to land ballast, if required - - - - - - -	0 20
Permit to land passengers' baggage - - - - - - -	0 20
General order to discharge - - - - - - -	0 20
Post entry, if necessary - - - - - - -	2 00
Hospital dues, if American vessel, 40 cents per month for each seaman employed since last entry - - - - - - -	—
Oath to hospital return, if American vessel - - - - - -	0 20
Tonnage duty, at 30 cents per ton, American measure, if due - -	—
Certificate of payment of tonnage dues, if required - - - -	0 20
Permit to take in cargo or ballast while discharging, if required - -	0 20
Descriminating tonnage duty upon vessels of certain nations - - -	—
54. Clearance of a foreign vessel for a foreign port with passengers :—	
Of 100 tons or upward - - - - - - - -	2 50
Of less than 100 tons - - - - - - - -	1 50
Bill of health - - - - - - - - -	0 20
Bond to retain cargo on board, if required - - - - - -	0 40
Permit to retain cargo on board, if required - - - - - -	0 20
Oath to passenger list - - - - - - - -	0 20

	$ cts.
Certified copy of outward manifest, if required	0 20
Departure permit, when required	0 20
Postal oath, if not embodied in general oath on clearance	0 20
Tonnage duty, at 30 cents per ton, if due	—
Certificate of payment of tonnage dues	0 20
Certificate of American growth or production, if required	0 20
55. Clearance of an American vessel for a foreign port with passengers :—	
Fees, same as above, and bond for crew	0 40
Certified crew list	0 25
Certificate to shipping articles	0 20
56. Entry of an American vessel sailing under register, in the coasting trade, touching at a foreign port, under the Act of May 27, 1848, and bringing thence cargo and passengers :—	
Foreign entry, if of vessel of 100 tons or upwards	2 50
If of less than 100 tons	1 50
Duties performed by the surveyor on vessel of 100 tons or upwards, if there be dutiable cargo	3 00
Duties performed by surveyor on vessel of less than 100 tons, if there be dutiable cargo	1 50
Duties performed by surveyor on vessel of whatever tonnage, with free cargo	0 67
Jurat to passenger list	0 20
Permit to land old sails, chronometers, &c., if required	0 20
Permit to land ballast, if required	0 20
Permit to land passengers' baggage	0 20
General order to discharge	0 20
Post entry, if necessary	2 00
Oath to hospital return	0 20
Hospital dues (*see* paragraph 53).	
Permit to take in coal, cargo, or ballast while discharging	0 20
Tonnage duty, if due	—
Certificate of payment of tonnage dues, if required	0 20
Receiving certified manifest and granting permit, for each manifest	1 50
57. Clearance of an American vessel sailing under a register, touching at a foreign port, under the Act of May 27, 1848, and carrying cargo and passengers :—	
Clearance of vessel of 100 tons or upwards	2 50
Clearance of vessel under 100 tons	1 50
Bill of health	0 20
Bond to retain cargo on board, if required	0 40
Permit to retain cargo on board, if required	0 20
Oath to passenger list	0 20
Postal oath, if not embodied in general oath on clearance	0 20
Tonnage duty, at 30 cents per ton, if due	—
Certificate of American production, if required	0 20
Certificate of payment of tonnage dues	0 20
Bond for crew	0 40
Certified crew list	0 25
Certified copy of outward manifest, if required	0 20
Certificate to shipping articles	0 20
Certificate to coastwise manifest, and permit	1 50
Departure permit, if required	0 20

	$ cts.
58. Entry of merchandise for immediate consumption on arrival (*Form* 80, *Art.* 347, *Regs.* 1874).	
Certificate to each invoice (*Art.* 349, *Regs.* 1874)	0 20
Permit to land	0 20
Oath of importer, consignee, or agent	0 20
Bond, if any	0 40
	1 00
59. Warehouse entry (*Form* 120, *Art.* 593, *Regs.* 1874).	
Oath to entry	0 20
Certificate to each invoice	0 20
Permit to warehouse	0 20
Warehousing bond	0 40
	1 00
60. Withdrawal entry for consumption at port of original importation (*Form* 125, *Art.* 617, *Regs.* 1874).	
Permit	0 20
Penal bond, if required, 40 cents additional	—
61. Withdrawal entry for consumption at a port other than that of original importation (*Forms* 127 *and* 142, *Arts.* 618 *and* 653, *Regs.* 1874).	
Permit	0 20
Penal bond, if required, 40 cents additional	—
62. Withdrawal entry for transportation in the United States, at the port of original importation (*Form* 128, *Art.* 631, *Reg. Jan.* 1, 1874).	
Oath to entry	0 20
Transportation bond	0 40
Permit to deliver	0 20
Permit or order to load	0 20
Certificate to copy of invoice (*Art.* 638, *Reg. Jan.* 1, 1874)	0 20
	1 20
63. Withdrawal entry for transportation in the United States, at a port other than that of original importation (*Forms* 129 *and* 143, *Arts.* 631 *and* 653, *Reg. Jan.* 1, 1874).	
Fees, same as in par. 62.	
64. Re-warehousing entry (*Form* 136, *Art.* 645, *Reg. Jan.* 1, 1874).	
Oath to entry	0 20
Permit to warehouse	0 20
Re-warehousing bond	0 40
Certificate to cancel transportation bond	0 20
Certificate to invoice	0 20
	1 20

	$ cts.
65. Re-warehouse withdrawal entry for exportation (*Form* 144, *Art.* 653, *and Form* 170, *Art.* 703, *Reg. of Jan.* 1, 1874).	
Oath to entry	0 20
Bond to export	0 40
Permit to deliver	0 20
Order to survey or to load	0 30
	1 10
66. Re-warehousing and withdrawal entry for consumption (*Form* 145, *Art.* 654, *Reg. Jan.* 1, 1874).	
Oath to entry	0 20
Penal bond	0 40
Permit to deliver	0 20
Certificate to cancel bond	0 20
Certificate to invoice	0 20
	1 20
67. Re-warehouse entry for immediate exportation (*Form* 147, *Art.* 656, *Reg. Jan.* 1, 1874).	
Oath to entry	0 20
Exporter's oath, if not combined with oath to entry	0 20
Permit to deliver	0 20
Export bond	0 40
Order to load	0 30
Certificate to cancel transportation bond	0 20
Certificate to invoice	0 20
	1 70
68. Entry for warehouse and immediate transportation in the United States (*Form* 152, *Art.* 658, *Reg. Jan.* 1, 1874).	
Oath to entry	0 20
Oath to transport, if not combined with oath to entry	0 20
Bond	0 40
Permit to deliver	0 20
Order to load	0 20
Certificate to invoice	0 20
Certificate to copy of invoice	0 20
	1 60
69. Export entry from port of original importation (*Form* 164, *Art.* 698, *Reg. Jan.* 1, 1874).	
Exporter's oath	0 20
Export bond	0 40
Permit to deliver	0 20
Order on surveyor to ship	0 30
	1 10

	$ cts.
70. Warehouse and exportation entry (*Form* 171, *Art.* 704, *Reg. Jan.* 1, 1874).	
Certificate to invoice	0 20
Export bond	0 40
Oath	0 20
Permit to deliver	0 20
Order on surveyor to ship	0 30
	1 30
71. Withdrawal entry for transportation and exportation in bond to Mexico (*Form* 187, *Art.* 726, *Reg. Jan.* 1, 1874).	
Oath	0 20
Bond to export	0 40
Permit to deliver	0 20
Order to load	0 30
Certificate to manifest	0 20
	1 30
72. Entry for immediate transportation and exportation in bond to Canada (*Form* 177, *Arts.* 707 *and* 718, *Reg. Jan.* 1, 1874).	
Certificate to invoice	0 20
Oath of exporter	0 20
Bond to transport and export	0 40
Permit to deliver	0 20
Order to surveyor to load	0 30
Certificate to manifest	0 20
[Any additional permit, if necessary, 20 cents.]	
	1 50
73. Withdrawal entry from warehouse for transportation and exportation in bond to Canada (*Form* 185, *Art.* 722, *Reg. Jan.* 1, 1874).	
Oath of exporter	0 20
Bond to transport and export	0 40
Permit to deliver	0 20
Order to surveyor	0 30
Certificate to manifest	0 20
	1 30
74. Entry for immediate transportation of unappraised merchandise (*Form* 154, *Art.* 675, *Reg. Jan.* 1. 1874).	
Oath to entry	0 20
Transportation bond	0 40
Certificate to invoice	0 20
Permit to deliver, and order to load	0 40
Certificate to manifest (*Art.* 680, *Reg. Jan.* 1, 1874)	0 20
	1 40

	$ cts.
75. Export entry from warehouse for benefit of drawback (*Form* 211, *Art.* 815, *Reg. Jan.* 1, 1874).	
Oath	0 20
Export bond	0 40
Permit to deliver	0 20
Order to load	0 30
Debenture certificate	0 20
	1 30

[If weighable goods exported, three cents per hundred pounds for weighing, and if gaugeable goods exported, ten cents per cask for gauging.]

76. Export entry of manufactured articles for drawback (*Form* 214, *Art.* 819, *Reg. Jan* 1, 1874).	
Oath to entry	0 20
Export bond	0 40
Debenture certificate	0 20
Order for examination of goods (Treasury Circular, December 12, 1868)	0 20
Order on surveyor to ship	0 30
	1 30

77. Transportation entry for exportation for drawback (*Form* 217, *Art.* 823, *Reg. Jan.* 1, 1874).	
Oath	0 20
Bond	0 40
Order for examination	0 20
Order to load for transportation	0 20
Debenture certificate	0 20
	1 20

At the port of arrival, there will be charged :	
For order on surveyor to ship for exportation	0 30
For certificate of exportation	0 20
	0 50

Like fees to the foregoing should be collected upon exportation of goods under Internal Revenue Acts.

CUSTOM-HOUSE FEES ON THE NORTHERN, NORTH-EASTERN, AND NORTH-WESTERN FRONTIERS OF THE UNITED STATES.

Treasury Regulations of 1874.

	$ cts.
1. For the admeasurement of tonnage and certifying the same, for every transverse section under the tonnage deck	1 50
2. For each between decks, above the tonnage deck	3 00
3. For each closed-in space above the upper or spar deck, required by law to be admeasured (no fees being chargeable for admeasuring a vessel under five tons in burden)	1 50
4. For certificate of enrolment, including bond and oath	1 10
5. For granting a license, including bond and oath, to a vessel not over 20 tons in burden	0 45
6. For granting a license to a vessel above 20 tons and not over 100 tons, including bond and oath	0 70
7. For granting a license to a vessel above 100 tons, including bond and oath	1 20
8. For certifying a manifest, including master's oath, and granting a permit for a vessel under 50 tons, to go from district to district, whether belonging to a citizen of the United States or otherwise	0 25
9. For certifying a manifest, including master's oath, and granting a permit for a vessel over 50 tons, to go from district to district, whether belonging to citizens of the United States or otherwise	0 50
10. For receiving a manifest, including oath of master, on arrival of a vessel under 50 tons from one collection district at another, whether touching at an intermediate foreign port or not	0 25
11. For receiving a manifest, including master's oath, on arrival of a vessel of 50 tons or over from one collection district at another, whether touching at an intermediate foreign port or not	0 50
12. For certifying a manifest, including oath of master, and granting a permit to a vessel under 50 tons, laden with a cargo destined for a port or place in another district at which there is no custom-house	0 25
13. For certifying a manifest, including master's oath, and granting a permit to a vessel above 50 tons, laden with a cargo destined for a port or place in another district at which there is no custom-house	0 50
14. For certificate to a manifest of a vessel trading from place to place in a district (when required)	0 20
15. For the entry of a vessel directly from a foreign port	0 50
16. For the clearance of a vessel sailing directly to a foreign port, otherwise than by the sea	0 50
17. For a post entry	2 00
18. For a permit to land or deliver imported goods not included in any entry (*see item* 29)	0 20
19. For a bond officially taken, not otherwise provided for	0 50
20. For a permit or order to load goods for exportation, whether for benefit of drawback or otherwise	0 30
21. For debenture or other official certificate, not otherwise provided for	0 20
22. For recording bills of sale, mortgages, hypothecations, or conveyances of vessels	0 50
23. For recording a certificate for discharging or cancelling any such conveyance	0 50

	$ cts.
24. For furnishing a certificate setting forth the names of the owners of any registered or enrolled vessel, the parts or proportions owned by each; and, also, the material facts of any existing bill of sale, mortgage, hypothecation, or other encumbrance, the date and amount of such encumbrance, and from and to whom made	1 00
25. For furnishing copies of such records: for each bill of sale, mortgage, or other conveyance	0 50
26. For a certificate of the payment of tonnage dues (*see item* 21)	0 20
27. For a permit to transfer goods from one storehouse to another, when required by owner or importer (*see item* 18)	0 20
28. For receiving a manifest of each railroad car or other vehicle, laden in foreign contiguous territory, with goods, wares, or merchandise, destined for the United States, and administering the prescribed oath	0 25
[No fees should be exacted for receiving or certifying manifests of railroad cars, or other vehicles, laden with goods, wares, or merchandise, passing from one port or place in the United States, to another therein, through foreign contiguous territory.]	
29. For entry of goods, wares, and merchandise, for consumption, warehouse or re-warehouse, transportation or exportation, including oath and permit to land or deliver the same	0 50
[Combined entries will be treated as two entries, and charged for accordingly.]	
30. For certificate of registry, including bond and oath	2 25
31. For indorsement of change of master on registry	1 00
32. For indorsement of change of master on license (*see item* 21)	0 20
33. The fees above mentioned (so far as they concern vessels), are applicable in the case of all vessels navigating the waters of the northern, north-eastern, and north-western frontiers otherwise than by the sea, and no fees other than those above specially enumerated can be legally collected from the owners or masters *as such*, of vessels (not being steamers) enrolled or licensed on said frontiers.	
34. Bill of health	0 25
35. Crew-list, including bond	1 00
36. Protection	0 50
37. Weighing of weighable articles withdrawn from bonded warehouse for export, per 100 lbs.	0 03
38. Weighing of salt to cure fish. (*See Treas. Reg. of* 1874, *Arts.* 739, 743, *and* 744. *Also Regs. of* 1868, *Part V., Art.* 122, *and Supplementary Regulations of July* 27, 1872.)	
39. Salt withdrawn in quantities less than an entire importation for the curing of fish, per 100 bushels	0 75
40. Weighing of other weighable articles, per 112 pounds	0 03
[Weighers' fees are not to be collected, unless weighing is necessary to determine dutiable value; and goods entered for immediate exportation, and not actually deposited in warehouse, are exempt from such fees.]	
41. Gauging of gaugeable articles exported, or withdrawn from warehouse for exportation, per cask	0 10
[Fee is not applicable to goods exported in cases.]	
42. Gauging of other articles:—	
Casks, each	0 12
Cases and baskets containing wines and distilled spirits, each	0 04½
43. For counting the number of bottles of cider, beer, ale, porter, &c. contained in any package, per dozen bottles	0 01½

	$ cts.
44. Measuring, per 100 bushels :—	
Coal, chalk, brimstone, &c.	0 90
Salt	0 75
Potatoes, seeds, grain, and all similar measurable articles	0 45
45. Marble, lumber, and other similar articles, the actual expense incurred.	

FEES FOR THE INSPECTION OF STEAM VESSELS.

46. In addition to the fees above mentioned, for issuing enrolments, licenses, or registers to vessels, the following fees are to be collected under the Act to provide for the better security of life on board of vessels propelled in whole or in part by steam. They should be paid over to the *cashier* of the *Customs*, under such regulations as may be prescribed by the Department, and by him deposited to the credit of the Treasurer of the United States, to create a fund for the payment of the expenses of enforcing the Act above cited. They are to be accounted for as other revenue receipts, and should not be included in the emolument account.	
47. For the inspection and examination of steam vessels made for the year, and for furnishing the inspection certificate :—	
For each steam vessel of 100 tons, or under	25 00
48. For every ton in excess of 100 tons	0 05
49. For the licensing of each captain, chief engineer, and first class pilot of a steam vessel	10 00
50. For the licensing of every engineer and pilot of inferior grade	5 00
51. For the licensing of a chief mate of a steam vessel	5 00

FOR THE SERVICES MENTIONED BELOW, FEES ARE COLLECTABLE AS FOLLOWS :—

52. Entry of a vessel directly from a foreign port with passengers :—	
Entry	0 50
Permit to land old sails, water casks, chronometer, &c., if required	0 20
Permit to land sand ballast, if required	0 20
Permit to land passengers' baggage, if required	0 20
General order to discharge, if required	0 20
Tonnage duty	—
Post entry, if made	2 00
53. Clearance of a foreign vessel, for a foreign port, with passengers :—	
Clearance	0 50
Bond to retain cargo, if necessary	0 50
Tonnage duty	—
54. Clearance of an American vessel directly for a foreign port, with passengers :—	
Clearance	0 50
Bond to retain cargo, if necessary	0 50
Tonnage duty	—
Bond for return of crew, if necessary	0 50
Certificate to crew list if required	0 20
Certificate to shipping articles, if necessary	0 20
55. Entry of an American vessel engaged in the coasting trade, and touching at a foreign port, under the Act of July 1, 1870, and joint resolution of February 10, 1871.	
For receiving manifest, and certifying to oath, of a vessel of 50 tons or over	0 50
For receiving manifest, and certifying to oath of a vessel under 50 tons	0 25
Permit to land chronometer, old sails, and water casks, if necessary	0 20
Permit to land passengers' baggage, if required	0 20

	$ cts.
Permit to land sand ballast, if necessary	0 20
Post entry, if made	2 00
General order to discharge, if required	0 20

56. Clearance of an American vessel engaged in the coasting trade, and touching at a foreign port under Act of July 1, 1870, and joint resolution of February 10, 1871.

For certifying manifest and granting permit :—	
If to a vessel of 50 tons or over	0 50
If to a vessel under 50 tons	0 25

57. Entry of merchandise for immediate consumption on arrival (*Form* 80, *Art.* 347, *Regs.* 1874).

Entry including oath and permit to land	0 50
Certificate to each invoice (*Art.* 349, *Regs.* 1874)	0 20
	0 70

58. Warehouse entry (*Form* 120, *Art.* 593, *Regs.* 1874).

Entry including oath and permit to land	0 50
Certificate to each invoice (*Art.* 349, *Regs.* 1874)	0 20
Warehousing bond	0 50
	1 20

59. Withdrawal entry for consumption at port of original importation (*Form* 125, *Art.* 617, *Regs.* 1874).

Entry, including permit to deliver	0 50

60. Withdrawal entry for consumption at a port other than that of original importation (*Forms* 127 *and* 142, *Arts.* 618 *and* 653, *Regs.* 1874).

Entry, including oath and permits	0 50
Bond	0 50
Certificate to invoice	0 20
	1 20

61. Withdrawal entry for transportation in the United States, at the port of original importation (*Form* 128, *Art.* 631, *Reg. of Jan.* 1, 1874).

Entry, including oath and permits	0 50
Bond	0 50
Certificate to invoice (*Art.* 628, *Reg. Jan.* 1, 1874)	0 20
	1 20

62. Withdrawal entry for transportation in the United States, at a port other than that of original importation; fees same as above.

63. Re-warehousing entry :—

Entry, including oath and permits	0 50
Bond	0 50
Certificate to cancel bond (*Form* 140, *Art.* 648, *Regs.* 1874)	0 20
	1 20

	$ cts.
64. Re-warehouse withdrawal entry for exportation (*Form* 144, *Art.* 653, *and Form* 170, *Art.* 703, *Regs.* 1874).	
Entry, including oath and permit to deliver	0 50
Bond	0 50
Permit or order to load	0 30
	1 30
65. Re-warehousing and withdrawal entry for consumption (*Form* 145, *Art.* 654, *Regs.* 1874).	
Combined re-warehousing and withdrawal entry (two entries), including oath and permits	1 00
Certificate to cancel bond (*Form* 140, *Art.* 648, *Regs.* 1874)	0 20
	1 20
66. Re-warehouse entry for immediate exportation (*Form* 147, *Art.* 656, *Reg. Jan.* 1, 1874).	
Combined warehouse and withdrawal entry (two entries), including oath and permit to deliver	1 00
Export bond	0 50
Permit or order to load	0 30
Certificate to cancel bond	0 20
	2 00
67. Entry for warehouse and immediate transportation in the United States (*Form* 152, *Art.* 658, *Reg. Jan.* 1, 1874).	
Combined warehouse and withdrawal entry (two entries), including oaths and permits	1 00
Bond	0 50
Certificate to invoice (*Art.* 349, *Regs.* 1874)	0 20
Certificate to copy of invoice (*Art.* 628, *Regs.* 1874)	0 20
	1 90
68. Export entry from port of original importation (*Form* 164, *Art.* 698, *Regs.* 1874).	
Entry, including oath and permit to deliver	0 50
Bond	0 50
Permit or order to load	0 30
	1 30
69. Warehouse and exportation entry (*Form* 171, *Art.* 704, *Regs.* 1874).	
Combined warehouse and withdrawal entry, including oaths and permit to deliver	1 00
Bond to export	0 50
Certificate to invoice	0 20
Permit or order to load	0 30
	2 00

	$ cts.
70. Withdrawal entry for transportation and exportation in bond to Mexico (*Form* 187, *Art.* 726, *Regs.* 1874).	
Withdrawal entry including oath and permit - - - -	0 50
Bond to export - - - - - - - -	0 50
Certificate to manifest - - - - - - -	0 20
	1 20
71. Entry for immediate transportation and exportation in bond to Canada, &c. (*Form* 177, *Arts.* 707 *and* 718, *Regs.* 1874).	
Combined entry, including oath and permit - - - - -	1 00
Bond to export - - - - - - - -	0 50
Certificate to invoice - - - - - - - -	0 20
Certificate to manifest - - - - - - - -	0 20
	1 90
72. Withdrawal entry from warehouse for transportation and exportation in bond to Canada, &c. (*Form* 185, *Art.* 722, *Regs.* 1874).	
Entry, including oath and permit - - - - - -	0 50
Bond to export - - - - - - - -	0 50
Certificate to manifest - - - - - - -	0 20
	1 20
73. Entry for immediate transportation of unappraised merchandise (*Form* 154, *Art.* 675, *Regs.* 1874).	
Entry, including oath and permit - - - - - -	0 50
Bond - - - - - - - - -	0 50
Certifying invoice - - - - - - - -	0 20
Certifying manifest (*Art.* 680, *Regs.* 1874) - - - - -	0 20
	1 40
74. Export entry from warehouse for benefit of drawback (*Form* 211, *Art.* 815, *Regs.* 1874).	
Entry, including oath and permit to deliver - - - - -	0 50
Bond to export - - - - - - - -	0 50
Debenture certificate - - - - - - - -	0 20
Permit or order to load - - - - - - -	0 30
	1 50
[If weighable goods exported, three cents per hundred pounds for weighing; and if gaugeable goods exported, ten cents per cask for gauging.]	
75. Export entry of manufactured articles for drawback (*Form* 214, *Art.* 819, *Regs.* 1874).	
Entry - - - - - - - - -	0 50
Bond to export - - - - - - - -	0 50
Debenture certificate - - - - - - - -	0 20
Permit or order to load - - - - - - -	0 30
	1 50

	$ cts.
76. Transportation entry for exportation for drawback (*Form* 217, *Art.* 823, *Regs.* 1874).	
Entry - - - - - - - - -	0 50
Bond - - - - - - - - -	0 50
Debenture certificate - - - - - - - - -	0 20
	1 20
77. Goods warehoused without invoice :—	
Permit - - - - - - - - -	0 20
Certificate to oath, &c. - - - - - - - -	0 20
	0 40

The phrase "or other official certificate" is held to embrace every certificate requiring the collector's official signature in the regular transaction of the business of the custom house, including his certificate to an oath, invoice, or manifest.

The phrase "permit to land or deliver imported goods" is intended to include all permits to land, whether for immediate delivery or otherwise; and all permits to warehouse or public store, or delivery therefrom; all permits or orders to appraise without invoice; and all permits to transfer goods from one store to another, when required by owner or importer.

A fee of 20 cents for a permit to deliver goods from the warehousing or importing vessel, in addition to a fee of 30 cents for the permit to load for exportation, will be collected.

For a landing permit of passengers' baggage, whether embracing the baggage of one or more persons, a single fee only shall be collected.

Fees for weighing, gauging, or measuring imports will be charged in all cases where the invoice or entry shall not contain the weight, quantity, or measure of the merchandise weighed, gauged, or measured; and whenever the weighing, gauging, or measuring shall disclose a difference between the actual weight or quantity and that specified in the invoice or entry, affording a well-grounded presumption of fraud, the collector will advise with the District Attorney of the United States in regard to the case, and will be governed by his opinion as to the propriety of instituting legal proceedings for enforcing the penalty provided by law.

Fees for weighing, gauging, or measuring goods withdrawn from warehouse in quantities less than the entire importation, are to be paid by the importer, at the rates prescribed by law. The actual expense incurred is not to be taken into consideration.

The fees allowed to surveyors for services other than admeasurement on board vessels, may be charged by the collectors performing such services at ports where there are no surveyors; but such fees will not be collected from coasting vessels.

Fees for the admeasurement of vessels under five tons in burden will not be charged.

Collectors may receive port warden's and harbour master's fees, where it is a matter of convenience to all parties concerned.

The term "legal fees" does not embrace pilotage, half pilotage, or similar local charges.

Invoices must be certified and sealed by the collector as soon as received, for which service he should collect a fee of 20 cents in the case of any original invoice presented by the importer or consignee; but no fees should be charged for a certificate to a duplicate invoice, manifest, or other paper forwarded to the collector as a verification of the original document.

Masters of passenger vessels from foreign territory not contiguous to the United States are required to pay, within 24 hours from entry, to the collector of customs at the port of

arrival, ten ($10) dollars for each passenger over eight years of age (not being a cabin passenger) who shall have died of natural disease during the voyage.

Collectors, naval officers, and surveyors are required to have posted in a public place in their offices a fair table of the fees demandable by law at their ports, subject at all times to inspection, and to give receipts for fees collected, specifying the particulars, whenever required to do so. Failure to observe these requirements entails a penalty of one hundred ($100) dollars, for the benefit of the informer.

Fees will not be charged on the northern frontiers for permits to unlade cargo brought from an American port; but permits must be obtained, and existing laws complied with, previous to the discharge or landing of passengers, baggage, goods, wares, or merchandise brought from foreign ports or places.

Canadian steamers trading on the northern frontiers from one foreign port to another, and touching during the course of such voyage at a port or place in the United States, and landing passengers, baggage, or freight, are required to report and pay entrance and clearance fees, in addition to the usual fee for a permit to land imported goods.

Fees will not be collected by officers of the customs for receiving or certifying manifests of railroad cars, or other vehicles laden with goods, wares, or merchandise, sealed by customs officers, for transportation from one port or place in the United States to another therein, through foreign contiguous territory; such manifests, however, will be produced, received, and certified in the same manner as heretofore. Fees for receiving and certifying manifests accompanying cars laden in foreign contiguous territory, will continue to be collected.

DRAWBACK RATES.

Alphabetical List of, established under the Authority of the Act of August 5, 1861.

Axes, made from iron and steel by the process of splitting the iron and inserting the steel, $1\frac{35}{100}$ cents per lb.

„ made by the reverse process, $1\frac{17}{100}$ cents per lb.

Bags, from jute and burlap cloth, same as duty paid; exported quantity determined by measurement.

Bayonets, made by Remington and Sons, $3\frac{76}{100}$ cents each, and 10 per cent. off.

„ made for Colt's patent fire-arm, 7 cents each, and 10 per cent. off.

„ made for the Winchester fire-arm, $1\frac{37}{100}$ cents each, and 10 per cent. off.

Blacking Boxes, from tin plates, same as duty paid; the exported quantity determined by adding to the outside measurement of the box $\frac{1}{4}$ of such product.

Bolts, Nuts, and Pivots, from iron, same as duty paid.

Bullets, leaden, and Shot, same as duty paid on a like number of pounds.

Cans, from tin plates, same as duty paid: the exported quantity determined by adding to the outside measurement of the can $\frac{1}{20}$ of such product, excepting one-pound cans, for which add 15 per cent. to the outside measurement, without any other additions.

Castor oil, product of castor seed, 25 cents per gallon.

„ pomace, product of castor seed, 11 cents per 100 lbs.

Cleaned Rice (see Rice).

Copper, from ore, same as duty paid.

Cordage, from Manilla hemp, $1\frac{1}{8}$ cents per lb.

„ from jute hemp, $\frac{2}{3}$ cent per lb.

„ product of Sisal hemp, $\frac{2}{3}$ cent per lb.

„ from New Zealand flax, $\frac{8}{9}$ cent per lb.

„ tarred Russia, $\frac{15}{16}$ cent per lb.

Cut Nails (see Nails).

Chains, made from bar-iron, same as duty paid; add 4 per cent. to exported quantity to cover wastage in manufacture.
Dressed Skins, from raw, same as duty paid.
Fish Plates (see Plates).
Flour, from wheat which paid a duty of 20 cents per bushel, 75 cents per barrel.
Glazier's points, product of sheet zinc, same as duty paid.
Gunpowder, from saltpetre which paid a duty of 2 cents per lb. :—
American Sporting, $1\frac{68}{100}$ cents per lb.
United States Government, $1\frac{64}{100}$ cents per lb.
Shipping and Mining, $1\frac{4}{10}$ cents per lb.
„ from saltpetre which paid a duty of 1 cent per lb. :—
American Sporting, $\frac{8}{10}$ cent per lb.
United States Government, $\frac{8}{10}$ cent per lb.
Shipping and Mining, $\frac{7}{10}$ cent per lb.
Guns, Gattling, 42 calibre and 10 barrels, $7.03 each gun, and 10 per cent. off.
„ „ 42 „ 6 „ $5.00 „ „ „
„ „ $\frac{65}{75}$ „ 10 „ $9.00 „ „ „
„ „ 1 in. „ 10 „ $11.73 „ „ „
Gun-systems, made from iron by Remington and Sons, $5\frac{4}{100}$ cents each, and 10 per cent. off.
„ made for the Peabody fire-arm, $7\frac{29}{100}$ cents each, and 10 per cent. off.
„ made for Colt's patent fire-arm, $14\frac{42}{100}$ cents each gun, and 10 per cent. off.
Gun Trimmings, made for the Peabody fire-arm, $1\frac{74}{100}$ cents each gun, and 10 per cent. off.
„ made for Colt's patent fire-arm, $6\frac{6}{10}$ cents each gun, and 10 per cent. off.
„ made by Remington and Sons :—
For the iron used in the manufacture, $1\frac{54}{100}$ cents each gun, and 10 per cent. off.
For the steel (when imported as such), $3\frac{3}{4}$ cents each gun, and 10 per cent. off.
For the steel made from imported iron, $\frac{1}{4}$ cent each gun, and 10 per cent. off.
„ and Systems, for the Winchester fire-arm, $8\frac{1}{2}$ cents each arm, and 10 per cent. off.
Handles and Nozzles, made from sheet zinc and attached to tin cans (when tagger's tin is also used in making such nozzles), $24\frac{3}{10}$ cents per 100 cans.
Handles, made from sheet zinc and attached to tin cans without above-described nozzles, $14\frac{4}{10}$ cents per 100 cans.
Lanterns, from tin plates, same as duty paid: quantity determined by the measurement of the pieces composing such lanterns before they are put together.
Lead Pipe, same as duty paid.
Leather, sole, from hides, same as duty paid.
Linseed Oil, $6\frac{1}{4}$ cents per gallon.
Locomotive Tyres, from imported steel, same as duty paid; add 2 per cent. to exported weight to cover wastage in manufacture.
Nails, cut, from sheet and plate iron, $1\frac{1}{8}$ cents per lb.
„ horseshoe, from slit iron rods, same as duty paid.
Nail Rods, rolled, from iron, same as duty paid; add 9 per cent. to the exported weight to cover wastage in manufacture.
„ slit, from iron, same as duty paid; add 3 per cent. to exported weight to cover wastage in manufacture.
New England Rum, product of molasses, $5\frac{1}{4}$ cents per gallon.
Nozzles, made from tin plates, same as duty paid.
„ flat screw-top, made from sheet zinc and attached to tin cans, 8 cents per 100 cans.

Oil (see Linseed and Castor).
Packing, from jute yarn, same as duty paid.
Plates, fish, from iron, same as duty paid ; add 12 per cent. to exported weight to cover wastage in manufacture.
„ tack, same as duty paid.
Pipe (see Lead).
Pistols, Colt's navy or belt, $10\frac{48}{100}$ each.
Pivots (see Bolts).
Pomace (see Castor).
Refined Saltpetre (see Saltpetre).
„ Sugar (see Sugar).
Rice, cleaned from paddy rice, $1\frac{2}{5}$ cents per lb.
„ cleaned from rough rice, $2\frac{1}{5}$ cents per lb.
Rifle Barrels, from bar-steel and from barrel moulds, same as duty paid.
Rum (see New England).
Salt, fine, 8 cents per 100 lbs.
Saltpetre, refined from crude, $\frac{95}{100}$ cent per lb.
Sheet Lead, from pig-lead, same as duty paid.
Shooks from staves, same as duty paid.
Shot (see Bullets).
Shovels and Spades, made principally of steel, 72 cents per dozen.
„ „ made principally of iron, 45 cents per dozen.
Skins (see Dressed).
Solder, used in making tin cans, $14\frac{4}{10}$ cents per 100 cans of 5 gallon capacity, and in proportion for cans of less capacity.
Sole Leather (see Leather).
Sugar, refined crystalline, 3 cents per lb.
„ refined B and C, lower grades, 2 cents per lb.
„ product of molasses, 1 cent per lb.
Syrup, product of sugar, 5 cents per gallon.
„ product of molasses, 4 cents per gallon.
Tacks, from iron, 1 cent per lb.
Tin Cans (see Cans).
Tires (see Locomotive).
Wire, telegraph, from iron rods, same as duty paid.
„ from steel, for bridges, same as duty paid.

In those cases where a discriminating duty has been paid upon the materials used, the drawback allowed shall bear the same relation to that duty as the usual allowance bears to the ordinary duty.

All of the foregoing subject to the usual 10 per cent. retention required by law.

RATES OF TARE

PRESCRIBED BY TREASURY DEPARTMENT IN GENERAL REGULATIONS OF 1874.

Almonds,	in bags,	2 per cent.
„	in bales,	$2\frac{1}{2}$ „
„	in frails,	8 „
Alum,	in casks,	10 „
Alum coarse, or ground,	in sacks,	2 lbs. per sack.
Barytes,		3 per cent.
Cassia,	in mats,	9 „

RATES OF TARE—*continued.*

Cheese,	in casks or tubs,	10 per cent.
Chicory,	in bags,	2 „
Cocoa,	in bags,	2 „
„	in ceroons,	8 „
Cinnamon,	in bales,	6 „
Coffee, Rio,	in double bags,	2 „
„	in single bags,	1 „
„ all other, actual tare,		
Copperas,	in casks,	10 „
Currants,	in casks,	10 „
Hemp, Manilla,	in bales,	4 lbs. per bale.
„ Hamburg, Leghorn, Trieste,		5 „
Indigo,	in ceroons,	10 per cent.
Melado,		11 „
Nails,	in bags,	2 „
„	in casks,	8 „
Ochre, dry,	in casks,	8 „
„ in oil,	in casks,	12 „
Paris White,	in casks,	10 „
Pepper,	in bags,	2 „
„	in double bags,	4 „
Peruvian Bark,	in ceroons,	10 „
Pimento,	in bags,	2 „
Raisins,	in boxes,	25 „
„	in casks,	12 „
„	in half boxes,	27 „
„	in quarter boxes,	29 „
„	in frails,	4 „
Rice,	in bags,	2 „
Spanish Brown, dry,	in casks,	10 „
„ „ in oil,	in casks,	12 „
Sugar,	in bags,	2 „
„	in bbls.,	10 „
„	in boxes,	14 „
„	in hhds.,	12½ „
„	in mats,	2½ „
„	in tierces,	12 „
Salt, alum, coarse or ground,	in sacks,	2 lbs. per sack.
„ fine,	in sacks,	3 „ „
*Teas, China or Japan, duty on net invoice weight,		
„ all others, actual tare,		
Tobacco, Leaf,	in bales,	10 lbs. per bale.
„ „	in bales, ex. covers,	12 „ „
Whiting,	in casks,	10 per cent.

Actual tare to be allowed for the weight of jute ropes around bales of the same material.

From and after the passage of this Act, in estimating the allowance for tare on all chests, boxes, cases, casks, bags, or other envelope or covering of all articles imported liable to pay any duty, where the original invoice is produced at the time of making entry thereof, and the tare shall be specified therein, it shall be lawful for the collector, if he shall see fit, or for the collector and naval officer, if such officer there be, if they shall see fit, with the consent of the consignees, to estimate the said tare according to such invoice; but in all other cases the real tare shall be allowed, and may be ascertained under such regulations as the Secretary of the Treasury may from time to time prescribe; but in no case shall there be any allowance for draft.

The tare, as above, is that uniformly allowed in all parts of the United States when the actual tare is not claimed by the importer at the time of entry.

EXTRACTS FROM POST OFFICE ACT.

Act of June 8, 1872.

An Act to revise, consolidate, and amend the Statutes relating to the Post Office Department.

That mailable matter shall be divided into three classes: first, letters; second, regular printed matter; third, miscellaneous matter.

That mailable matter of the first class shall embrace all correspondence, wholly or partly in writing, except book-manuscripts and corrected proof-sheets passing between authors and publishers.

That mailable matter of the second class shall embrace all matter exclusively in print, and regularly issued at stated periods from a known office of publication, without addition by writing, mark, or sign.

That mailable matter of the third class shall embrace all pamphlets, occasional publications, transient newspapers, magazines, hand-bills, posters, unsealed circulars, prospectuses, books, book-manuscripts, proof-sheets, corrected proof-sheets, maps, prints, engravings, blanks, flexible patterns, samples of merchandise not exceeding 12 ounces in weight, sample cards, phonographic paper, letter envelopes, postal envelopes and wrappers, cards, plain and ornamental paper, photographic representations of different types, seeds, cuttings, bulbs, roots, scions, and all other matter which may be declared mailable by law, and all other articles not above the weight prescribed by law, which are not, from their form or nature, liable to destroy, deface, or otherwise injure the contents of the mail-bag or the person of any one engaged in the postal service. All liquids, poisons, glass, explosive materials, and obscene books shall be excluded from the mails. All matter of the third class, excepting books and other printed matter, book-manuscripts, proof-sheets, and corrected proof-sheets, shall not exceed 12 ounces in weight, and all matter of the third class shall be subject to examination and to rates of postage as herein-after provided. Samples of metals, ores, and mineralogical specimens shall not exceed 12 ounces in weight, and shall be subject to examination and to rates of postage as herein-after provided.

That no package weighing more than 4 pounds shall be received for conveyance by mail, except books published or circulated by order of Congress.

That the Postmaster General shall furnish to the post offices exchanging mails with foreign countries, and to such other offices as he may deem expedient, postal balances denominated in grams of the metric system, 15 grams of which shall be the equivalent, for postal purposes, of one half ounce avoirdupois, and so on in progression.

That postage on all mail-matter must be prepaid by stamps at the time of mailing, unless herein otherwise provided for.

That all mail-matter deposited for mailing, on which at least one full rate of postage has been paid as required by law, shall be forwarded to its destination, charged with the unpaid rate, to be collected on delivery.

That if any mail-matter, on which by law the postage is required to be prepaid at the mailing office, shall by inadvertence reach its destination without such prepayment, double the prepaid rates shall be charged and collected on delivery.

That no mail-matter shall be delivered until the postage due thereon has been paid.

That on all mail-matter which is wholly or partly in writing, except book-manuscripts and corrected proofs passing between authors and publishers, and local or drop letters; on all printed matter which is so marked as to convey any other or further information than is conveyed by the original print, except the correction of mere typographical errors; on all matter which is sent in violation of law or the regulations of the department respecting inclosures; and on all matter to which no specific rate of postage is assigned, postage shall be charged at the rate of 3 cents for each half ounce or fraction thereof.

That letters commonly known as drop or local letters, delivered through the post office or its carriers, shall be charged with postage at the rate of 2 cents where the system of free delivery is established, and 1 cent where such system is not established, for each half ounce or fraction thereof.

That on newspapers and other periodical publications, not exceeding 4 ounces in weight, sent from a known office of publication to regular subscribers, postage shall be charged at the following rates per quarter, namely: on publications issued less frequently than once a week, at the rate of 1 cent for each issue; issued once a week, 5 cents; and 5 cents additional for each issue more frequent than once a week. And an additional rate shall be charged for each additional 4 ounces or fraction thereof in weight.

That on mailable matter of the third class, except as herein stated, postage shall be charged at the rate of 1 cent for each 2 ounces or fraction thereof. Double these rates shall be charged for books, samples of metals, ores, minerals, and merchandise.

That packages of woollen, cotton, or linen clothing, not exceeding 2 pounds in weight, may be sent through the mail to any non-commissioned officer or private in the army of the United States, if prepaid, at the rate of 1 cent for each 1 ounce or fraction thereof, subject to such regulation as the Postmaster General may prescribe.

That the rate of United States postage on mail-matter sent to or received from foreign countries with which different rates have not been established by postal convention or other arrangement, when forwarded by vessels regularly employed in transporting the mail, shall be 10 cents for each half ounce or fraction thereof on letters, unless reduced by order of the Postmaster General; 2 cents each on newspapers; and not exceeding 2 cents per each 2 ounces, or fraction thereof, on pamphlets, periodicals, books, and other printed matter, which postage shall be prepaid on matter sent and collected on matter received; and to avoid loss to the United States in the payment of balances, the Postmaster General may collect the unpaid postage on letters from foreign countries in coin or its equivalent.

That all letters conveyed by vessels not regularly employed in carrying the mail shall, if for delivery within the United States, be rated with double postage, to cover the fee paid to the vessel.

That to facilitate letter correspondence and provide for the transmission of the mails, at a reduced rate of postage, of messages, orders, notices, and other short communications, either printed or written in pencil or ink, the Postmaster General shall be, and he is hereby, authorised and directed to furnish and issue to the public, with postage stamps impressed upon them, "postal cards," manufactured of good stiff paper, of such quality, form, and size as he shall deem best adapted for general use; which cards shall be used as a means of postal intercourse, under rules and regulations to be prescribed by the Postmaster-General, and when so used shall be transmitted through the mails at a postage charge of 1 cent each, including the cost of their manufacture.

That any person who shall forge or counterfeit, or knowingly utter or use any forged or counterfeited postage stamp of any foreign government, shall be deemed guilty of a felony, and, on conviction thereof, shall be punished by imprisonment of not less than 2 nor more than 10 years, at the discretion of the court.

That all mail-matter not herein-before specially made free must be prepaid by postage-stamps.

That when the writer of any letter on which the postage is prepaid shall indorse upon the outside thereof his name and address, such letter shall not be advertised, but after remaining uncalled for at the office to which it is directed thirty days, or the time the writer may direct, shall be returned to him without additional charge for postage, and if not then delivered shall be treated as a dead-letter.

That prepaid and free letters shall be forwarded from one post office to another, at the request of the party addressed, without additional charge for postage.

That no person shall carry any letter or packet on board any vessel which carries the

mail otherwise than in such mail, except as provided in section two hundred and thirty-nine; and for every such offence the party offending shall forfeit and pay fifty dollars.

That no vessel departing from the United States for any foreign port shall receive on board or convey any letter or packet originating in the United States which has not been regularly received from the post office at the port of departure, and which does not relate to the cargo of said vessel, except as provided in section two hundred and thirty-nine; and every collector, or other officer of the port empowered to grant clearances, shall require from the master of such vessel, as a condition of clearance, an oath or affirmation that he has not received on board, has not under his care or control, and will not receive or convey any letter or packet contrary to the provisions of this section.

That no vessel arriving within any port or collection-district of the United States shall be allowed to make entry or break bulk until all letters on board are delivered at the nearest post office, and the master thereof has signed and sworn to the following declaration, before the collector or other proper customs officer:—

> "I, A.B., master of the ——, arriving from ——, and now lying in the port of ——, do solemnly swear (or affirm) that I have, to the best of my knowledge and belief, delivered, at the post office, at ——, every letter, and every bag, packet, or parcel of letters, which were on board the said vessel during her last voyage, or which were in my possession or under my power or control."

And any master who shall break bulk before he has delivered such letters shall, on conviction thereof, forfeit not exceeding one hundred dollars for every such offence, one-half to the officer making the seizure, and the other to the use of the United States.

That any special agent of the Post-office Department, when instructed by the Postmaster General to make examinations and seizures, and the collector or other customs officer of any port without special instructions, shall carefully search all vessels for letters which may be on board or which have been conveyed contrary to law. "*Importations through the* "*Mail.*—The Postmaster General complains that registered letters and packages received "through the mail from foreign countries are seized and detained by the collector of "customs at the port in the United States at which they first arrive, and requests that "measures shall be taken to prevent such alleged violations of the postal laws.

"It has been agreed that collectors shall not require postmasters to deliver to them any "letter or package addressed to a person residing at another port or place where a "customs officer is stationed. A careful inspection, however, should be made by the "postmaster, and, if any such letter or package be suspected to contain dutiable articles, "the postmaster at the place of destination should be notified, in order that he may inform "the proper officer of the customs. Such letters and packages should be opened in the "presence of an officer of the customs by the person to whom addressed, and any dutiable "article contained therein, not mentioned in a postal convention applicable, should be "seized and held to await the decision of this Department (United States Treasury) upon "any application which may be made for a mitigation of the forfeiture incurred."

That any special agent of the Post Office Department, collector, or other customs officer, or United States marshal or his deputy, may at all times seize all letters and bags, packets or parcels, containing letters, which are being carried contrary to law on board any vessel or on any post-route, and convey the same to the nearest post office, or may, by the direction of the Postmaster General or Secretary of the Treasury, detain them until two months after the final determination of all suits and proceedings which may, at any time within six months after such seizure, be brought against any person for sending or carrying such letters.

That every package or parcel seized by any special agent of the Post Office Department, collector, or other customs officer, or United States marshal or his deputies, in which any letter is unlawfully concealed, shall be forfeited to the United States, and the same proceedings may be had to enforce the forfeiture as are authorised in respect to goods, wares, and merchandise forfeited for violation of the revenue laws; and all laws for the benefit

and protection of customs officers making seizures for violating said revenue laws shall apply to officers making seizures for violating the postal laws.

That nothing herein contained shall be construed to prohibit the conveyance or transmission of letters or packets by private hands without compensation, or by special messenger employed for the particular occasion only.

That all letters inclosed in stamped envelopes (the postage-stamp in every case being of a denomination sufficient to cover the postage that would be chargeable thereon if the same were sent by mail), may be sent, conveyed, and delivered otherwise than by mail, provided such envelope shall be duly directed and properly sealed, so that the letter cannot be taken therefrom without defacing the envelope, and the date of the letter or of the transmission or receipt thereof shall be written or stamped upon the envelope. But the Postmaster General may suspend the operation of this section upon any mail route where the public interest may require such suspension.

That any person who shall knowingly and wilfully obstruct or retard the passage of the mail, or any carriage, horse, driver, or carrier, carrying the same, shall on conviction thereof, for every such offence, forfeit and pay not exceeding one hundred dollars.

That any ferryman who shall delay the passage of the mail by wilful neglect or refusal to transport the same across any ferry shall, for every ten minutes such mail may be so delayed, forfeit and pay ten dollars.

Act of January 9, 1873.

Chap. XXI.—*An Act to amend the one hundred and thirty-third Section of an Act approved June eighth, eighteen hundred and seventy-two, entitled "An Act to "revise, consolidate, and amend the Statutes relating to the Post Office "Department."*

That section one hundred and thirty-three of the Act entitled "An Act to revise, "consolidate, and amend the statutes relating to the Post Office Department," approved June eighth, eighteen hundred and seventy-two, be so amended as to authorise the transmission by mail of packages of seeds, cuttings, bulbs, roots, and scions of any weight, for each of such packages, not exceeding four pounds, at a rate of postage of one cent for each two ounces or fractions of an ounce of such package or packages: *Provided*, that all mail matter of the third class must be prepaid in full in postage stamps at the office of mailing.

Act of June 23, 1874.

That all mailable matter of the third class, referred to in section one hundred and thirty-three, of the Act entitled "An Act to revise, consolidate, and amend the statutes "relating to the Post Office Department," approved June 8th, 1872, may weigh not exceeding four pounds for each package thereof, and postage shall be charged thereon at the rate of one cent for each two ounces or fraction thereof; but nothing herein contained shall be held to change or amend section one hundred and thirty-four of said Act.

TARIFF UPON BRITISH GOODS IMPORTED INTO FRANCE, SHOWING THE RATES PRIOR AND SUBSEQUENT TO THE PARIS EXHIBITION OF 1855.

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
	Per cwt.	Per cwt. *s. d.*	Per cwt. *s. d.*
METALS.			
IRON :—			
Ore of	Free.	Free.	Free.
Filings, slag and dross, from the forge	Free and 4¾*d.*	,,	,,
Pig and fragments of old cast iron	1*s.* 11¼*d.*	1 0¼	0 9¾
Purified cast, called "mazée," and old broken wrought iron	3*s.* 5*d.* and 3*s.* 10½*d.*	1 4	1 1½
Crude, in lumps or prisms, not freed from the dross	Prohibited.	2 0½	1 10
Bars, square, round, or flat; rails of all shapes and dimensions; angle and T iron; and wire, with the exceptions herein-after mentioned	Bars and rails 4*s.* 10½*d.* to 6*s.* 10*d.*	2 10	2 5¼
Hoops, of the thickness of 1 millimètre ($\frac{1}{25}$ inch) or less	9*s.* 9*d.*	3 5½	3 0½
Sheet, rolled or hammered, exceeding 1 millimètre in thickness			
In plates weighing 200 kilos. (441 lbs.) or less, and of which the breadth does not exceed 1 mètre 20 centimètres (47¼ inches), nor the length 4 mètres 50 centimètres (14 ft. 9 in.)			
In plates exceeding 200 kilogrammes in weight or 1 mètre 20 centimètres in breadth, or 4 mètres 50 centimètres in length	9*s.* 9*d.*	3 10¼	3 0½
Sheet, thin, and black iron, in plates of 1 millimètre ($\frac{1}{25}$ inch) or less in thickness		5 3½	4 0¾
(N.B. Thin sheet and black iron in flat plates, cut out or trimmed in any way, to pay one-tenth more than rectangular plates.)			
Sheets, tinned, coppered, covered with zinc or lead	19*s.* 6*d.*	6 6	5 3½
Wire, not exceeding $\frac{5}{10}$th millimètres ($\frac{1}{50}$ inch) in diameter, whether tinned, coppered, or covered with zinc	14*s.* 7½*d.* and 1*l.* 14*s.* 1½*d.*	5 8¼	4 0¾
STEEL :—			
In bars of all kinds	14*s.* 7½*d.*	6 1	5 3½
Sheet, exceeding 2 millimètres ($\frac{1}{12}$ inch) in thickness	Sheets 1*l.* 4*s.* 4½*d.* to 11*l.* 3*s.* 10*d.*	8 11¼	7 3¾
Sheet, not exceeding 2 millimètres in thickness, and wire, including bright wire for instruments	Wire 1*l.* 14*s.* 1½*d.*	12 2¼	10 2

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
	Per cwt.	Per cwt. *s. d.*	Per cwt. *s. d.*
METALS—*continued.*			
COPPER :—			
Ore, filings and old broken articles	Free.	Free.	Free.
Pure, and brass smelted, in pigs, bars, or plates	$\frac{3}{5}d.$ to $11\frac{3}{4}d.$	"	"
Rolled or beaten into bars or sheets	14*s.* $7\frac{1}{2}d.$ to 1*l.* 19*s.*	6 1	4 $0\frac{3}{4}$
Wire of all sizes, whether polished or not	2*l.* 8*s.* $9\frac{1}{4}d.$ to 6*l.* 19*s.* $5\frac{3}{4}d.$	6 1	4 $0\frac{3}{4}$
Gilt or silvered, beaten, drawn, or rolled, and wire laid on thread or silk	4*l.* 19*s.* $5\frac{3}{4}d.$ to 23*l.* 3*s.* $3\frac{1}{2}d.$	40 $7\frac{3}{4}$	40 $7\frac{3}{4}$
ZINC :—			
Ore, crude, calcined, or pounded, filings, and old broken articles	Free and $\frac{3}{5}d.$	Free.	Free.
In pigs, bars, or plates	$\frac{3}{5}d.$	0 $0\frac{1}{2}$	0 $0\frac{1}{2}$
Rolled	1*l.* 4*s.* $4\frac{1}{2}d.$	2 $5\frac{1}{4}$	1 $7\frac{1}{2}$
LEAD :—			
Ore and dross of all sorts, filings and old broken articles	Free.	Free.	Free.
In pigs, bars, or plates	Pigs 2*s.* $5\frac{1}{4}d.$	1 $2\frac{3}{4}$	"
Rolled or sheet, alloyed with antimony, in pig, and type, old	Sheets 11*s.* 8*d.* Alloyed with antimony, 12*s.* $8\frac{1}{4}d.$	2 $0\frac{1}{2}$	1 $2\frac{3}{4}$
TIN :—			
Ore and metal in pigs, bars, or plates, filings, and old broken articles	Free and $11\frac{3}{4}d.$	Free.	Free.
Alloyed with antimony (Britannia metal) in ingots	—	2 $0\frac{1}{2}$	2 $0\frac{1}{2}$
Pure metal or alloyed, beaten or rolled	1*l.* 9*s.* 3*d.*	2 $5\frac{1}{4}$	2 $5\frac{1}{4}$
BISMUTH :—			
Crude	$11\frac{3}{4}d.$	Free.	Free.
ANTIMONY :—			
Ore and sulphuretted	Free and $5\frac{3}{4}d.$	Free.	Free.
Metal or regulus	12*s.* 8*d.*	3 3	2 $5\frac{1}{4}$
NICKEL :—			
Ore and speiss	Free.	Free.	Free.
Pure, and alloyed with other metals, especially copper or zinc (argentine or German silver), in ingots or pigs	$5\frac{3}{4}d.$	"	"
Ditto, ditto, rolled or drawn	2*l.* 8*s.* $9\frac{1}{4}d.$	6 1	4 $0\frac{3}{4}$
MANGANESE :—			
Ore			
ARSENIC :—	Free.	Free.	Free.
Metallic			
ORES :—			
Not enumerated			

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
	Per cwt.	Per cwt. s. d.	Per cwt. s. d.
METAL MANUFACTURES.			
CAST IRON :—			
Not turned or polished :—			
1st Class. Chairs for railways, plates and other castings from the open mould -		1 5¼	1 2¾
2nd Class. Cylindrical pipes (straight), rafters, solid columns, and gas retorts - -	Prohibited.	1 11	1 6¼
3rd Class. Pots and all other manufactures not included in the preceding classes -		2 0½	1 10
Polished or turned - - - -		3 8	2 5¼
Tinned, enamelled, or varnished - -		4 10½	4 0¾
WROUGHT IRON :—			
Ironwares (heavy), including framework; pieces of frames - - - - -			
Knees and girders for ships - - -			
Ironwork for carts and waggons - -			
Hinges; clamps; large bolts; braces, and other fastenings of doors and windows, not polished or turned - - - - -		3 8	3 3
Gratings (solid); beds; seats and furniture for gardens and other kinds, with or without ornaments or adjuncts, in cast iron, steel, or copper	Prohibited (except a few small wares admitted under the head of "Mercery.")		
N.B.—Axles, springs, and tires for wheels are not included in the above category, but are classed among detached pieces of machinery.			
Small ironwares ("serrurerie") including locks and padlocks of all sorts, bolts and hinges, in sheet iron, latches, and flat bolts, and all other articles in wrought or sheet iron for fastenings of doors or windows, and furniture, polished, filed, or turned - - - -		6 1	4 10½
Nails, forged by machinery - - -		4 0¾	3 3
Ditto, ditto, by hand - - - -		6 1	4 10½
Wood screws, screw-bolts, and nuts - -		4 0¾	3 3
Anchors - - - - -	4*s.* 10½*d.* to 7*s.* 3¾*d.*	4 0¾	3 3
Chains and chain-cables - - - -	18*s.* 3½*d.*		
Tools, in pure iron with or without handles -	1*l.* 4*s.* 4½*d.*	4 10½	4 0¾
Tubes of wrought-iron, simply welded, of 9 millimètres (⅓ in.) interior diameter or more -		5 3½	4 5½
Ditto, ditto, less than 9 millimètres (⅓ in.), and fittings of tubes - - - -	19*s.* 6*d.* to 1*l.* 9*s.* 3¼*d.*	10 2	8 1½
Tubes in wrought-iron, welded on a mandril, or lap-welded - - - - -		10 2	8 1½
Fish-hooks (for sea fishing), tinned or not -	4*l.* 17*s.* 6½*d.*	20 4	20 4

DESCRIPTION OF ARTICLES.	Rates of Import Duties. Old Tariff. 1854.	New Tariff. 1860.	New Tariff. 1864.
	Per cwt.	Per cwt. *s.* *d.*	Per cwt. *s.* *d.*
METAL MANUFACTURES—*continued.*			
WROUGHT IRON—*continued.*			
Household articles and other wares unenumerated :—			
In wrought or sheet-iron, polished or painted	Prohibited.	6 11	5 8¼
Ditto, ditto, enamelled, varnished, or tinned		8 1½	6 6
STEEL WARES :—			
Tools in pure steel; files; saws, circular or straight; scythes, sickles, and other unenumerated	1*l.* 19*s.* to 5*l.* 9*s.* 8¾*d.*	16 3	13 0
Needles for sewing, less than 5 centimètres (⅕ in.) in length	4*l.* 17*s.* 6½*d.* to 19*l.* 10*s.* 1¾*d.*	81 3½ to 40 7¾	81 3½ to 40 7¾
Ditto, of 5 and more centimètres in length	4*l.* 17*s.* 6½*d.*	40 7¾	40 7¾
Fish-hooks (for river fishing), blued or not	9*l.* 15*s.* 0¾*d.*	40 7¾	40 7¾
Metallic pens (other than gold or silver)			
Small articles of ornament, such as beads, purse garniture, brooches, and thimbles	2*l.* 8*s.* 9¼*d.* to 4*l.* 17*s.* 6*d.*	10 2	8 1½
Household articles and other wares unenumerated	Prohibited.	16 3	13 0
CUTLERY :—			
Of every description	Prohibited.	20 per cent. ad valorem, reduced to 15 per cent. *ad valorem* on the 1st. Jan. 1866.	
Instruments, surgical, optical, and philosophical	Surgical 10 per cent. Optical 30 per cent.	10 per cent. *ad valorem.*	10 per cent. *ad valorem.*
ARMS, not being implements of war :—			
Side arms	9*l.* 15*s.* 0¾*d.*	16 3	16 3
Fire-arms	4*l.* 17*s.* 6½*d.*	97 6½	97 6½
SUNDRY METAL WARES.			
Tools of iron tipped with steel, with or without handles	3*l.* 0*s.* 11½*d.*	7 3¾	6 1
Articles made partly of cast and partly of wrought iron, not polished, if the weight of wrought iron is less than half the total weight	Prohibited.	2 0½	2 0½
Ditto, if half or more than half the total weight		4 0¾	3 3
Ditto, polished, enamelled or japanned, and with ornamental adjuncts in iron, copper, brass, or steel		6 1	4 10½
Wire gauze of iron or steel	1*l.* 16*s.* 7*d.* to 3*l.* 13*s.* 2*d.*	6 1	4 0¾
Cylinders of copper or brass for printing, whether engraved or not	Engraved 15 per cent. *ad valorem*, not engraved 4*l.* 17*s.* 6½.	6 1	6 1

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
	Per cwt.	Per cwt. *s.* *d.*	Per cwt. *s.* *d.*
SUNDRY METAL WARES—*continued.*			
Copper wares, metal gauze of copper or brass, works of art and ornament, and all other manufactured articles of copper, pure or alloyed with zinc or tin - - -	Gauze 3*l.* 13*s.* 2*d.*; all others (except a few classed as "Mercery") prohibited.	10 2	8 1½
Manufactures of zinc of all kinds - -	Prohibited.	4 0¾	3 3
Lead pipes, and all other manufactures of lead -	11*s.* 8½*d.*	2 0½	1 2¾
Printing type, new - - - - -	1*l.* 4*s.* 4½*d.* to 4*l.* 17*s.* 6½*d.*	4 0¾	3 3
Tin pots and pans and other manufactures of tin, whether pure or alloyed with antimony	Pots and pans 2*l.* 8*s.* 9¼*d.* to 4*l.* 17*s.* 6½*d.*, others prohibited.	12 2¼	12 2¼
Manufactures of nickel allied with copper or zinc (argentine) - - - - - -	Prohibited.	40 7¾	40 7¾
Plated manufactures of every description -		40 7¾	40 7¾
Manufactures of metal gilt or silvered by the mercurial or electro-plate processes - -		40 7¾	40 7¾
Plate and jewellery of gold, of silver, platina, or other metals - - - - -	10¾*d.* to 5*s.* 11½*d.* per oz. troy.	1½ per oz. troy.	1½ per oz. troy.
Clocks and watches - - - -	1*s.* 0¾ to 5*s.* 9*d.* each; or, without cases, 10 per cent. *ad valorem.*	5 per cent. *ad valorem.*	5 per cent. *ad valorem.*
Clock and watch movements - - -	12*l.* 3*s.* 10*d.*	40 7¾	40 7¾
MACHINES AND MACHINERY.			
WITH APPARATUS COMPLETE :—			
Steam-engines stationary, with or without boilers or fly-wheels - - - - - -	12*s.* 2¼*d.*	4 0¾	2 5¼
Ditto, marine, with or without boilers - -	17*s.* 0¾*d.*	8 1½	4 10½
„ locomotives and portable engines -	19*s.* 6*d.*	6 1	4 0¾
Tenders for locomotive engines, complete -	14*s.* 7½*d.*	4 0¾	3 3
Spinning machines - - - -	19*s.* 6*d.*	6 1	4 0¾
For weaving - - - - -	7*s.* 3¾*d.*		
For paper-making - - - -	14*s.* 7½*d.*		
For printing - - - - -	14*s.* 7½*d.*	3 8	2 5¼
Agricultural machines, and machines for making sheets and fillets of cards - - -	agri. 7*s.* 3¾*d.*		
Lace-making machines - - - -	1*l.* 9*s.* 3*d.*	6 1	4 0¾
Distilling apparatus, sugar-pans and boilers made of copper - - - - - -	14*s.* 7½*d.* to 1*l.* 9*s.* 3*d.*	6 1	4 0¾
Carding machines, not furnished - -	14*s.* 7½*d.*	6 1	4 0¾
Steam boilers, of sheet iron, of cylindrical or spherical shape, with or without boiler-pipes or heating-pipes - - - - -	14*s.* 7½*d.* to 1*l.* 9*s.* 3*d.*	4 0¾	3 3
Ditto, tubular, of sheet iron, with tubes of wrought iron, copper or brass, or of sheet iron riveted, with interior furnaces, and all other boilers not of cylindrical or spherical shape -	14*s.* 7½*d.* to 1*l.* 9*s* 3*d.*	6 1	4 10½

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
MACHINES AND MACHINERY—*continued.*	Per cwt.	Per cwt. *s. d.*	Per cwt. *s. d.*
WITH APPARATUS COMPLETE—*continued.*			
Steam boilers, tubular, of sheet steel of every shape	14*s.* 7½*d.* to 1*l.* 9*s.* 3*d.*	12 2¼	10 2
Gasometers, open boilers, furnaces and stoves in sheet iron, or in cast and sheet iron	14*s.* 7½*d* to 1*l.* 9*s.* 3*d.*	4 0¾	3 3
Machines for making machines ("machines-outils") and machines not enumerated:—			
Containing 75 per cent. or more of their weight in cast iron	9*s.* 9*d.* to 1*l.* 11*s.* 8¼*d.*	3 8	2 5¼
Containing 50 per cent. and less than 75 per cent. of cast iron		6 1	4 0¾
Containing less than 50 per cent. of cast iron		8 1½	6 1
DETACHED PARTS OF MACHINES:—			
Sheets and fillets of cards on leather, india-rubber, or other materials	4*l.* 17*s.* 6½*d.*	24 4½	20 4
Dents of reeds in iron or in copper	4*l.* 17*s.* 6½*d.*	12 2¼ / 20 4	12 2¼
Reeds complete, in iron or copper			
Pieces in cast iron, polished, filed, and adjusted	7*s.* 3¾*d.* to 1*l.* 19*s.* 0*d.*	3 8	2 5¼
Pieces in wrought iron, polished, filed, and adjusted or not, without distinction of weight	1*l.* 9*s.* 3*d.* to 2*l.* 8*s.* 9¼*d.*	6 1	4 0¾
Steel spring for carriages, waggons, or locomotives	Prohibited.	6 11	6 1
Pieces in steel, polished, filed, adjusted or not; weighing more than 1 kilogramme (2⅕ lbs.)	3*l.* 13*s.* 2*d.* to 4*l.* 17*s.* 6½*d.*	12 2¼ / 16 3	10 2 / 14 2¾
Ditto, 1 kilogramme and less			
Pieces in copper, pure or mixed with any other metals		10 2	8 1½
Sheets and fillets for cards of leather, caoutchouc, or other materials	—	8 1½	8 1½
GOLD-LEAF	8*s.* 11½*d.* per oz. troy.	2*s.* 5¾*d.* per oz. troy.	2*s.* 5¾*d.* per oz. troy.
REFINED SUGAR	Prohibited.	16*s.* 8*d.*	16*s.* 8*d.*
CARRIAGES	Prohibited.	10 per cent. *ad valorem.*	10 per cent. *ad valorem.*
CABINET-MAKERS' AND TURNERS' SMALL WARES, and wares in ivory or carved wood ("tabletterie")	9*l.* 15*s.* 1*d.* to 12*l.* 3*s.* 10*d.*	,,	,,
LEATHER: prepared skins, varnished, dyed, and morocco leather	Prohibited.	101 7¼	101 7¼
Ditto, all other kinds	12*s.* 2¼ to 4*l.* 17*s.* 6½*d.*	12 2¼	12 2¼
Leather manufactures of all kinds	Prohibited (except common pack saddles and wine skins).	10 per cent. *ad valorem.*	10 per cent. *ad valorem.*

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
	Per cwt.	Per cwt. *s. d.*	Per cwt. *s. d.*
WOODEN WARES :			
Empty casks, new or old not hooped, or hooped with wooden hoops	Wood hooped, 1*s.* 1*d.*; iron hooped, 9*s.* 7¼*d.*, per 100 gallons of content; not hooped, 10 per cent. *ad valorem.*	Free.	Free.
„ „ iron hoops	- - - -	10 per cent. *ad valorem.*	10 per cent. *ad valorem.*
Shovels, forks, rakes, handles of tools, of wood, with or without ferrules	15 per cent. ad valorem.	Free.	Free.
Oars	1¾*d.* to 5¼*d.* per 10 yards.	„	„
Plates, spoons, porringers, and other household articles	15 per cent. *ad valorem.*	„	„
Pieces of carpenter's work, dressed or not		„	„
Parts of cartwright's work, dressed or not		„	„
Other articles of wood, not enumerated		10 per cent. *ad valorem.*	10 per cent. *ad valorem.*
HOUSEHOLD FURNITURE		„	„
SHIPS AND BOATS, built in the United Kingdom, not registered or sailing under British flag, in wood	Prohibited.	Per ton of French measurement.* 20 0	16 0
Ditto, ditto, in iron		56 0	48 0
Hulls of ships, in wood		12 0	8 0
Ditto, ditto, in iron		40 0	32 0
N.B.—The machines and machinery on board such ships shall be charged separately, according to the rates fixed by the Tariff for "Machines and Machinery."			
TEXTILE FABRICS.			
FLAX AND HEMP :—		Per cwt. *s. d.*	
Flax or hemp, combed	7*s.* 3¾*d.*	2 0½	
Yarn of hemp or flax measuring, to the lb. :			
Single :—			
Unbleached :—			
2,976 yards, or less	18*s.* 3½*d.*	6 1	
More than 2,976 yards, and not more than 5,952	1*l.* 3*s.* 5*d.*	8 1½	
More than 5,952 yards, and not more than 11,904	1*l.* 19*s.* 0*d.*	12 2¼	
More than 11,904 yards, and not more than 17,856	3*l.* 0*s.* 11½*d.*	14 7½	

* The French ton is nearly the same as the English. It is about 5 per cent. less for vessels under 300 tons, and 7 to 8 per cent. less for larger vessels.

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt. *s.* *d.*	
LAX AND HEMP:			
Single:			
Unbleached:			
More than 17,856 yards, and not more than 35,712	4*l.* 0*s.* 5¾*d.*	24	4¾
More than 35,712 yards		40	7¾
Bleached, or dyed:—			
2,976 yards, or less	1*l.* 6*s.* 4*d.* to 1*l.* 8*s.* 3½*d.*	8	1½
More than 2,976 yards, and not more than 5,952	1*l.* 12*s.* 2¼*d.* to 1*l.* 14*s.* 1½*d.*	10	11¾
More than 5,952 yards, and not more than 11,904	2*l.* 11*s.* 8¼*d.*	16	3
More than 11,904 yards, and not more than 17,856	3*l.* 18*s.* 0¼*d.* to 3*l.* 19*s.* 6*d.*	19	6
More than 17,856 yards, and not more than 35,712	4*l.* 17*s.* 6½*d* to 5*l.* 3*s.* 4¾*d.*	32	6
More than 35,712 yards		54	0½
Twisted:—			
Unbleached	1*l.* 1*s.* 5½*d.* to 5*l.* 9*s.* 8¾*d.*	Same duties as upon single unbleached yarn, augmented by 40 per cent., according to the class.	
Bleached, or dyed	1*l.* 9*s.* 9*d.* to 6*l.* 19*s.* 11½*d.*	Same duties as upon single bleached or dyed yarns, augmented by 40 per cent., according to the class.	
Tissues of flax or hemp, plain linens and diaper, having in the warp in the space of 5 square millimètres (⅕ of an inch):—		*s.*	*d.*
Unbleached:—			
8 threads or less	1*l.* 9*s.* 3*d.* to 11*l.* 7*s.* 9*d.*	12	2¼
9, 10, and 11 threads		22	4¼
12, 13, and 14 threads		36	7
15, 16, and 17 threads		46	8¾
18, 19, and 20 threads		69	1
21, 22, and 23 threads		105	8
24 threads and above		162	6¾
Bleached, dyed, or printed:—			
8 threads or less	2*l.* 3*s.* 10¾*d.* to 19*l.* 18*s.* 5¼*d.*	16	3
9, 10, and 11 threads		28	5½
12, 13, and 14 threads		48	9¼
15, 16, and 17 threads		63	0
18, 19, and 20 threads		93	5¾
21, 22, and 23 threads		142	3
24 threads and above		217	7¼

DESCRIPTION OF ARTICLES.	Rates of Import Duties. Old Tariff. 1854.	New Tariff. 1860.	New Tariff. 1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt.	
		s. *d.*	
FLAX AND HEMP—*continued.*			
Drills, plain or figured, having, in the warp, in the space of 5 square millimètres ($\frac{1}{5}$ of an inch) :—			
Unbleached :—			
8 threads in warp, or less	1*l.* 9*s.* 3*d.* to 8*l.* 17*s.* 6*d.*	14 $2\frac{3}{4}$	
9, 10, and 11 threads		22 $4\frac{1}{4}$	
12, 13, and 14 threads		36 7	
More than 14 threads		46 $8\frac{3}{4}$	
Bleached, dyed, or printed :—			
8 threads or less		19 $1\frac{1}{4}$	
9, 10, and 11 threads		28 $5\frac{1}{2}$	
12, 13, and 14 threads		48 $9\frac{1}{4}$	
More than 14 threads		63 0	
Yarns and tissues of flax or hemp mixed with other materials will pay the same duties as pure yarns and tissues of flax or hemp, provided that the flax or hemp predominates in weight.			
Damasks	7*l.* 16*s.* 3*d.* to 23*l.* 18*s.* $1\frac{1}{2}d.$	16 per cent. *ad valorem.*	
Cambrics	10*s.* $10\frac{3}{4}d.$ per lb.	Same duties as plain linens.	
Lawns	10*s.* $10\frac{3}{4}d.$ per lb.		
Handkerchiefs, bordered	As linens.		
Net of thread	Prohibited.	Same duties as cotton net.	
Lace, ditto	5 per cent. *ad valorem*	5 per cent. *ad valorem.*	
Hosiery, ditto	4*l.* 17*s.* $6\frac{1}{2}d.$		
Haberdashery, ditto	1*l.* 19*s.* to 3*l.* 13*s.* $1\frac{3}{4}d.$	15 per cent. *ad valorem.*	
Ribbon of thread, unbleached, bleached, or dyed			
Articles made of flax or hemp, wholly or in part made up	—		
Articles not enumerated	—		
JUTE :—			
In the fibre, or hackled, imported direct from British India, or from British entrepôts, in British or French vessels	$2\frac{1}{4}d.$ to 3*s.* $10\frac{3}{4}d.$	*s.* *d.* Free.	*s.* *d.*
Combed	7*s.* $3\frac{3}{4}d.$	1 $2\frac{1}{2}$	1 $2\frac{1}{2}$
Jute yarn, measuring per lb. :—			
Unbleached :—			
Less than 694 yards	1*l.* 9*s.* 3*d.*	2 $10\frac{1}{4}$	2 $0\frac{1}{2}$
From 694 to 1,835 yards, exclusively		3 9	2 $5\frac{1}{4}$
From 1,835 to 2,083 „ id.		4 $1\frac{3}{4}$	2 $10\frac{1}{4}$
From 2,083 to 2,976 „ id.		6 1	4 $0\frac{3}{4}$
More than 2,976 „		Same as linen yarn.	
Bleached, or dyed :—			
Less than 694 yards	1*l.* 19*s.* to 1*l.* 19*s.* 6*d.*	4 $0\frac{3}{4}$	2 $10\frac{1}{4}$
From 694 to 1,835 yards, exclusively		5 $3\frac{1}{2}$	3 $7\frac{3}{4}$
From 1,835 to 2,083 „ id.		6 1	4 $0\frac{3}{4}$
From 2,083 to 2,976 „ id.		8 $11\frac{1}{4}$	5 $8\frac{1}{4}$
More than 2,976 „		Same as linen yarn.	

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt. *s. d.*	Per cwt. *s. d.*
JUTE—*continued.*			
Tissues of jute, having, in the warp, in the space of 5 square millimètres ($\frac{1}{5}$ of an inch) :—			
Unbleached :—			
1, 2, and 3 threads, plain - -	Less than 8 threads 1*l.* 17*s.* 6½*d.*	5 3½	4 0¾
1, 2, and 3 threads, twilled - -		6 1	4 10½
4 and 5 threads - - - -		8 6¼	6 6
6, 7, and 8 threads - - -		12 2¼	9 9
More than 8 threads - - -	—	Same as tissues of linen, according to class.	
Bleached, or dyed :—			
1, 2, and 3 threads, plain - -	Less than 8 threads. 2*l.* 12*s.* 2¼*d.*	7 8¾	6 1
1, 2, and 3 threads, twilled - -		8 11¼	6 10¾
4 and 5 threads - - - -		12 2¼	9 4¼
6, 7, and 8 threads - - -		17 10½	14 2¼
More than 8 threads - - -	—	Same as tissues of linen, according to class.	
Carpets, rugs, and matting - - -	—	13 0	9 9
Yarns and tissues of jute mixed with other materials will pay the same duties as pure yarns and tissues of jute, provided that the jute predominates in weight.			
VEGETABLE FIBRES :—			
Phormium tenax, abaca, and other vegetable fibres, not specified :—			
Filaments :—			
Raw or stripped - - -	2¼*d.* to 3*s.* 10¾*d.*	Free.	
Combed or twisted - - -	7*s.* 3¾*d.*	5*d.*	
Threads - - - - -	1*l.* 9*s.* 3*d.* to 1*l.* 19*s.* 6¾*d.*	5 per cent. *ad valorem.*	
Tissues - - - - -	—	10 per cent. *ad valorem.*	
HORSE-HAIR :—			
Raw, of all kinds, prepared or curled - -	5¾*d.* to 2*s.* 5¼*d.*	Free.	
Tissues and manufactures of horse-hair, pure or mixed - - - - -	Prohibited (except sieve-cloth trimmings and hats.)	10 per cent. *ad valorem.*	
COTTONS :—			
Cotton, raw, imported direct from British India, or from British entrepôts, in British or French vessels - - - - -	Free and 1*s.* 2½*d.*	Free.	
Cotton, in sheets, carded or gummed (wadding)	—	4*s.* 0¾*d.*	
Cotton yarn, single :—			
Unbleached :—			
Of 19,840 yards or less to the pound -	No. 143 (170 English) and above 3*s.* 0½*d.* per lb., all others prohibited.	6 1	
Of 20,832 yards to 29,760 - - -		8 1½	
Of 30,752 „ 39,680 - - -		12 2¼	
Of 40,672 „ 49,600 - - -		16 3	

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt. *s. d.*	
COTTONS—*continued.*			
Cotton Yarn, single—			
Unbleached—			
Of 50,592 yards to 59,520	No. 143 (170 English) and above 3*s.*0½*d.* per lb., all others prohibited	20 4	
Of 60,512 „ 69,440		24 4¾	
Of 70,432 „ 79,360		28 5½	
Of 80,352 „ 89,280		36 6¾	
Of 90,272 „ 99,200		40 7¾	
Of 100,192 „ 109,120		48 9¼	
Of 110,112 „ 119,040		56 10¾	
Of 120,032 „ 128,960		65 0¼	
Of 129,952 „ 138,880		81 3½	
Of 139,872 „ 168,640		101 7¼	
Of 169,632 and above		121 11	
Bleached	Prohibited.	15 per cent. above the duties on unbleached.	
Dyed	„	10*s.* 2*d.* per cwt. above the duties on unbleached.	
Twisted in two strands :—			
Unbleached	No. 143 (170 English) and above 3*s.* 5¾*d.* per lb., others prohibited.	50 per cent. above the duties on single yarn unbleached.	
Bleached	Prohibited.	15 per cent. above twisted unbleached.	
Dyed	„	10*s.* 2*d.* per cwt. above twisted unbleached.	
Warped yarns :—			
Unbleached	„	50 per cent. above the duties on single unbleached yarn.	
Bleached	„	15 per cent. above the duties on unbleached warped yarns.	
Dyed	„	10*s.* 2*d.* per cwt. above the duties on unbleached warped yarns.	
Yarns of three or more threads, grey, bleached, or dyed :—			
Single twist	„	½*d.* per 1,000 yards.	
Double or cable twist	„	1*d.* per 1,000 yards.	

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt.	
COTTONS—*continued.*			
Cotton tissues, plain, twilled, and ticks, unbleached :—			
1st class, weighing $20\frac{1}{4}$ lbs. or more to the 100 square yards :—			
Of 175 threads or less in 1 inch square, adding warp and weft together -	Prohibited.	$2\frac{1}{4}d.$ per lb.	
Of 180 threads and above - -	,,	$3\frac{1}{2}d.$,,	
2nd class, weighing $12\frac{9}{10}$ to $20\frac{1}{4}$ lbs., exclusively, the 100 square yards :—			
Of 175 threads or less in 1 inch square	,,	$2\frac{3}{4}d.$,,	
Of 180 to 215 threads - - -	,,	$4\frac{1}{2}d.$,,	
Of 220 threads and above - -	,,	$8\frac{3}{4}d.$,,	
3rd class, weighing $5\frac{1}{2}$ to $12\frac{9}{10}$ lbs. exclusively ; the 100 square yards :—			
Of 135 threads or less to 1 in. square -	,,	$3\frac{1}{2}d.$,,	
Of 140 to 175 threads - -	,,	$5\frac{1}{4}d.$,,	
Of 180 to 215 threads - -	,,	$8\frac{1}{4}d.$,,	
Of 220 threads and above - -	,,	1*s.* 1*d.* ,,	
Cotton tissues :—			
Bleached - - - - -	,,	15 per cent. above the duty on unbleached.	
Dyed - - - - - -	,,	$1\frac{1}{8}$ per lb. above the duty on unbleached.	
Printed - - - - -	,,	15 per cent. *ad valorem.*	
Velvets and fustians :—			
Made as silk velvet :—			
Unbleached - - - -	,,	$3\frac{3}{4}d.$ per lb.	
Dyed or printed - - - -	,,	$4\frac{3}{4}d.$,,	
Other kinds—cords, moleskins, &c. :—			
Unbleached - - - -	,,	$2\frac{3}{4}d.$,,	
Dyed or printed - - - -	,,	$3\frac{3}{4}d.$,,	
Cotton tissues, unbleached, grey cloths, plain or twilled, weighing less than 3 kilogrammes per 100 square mètres - - - -	,,	15 per cent. *ad valorem.*	
Quiltings, dimities, stripes and checks, damasks and brilliants - - - - -			
Counterpanes and blankets - - -			
Net or tulle, plain or embroidered - -	Prohibited (except in union with thread lace).		
Gauzes and muslins, embroidered or figured in the loom, for furniture or hangings - -	Prohibited.		
Articles wholly or in part made up - -			
Articles not denominated - - -		10 per cent. *ad valorem.*	
Embroidery by hand - - - -	,,		

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt.	
		s. *d.*	
COTTONS—*continued.*			
Lace and blonde - - - -	5 per cent. *ad valorem.*	5 per cent. *ad valorem.*	
Cotton yarns and tissues mixed with other materials will pay the same duties as yarns and tissues of pure cotton, provided that the cotton predominates in weight.			
WOOLLENS:—			
Wool, raw, Australian, imported direct or from British entrepôts in British or French vessels	Free and 1*s.* 2½*d.*	Free.	
Wool, dyed in masses - - - -	2*l.* 8*s.* 9¼*d.*	10 2	
Ditto, combed (dyed or not) - - -	1*l.* 14*s.* 1½*d.*	10 2	
Single yarn of pure wool, bleached or not, containing in the lb.:—			
496 to 14,880 yards - - -	Long combed wool, unbleached, twisted, cleaned, or baked, 1*l.* 17*s.* 4½*d.*; all others prohibited.	10 2	
15,376 „ 19,840 „ - - -		14 2¾	
20,336 „ 24,800 „ - - -		18 3½	
25,296 „ 29,760 „ - - -		22 4¼	
30,256 „ 34,720 „ - - -		26 5	
35,216 „ 39,680 „ - - -		30 5¾	
40,176 „ 44,640 „ - - -		34 6½	
45,136 „ 49,600 „ - - -		38 7¼	
50,096 and above - - - -		40 7¾	
Double yarn for weaving, bleached or not -		50 per cent. above the duty on single unbleached yarn.	
Ditto, for embroidery - - - -		Double the duties on single yarns.	
Dyed yarns, single or double - - -		10*s.* 2*d.* per cwt. above the duties on yarns undyed.	
Tissues of wool, pure - - - -	Prohibited.	15 per cent. *ad valorem.*	10 per cent. *ad valorem.*
Felts of all kinds - - - -	2*l.* 8*s.* 9¼*d.* to 9*l.* 15*s.* 0¾*d.*		
Blankets of pure wool - - - -	4*l.* 17*s.* 6¼*d.*		
Carpets of all kinds - - - -	6*l.* 1*s.* 11*d.* to 12*l.* 3*s.* 10*d.*	15 per cent. *ad valorem.*	
Hosiery of pure wool - - - -	Prohibited.	15 per cent. *ad valorem.*	10 per cent. *ad valorem.*
Haberdashery of pure wool - - -	4*l.* 12*s.* 8*d.* to 5*l.* 7*s.* 3½*d.*		
Ribbons of wool - - - -			
Lace, woollen - - - - -	—		
List shoes - - - - -	—	10 per cent. *ad valorem.*	
Articles not enumerated - - -	Prohibited.	15 per cent. *ad valorem.*	10 per cent. *ad valorem.*
Cloth list of all kinds, in pieces or not - -	—	Free.	
Ready-made clothes:—			
New - - - - - -	30 per cent. *ad valorem.*	15 per cent. *ad valorem.*	10 per cent. *ad valorem.*
Old - - - - - -	1*l.* 4*s.* 10½*d.*	8 1½	

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt. *s. d.*	Per cwt. *s. d.*
WOOLLENS—*continued.*			
Yarns and tissues of Alpaca, Llama, or Vicuna, pure or mixed with wool, will pay the same duties as yarns and tissues of wool in whatever proportions they may be mixed.			
Yarns and tissues of wool, or of other materials above mentioned, mixed with cotton, or with any other filaments whatever, will pay the same duties as yarns and tissues of pure wool, provided that the wool predominates in weight.			
Yarns of goats' hair will continue to pay the duties at present in force.*			
Tissues of goats' hair, other than Indian cashmere shawls and scarfs, will pay as tissues of pure wool.†			
SILKS :—			
Silk in cocoons - - - - -	Free and 4*s.* 10½*d.*		Free.
Raw or thrown - - - - -	2*s.* 5¼*d.* to 4*s.* 10½*d.*		Free.
Dyed :—			
For sewing, embroidery, or lace - -	7*l.* 9*s.* 1¾*d.*	121 11	Free.
Others - - - - -	7*l.* 9*s.* 1¾*d.*		Free.
Waste silk :—			
In mass - - - - -	Free and 4*s.* 10½*d.*		Free.
Combed - - - - -	4*s.* 10½*d.*		4 0¾
In thread, single and twisted, unbleached, bleached, blued, or dyed :—			
Of 39,680 yards single, or less, to the lb.	2*l.* 8*s.* 9¼*d.* to 7*l.* 6*s.* 3¾*d.*		30 5¾
Of 40,176 yards single, or more, to the lb.			48 9¼
Tissues of pure silk - - - -	Silk stuffs, 6*s.* 11½*d.* to 8*s.* 3¼*d.* per lb.; coverlets, 4*l.* 19*s.* 5¾*d.* per cwt.; carpets, 7*l.* 9*s.* 2¾*d.* per cwt.; gauze, 13*s.* 6*d.* per lb.; lace, 15 per cent. *ad valorem*; hosiery, 29*l.* 5*s.* 2¾*d.* per cwt.		Free.
Hosiery „ - - - -			
Lace „ - - - -			

* 9*s.* 9*d.* per cwt.

† Cashmere shawls made in countries out of Europe } each 96*s.*
„ „ long, of all dimensions - -
„ „ square, of 71 inches and above - }
„ „ „ of less dimensions - } each 48*s.*
„ scarfs - - - - -

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
TEXTILE FABRICS—*continued.*	Per cwt.	Per cwt. *s. d.*	
SILKS—*continued.*			
Crapes, called English, unbleached, black, or coloured	8*s.* 8*d.* to 17*s.* 4*d.* per lb.	3*s.* 7½*d.* per lb.	Free from 1866.
Net :—			
Plain, unbleached	Prohibited.	7*s.* 3*d.* per lb.	Free.
Dressed	,,	15 per cent. *ad valorem.*	
Figured, unbleached, or dressed	,,	10 per cent. *ad valorem.*	Free from October 1, 1864.
Tissues of pure waste silk, of silk and of waste silk, unbleached, bleached, dyed, or printed	3*s.* 0½*d.* per lb.	0 8¾ per lb.	
Tissues, haberdashery, and lace of silk or of waste silk :—			
With fine gold or silver	—	4 4¼ ,,	
With semi-fine or false gold or silver	Prohibited.	1 3¼ ,,	
Tissues of silk or of waste silk, mixed with other materials, in which the silk or waste silk predominates in weight	—	1 1 ,,	
Ribbons of silk or of waste silk :—			
Of velvet	3*s.* 5¾*d.* per lb.	1 9¾ ,,	
Others		2 11 ,,	
Mixed with other materials, silk or waste silk predominating in weight		10 per cent. *ad valorem.*	
CHEMICAL PRODUCTS AND DYE STUFFS.			
Iodine	12*l.* 3*s.* 10*d.*	Free.	
Bromine	19*s.* 6*d.*		
Acids :—			
Sulphuric	1*l.* 0*s.* 0*d.*		
Nitric	2*l.* 4*s.* 2¼.		
Tartaric	1*l.* 14*s.* 1¾*d.*		
Benzoic	4*s.* 10½*d.* to 7*s.* 3¾*d.*		
Boracic	1½*d.*		
Citric	5¾*d.* to 3*l.* 13*s.* 2*d.*		
Arsenic	5¾*d.*		
Lemon juice	5¾*d.* to 3*l.* 13*s.* 2*d.*		
Oxides :—			
Of iron	Free.		
,, zinc, grey	,,		
,, tin	,,		
,, uranium	,,		
,, copper	,,		
Zaffre and other combinations of cobalt	,,		
Sulphuret of arsenic	3*s.* 10¾*d.*		

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
CHEMICAL PRODUCTS AND DYE STUFFS—*continued.*	Per cwt.	Per cwt. *s. d.*	
Chloride of potassium	—		
Iodide of potassium	12*l.* 3*s.* 10*d.*		
*Salts of beetroot	—		
Carbonates of potash	2*s.* 11*d.* and 4*s.* 10½*d.*		
Nitrate of potash	Free and 9¾*d.*		
Sulphate of potash	4*s.* 10½*d.*		
Tartrates of potash	1*l.* 14*s.* 1¾*d.*		
Vegetable ashes, quick and lixiviated	Free.		
Lees of wine	,,		
Borax, raw	Free and 1*s.* 5½*d.*		
Nitrate of soda	Free and 9¾*d.*		
*Kelp	12*s.* 11*d.*	Free.	
Bone black	3*s.* 5*d.*		
Bones, calcined, white	—		
Phosphates, natural	—		
Citrates of lime	5¾*d.*		
Sulphate of magnesia	1*l.* 14*s.* 1¾*d.*		
Carbonate of magnesia	4*l.* 17*s.* 6½*d.*		
*Chloride of magnesium	—		
Acetate of iron, liquid	Free.		
Garancine	Prohibited.		
Sugar of milk			
Albumen			
Phosphorus, white	—	16 3	
Oxide of zinc (white of zinc)	6*s.* 4*d.*	2 10¼	
		s. d.	*s. d.*
Oxides and carbonates of lead	4*s.* 10½*d.* to 18*s.* 0½*d.*	2 10¼	1 7½
Oleic acid	11¾*d.* to 2*s.* 5¼*d.*	2 0½	
Oxalic acid and oxalates of potash	1*l.* 14*s.* 1¾*d.*	6 1	4 0¾
Yellow prussiate of potash	5*l.* 2*s.* 5*d.*	8*s.* 1½*d.*	
Red prussiate of potash	5*l.* 2*s.* 5*d.*	12*s.* 2¼*d.*	
Extracts of dye woods:—			
For blacks and violets	Prohibited	8*s.* 1½*d.*	
For reds and yellows	,,	12*s.* 2¼*d.*	
Turmeric, in powder	,,	2*s.* 0½*d.*	
*Hydrochloric acid (muriatic acid)	1*l.* 10*s.* 2¾*d.*	3*d.*	
Caustic soda	—	3 3	2 0½
Carbonate of soda (salt of soda) of all degrees	12*s.* 11*d.*	1 10	1 2¾
*Artificial soda (raw)	12*s.* 11*d.*	0 11	0 7¼
*Carbonate of soda, crystallised (crystals of soda)	12*s.* 11*d.*	0 11	0 7¼
*Sulphate of soda and sulphite of soda	2*s.* 11*d.* to 4*s.* 10½*d.*	0 5¾	0 5
*Sulphate of soda crystallised (Glauber's salts)	2*s.* 11*d.* to 4*s.* 10½*d.*	0 5	0 3½
*Bicarbonate of soda, and other salts of soda not specified	—	2 0½	1 5

* These articles are also liable to an Excise duty. *See* page 424.

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
CHEMICAL PRODUCTS AND DYE STUFFS—*continued.*	Per cwt.	Per cwt. *s. d.*	Per cwt. *s. d.*
*Chloride of lime	—	1 $8\frac{3}{4}$	1 $1\frac{3}{4}$
*Chlorate of potash	—	15 $8\frac{1}{4}$	10 $5\frac{3}{4}$
*Soap, ordinary, and for perfumery	Perfumed, 4*l.*; others prohibited	2*s.* $5\frac{1}{4}$*d.*	
*Artificial ultramarine	—	6*s.* 1*d.*	
Red phosphorus	—		
Aluminium	—		
Aluminate of soda	—		
Chloride of aluminium	—		
Chromates of potash	3*l.* 13*s.* 2*d.*		
Chromates of lead	1*l.* 16*s.* 7*d.*		
Colours not specified, dry, in paste, and liquid	8*s.* $6\frac{1}{2}$*d.* to 17*s.* $0\frac{3}{4}$*d.*	10 per cent. *ad valorem.*	
Stearic acid	12*s.* $2\frac{1}{4}$*d.*		
Glue and gelatine	12*s.* $2\frac{1}{4}$*d.* to 2*l.* 8*s.* $9\frac{1}{4}$*d.*		
Varnish :—			
Oil	2*l.*		
Essential oil			
*Spirit of wine			
Orchilla dyes of all kinds	2*l.* 8*s.* $9\frac{1}{4}$*d.* to 4*l.* 17*s.* $6\frac{1}{2}$*d.*	5 per cent. *ad valorem.*	
Chemicals not specified	Prohibited.		
GLASS AND CRYSTAL WARE.			
Mirrors of less than 1 mètre square	2*l.* 8*s.* $9\frac{1}{4}$*d.*	10 per cent. *ad valorem.*	
*Plate-glass and mirrors :—			
Unpolished	12*s.* $0\frac{1}{2}$*d.* to 2*l.* 8*s.* 2*d.* per sq. yard.	1*s.* 0*d.* per sq. yard.	
Silvered or polished	13*s.* 3*d.* to 2*l.* 12*s.* $11\frac{1}{2}$*d.* per sq. yard.	2*s.* 8*d.* „ „	
*Bottles of all shapes	Prohibited.	0*s.* $6\frac{1}{4}$*d.* per cwt.	
*Window-glass, plain	Prohibited.	1*s.* 5*d.* „ „	
Glass, coloured, polished, or engraved, and for watches and optical purposes	Prohibited (except for watches and optical purposes, from 4*s.* $10\frac{1}{2}$*d.* to 9*s.* 9*d.* per cwt.).	10 per cent. *ad valorem.*	
*Glass-ware, and table glass, white or coloured	Prohibited.		
Vitrifications	$5\frac{1}{4}$*d.* to 2*s.* $7\frac{1}{4}$*d.* per lb.		
Enamelled glass	4*l.* 17*s.* $6\frac{1}{2}$*d.*		
Articles of glass not enumerated	Prohibited.		
Broken glass and cullet	Free.	Free.	
Rock crystal, rough or worked	Rough, free. Worked, prohibited.	Free.	
N.B.—Rock crystal mounted will pay as jewellery.			

* These articles are also liable to an Excise duty. *See* page 424.

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
EARTHENWARE AND POTTERY.	Per cwt.	Per cwt. *s. d.*	
COMMON WARE :—			
Tiles of all kinds, bricks, and fire-bricks -	2*s.* 11*d.*	Free.	
Gas retorts, drainage pipes, and others - -			
Crucibles of all sorts, including those of plumbago or black lead - - - - -			
Clay pipes - - - - -			
Glazed or not, of all shapes - -			
Glazed, with decorations in relief, of one or more colours, flat or hollow - - -	2*s.* 11*d.*	2 0½	
STONEWARE :—			
Utensils and apparatus for the manufacture of chemical products - - - -	4*s.* 10½*d.*	Free.	
Common of all sorts, flat and hollow, including bottles, flasks, household articles, kitchen utensils, &c. - - - - -	7*s.* 3¾*d.*	1 7½	
EARTHENWARE :—			
With tin glaze-coloured paste, white glaze -	1*l.* 3*s.* 10¾*d.*	Free.	
With coloured glaze, majolica, with varnish of more than one colour - - - -	1*l.* 3*s.* 10¾*d.*	20 per cent. *ad valorem.*	15 per cent. *ad valorem.*
Fine earthenware - - - -	Prohibited.		
Fine stoneware - - - - -	,,		
Porcelain, white or decorated, of all kinds, Parian and biscuit (white) - - -	4*l.* to 7*l.* 19*s.* 5¾*d.*	10 per cent. *ad valorem.*	
VARIOUS ARTICLES.			
ARTIFICIAL FLOWERS - - - -	12 per cent. *ad valorem.*	Free.	
MODES - - - - - -		Free.	
MERCERY, all kinds - - - -	2*l.* 8*s.* 9¼*d.* to 4*l.* 17*s.* 6½*d.*	10 per cent. *ad valorem.*	
BUTTONS, fine or common, other than haberdashery	2*l.* 8*s.* 9¼*d.* to 4*l.* 17*s.* 6½*d.*		
BRUSHES of all kinds - - - -			
MUSICAL INSTRUMENTS and parts of instruments -	Pianos 14*l.* 8*s.* 0*d.* to 19*l.* 4*s.* 0*d.* each; church organs 19*l.* 4*s.* 0*d.*; harps 1*l.* 14*s.* 7*d.*		
PINS of all kinds - - - - -	2*l.* 8*s.* 9¼*d.* to 4*l.* 17*s.* 6½*d.*	20 4 (from the 1st December 1860.)	
INDIA-RUBBER MANUFACTURES :—			
Pure or mixed - - - - -	9*s.* 9*d.* to 1*l.* 4*s.* 4¾*d.*	8 1½	
Applied upon tissues in pieces or upon other materials - - - - -	4*l.* 17*s.* 6½*d.*	40 7¾	
Made-up wearing apparel - - -	4*l.* 17*s.* 6½*d.*	48 9¼	
In elastic tissues of any dimensions -	4*l.* 17*s.* 6½*d.*	81 3½	

DESCRIPTION OF ARTICLES.	Rates of Import Duties.		
	Old Tariff.	New Tariff.	
	1854.	1860.	1864.
	Per cwt.	Per cwt. s. d.	
VARIOUS ARTICLES—*continued.*			
India-rubber Manufactures—*continued.*			
Boots and shoes	4*l.* 17*s.* 6½*d.*	24	4¾
N.B.—Articles of gutta-percha pay the same duties as india-rubber.			
Oil and Floor Cloth :—			
For packing	1*l.* 14*s.* 1¾*d.* to 5*l.* 7*s.* 3½*d.*	2	0½
„ furniture, hangings, and other purposes		6	1
Sealing-Wax	2*l.* 8*s.* 9¼*d.*	12	2¼
Blacking of all kinds	3*l.* 0*s.* 0*d.*	1	7½
Ink, writing, drawing, and printing	1*l.* 9*s.* 3*d.* to 2*l.* 8*s.* 9¼*d.*	8	1½
Cordage, cables, and fishing nets	12*s.* 2¼*d.*	8	1½
Fish, fresh water :—			
Fresh	Free.	Free.	
Prepared	19*s.* 6*d.*	4	0¾
Fish, sea :—			
Fresh, dry, salted, or smoked (except cod)	19*s.* 6*d.*	4	0¾
Sauces and Pickles	4*l.* 17*s.* 6½*d.*	10	2
Cheese, hard	7*s.* 3¾*d.*	4	0¾
*Beer	1*l.* 6*s.* 2*d.* per 100 galls.	7*s.* 3¼*d.* per 100 galls., in addition to the internal tax.	
Molasses :—			
Containing less than 50 per cent. of saccharine matter	Prohibited.	4	5¾
Containing more than 50 per cent. of saccharine matter		Same as raw sugar.	
*Alcohol, per 100 degrees	5*l.* 9*s.* 0*d.* per 100 galls.	54*s.* 6*d.* per 100 galls., in addition to the internal tax.	
Slates :—			
For roofing	7*s.* 2½*d.* to 2*l.* 4*s.* 2*d.* per 1,000.	3*s.* 2½*d.* per 1,000.	
In squares or slabs	1*l.* 8*s.* 9½*d.* per 100.	8*s.* 0*d.* „ 100.	

* These articles are also liable to an Excise duty. *See* page 424.

Excise Duties leviable on Articles of British Manufacture.

The articles mentioned below are also subject, on their importation into France, to the following Excise duties, in addition to the customs duties specified in the Tariff, by way of compensation for equivalent duties paid by French manufacturers.

	Per cwt. s.	d.
Raw soda	1	9¼
Crystals of soda	1	9¼
Sulphate of soda :—		
Pure—		
Anhydrate	2	5¼
Crystallized or hydrate	0	11¾
Impure—		
Anhydrate	2	2¼
Crystallized or hydrate	0	10¼
Sulphite of soda	2	5¼
Salt of soda	4	5½
Hydrochloric acid	1	2½
Chloride of lime	4	0¾
Chlorate of potash	26	10
Chloride of magnesium	1	7½
Plate glass or large mirrors	8*d.* per sq. yd.	
Glass ware, window glass, and other white glass	1	3½
Bottles	0	6
Artificial ultramarine	4	5½
Sal ammoniac	6	6
Kelp	0	7¼

	Per cwt. s.	d.
Salts or raw residue of the calcination of beet-root refuse	0	6
Salt of tin	1	2½
Soap :—		
White or marbled, composed of alkalis and oil of olives, or oleaginous seeds, pure or mixed with animal fat—		
The oil composing at least half of the mixture of oleaginous bodies	3	4
The oil composing less than half in the mixture of oleaginous bodies	2	5¼
Of animal fat—		
Pure	2	5¼
Mixed with resin	2	5¼
Of palm or cocoa-nut oil mixed with animal fat	1	7½
Coloured, composed of oils from seeds or of animal fat	2	5¼
Pure alcohol	3*s.* 3¼*d.* per gall.	
Beer	8*s.* 8¾*d.* per 100 galls.	
Spirits of wine varnish, 3*s.* 3¼*d.* per gallon of pure alcohol contained in the varnish.		

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