Companion to the latest edition of the British pharmacopoeia : comparing the strength of its various preparations with those of the United States and other foreign pharmacopoeias to which are added non-official preparations and practical hints on prescribing / by Peter Squire.

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Publication/Creation

London : J. & A. Churchill, 1874 (London : Taylor.)

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SQUIRE'S COMPANION
TO THE
BRITISH PHARMACOPŒIA.

TENTH EDITION.
1874.

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COMPANION

TO THE LATEST EDITION OF THE

BRITISH PHARMACOPŒIA.

TENTH EDITION.

COMPANION

TO THE LATEST EDITION OF THE

BRITISH PHARMACOPŒIA,

COMPARING THE STRENGTH OF ITS VARIOUS PREPARATIONS

WITH THOSE OF THE

UNITED STATES, AND OTHER FOREIGN PHARMACOPŒIAS.

TO WHICH ARE ADDED

NON-OFFICIAL PREPARATIONS, AND

PRACTICAL HINTS ON PRESCRIBING.

BY

PETER SQUIRE, F.L.S.,

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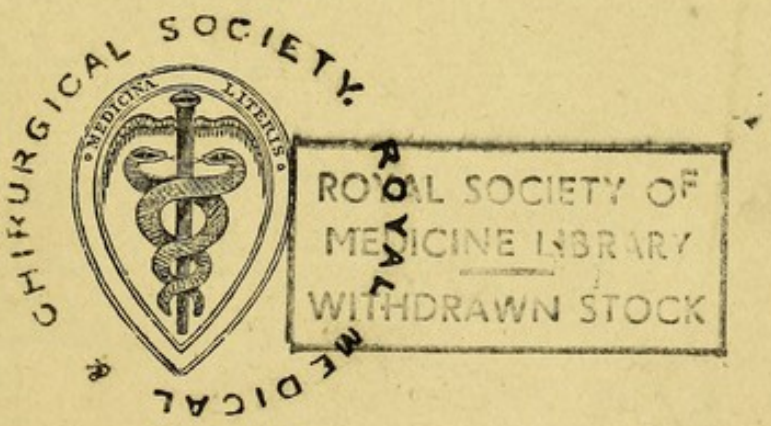
CHEMIST IN ORDINARY TO THE PRINCE OF WALES AND THE ROYAL FAMILY,
LATE PRESIDENT OF THE PHARMACEUTICAL SOCIETY,
MEMBER OF THE BRITISH PHARMACOPŒIA COMMITTEE.

Tenth Edition.



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In Memory of

SIR JAMES CLARK, BART., K.C.B., M.D., F.R.S.

To whom, by his permission, the former Editions were dedicated, and whose recent death, at the mature age of 82, *was lamented by Her Majesty and the whole of the Royal Family; and by the Medical Profession, of which he was one of the brightest ornaments.*

He was not only a wise physician, but a man of sound judgment and quick perception. His hand was ever ready to help the unfortunate and to assist the deserving; and some who have risen to the highest professional eminence, owe their success in a great measure to his counsel and advice during their early career.

He was much interested in Pharmacy, and through his influence the Pharmaceutical Society sent its delegate to take part in the formation of the British Pharmacopœia.

PREFACE

TO THE FIFTH EDITION.

—•—

The Pharmacopœia of 1864 had the merit of amalgamating the three Pharmacopœias of Britain, but it had defects, and the Medical Council ordered a new Edition to be prepared. A Committee was appointed of eminent men, with the President of the Council as Chairman. These gentlemen were engaged some years upon the work; and when completed it was submitted to all the members of the Medical Council, and to other practical men, for the purpose of receiving suggestions. The Author prepared, from the formulæ of this work, the preparations for the Paris Exhibition; it has therefore been well tested and corrected, and is worthy of the respect of the medical profession.

The Author has re-written his 'Companion' to correspond with this new Edition, and so arranged the matter as to render it easy for medical men in active practice to become acquainted with the changes and new introductions with as little expense of trouble and time as possible.

The "Non-Official" preparations are increased in number. Incompatibles, and antidotes to poisonous drugs, are added; and

the Author has taken great pains to make this new work as worthy the notice of the Profession as the previous Editions have been.

277, Oxford Street,
July, 1867.

The Fifth Edition having been disposed of within a fortnight from its publication, it has been found necessary to reprint another thousand, and in doing this the Author has carefully revised each proof-sheet, with a desire to make the book as perfect as possible.

August, 1867.

This second issue was sold in three months.

November, 1867.

The third was out of print three and a half months after its publication.

April, 1868.

PREFACE

TO THE SIXTH EDITION.

In this Edition are described the colours and characters of the liquid and solid preparations, except of those which are made as required,—Decoctions, Enemas, Infusions, etc.

It is most difficult to describe colours, especially those of liquids, but it is hoped that such an approximation is attained as may enable Physicians to judge whether Medicines have their proper appearance.

The descriptions are taken from the Collection that was placed in the French Exhibition, and in the case of those preparations that have undergone change during the ten months they were exposed there, the alteration is described; so that the Committee may consider the propriety of modifying them in a future Edition of the British Pharmacopœia.

The Collection is in the Museum of the College of Physicians.

Much of this 'Companion' has been re-written, and considerable additions have been made to those Medicines not mentioned in the Pharmacopœia, called Non-Officinal, or Not Official, as they are termed in this Work.

The Index has been rendered more complete; and, in consequence of the Book containing more matter than any previous Edition, it has been found necessary to increase the price.

THE AUTHOR.

May 15, 1868.

PREFACE

TO THE SEVENTH EDITION.

The Sixth Edition (2000 copies) has disappeared in the short space of seven months; some little delay has occurred in preparing the seventh. Several additions and improvements have been made; many of the formulæ lately introduced in the new *Pharmacopœias* of the London Hospitals, together with other new medicines brought into use since the last Edition, and a tabular arrangement of the Organic Materia Medica, for the use of students, have been introduced; and there is also a condensed account of all the Spas of any note in Europe, which is placed as an appendix for the use of medical men, and thus be more ready for reference than having to search for them in Dr. Althaus, Dr. Sutro, Dr. Glover, and the various pamphlets from which the Author has obtained his information, and in which it will be still necessary to search if further information is required.

April 10, 1869.

PREFACE

TO THE EIGHTH EDITION.

The Seventh Edition (3000 copies) has been sold in eighteen months; the interest, therefore, taken in this work is unabated.

In writing this, the Eighth Edition, the Author has been assisted by his two sons, who he hopes will continue the Editorship, with the same spirit, should his strength fail. The present Work contains the new medicines that have been introduced since the publication of the Seventh Edition, and much additional practical information for the prescriber and dispenser is added, omitting many remarks that are no longer necessary.

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PREFACE

TO THE NINTH EDITION.

The Eighth Edition (3500 copies) now out of print, completes the 20,000 copies which have been disposed of, and are in the hands of the prescribers and dispensers of medicine, averaging 2000 copies per annum.

The Author has therefore the pleasing duty of acknowledging with grateful thanks this recognition of his efforts. His endeavour will be to keep pace with the march of Medical Science and Pharmacy, carefully selecting new medicines which have been proved to be valuable.

The recently published Pharmacopœia Germanica and the new U.S. Pharmacopœia have been compared with the British in this work, and some of the preparations adopted.

An Index to Diseases has been added, similar to that found in Quincey's Dispensary published more than a century ago; it may serve to aid the memory in the selection of remedies.

Seven pages that were devoted to a comparison of the strength of preparations in former Pharmacopœias with those of the British are no longer necessary, and are now omitted.

July 29, 1873. THE AUTHOR.

PREFACE

TO THE TENTH EDITION.

—•—

It is just ten years since the British Pharmacopœia was first issued, and also since the publication of the 'Companion.' The Medical Council have now reprinted the British Pharmacopœia, and have appended to it an Addendum; the Author, therefore, has embodied these in the present Work, with such remarks as appear to him to be necessary.

In the previous Editions, the British of 1867 was compared with that of 1864 and the Pharmacopœias of London Edinburgh and Dublin Colleges, with the endeavour to introduce the Prescribers of the three Colleges to the British published by the authority of the Medical Council; and Prescribers have at length become so familiar with the British, that former Pharmacopœias are scarcely ever referred to. The Author has, therefore, discontinued comparisons with them, and has confined himself to those of the Pharmacopœias of Austria, Belgium, France, Germany, Russia, and the United States. In some of these the formulas are a good deal altered and improved; however, pains have been taken to secure the latest Editions, and Prescribers may with confidence refer to this Work when they wish to ascertain what preparations corresponding to our British Pharmacopœia are to be found in the several countries already alluded to.

The Classification of Remedies has been re-arranged and placed at the end of the book.

October 1, 1874.

THE WEIGHTS AND MEASURES OF THE BRITISH PHARMACOPŒIA, AT THE TEMPERATURE OF 60° FAHRENHEIT.

Weights.

The Avoirdupois pound = 16 oz. = 7000 grs.
1 oz. = 437·5 grs.
1 gr. = 1 gr.

Measures.

The Imperial gallon contains 277·274 cubic inches of distilled water 60° F.

C 1 gallon	= 8 pints.	weighing 10 pounds,	contains	76,800	minims.
O 1 pint	= 20 fluid ounces,	„ 1¼ „	„	9600	„
fl. oz. 1 fluid ounce	= 8 fluid drachms	„ 437·5 grains	„	480	„
fl. dr. 1 fluid drachm	= 60 minims	„ 54·68 „	„	60	„
♏ 1 minim		„ ·91 „	„	1	„

It must be remembered that the minim is less than the grain-measure; hence, although in Tinct. Opii there is 1 in 13½ grain-measures, there is only 1 in 14⅔ minims.

To find the number of gallons any rectangular vessel will hold, multiply the length in inches by the breadth, and the product by the depth in inches, then divide the total by 277·274, which is the number of cubic inches contained in the gallon.

35¼ fluid ounces are contained in the French litre.

In the American Pharmacopœia only the Troy ounce of 480 grains, and the grain, are used. The pound, drachm, and scruple are omitted. The measures have the same names as the British, but are different in value, the pint weighing 16 oz. 291·2 grains avoirdupois, and the fluid ounce 455·7 grains. In the formulas, the Acids and Oils are ordered by weight, other liquids by measure.

The Prussian Pharmacopœia is now superseded by the Pharmacopœia Germanica used in the German Empire and the formulas are stated in parts by weight, or in grammes: the French in Switzerland; that of Orosi in Italy. In the Russian Pharmacopœia liquids as well as solids are weighed as in the other foreign Pharmacopœias, and the troy weight used; but the others use the gramme.

Graduated measures require testing before use, which is easily done with good weights and scales, and distilled water. Every fluid ounce ought to weigh an ounce, but there are two lines on the surface of a liquid; the upper one is that of capillary attraction to the sides of the vessel; the lower one the exact surface of the fluid. This should be on a line with the eye to measure accurately.

Specific Gravity of Syrups, etc., may be tested with a ten-ounce measure. Ten measured ounces of simple syrup should weigh nearly thirteen ounces and one-third, representing the sp. gr. 1·330.

In the formula for the Syrups of the British Pharmacopœia they are directed to be made to a given weight, and the specific gravity is also stated. It can be easily ascertained what any of these weights would measure, by dividing the weight by the specific gravity; thus Syrupus Scillæ is directed to weigh 50 oz., and the specific gravity to be 1·330, then 1·330)50·000(37·5 or 37½ ounces by measure.

The British published in 1874, is in this work compared with the latest editions of the foreign Pharmacopœias, which are as follows:—

Austrian	published in 1869
Belgian	„ „ 1856
French	„ „ 1866
German	„ „ 1872
Russian	„ „ 1874
United States . . .	„ „ 1873

and are thus abbreviated—Austr., Belg., Fr., Ger., Russ., U.S.

The Russian and U.S. Pharmacopœias order the troy weight; it has therefore been thought desirable to give the following table of comparisons of troy and avoirdupois weights, to save the trouble of calculation:—

Troy.			Avoirdupois.					
12	ounces	equals	13	ounces	and	73	grains =	5760 grains.
11	„	„	12	„	„	30	„ =	5280 „
10	„	„	$10\frac{3}{4}$	„	„	97	„ =	4800 „
9	„	„	$9\frac{3}{4}$	„	„	$54\frac{1}{2}$	„ =	4320 „
8	„	„	$8\frac{3}{4}$	„	„	12	„ =	3840 „
7	„	„	$7\frac{1}{2}$	„	„	79	„ =	3360 „
6	„	„	$6\frac{1}{2}$	„	„	$36\frac{1}{2}$	„ =	2880 „
5	„	„	$5\frac{1}{4}$	„	„	103	„ =	2440 „
4	„	„	$4\frac{1}{4}$	„	„	61	„ =	1920 „
3	„	„	$3\frac{1}{4}$	„	„	18	„ =	1440 „
2	„	„	2	„	„	85	„ =	960 „
1	„	„	1	„	„	$42\frac{1}{2}$	„ =	480 „

EQUIVALENTS OF ENGLISH WEIGHTS TO FRENCH GRAMMES.

1 pound avoirdupois	7000 Troy grains ...	or	16 ounces ...	=	453·592	French grammes.	
	6562·5	or	15	=	425·2425	,,	,,
	6125	or	14	=	396·8925	,,	,,
	5687·5	or	13	=	368·5435	,,	,,
	5250	or	12	=	340·1935	,,	,,
	4812·5	or	11	=	311·8445	,,	,,
	4375	or	10	=	283·495	,,	,,
	3937·5	or	9	=	255·1455	,,	,,
	3500	or	8	=	226·796	,,	,,
	3062·5	or	7	=	198·4465	,,	,,
	2625	or	6	=	170·097	,,	,,
	2187·5	or	5	=	141·7475	,,	,,
	1750	or	4	=	113·398	,,	,,
	1312·5	or	3	=	85·0485	,,	,,
	875	or	2	=	56·699	,,	,,
1 ounce,	437·5	or	1	=	28·3495	,,	,,
	218·75	or	½	=	14·17475	,,	,,
	109·37	or	¼	=	7·08737	,,	,,
	15·43			=	1		
	1·543			=	·1, a decigramme.		
1 grain,	1			=	·0648		
	·15 or $\frac{1}{7}$ nearly			=	·01, a centigramme.		
	·015 or $\frac{1}{70}$ nearly			=	·001, a milligramme.		

MEASURES, EQUIVALENTS OF FRENCH GRAMMMES TO ENGLISH WEIGHTS.

1 Litre	=1 kilogramme,	1000 French grammes	=	35 ounces and 120 grains	
		900	=	31 ..... and 326¾	,,
		800	=	28 ..... and 96	,,
		700	=	24 ..... and 302¾	,,
		600	=	21 ..... and 72	,,
		500	=	17 ..... and 278¾	,,
		400	=	14 ..... and 48	,,
		300	=	10 ..... and 254¾	,,
		200	=	7 ..... and 24	,,
1 Decilitre	=1 hectogramme,	100	=	3 ..... and 230¾	,,
		90	=	3 ..... and 76⅓	,,
		80	=	2 ..... and 359½	,,
		70	=	2 ..... and 205⅓	,,
		60	=	2 ..... and 51	,,
		50	=	1 ..... and 334	,,
		40	=	1 ..... and 179¾	,,
		30	=	1 ..... and 25½	,,
		20	=	..... 308⅔	,,
1 Centilitre	=1 decagramme,	10	=	..... 154⅓	,,
		5	=	..... 77⅙	,,
1 Millelitre	=*1 gramme,	1	=	nearly 15½	,,
		·5	=	,, 7¾	,,
	1 decigramme,	·1	=	,, 1½	,,
		·05	=	,, ¾	,,
	1 centigramme,	·01	=	,, ⅐	,,
		·005	=	,, 1/14	,,
	1 milligramme,	·001	=	,, 1/70	,,

* The weight of a cubic centimetre of water at its greatest density, viz. at the temperature of 4° C. or 39·2° F.

NOTE.—In French, as in German and Russian dispensing, all liquids are weighed, not measured.

METRICAL MEASURES.

RELATION OF THE METRICAL MEASURES TO THE MEASURES OF THE BRITISH PHARMACOPŒIA.

1 Millimetre	=	0·03937 inches.
1 Centimetre	=	0·39371 „
1 Decimetre	=	3·93708 „
1 Metre	=	39·37079 „

1 Cubic Centimetre = 15·432 grain-measures.
1 Litre = 35¼ fl. oz. and 11 mins. or 15432·348 grain-measures.

LENGTH.

1 Millimetre = the thousandth part of one metre, or 0·001 metre.
1 Centimetre = the hundredth „ 0·01 „
1 Decimetre = the tenth part „ 0·1 „
1 Metre = the ten-millionth part of a quarter of the circumference of the earth = 39 37079 inches.

1 Line = $\frac{1}{12}$ inch.
1 Inch = $\frac{1}{39 \cdot 1393}$ of a pendulum vibrating seconds.
12 „ = 1 foot.
36 „ = 3 feet = 1 yard.
Length of pendulum vibrating seconds of mean time in the latitude of London, in a vacuum at the level of the sea. } 39·1393 inches.

It is remarkable that the English and French standards, taken from such different sources, should so nearly agree:—

The English, from the length of a pendulum vibrating seconds of mean time; from which the yard (36 inches) is computed . . } 39·1393.
The French being the ten-millionth part of a quarter of the earth's meridian and called a metre . . . . . } 39·37079.

CAPACITY.

1 Millilitre	=	1	cubic centimetre, or the measure of 1 gramme of water.			
1 Centilitre	=	10	„	„	10 „	„
1 Decilitre	=	100	„	„	100 „	„
1 Litre	=	1000	„	„	1000 „	(1 kilo.)

TABLE OF COMPARISON OF THE FAHRENHEIT WITH THE CENTIGRADE* AND RÉAUMUR'S THERMOMETER.

Fahr.	Cent.	Réau.	Fahr.	Cent.	Réau.	Fahr.	Cent.	Réau.
212	100	80	136·4	58	46·4	60·8	16	12·8
210·2	99	79·2	134·6	57	45·6	59	15	12
208·4	98	78·4	132·8	56	44·8	57·2	14	11·2
206·6	97	77·6	131	55	44	55·4	13	10·4
204·8	96	76·8	129·2	54	43·2	53·6	12	9·6
203	95	76	127·4	53	42·4	51·8	11	8·8
201·2	94	75·2	125·6	52	41·6	50	10	8
199·4	93	74·4	123·8	51	40·8	48·2	9	7·2
197·6	92	73·6	122	50	40	46·4	8	6·4
195·8	91	72·8	120·2	49	39·2	44·6	7	5·6
194	90	72	118·4	48	38·4	42·8	6	4·8
192·2	89	71·2	116·6	47	37·6	41	5	4
190·4	88	70·4	114·8	46	36·8	39·2	4	3·2
188·6	87	69·6	113	45	36	37·4	3	2·4
186·8	86	68·8	111·2	44	35·2	35·6	2	1·6
185	85	68	109·4	43	34·4	33·8	1	0
183·2	84	67·2	107·6	42	33·6	32	0	0·8
181·4	83	66·4	105·8	41	32·8	30·2	1	0·8
179·6	82	65·6	104	40	32	28·4	2	1·6
177·8	81	64·8	102·2	39	31·2	26·6	3	2·4
176	80	64	100·4	38	30·4	24·8	4	3·2
174 2	79	63·2	98·6	37	29·6	23	5	4
172·4	78	62·4	96·8	36	28·8	21·2	6	4·8
170·6	77	61·6	95	35	28	19·4	7	5·6
168·8	76	60·8	93·2	34	27·2	17·6	8	6·4
167	75	60	91·4	33	26·4	15·8	9	7·2
165·2	74	59·2	89·6	32	25·6	14	10	8
163·4	73	58·4	87·8	31	24·8	12·2	11	8·8
161·6	72	57·6	86	30	24	10·4	12	9·6
159·8	71	56·8	84·2	29	23·2	8·6	13	10·4
158	70	56	82·4	28	22·4	6·8	14	11·2
156·2	69	55·2	80·6	27	21·6	5	15	12
154·4	68	54·4	78·8	26	20·8	3·2	16	12·8
152·6	67	53·6	77	25	20	1·4	17	13·6
150·8	66	52·8	75·2	24	19·2	0·4	18	14·4
149	65	52	73·4	23	18·4	2·2	19	15·2
147·2	64	51·2	71·6	22	17·6	4	20	16
145·4	63	50·4	69·8	21	16·8	5·8	21	16·8
143·6	62	49·6	68	20	16	7·6	22	17·6
141·8	61	48·8	66·2	19	15·2	9·4	23	18·4
140	60	48	64·4	18	14·4	11·2	24	19·2
138·2	59	47·2	62·6	17	13·6	13	25	20

Reductions from one scale to another are easily made by the following formula:—

Fahrenheit to Centigrade $\frac{5}{9}$ (F.°−32) = C.°
Centigrade to Fahrenheit $\frac{9}{5}$ C.° + 32° = F.°
Réaumur to Fahrenheit $\frac{9}{4}$ R.° + 32 = F.°

* Celsius first proposed this scale, which is also called "Celsius."

TABLE COMPARING THE PHARMACEUTICAL HYDROMETER WITH BEAUMÉ'S FOR SPIRIT,

INDICATING AT THE SAME TIME THE SPECIFIC GRAVITY AND PERCENTAGE OF ALCOHOL BY WEIGHT AT A TEMPERATURE OF 15·5° CENTIGRADE = 60° FAHRENHEIT.

Pharmaceutical.	Beaumé's.	Specific Gravity.	Percentage of absolute Alcohol (Fownes).
0	10	1·000	0·
1	11	0·993	4·0
2	12	0·986	8·7
3	13	0·980	13·0
4	14	0·973	19·0
5	15	0·967	23·6
6	16	0·960	28 5
7	17	0·954	32·2
8	18	0·948	35·5
9	19	0·942	38·7
10	20	0·936	41·8
11	21	0·930	44·6
12	22	0·924	47·4
13	23	0·918	50·1
14	24	0·913	52·2
15	25	0·907	55·0
16	26	0·901	57·6
17	27	0·896	59·8
18	28	0·890	62·3
19	29	0·885	64·6
20	30	0·880	66·7
21	31	0·874	69·2
22	32	0·869	71·2
23	33	0·864	73·4
24	34	0·859	75·6
25	35	0·854	77·7
26	36	0·849	79·7
27	37	0·844	81·8
28	38	0·839	83·7
29	39	0·834	85·7
30	40	0·830	87·2
31	41	0·825	89·2
32	42	0·820	90·3
33	43	0·816	92·5
34	44	0·811	94·3
35	45	0·807	95·6
36	46	0·802	97·3
37	47	0·798	98·6
38	48	0·794	100·0
39	49	0·789	
40	50	0·785	
41	51	0·781	
42	52	0·777	
43	53	0·773	
44	54	0·768	
45	55	0·764	
46	56	0·760	
47	57	0·757	
48	58	0·753	
49	59	0·749	
50	60	0·745	
51	61	0·741	

BEAUMÉ'S HYDROMETER COMPARED WITH THE SPECIFIC GRAVITY OF LIQUIDS HEAVIER THAN WATER.

1·000 BEING TAKEN AS THE SPECIFIC GRAVITY OF DISTILLED WATER AT 60° F.

Beaumé.	Sp. G.
0	1·000
1	1·007
2	1·013
3	1·020
4	1·027
5	1·034
6	1·041
7	1·048
8	1·056
9	1·063
10	1·070
11	1·078
12	1·085
13	1·094
14	1·101
15	1·109
16	1·118
17	1·126
18	1·134
19	1·143
20	1·152
21	1·160
22	1·169
23	1·178
24	1·188
25	1·197
26	1·206
27	1·216
28	1·225
29	1·235
30	1·245
31	1·256
32	1·267
33	1·277
34	1·288
35	1·299
36	1·310
37	1·321
38	1·333
39	1·345
40	1·357
41	1·369
42	1·381
43	1·395
44	1·407
45	1·420
46	1·434
47	1·448
48	1·462
49	1·476
50	1·490
51	1·495
52	1·520
53	1·535
54	1·551
55	1·567
56	1·583
57	1·600
58	1·617
59	1·634
60	1·652
61	1·670
62	1·689
63	1·708
64	1·727
65	1·747
66	1·767
67	1·788
68	1·809
69	1·831
70	1·854
71	1·877
72	2·900
73	2·944
74	2·949
75	2·974
76	2·000

MATERIA MEDICA TABLE

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Acacia	Acacia ?	Leguminosæ	Cordofan, in Eastern Africa
Aconitum	Aconitum Napellus	Ranunculaceæ	Germany or Britain
Adeps	Sus scrofa	Pachydermata	Domesticated everywhere
Aloe Barbadensis	Aloe vulgaris	Liliaceæ	Barbadoes
Aloe Socotrina	Aloe ?	Liliaceæ	Socotra (shipped by way of Bombay)
Ammoniacum	Dorema Ammoniacum	Umbelliferæ	Persia, and the Punjaub
Amygdala amara	Amygdalus communis	var. amara } Rosaceæ	Mogadore
Amygdala dulcis	Amygdalus communis	var. dulcis } Rosaceæ	Malaga
Amylum	Triticum vulgare	Graminaceæ	Indigenous
Anethi Fructus	Anethum graveolens	Umbelliferæ	England, middle and southern Europe
Anisi Oleum	Pimpinella Anisum	Umbelliferæ	Distilled in Europe
	Illicium Anisatum	Magnoliaceæ	Distilled in China
Anthemidis Flores	Anthemis nobilis	Compositæ	Britain, wild and cultivated
Areca	Areca Catechu	Palmaceæ	East Indies
Armoraciæ Radix	Cochlearia Armoracia	Cruciferæ	Britain
Arnicæ Radix	Arnica montana	Compositæ	Mountainous parts of middle and southern Europe.
Assafœtida	Narthex Assafœtida	Umbelliferæ	Affghanistan and Punjaub
Aurantii Cortex	Citrus Bigaradia	Aurantiaceæ	South of Europe
Balsamum Peruvianum	Myroxylon Pereiræ	Leguminosæ	Salvador, in Central America
Balsamum Tolutanum	Myroxylon Toluifera	Leguminosæ	New Granada
Belæ Fructus	Ægle Marmelos	Aurantiaceæ	Malabar and Coromandel
Belladonna	Atropa Belladonna	Atropaceæ	(Leaves) Britain, (Root) Britain, Germany
Benzoinum	Styrax Benzoin	Styraceæ	Siam and Sumatra
Buchu Folia	Barosma betulina, crenulata, serratifolia	Rutaceæ	Cape of Good Hope
Cajuputi Oleum	Melaleuca minor	Myrtaceæ	Imported from Batavia and Singapore
Calumbæ Radix	Jateorrhiza Columba, Miersii; Cocculus palmatus	Menispermaceæ	Eastern Africa, between Ibo and Zambesi
Cambogia	Garcinia Morella	Guttiferæ	Siam
Camphora	Camphora officinarum	Lauraceæ	China and Japan (purified here)
Canellæ Albæ Cortex	Canella alba	Canellaceæ	West Indies
Cannabis Indica	Cannabis sativa	Cannabinaceæ	India

OF THE ORGANIC KINGDOM.

Parts used.	Preparations into which it enters.
Gum	Mist. Cretæ and Mist. Guaiaci; Mucilago Acaciæ; Pulv. Amygdalæ Co. and Pulv. Tragacanth Co. All Trochisci.
Fresh leaves and flowering tops, and dried root	Fresh leaves and flowering tops = Extract. Root = Linimentum, Tinctura, and Aconitia.
Internal fat of the abdomen	Adeps Benzoatus; Empl. Canthar. Suppositoria; Unguenta except Canth. Cetacei, Hyd. Ox. Rub. Picis, Plumb. Subacet.
Inspissated juice of the leaf	Enema Aloes; Ext. Aloes Barb.; Pilulæ Aloes Barb.; Pil. Aloes et Ferri; Pil. Cambogiæ Comp.; Pil. Colocynthidis Co.; Pil. Colocynthidis et Hyoscyami.
Inspissated juice of the leaf	Decoct. Aloes Co.; Enema Aloes; Ext. Aloes Socotrinæ; Ext. Coloc. Co.; Pil. Aloes et Assafœtidæ; Pil. Aloes et Myrrhæ; Pil. Aloes Socot.; Pil. Rhei Co.; Tinct. Aloes; Tinct. Benzoini Co.; Vinum Aloes.
Gum-resinous exudation	Emplastrum Ammoniaci c. Hydrargyro; Emplast. Galbani; Mistura Ammoniaci; Pilula Scillæ Co.; Pil. Ipecac. c. Scilla.
Oil of the seed	Unguenta Cetacei; Hydr. Ox. Rub.; Plumb. Subacet.; Simplex.
Seed and the oil	Oleum Amygdalæ; Pulvis Amygdalæ Compositus.
Starch from seed	Glycerinum Amyli; Mucilago Amyli; Pulvis Tragacanth. Co.
Fruit	Aqua Anethi; Oleum Anethi.
Oil from the fruit	Ess. Anisi; Tinct. Camph. Co.; Tinct. Opii Ammoniata.
Single and double flower-heads (dried)	Extractum, Infusum, Oleum Anthemidis.
Seed	
Fresh root	Spiritus Armoraciæ Compositus.
Dried rhizome and rootlets	Tinctura Arnicæ.
Gum-resin	Enema Assafœtidæ; Pil. Aloes et Assafœtidæ; Pil. Assafœtidæ Co.; Spiritus Ammoniæ Fœtidæ; Tinctura Assafœtida.
Fresh and dried outer part of the rind of the ripe fruit	Inf. Aurantii, Comp.; Inf. Gentian. Comp.; Mist. Gentianæ; Tinct. Aurantii; Tinct. Aur. Rec.; Tinct. Gentian. Comp.
Balsam	
Balsam	Syrupus Tolutanus; Tinct. Benzoini Co.; Tinct. Tolutana.
Dried half-ripe fruit	Extractum Belæ Liquidum.
Leaves, with or without branches, and root	Leaves and branches = Extract; leaves, Tinct. Belladonnæ. Root = Linimentum Belladonnæ, Atropia.
Balsamic resin	Acidum Benzoicum; Adeps Benzoatus; Tinct. Benzoini Co.
Dried leaves	Infusum, Tinctura.
Oil from the leaves	Oleum, Spiritus Cajuputi, Lin. Crotonis.
Dried root	Extractum, Inf. Calumbæ; Mist. Ferri Aromat.; Tinct. Calumbæ.
Gum-resin	Pilula Cambogiæ Composita.
A concrete volatile oil from the wood	Aqua; Linimentum; Linimentum Co.; Spiritus; Tinct. Co.; Ung. Plumb. Acet. Co.; Ung. Hydrarg. Co.; and all the liniments except Ammoniæ, Calcis, Crotonis, Potassii Iodidi c. Sapone.
Bark	Vinum Rhei.
Dried flowering tops of female plants	Extractum, Tinctura.

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Cantharis	Cantharis vesicatoria	Coleoptera	Hungary
Capsici Fructus	Capsicum fastigiatum	Solanaceæ	Zanzibar
Cardamomum	Elettaria Cardamomum	Zingiberaceæ	Malabar
Carui Fructus	Carum Carui	Umbelliferæ	England and Germany
Caryophyllum	Caryophyllus aromaticus	Myrtaceæ	Penang, Bencoolen, and Amboyna
Cascarillæ Cortex	Croton Eluteria	Euphorbiaceæ	Bahama Islands
Cassiæ Pulpa	Cassia Fistula	Leguminosæ	East and West Indies
Castoreum	Castor Fiber	Rodentia	Hudson's Bay Territory
Catechu pallidum	Uncaria Gambir	Cinchonaceæ	Singapore, and other places in the Eastern Archipelago
Cera Flava, from	Apis mellifica	Hymenoptera	Indigenous
Cetaceum	Physeter macrocephalus	Cetaceæ	Pacific and Indian Oceans
Cetraria	Cetraria Islandica	Lichenes	North of Europe
Chirata	Ophelia Chirata	Gentianaceæ	Northern India
Cinchonæ Flavæ Cortex	Cinchona Calisaya	Cinchonaceæ	Bolivia and Southern Peru
Cinchonæ Pallidæ Cortex	Cinchona Condaminea	Cinchonaceæ	Loxa in Ecuador
Cinchonæ Rubræ Cortex	Cinchona succirubra	Cinchonaceæ	Western slopes of Chimborazo
Cinnamomi Cortex	Cinnamomum Zeylanicum	Lauraceæ	Ceylon
Coccus	Coccus Cacti	Hemiptera	Mexico and Teneriffe
Colchicum	Colchicum autumnale	Melanthaceæ	Indigenous
Colocynthidis Pulpa	Citrullus Colocynthis	Cucurbitaceæ	Smyrna, Trieste, France, and Spain
Conii Folia	Conium maculatum	Umbelliferæ	Britain
Copaiba	Copaifera multijuga	Leguminosæ	Valley of the Amazon
Coriandri Fructus	Coriandrum sativum	Umbelliferæ	Britain
Crocus	Crocus sativa	Iridaceæ	Spain, France, and Italy
Croton	Croton Tiglium	Euphorbiaceæ	Hindoostan, Ceylon, and Indian Archipelago
Cubeba	Cubeba officinalis	Piperaceæ	Java
Cuspariæ Cortex	Galipea Cusparia	Rutaceæ	South America
Cusso	Brayera anthelmintica	Rosaceæ	Abyssinia
Digitalis Folia	Digitalis purpurea	Scrophulariaceæ	Indigenous
Dulcamara	Solanum Dulcamara	Solanaceæ	Indigenous
Ecbalii Fructus	Ecbalium officinarum	Cucurbitaceæ	South of Europe
Elemi	Canarium commune	Amyridaceæ	Manilla

Parts used.	Preparations into which it enters.
The dried Beetle	Acetum, Emplastrum, Tinctura, Unguentum Cantharidis; Charta Epispastica; Liquor Epispast.; Emplast. Calefaciens.
Dried ripe fruit	Tinctura Capsici.
Seeds of the dried capsules	Tinct. Cardam. Co.; Ext. Coloc. Co.; Pulv. Cinnam. Co.; Pulv. Cretæ Arom.; Tinct. Gentian. Co.; Tinct. Rhei; Vinum Aloes.
Dried fruit	Aqua, Oleum Carui; Confectio Opii; Conf. Piperis; Pulvis Opii Compositus; Tinct. Cardam. Co.; Tinct. Sennæ.
Dried unexpanded flower-buds	Infusum, Oleum Caryophylli; Inf. Aurant. Co.; Mist. Ferri Arom.; Vinum Opii.
Bark	Infusum, Tinctura Cascarillæ.
Pulp from the pods	Confectio Sennæ.
Dried preputial follicles, and their secretion from the Beaver	Tinctura Castorei.
An extract of the leaves and young shoots	Infusum, Pulvis Comp., Tinctura, and Trochisci Catechu.
Honeycomb of the Hive Bee	Emplast. Calefaciens, Cantharidis, Cerati Saponis, Galbani, Picis; Unguenta, Cantharidis, Hydrarg. Co., Hyd. Ox. Rub., Picis Liquid., Resinæ, Sabinæ, Terebinthinæ.
Nearly pure Cetine, mixed with oil, obtained from the head of the Sperm Whale.	Charta Epispastica; Unguentum Cetacei.
The entire lichen	Decoctum Cetrariæ.
Entire plant	Infusum and Tinctura Chiratæ.
Bark	Decoctum, Extractum Liquidum, Infusum, and Tinctura Cinchonæ Flavæ;—Quiniæ Sulphas.
Bark	Mist. Ferri Aromat.; Tinctura Cinchonæ Composita.
Bark	No preparation.
The inner bark of shoots from the truncated stocks	Aqua, Oleum, Pulvis Co., and Tinct. Cinnamomi; Infusum, Pulvis Co., and Tinct. Catechu; Acid. Sulph. Arom.; Decoct. Hæmatoxyli; Pulv. Cretæ Arom.; Pulv. Kino Co.; Tinct. Cardam. Co.; Tinct. Lavand. Co.; Vinum Opii.
Dried female insect	Tinctura Cocci; Tinct. Cardam. Co.; Tinct. Cinchonæ Co.
Fresh and dried corm and ripe seed.	Corm = Extractum, Extractum Aceticum, Vinum Colchici; Seeds = Tinctura Colchici Seminum.
Dried decorticated fruit freed from seeds	Extractum Coloc. Co.; Pil. Coloc. Co.; Pil. Coloc. et Hyoscyam.
Fresh leaves and young branches, and dried ripe fruit	Cataplasma, Extractum, Succus Conii (from the leaves); Tinctura Conii (from the fruit).
Oleo-resin	Oleum Copaibæ.
Dried ripe fruit	Oleum Coriandri; Conf. Sennæ; Mist. Gentianæ; Syrupus and Tinct. Rhei; Tinct. Sennæ.
The dried stigma and part of the style	Tinctura Croci; Decoct. Aloes Co.; Pil. Aloes et Myrrh.; Pulv. Cretæ Aromat.; Tinct. Cinchon. Co.; Tinct. Opii Ammon.; Tinct. Rhei.
Oil from the seeds	Oleum, Linimentum.
Dried unripe fruit	Oleum, Tinctura.
Bark	Infusum Cuspariæ (1 in 20).
Flowers and tops	Infusum Cusso.
Dried leaf	Infusum, Tinctura Digitalis; Digitalinum.
Dried young branches	Infusum Dulcamaræ.
Nearly ripe fruit	Elaterium, Pulvis Elaterii Composita.
A concrete resinous exudation	Unguentum Elemi.

B. P. Name	Obtained from.	Natural Order.	Habitat.
Ergota	Secale cereale	Graminaceæ	Indigenous
Farina Tritici	Triticum vulgare	Graminaceæ	Indigenous
Ficus	Ficus Carica	Moraceæ	Smyrna
Filix-Mas	Aspidium Filix-mas	Filices	Indigenous
Fœniculi Fructus	Fœniculum dulce	Umbelliferæ	Malta
Galbanum	Plant undetermined	Umbelliferæ	India and the Levant
Galla	Quercus infectoria	Cupuliferæ	Asia Minor
Gentianæ Radix	Gentiana lutea	Gentianaceæ	Central and Southern Europe (mountains)
Glycyrrhizæ Radix	Glycyrrhiza glabra	Leguminosæ	England
Gossypium	Gossypium	Malvaceæ	Warm and tropical regions
Granati Radicis Cortex	Punica Granatum	Granateæ	South of Europe
Guaiaci Lignum	Guaiacum officinale	Zygophyllaceæ	St. Domingo and Jamaica
Guaiaci Resina	Guaiacum officinale		
Gutta Percha	Isosandra Gutta	Sapotaceæ	Eastern Islands
Hæmatoxyli Lignum	Hæmatoxylum Campechianum	Leguminosæ	Campeachy, Honduras, and Jamaica
Hemidesmi Radix	Hemidesmus Indicus	Asclepiadaceæ	India
Hirudo	Sanguisuga medicinalis (speckled) officinalis (green)	Sanguisuga	Spain, France, Italy, Hungary
Hordeum Decorticatum	Hordeum distichon	Graminaceæ	Britain
Hyoscyami Folia	Hyoscyamus niger	Solanaceæ	Britain
Ipecacuanha	Cephaëlis Ipecacuanha	Cinchonaceæ	Brazil
Jalapa	Exogonium Purga	Convolvulaceæ	Mexico
Juniper	Juniperus communis	Coniferæ	North of Europe, indigenous
Kamala	Rottlera tinctoria	Euphorbiaceæ	India
Kino	Pterocarpus Marsupium	Leguminosæ	Malabar
Krameriæ Radix	Krameria triandra	Polygalaceæ	Peru
Lac	Bos Taurus	Ruminantia	Domesticated everywhere
Lactuca	Lactuca virosa	Compositæ	Indigenous
Laricis Cortex	Larix Europœa	Coniferæ	Indigenous
Laurocerasi Folia	Prunus Laurocerasus	Rosaceæ	Britain
Lavandula	Lavandula vera	Labiatæ	South of Europe
Limon	Citrus Limonum	Aurantiaceæ	South of Europe
Lini Semina	Linum usitatissimum	Linaceæ	Britain
Lobelia	Lobelia inflata	Lobeliaceæ	North America
Lupulus	Humulus Lupulus	Cannabinaceæ	England
Manna	Fraxinus Ornus rotundifolia	Oleaceæ	Calabria and Sicily

Parts used.	Preparations into which it enters.
The sclerotium (compact mycelium or spawn) of *Claviceps purpurea*, produced within the paleæ of the common Rye (*Secale cereale*) . . .	Extractum Liquidum, Infusum, and Tinctura Ergotæ.
ıe flour of the grain of wheat . .	Cataplasma Fermenti.
ried fruit	Confectio Sennæ.
ried rhizome	Extractum Filicis Liquidum.
ruit	Aqua Fœniculi.
um-resin	Emplast. Galbani; Pil. Assafœtidæ Co.
Excrescences caused by the punctures and deposited ova of *Diplolepis Gallæ tinctoriæ*	Acidum Gallicum and Tannicum; Tinct., Ung., and Ung. Gallæ c. Opio.
ried root	Extractum, Infusum Co., Mistura, and Tinct. Gentianæ Co.
Root and underground stem, fresh and dried	Extract. et Ext. Liquid; Pulv. Glycyrrh. Co.; Conf. Tereb. Dec. Sarsæ Co.; Inf. Lini; Pil. Hydr.; Pil. Ferri Iodid.
airs of the seed	Pyroxylin.
ried bark of the root	Decoctum Granati Radicis.
Wood in chips	Decoct. Sarsæ Co.
Resin	Mist. Guaiaci; Pil. Hydrarg. Subchlor. Co.; Tinct. Guaiaci Ammon.
ɔncrete Juice	Liquor Guttæ Perchæ.
iced heart-wood	Decoctum and Extractum Hæmatoxyli.
ried root	Syrupus Hemidesmi.
ɛech.	
usked seeds	Decoctum Hordei.
resh leaves	Extractum and Tinctura Hyoscyami.
ried root	Pil. Ipecac. c. Scillâ; Pulv. Ipecac. Co.; Trochisci Ipecac.; Trochisci Morphiæ et Ipecac.; Vinum Ipecac.; Pil. Conii Co.
ried tubercules	Extractum, Pulv. Co., Resina, and Tinctura Jalapæ; Pulvis Scammonii Compositus.
il from the unripe fruit	Oleum, Spiritus.
Minute glands that cover the capsules of the *Rottlera* .	
ıspissated juice	Pulvis Compositus, Tinct. Kino; Pulv. Catechu Co.
ried root	Extractum, Infusum, Tinctura Krameriæ; Pulv. Catechu Co.
resh milk	Mistura Scammonii.
lowering herb	Extractum Lactucæ.
ıner Bark	Tinct. Laricis.
resh leaves	Aqua Laurocerasi.
il from the flowers	Oleum, Spiritus, and Tinctura Composita.
ɛel and juice	Cortex = Oleum, Syrupus, Tinctura Limonis; Inf. Aurant. Co.; Inf. Gentian. Co.; Succus = Syrupus Limonis.
Seeds, and cake from which the oil has been pressed . . .	Infusum Lini, Oleum;—Cataplasmata except Fermenti.
ried flowering herb	Tinctura Lobeliæ, Tinct. Lobeliæ Ætherea.
ried strobiles of the female plant	Extractum, Infusum, Tinctura Lupuli.
Concrete saccharine exudation from the stem	

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Mastiche	Pistacia Lentiscus	Anacardiaceæ	Island of Scio
Maticæ Folia	Artanthe elongata	Piperaceæ	Peru
Mel	Apis mellifica	Hymenoptera	Universally domesticated
Mentha piperita	Mentha piperita	Labiatæ	Britain
Mentha viridis	Mentha viridis	Labiatæ	Britain
Mezerei Cortex	Daphne { Mezereum / Laureola }	Thymelaceæ	Indigenous
Mica Panis	Triticum vulgare	Graminaceæ	Indigenous
Mori Succus	Morus nigra	Moraceæ	Cultivated in Britain; native of Persia and China
Morrhuæ Oleum	Gadus Morrhua	Acipenser	Coasts of Norway, France, and England, Newfoundland and Labrador
Moschus	Moschus moschiferus	Ruminantia	Native of Central Asia; imported from China and India
Myristica	Myristica officinalis	Myristicaceæ	Banda Islands of the Malayan Archipelago
Myrrha	Balsamodendron Myrrha	Amyridaceæ	Arabia Felix and Abyssinia
Nectandræ Cortex	Nectandra Rodiæi	Lauraceæ	British Guiana
Nux Vomica	Strychnos Nux-vomica	Loganiaceæ	East Indies
Olivæ Oleum	Olea Europæa	Oleaceæ	South of Europe
Opium	Papaver somniferum	Papaveraceæ	Asia Minor (Smyrna)
Ovi Vitellus	Gallus Banckiva	(Class) Aves	Domesticated everywhere
Papaveris Capsulæ	Papaver somniferum	Papaveraceæ	Britain
Pareiræ Radix	Cissampelos Pareira	Menispermaceæ	Brazil
Physostigmatis Faba	Physostigma venenosum	Leguminosæ	Western Africa
Pimenta	Eugenia Pimenta	Myrtaceæ	West Indies
Piper nigrum	Piper nigrum	Piperaceæ	East Indies
Pix Burgundica	Abies excelsa	Coniferæ	Switzerland
Pix liquida	Pinus sylvestris	Coniferæ	Scotland, Denmark, and Norway
Podophylli Radix	Podophyllum peltatum	Ranunculaceæ	North America
Prunum	Prunus domestica	Rosaceæ	Southern Europe
Pterocarpi Lignum	Pterocarpus santalinus	Leguminosæ	Ceylon
Pyrethri Radix	Anacyclus Pyrethrum	Compositæ	Levant
Quassiæ Lignum	Picræna excelsa	Simarubaceæ	Jamaica
Quercus Cortex	Quercus pedunculata	Cupuliferæ	Britain
Resina	Pinus et Abies	Coniferæ	America
Rhamni Succus	Rhamnus catharticus	Rhamnaceæ	Britain
Rhei Radix	Rheum (palmatum?)	Polygonaceæ	China, Chinese Tartary, and Thibet. Imported from Shanghai and Canton; brought overland by way of Moscow
Rhœados Petala	Papaver Rhœas	Papaveraceæ	Indigenous
Ricinus	Ricinus communis	Euphorbiaceæ	India
Rosæ caninæ Fructus	Rosa canina	Rosaceæ	Indigenous
Rosæ centifoliæ Petala	Rosa centifolia	Rosaceæ	Britain
Rosæ Gallicæ Petala	Rosa Gallica	Rosaceæ	Britain

Parts used.	Preparations into which it enters.
sinous exudation from the stem	Infusum Maticæ.
ied leaves	Mel Boracis; Oxymel; Oxymel Scillæ; Conf. Piper.; Conf. Scammon.; Conf. Tereb.
Saccharine secretion in honey-comb, purified	Aqua, Essentia, Spiritus Menthæ Piperitæ; Pil. Rhei Co.
stilled Oil	Aqua Menthæ Viridis.
stilled Oil	Extractum Mezerei Æthereum; Decoctum Sarsæ Compositum.
ied bark	Cataplasma Carbonis.
umb of bread of wheat flour	Syrupus Mori.
ice of ripe fruit	
l of fresh liver of the Cod.	
Inspissated and dried secretion of the preputial follicles	
ernel of the seed	Oleum, and Oleum Myristicæ Expressum; Pulv. Catechu Co.; Pulv. Cretæ Aromat.; Sp. Armoraciæ Co.; Tinct. Lavand. Co.
um-resin (from the stem)	Tinct. Myrrh.; Pil. Aloes et Myrrh.; Decoct. Aloes Co.; Mist. Ferri Co.; Pil. Assafœtidæ Co.; Pil. Rhei Co.
rk	Beberiæ Sulphas.
eds	Extractum, Tinctura Nucis Vomicæ; Strychnia.
l from the fruit	Charta Epispastica, Cataplasma Lini; Emplastra; Enema Mag. Sulph.; Lin. Ammon., Calcis, Camphoræ; Unguenta, several.
Inspissated juice from unripe capsules	Preparations many. *Vide* Opium.
lk	Mistura Spiritus Vini Gallici.
Nearly ripe dried capsules of White Poppy	Decoctum, Extractum, Syrupus Papaveris.
ied root	Decoctum, Extractum, Extractum Pareiræ Liquidum.
ed	Extractum Physostigmatis.
ied unripe berries	Aqua, Oleum Pimentæ; Syrupus Rhamni.
ied unripe berries	Confectio Opii; Confectio Piperis; Pulv. Opii Co.
sinous exudation from the stem	Emplastrum Ferri; Emplastrum Picis.
Bituminous liquid obtained from the wood	Unguentum Picis Liquidæ.
ied rhizome	Resina Podophylli.
ied drupe of the Plum	Confectio Sennæ.
ood	Tinctura Lavandulæ Composita.
ot	Tinctura Pyrethri.
ood	Extractum, Infusum, Tinctura Quassiæ.
ied bark of young tree	Decoctum Quercus.
	Emplastra, Unguenta.
Fresh expressed juice of the ripe berries	Syrupus Rhamni.
ied root deprived of the bark	Extractum, Infusum, Pilula Co., Pulvis Co., Syrupus, Tinctura, Vinum.
esh petals	Syrupus Rhœados.
l from the seeds	Oil.
pe fruit	Confectio Rosæ Caninæ.
esh petals	Aqua Rosæ.
esh and dried unexpanded petals	Confectio, Syrupus Rosæ Gallicæ; Infusum Rosæ Acidum.

B. P. Name.	Obtained from.	Natural Order.	Habitat.
Romarinus	Rosmarinus officinalis	Labiatæ	South of Europe, Asia Minor; cultivated in England
Ruta	Ruta graveolens	Rutaceæ	South of Europe
Sabadilla	Asagræa officinalis	Melanthaceæ	Mexico
Sabinæ Cacumina	Juniperus Sabina	Coniferæ	Britain
Saccharum Purif.	Saccharum officinarum	Graminaceæ	West Indies
Saccharum Lactis	Bos Taurus	Ruminantia	Domesticated everywhere
Sambuci Floris	Sambucus nigra	Caprifoliaceæ	Indigenous
Santonica	Artemisia?	Compositæ	Russia
Sarsæ Radix	Smilax officinalis	Smilaceæ	Native of Central America; imported from Jamaica
Sassafras Radix	Sassafras officinale	Lauraceæ	North America
Scammoniæ Radix	Convolvulus Scammonia	Convolvulaceæ	Syria and Asia Minor
Scammonium	Convolvulus Scammonia	Convolvulaceæ	Asia Minor
Scilla	Urginea Scilla	Liliaceæ	Mediterranean
Scoparii Cacumina	Sarothamnus scoparius	Leguminosæ	Indigenous
Senegæ Radix	Polygala Senega	Polygalaceæ	North America
Senna Alexandrina	Cassia { lanceolata / obovata }	Leguminosæ	Alexandria
Senna Indica	Cassia elongata	Leguminosæ	Southern India
Serpentariæ Radix	Aristolochia serpentaria	Aristolochiaceæ	Southern parts of North America
Sinapis	Sinapis { alba / nigra }	Cruciferæ	Indigenous
Stramonium	Datura Stramonium	Solanaceæ	Britain
Styrax præparatus	Liquidambar orientale	Liquidambaraceæ	South-west of Asia Minor, and Cyprus
Sumbul Radix	Euryangium Sumbul	Umbelliferæ (?)	Russia and India
Tabaci Folia	Nicotiana Tabacum	Solanaceæ	America
Tamarindus	Tamarindus Indica	Leguminosæ	West Indies
Taraxaci Radix	Taraxacum Dens-leonis	Compositæ	Britain
Terebinthina Canadensis	Abies balsamea	Coniferæ	Canada
Theobromæ Oleum	Theobroma Cacao	Sterculiaceæ	America
Theriaca	Saccharum officinarum	Graminaceæ	West Indies and elsewhere
Thus Americanum	Pinus { Tæda / palustris }	Coniferæ	Southern States of North America
Tragacantha	Astragalus verus	Leguminosæ	Asia Minor
Ulmi Cortex	Ulmus campestris	Ulmaceæ	Britain
Uvæ Ursi Folia	Arctostaphylos Uvæ Ursi	Ericaceæ	Indigenous
Uvæ	Vitis vinifera	Vitaceæ	Spain
Valerianæ Radix	Valeriana officinalis	Valerianaceæ	Britain
Veratria	Asagræa officinalis	Melanthaceæ	Mexico
Veratri Viridis Radix	Veratrum viride	Melanthaceæ	United States and Canada
Zingiber	Zingiber officinale	Zingiberaceæ	West Indies and India

Parts used.	Preparations into which it enters.
Oil from the fresh herb	Oleum, Spiritus Rosmarini.
Oil from fresh leaves and unripe fruit	Oleum.
Dried fruit	Veratria.
Fresh and dried tops	Oleum, Tinctura, Unguentum Sabinæ.
Juice of the stem	All Syrups and Lozenges.
Whey of milk, evaporated.	
Fresh flowers	Aqua Sambuci.
Unexpanded flower-heads	Santoninum.
Dried root	Decoctum, Decoct. Co., Extractum Sarsæ Liquidum.
Dried root	Decoctum Sarsæ Co.
Dried root and resin	Resina; Mistura Scam.; Pilula Scam. Co.; Extr. Coloc. Co.
Gum resin	Confectio; Pulvis Co.; Pil. Coloc. Co.; Pil. Col. Co. et Hyosc.
Sliced and dried bulb	Acetum, Oxymel, Pilula Co., Syrupus, Tinctura Scillæ; Pil. Ipecac. c. Scillâ.
Fresh and dried tops	Decoctum, Succus Scoparii.
Dried root	Infusum and Tinctura Senegæ.
Leaflets	Confectio, Infusum, Mistura Co., Syrupus, Tinctura, Sennæ.
Leaflets	May be used in the place of Alexandrian.
Dried rhizome	Infusum, Tinctura Serpentariæ; Tinct. Cinchon. Co.
Seeds	Cataplasma, Charta, Oleum Sinapis.
Dried leaves and ripe seeds	Seeds = Extractum, Tinctura Stramonii.
Balsam from the bark	Tinctura Benzoini Composita.
Root	Tinctura Sumbul.
Dried leaves	Enema Tabaci.
Pulp of the fruit	Confectio Sennæ.
Fresh and dried roots	Decoctum, Extractum, Succus Taraxaci.
Turpentine (Canada Balsam)	Charta Epispastica; Collodion Flexile.
Concrete oil	Suppositoria.
Uncrystallizable residue of the refining of sugar	Various Pill-masses.
Concrete Turpentine	Emplastrum Picis.
Gummy exudation	Mucilago, Pulv. Tragac. Co.; Conf. Opii; Pulv. Opii Co.
Dried inner bark	Decoctum Ulmi.
Dried leaves	Infusum Uvæ Ursi.
Ripe fruit	Tinct. Cardam. Co.; Tinct. Sennæ.
Dried root	Infusum, Tinctura, Tinctura Valerianæ Ammoniata.
The alkaloid from Cevadilla	Unguentum Veratriæ.
Dried rhizome	Tinctura Veratri Viridis.
Scraped and dried rhizome	Syrupus, Tinctura, Tinctura Zingiberis Fortior. It is also used in some powders and other preparations.

MATERIA MEDICA

WITH

COMPOUNDS AND PREPARATIONS.

ACACIÆ GUMMI.

WHITE TURKEY GUM ARABIC.

A gummy exudation from the stem of one or more undetermined species of Acacia, collected chiefly in Cordofan in Eastern Africa, and imported from Alexandria. In spheroidal tears, opaque, with numerous cracks, nearly white.

Sp. g. 1·355. Contains about 17 per cent. of water.

Solubility in Water, 1 in 1. Insoluble in Alcohol, Ether, and Oils.

Test.—Powder of gum should be white and free from Starch, and therefore, after boiling in water and cooling, should not be rendered blue by an aqueous solution of Iodine.

Medicinal Properties.

Emollient, nutritive. Allowed to dissolve slowly in the mouth, allays tickling cough. For a demulcent drink, 1 of Mucilage, 1 of Syrup, and 20 of Water, are the best proportions.

Dose.—Ad libitum.

INCOMPATIBLES.—Alcohol, Ether, Ammonia, Sub-acetate of Lead, Mineral Acids, Borax.

Preparation.

MUCILAGO ACACIÆ. Faintly coloured, slightly opaque.

Gum, 40; distilled water, 60: dissolve without heat. =(1 and $1\frac{1}{2}$).

The product measures only 87, therefore 4 of Gum are contained in $8\frac{3}{4}$ measures of Mucilage. Sp. g. 1·170.

Dose.—1 to 4 drms.

(Fr. 1 and 1; Austr. Ger. and Russ. 1 and 2; Belg. 1 and 4—also M. Spissa 1 and 2—and M. Levis, 1 and 9; U.S. about 1 and 2.)

An excellent mode of preserving Mucilage from change in hot weather is, to fill 6-ounce bottles with it, as soon as made, and cork them.

It is much used in cough linctuses and lozenges, and frequently to render oils, etc., emulsive with aqueous fluids; 3 drms. are required for 1 oz. of oils or resinous tinctures, 10 drms. for 1 oz. of copaiba. The mucilage should be put into a mortar and the oil added by degrees, with constant trituration. Used to keep Bismuth and other powders suspended, but Tragacanth answers better. It is sometimes used to make powders into pills, but they become hard after being kept a short time, therefore castor-oil, glycerine, treacle, and even Confection of Roses, are to be preferred. Mucilage, if kept only a week in hot weather, becomes sour, and its emulsive property is impaired: if made with hot water the change is more rapid. It is impossible to make a nice emulsion with some of the oils (the Oil of Male Fern for instance) unless the Mucilage be quite fresh; if fresh mucilage is not at hand, half the quantity of the powder of Acacia can be used; first rub the powder with the oil, then add water equal to double the weight of the powder, and rub till an emulsion is formed; now add by degrees any quantity of aqueous liquid ordered in the prescription.

Not Official.

MISTURA GUMMOSA (German).—Finely powdered Gum Arabic and White Sugar, of each 15: Water, 170.

POTION GOMMEUSE (Fr.).—Powdered Gum Arabic, 1; Sirop de Gomme, 3; Orange Flower Water, 1; Water, 10.

SIROP DE GOMME (Fr.).—Gum, 10; Water, 15; Simple Syrup, 100 by weight; dissolve the Gum in cold water; add the Syrup; and strain.

ACETUM.

BRITISH VINEGAR.

An acid liquid of a brown colour and peculiar odour, prepared from Malt and unmalted grain by acetous fermentation; contains 4·6 per cent. anhydrous Acetic Acid.

Test.—Sp. g. 1·017 to 1·019. Ten minims of the Solution of Chloride of Barium (1 in 8) will precipitate all the Sulphuric Acid in an ounce of vinegar, equal to $\frac{1}{1000}$ part, which by law is allowed to be added to it. 554 grains by weight require at least 500 grain-measures of Volumetric Solution of Soda for neutralization, corresponding to 4·6 per cent. of anhydrous Acetic Acid. Sulphuretted Hydrogen causes no change in colour—indicating absence of metals. U.S. 1 fluid ounce is neutralised by 35 grs. of Bicarb. Potassium.

Medicinal Properties.

Given to diminish profuse sweating in hectic cases. With infusion of sage it forms an astringent gargle. Used externally in lotions and fomentations. Used also to sponge the surface of the skin to allay heat, or with lint as a cooling discutient to bruises and sprains.

The most ready and safe antidote in cases of poisoning by alkalies.

Dose.—1 to 2 drms., diluted.

(Austr. Belg. Fr. Ger. Russ. and U.S. are without Sulphuric Acid.)

INCOMPATIBLES.—Ammonia, Lime, all the Alkalies and Carbonates.
Used in making Empl. Cerat. Saponis.

ACETUM CANTHARIDIS.—*See* CANTHARIS.
ACETUM SCILLÆ.—*See* SCILLA.

ACIDUM ACETICUM.

The British Pharmacopœia orders only three strengths :—

ACIDUM ACETICUM DILUTUM, sp. g. 1·006, cont. 3·63 per cent.

ACIDUM ACETICUM. . . .	„	1·044,	„ 28	„ { about 8 times as strong as the Diluted.
ACIDUM ACETICUM GLACIALE	„	1·065,	„ 84	„ { 3 times as strong as the Acidum Aceticum.

ACIDUM ACETICUM.

ACETIC ACID. PURIFIED PYROLIGNEOUS ACID.

A colourless acid liquid, with pungent odour, prepared from wood by destructive distillation and subsequent purification, containing 28 per cent. of anhydrous Acid (or 33⅓ per cent. of glacial Acid).

Test.—Sp. g. 1·044. 3 fluid drachms (182 grains by weight) require for neutralization 1000 grain-measures of the volumetric solution of Soda. It leaves no residue when evaporated. If a fluid drachm mixed with half an ounce of distilled water and half a drachm of pure Hydrochloric Acid be put into a small flask with a few pieces of Granulated Zinc, and while the effervescence continues, a slip of bibulous paper wetted with Solution of Subacetate of Lead be suspended in the upper part of the flask above the liquid, for about five minutes, the paper will not become discoloured—indicating absence of Sulphurous Acid; gives no precipitate with Sulphuretted Hydrogen, Chloride of Barium, or Nitrate of Silver—indicating absence of metals, Sulphuric and Hydrochloric Acids.

A mixture of equal volumes of this acid and of water is of the same neutralizing power as the diluted mineral acids of the Pharmacopœia, and is of the right strength for subcutaneous injection in cancer.

(U.S. 30·6; Ger. Acid. Acet. Dilut. 30; Russ. 25 per cent.; Fr. Acide Acétique du bois; not in Belg.)

Used only in the preparation of other medicines, and contained in Acetum Cantharidis, Acidum Aceticum Dilutum, Extractum Colchici Aceticum, Linimentum Terebinthinæ Aceticum, Liquor Ammoniæ Acetatis, Liquor Epispasticus, and Oxymel.

ACIDUM ACETICUM DILUTUM.

DILUTED ACETIC ACID.

Colourless, and is of the same strength as Distilled Vinegar. Contains 3·63 per cent. of anhydrous Acid.

Acidum Aceticum, 1; Distilled Water, 7; mix. =(1 in 8).

Test.—Sp. g. 1·006. 3 fluid ounces (1320 grain-measures) require for neutralization 939 grain-measures of volumetric solution of Soda.

Medicinal Properties.

Used for the same purposes as common Vinegar; when more concentrated, it is used for subcutaneous injection in cancer. (*See* ACIDUM ACETICUM.)

Dose.—1 to 2 drms. with water.

(Austr. 20; Belg. 5·5; Ger. 30; Russ. 4 per cent.; Fr. distilled from Wine Vinegar.)

Used to prepare Acetum Scillæ and Liquor Morphiæ Acetatis.

ACIDUM ACETICUM GLACIALE.

GLACIAL ACETIC ACID.

Monohydrated Acetic Acid, $HO,C_4H_3O_3$, or $HC_2H_3O_2$. eq. 60, containing 84 per cent. of anhydrous Acid. Colourless, more or less crystallized, very pungent.

The anhydrous Acid is represented thus, $C_4H_3O_3$, or $C_4H_6O_3$.

Test.—Sp. g. 1·065, which is increased by adding 10 per cent. of water if the acid be of full strength. 1 fluid drachm (60 grains by weight) in an ounce of water requires for neutralization 990 grain-measures of the volumetric solution of Soda. It does not give rise to a blue colour when added gradually to an equal volume of the solution of Iodate of Potash previously mixed with a little mucilage of Starch, or tried by the test mentioned in Acetic Acid—indicating absence of Sulphurous Acid.

It is three times as strong as Acidum Aceticum, and nearly twenty-four times as strong as Acidum Aceticum Dilutum. It is a colourless liquid, with pungent acetous odour, is converted into a mass of crystals when cooled to 34° F. and remains crystallized at 48°.

Medicinal Properties.

Escharotic; used for corns and warts, especially when of a syphilitic character; it speedily vesicates, and thus is useful in cases where Cantharides may do harm by being absorbed; but it causes much pain, and if applied incautiously, may produce a most troublesome sore. When scented, is employed to fill vinaigrettes containing sponge, or fragments of Sulphate of Potash.

(Same as Ger.; Acide Acétique Crystallisable, Fr.; A. A. Concentratissimum, Austr. and Russ.; A. A. Concentratum, Belg.; not in U.S.)

It is an ingredient in Acetum Cantharidis and Mistura Creasoti.

Not Official.

ACIDUM ACETICUM AROMATICUM (Belg. Russ. and Ger.).—Glacial Acetic Acid, 72 (Ger. 25); Oil of Cloves, 9; do. Lavender, 6; do. Orange, 6; do. Bergamot, 3; do. Thyme, 3; do. Cinnamon, 1; all by weight; mix and filter.

VINAIGRE ANGLAIS (Fr.).—Glacial Acetic Acid, 600; Camphor, 60; Oil of Cinnamon, 1; Oil of Cloves, 2; Oil of Lavender, ½; mix and digest fifteen days.

VINAIGRE DES QUATRE VOLEURS (Fr.).—Tops of the Greater and Lesser Wormwood, Rosemary, Sage, Peppermint, Rue, Lavender Flowers, of each 8; Calamus Root, Cinnamon, Cloves, Nutmeg, Garlic, of each 1; Camphor, 2; Glacial Acetic Acid, 8; Strong white Vinegar, 500: dissolve the Camphor in the Glacial Acid; macerate the other ingredients in the Vinegar for ten days; press and mix.

ACIDUM ARSENIOSUM.

ARSENIOUS ACID. WHITE ARSENIC.

Teroxide of Arsenic, AsO_3, eq. 99, or As_2O_3 eq. 198.

An anhydrous Acid. A heavy white powder, or in stratified opaque masses.

Solubility in cold water, 1 in 100; in boiling water, 1 in 20.

Test.—Entirely volatilized by heat; sublimes entirely in octahedral crystals. 4 grains of it, dissolved in boiling water with 8 grains of Bicarbonate of Soda, discharge the colour of 808 grain-measures of the volumetric solution of Iodine. The Arsenite of Soda is converted into Arseniate, and the Iodine into Iodide of Sodium.

(Same as Austr. Ger. and Russ.; A. Arsenicosum.)

Medicinal Properties.

Given in chronic cutaneous diseases and in chronic rheumatism of the joints; it is an antiperiodic in agues and neuralgic affections. Best given immediately after meals. Externally as a powerful caustic, and requires great care, as there is danger of absorption.

Dose.—$\frac{1}{60}$ to $\frac{1}{12}$ of a grain, in solution; rarely prescribed in the solid form.

Incompatibles.—Salts of Iron, Magnesia, Lime Water, and astringent matters.

Antidotes.—In case of poisoning by Arsenic, the freshly prepared moist Peroxide of Iron, and Calcined Magnesia; Ammonia, artificial respiration, cold affusion.

Antidotum Arsenici, Ph. Germ. (Russ. similar). Calcined Magnesia 7, in Water 120. Solution of Persulphate of Iron, s. g. 1318, 60, in Water 120.

These two mixtures will keep separately, and may be mixed at the instant they are required to be administered.

Preparations.

LIQUOR ARSENICALIS (Fowleri). *Syn.* Liq. Potassæ Arsenitis. Pale Pink.

Arsenious Acid, 80 grs.; Carbonate of Potash, 80 grs.; Compound Tincture of Lavender, 5 fl. drms.; Distilled Water, 20 oz.: boil till dissolved, add the tincture, and make up with water to 20 oz. = (1 of Arsenic in 120).

Dose.—2 to 8 minims twice a day in water with meals.

10 minims are used for each subcutaneous injection.

(Is of the same strength in all the Pharmacopœias.—4 grs. of Arsenic to the ounce; half a grain in 60 minims: (except Fr., Solution de Arsénite de Potasse and Russ. 1 in 100; Austr. Ger. 1 in 90.)

LIQUOR ARSENICI HYDROCHLORICUS. Colourless.

Arsenious Acid, 80 grs.; Hydrochloric Acid, 2 drms.; Distilled Water, 20 oz.: boil the two acids with 4 oz. of the water until a solution is effected, then add sufficient distilled water to make up 20 oz.

Nearly three times as strong as Lond., being made of the same strength as the Liquor Arsenicalis of the British Pharmacopœia.=(1 of Arsenic in 120.)

Dose.—2 to 8 minims.

ARSENIAS FERRI.—*Dose*, $\frac{1}{16}$ gr. *See* FERRI ARSENIAS.

ARSENIAS SODÆ.—*See* SODÆ ARSENIAS.

ARSENIATIS SODÆ LIQUOR. 1 in 120. *Dose*, 2 to 8 minims. } *See* SODÆ ARSENIATIS LIQUOR.

Not Official.

Liquor Ammoniæ Arsenitis was preferred by the late Mr. Gaskoin, and made of the same strength as Liquor Arsenicalis; Carbonate of Ammonia being substituted for Carbonate of Potash. Russ. Ammonium Arsenicum 1 gr.; Water 1 oz.

The Solutio Solventis Mineralis of Dr. De Valangin (the Liquor Arsenici Chloridi of the London Pharmacopœia) contains 30 grains of Arsenic dissolved by 90 minims of Hydrochloric Acid in 20 ounces of Water; is about one-third of the strength of the British Pharmacopœia. *Dose.*—3 minims three times a day, increasing to 10 minims for chorea.

Donovan's Solution (the Liquor Arsenici et Hydrargyri Hydriodatis of the Dublin Pharmacopœia). A fluid drachm contains $\frac{1}{12}$th of a grain of Arsenic, $\frac{1}{4}$th of a grain of Mercury, $\frac{3}{4}$ths of a grain of Iodine. *Dose.*—10 to 30 minims.

Arsenical Paste for Dentists.—Arsenious Acid, 2; Sulphate of Morphia, 1; Creasote to make a stiff paste. A quantity of the size of a pin's head is ample for one application. It should be spread on cotton-wool and placed in the tooth. It will thus destroy the sensibility of a carious tooth, and in a few hours the tooth is ready for stopping.

Arsenical Paste (Frères Come's) for cancer, is applied after the surface has been laid bare by the application of caustic potash. Arsenic, 1; Charcoal, 1; Red Sulphuret of Mercury, 4; Water, *q. s.*

Arsenical Caustic Powders contain each from $\frac{1}{16}$ gr. to $\frac{1}{8}$ gr. of Arsenious Acid to 1 gr. of Calomel, Vermilion, or Sulphuret of Antimony, or of any combination of them.

Iodide of Arsenic, given in lepra. *Dose.*—$\frac{1}{30}$ of a grain in pill.

ACIDUM BENZOICUM.

BENZOIC ACID.

Syn.—Flowers of Benzoin; Hydrate of Benzoyl.

$HO,C_{14}H_5O_3$, or $H,C_7H_5O_2$, eq. 122.

In white crystalline silky plates and needles, having an aromatic odour; obtained from Benzoin by sublimation.

Solubility in Water, 1 in 300; in boiling Water, 1 in 12; in Spirit, 1 in 4. Soluble also in Caustic Alkalies and Lime. Borax adds much to its solubility in water; 1 of Borax and 1 of Acid are soluble in 100 water.

Test.—When heated, it sublimes without residue.

Medicinal Properties.

Stimulant, expectorant; said to cure nocturnal incontinence of urine.

Dose.—5 to 15 grs. in a large quantity of water, or in pills made with Glycerine; 5 grs. Acid and 1 min. Glycerine makes a good pill.

Contained in Ammon. Benzoas, in Tinct. Camphoræ Composita, 2 grs. in each ounce; and in Tinct. Opii Ammoniata, 9 grains in each ounce.

See BENZOINUM.

(In all the Pharmacopœias.)

ACIDUM CARBOLICUM.

CARBOLIC ACID.

Syn.—Phenic Acid; Phenol; Hydrate of Phenyl; Phenylic Alcohol.

$HO,C_{12}H_5O$, or H,C_6H_5O, eq. 94.

In colourless acicular crystals, obtained from Coal Tar by fractional distillation (boiling-point 370°) and subsequent purification. Sp. g. 1·065. Melts at 95° F., to an oily liquid. It coagulates albumen; does not redden litmus.

When 1, 2, or 3 parts of melted Carbolic Acid are mixed with 1 of water, the Acid separates on cooling in oily-like globules; but when 4, 5, 6, 7, 8, and

even 9 of Acid to 1 of water are mixed, the solution is perfect at ordinary temperatures; when however the temperature sinks to 40° or under, the 8 and the 9 will crystallize out again.

Solution of Chloride of Lime takes away the odour.

Solubility, 1 in 15 of Water, and will not separate when more water is added; in Olive Oil 1 in 1; in Glycerine 4 in 1; in Volatile Oils, Chloroform, Ether, and Alcohol.

Medicinal Properties.

Given to check sickness, to arrest diarrhœa, to remove intestinal worms; useful in some stages of phthisis; for psoriasis 3 grs. in water three times a day is taken, and itching greatly relieved. It produces profuse perspiration, lowers the pulse, and is thus useful in fever, scarlatina, measles, and small-pox. It is not indicated in typhus. Used as a gargle (2 grs. to 1 oz.) for sore-throat attended with fœtor of breath; if used with a spray apparatus, 20 grains in an ounce of water, or for inhalation 15 grs. dissolved in a pint of hot water; as an injection (1 gr. to 4 oz. of water) for the vagina or the bladder, to correct putrescence. Externally, used alone is a powerful caustic; as a lotion (15 to 30 grs. to 1 oz.) for foul or syphilitic ulcers, carbuncles, scabies, and lepra; (5 grs. to 1 oz.) excellent for eczema and eruptions attended with itching; or an ointment (30 grs. to 60 grs. to 1 oz. of Benzoated Lard.)

1 of Acid in 20 of water or Olive Oil for dressing lacerated wounds, scalds, and burns. 1 of Acid and 4 of Oil has been recommended, but is often found too strong for use.

$\frac{3}{4}$ gr. of crystallized Acid dissolved in 20 drops of water for hypodermic injection.

(Austr.; Fr. Acide Phénique; Ger. Carbolsäure; U.S. and Russ.; not in Belg.)

Dose.—1 to 3 grains in water or in pill twice or three times a day.

Preparation.

GLYCERINUM ACIDI CARBOLICI. Colourless.

Carbolic Acid, 1; Glycerine, 4: rub together till dissolved.

(By weight 1 in 6, by measure 1 in $4\frac{3}{4}$.)

Dose.—5 to 10 minims in water.

(U.S., 1 and 4.)

Mixed with an equal bulk of water, may be applied to the tonsils when turgid or when there is a diseased state of mucous surface producing fœtor of breath; also in diphtheria, assisted by a nutritious diet.

SUPPOSITORIA ACIDI CARBOLICI.

Carbolic Acid, 12 grs.; Curd Soap in powder, 180 grs.; Starch, sufficient to form a paste; to be divided in 12 conical suppositories—is too hard without any Starch.

[If instead of Starch we use Glycerine of Starch 40 grs., the mass becomes a paste.—Edit.]

Not Official.

Carbolic Acid Putty is made by first mixing 1 of Acid with 4 of boiled Linseed Oil, and adding chalk till of the consistence of putty.

Emplastrum Acidi Carbolici.—Take of Shellac 75, Carbolic Acid 25: melt the Shellac with 8 of the Acid first, then add the remaining 17 of Acid and mix thoroughly. Should be spread on linen about $\frac{1}{16}$th of an inch thick, and then coated over with a solution of Gutta Percha in Bisulphide of Carbon, to keep the acid from

escaping. The plaster is applied to all sores, to lessen the discharge, strapping-plaster being used to keep it in its place.—*University College.*

Oiled silk dipped in a solution of Carbolic Acid, 1 in 40 is sometimes placed between the wound and this plaster when the latter is found too stimulating. Gauze imbued with Carbolic Acid is also used to lay over the sores to prevent any putrid effluvia rising, as well as to protect the sores from atmospheric influence.

Catgut ligatures are kept in carbolized oil for surgical use.

Carbolate of Lime has been used with success in the last stages of diarrhœa. *Dose.*—2 grains in a pill.—10 grains, with Stearine, for an antiseptic pessary.

The Sulphocarbolates have been given in zymotic diseases with benefit.

Sulphocarbolic Acid is formed by the action of Sulphuric Acid upon Carbolic Acid. (Gmelin's 'Chemistry,' vol. xii. 1857. *See* also 'Medical Press and Circular,' May 25, 1870.)

Sulphocarbolates of Ammonia, of Magnesia, of Potash, and of Soda, all crystallize in tufts of acicular crystals more or less white; Sulphocarbolate of Copper, in transparent light blue interlacing prisms; of Iron, in small brown micaceous crystals; of Zinc, in transparent rectangular colourless plates. 1 drm. Sulphocarbolate of Zinc to 24 oz. of water for vaginal injection,—for leucorrhœa, or gonorrhœa.

Mistura Sodæ Sulphocarbolatis.—Sulphocarbolate of Soda, 20 grs.; Camphor Water to 1 oz. for a dose. *Chest Hospital.*

Mistura Sodæ Sulphocarbolatis et Cinchonæ.—Sulphocarbolate of Soda, 20 grs.; Liquid Extract of Bark, 10 mins.; Water to 1 oz. *Chest Hospital.*

Suppositorium, U.S.; Carbolic Acid, 12 grs.; Theobroma Oil, 340 grs. water sufficient; divide into 12.

Aqua, U.S.; Glycerite of Carbolic Acid, 10 fluid drachms, water to 16 ounces.

ACIDUM CITRICUM.

CITRIC ACID.

$3HO,C_{12}H_5O_{11}+2HO$, or $H_3C_6H_5O_7.H_2O$, eq. 210.

A crystalline acid obtained from Lemon Juice or from the Juice of the fruit of *Citrus Limetta*, the Lime.

In colourless right rhombic prisms.

Solubility in water, 10 in 6; in glycerine, 1 in 2; in rectified spirit, 10 in 15.

Test.—70 grains dissolved in water require for neutralization 1000 grain-measures of volumetric solution of Soda. 100 grains dissolved in water require for neutralization 150 grains of Bicarbonate of Potash. It leaves no ash when burnt with free access of air. Dissolved in water, it is not darkened with Sulphuretted Hydrogen, and gives no precipitate when dropped into solution of Lime, or when added to a solution of Acetate of Potash or Chloride of Barium—indicating absence of metals, Oxalic, Tartaric, and Sulphuric Acids.

Acid, 1, dissolved in Distilled Water, 14, is a substitute for Lemon-Juice, but does not keep long without spoiling.

17 grs. of Citric Acid, or half a fluid ounce, of fresh Lemon-Juice } neutralize {

25	grs.	Bicarbonate of Potash.
20	„	Carbonate of Potash.
20	„	Bicarbonate of Soda.
35	„	Carbonate of Soda.
15	„	Carbonate of Ammonia.
13	„	Carbonate of Magnesia.

Medicinal Properties.

Refrigerant; allays thirst and irritation of the skin.

Prescribed in Powders to be taken with each dose of an alkaline mixture during effervescence; or in solution, directing the quantity to be taken with the alkaline mixture.

Dose.—10 to 30 grs. in a wineglassful of water.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Tartrate of Potash, Alkaline Carbonates, Acetates, and Sulphurets.

Contained in Ammoniæ Citratis Liquor, Bismuthi et Ammoniæ Citratis Liquor, Ferri et Ammoniæ Citras, Ferri et Quiniæ Citras, Lithiæ Citras, Potassæ Citras, Sodæ Citro-Tartras Effervescens, Vin Quinæ, and in all the granular effervescing citrates.

ACIDUM GALLICUM.

GALLIC ACID.

$3HO,C_{14}H_3O_7+2HO$, or $H_3C_7H_3O_5.H_2O$, eq. 188.

In acicular prisms or needles of a pale fawn colour. Prepared from Galls. Solubility in cold Water, 1 in 100; in boiling Water, 1 in 3; in Rectified Spirit, 1 in 8; in Glycerine, 1 in 20, or with heat, 1 in 5.

A solution in rectified spirit would be a convenient form for keeping it, as it will mix in any proportion with water without separating; but it becomes brown by keeping.

Test.—It leaves no residue when burnt with free access of air. Its solution reddens Litmus, gives no precipitate with Gelatine, nor does it colour the Protosalts of Iron—indicating absence of earthy matters and of Tannic Acid,

Care must be taken that the Protosalt of Iron is entirely free from Persalt, for the latter gives a blue precipitate.

Medicinal Properties.

Astringent; given in all cases where the bleeding vessels must be reached through the circulation; it is considered by some to be more effective than Tannic Acid. It is given in pyrosis and the night sweats of phthisis, and is very effective in albuminuria.

Dose.—3 to 10 grs. three times a day, dissolved in warm water or suspended in mixture by mucilage, 10 to 60 grs. every five hours in albuminuria, when the urine is of low specific gravity. It is also given in pills: 30 grs. of Acid and 4 minims of Glycerine will make 6 pills.

(Fr. U.S.; not in others.)

INCOMPATIBLES.—*See* GALLA.

Preparation.

GLYCERINUM ACIDI GALLICI. Yellow.

Gallic Acid, 1; Glycerine, 4; dissolve by heat. Part separates after cooling, and remains undissolved. (By weight 1 in 6, by measure 1 in 4½).

Dose.—10 to 60 minims.

(U.S. 1 and 4.)

Not Official.

ACIDUM PYROGALLICUM. In white flaky crystals, which blacken by exposure to light. Solubility in water, 1 in 2, and measures 2½. Chiefly used in Photography.
1 in 16 water, is used with a solution of Nitrate of Silver 1 in 30, for blackening the hair.

ACIDUM HYDROCHLORICUM.

HYDROCHLORIC ACID.

Syn. ACIDUM MURIATICUM PURUM, *Edin. Dub. U.S.*; CHLORHYDRIC ACID; SPIRIT OF SALT.

Colourless. Contains 31·8 per cent. of Hydrochloric Acid gas.

Test.—Sp. g. 1·160. 114·8 grains by weight, diluted with ½ oz. of distilled water, require for neutralization 1000 grain-measures of volumetric solution of Soda. When diluted with four times its volume of distilled water, it gives no precipitate with Chloride of Barium, is not discoloured by Sulphuretted Hydrogen, and does not tarnish bright copper-foil when boiled in it—indicating absence of Sulphuric Acid, metals, and Arsenic.

For the tests for Sulphur compounds, see ACETIC ACID, page 3.

Medicinal Properties.

Given in a very dilute form, as a refrigerant, antiseptic, and tonic; applied with an equal quantity of water to diphtheric patches in the throat.

(U. S.; Fr. 34; Belg. 36·2; Ger. 25; Austr. and Russ. 24 per cent.)

INCOMPATIBLES.—Salts of Silver and Lead, Tartar Emetic, Alkalies, and their Carbonates.

ANTIDOTES.—In cases of poisoning by Hydrochloric Acid, the antidotes are, Chalk, Magnesia, and emollient drinks.

Preparation.

ACIDUM HYDROCHLORICUM DILUTUM. Colourless.

Acid, 8; Distilled Water sufficient to make the mixture, when cooled to 60°, measure 26½.
Contains 10·5 per cent. of acid gas.

Test.—Sp. g. 1·052. Six fluid drachms (345 grains by weight) require for saturation 1000 grain-measures of volumetric solution of Soda; it therefore contains 1 equivalent in grains (36½) of Hydrochloric Acid, HCl.

Three and a quarter minims contain 1 minim Strong Acid.

Dose.—10 to 30 minims with bitter infusions; 1 drm. in 8 oz. of Infusion of Roses as a gargle for ulcerated sore-throat and thrush.

(Belg. 6·5; U.S. and Russ. Sp. g. 1·038; Austr. 12; Ger. equal weights Sp. g. 1·060; not in Fr.)

ACIDUM HYDROCYANICUM DILUTUM.

DILUTED HYDROCYANIC ACID.

Syn. PRUSSIC ACID; CYANHYDRIC ACID.

Hydrocyanic Acid, HC_2N or **HCN** (eq. 27), dissolved in water, and constituting 2 per cent. of the solution. Colourless; with a powerful odour.

Test.—Sp. g. ·997. 270 grains by weight of the acid, rendered alkaline with the addition of solution of Soda requires the addition of 1000 grain-measures of the volumetric solution of Nitrate of Silver before a permanent precipitate begins to form, which corresponds to 2 per cent. of anhydrous acid. This test is that of Liebig. The addition of the Soda to the Prussic Acid produces Cyanide of Sodium, and this again becomes Cyanide of Silver when the Nitrate of Silver is dropped in; but as one equivalent of Cyanide of Silver combines with one equivalent of Cyanide of Sodium to form a soluble compound, it is only when exactly one-half of the Cyanide of Sodium has been converted into Cyanide of Silver, that a permanent precipitate is produced.

It gives no precipitate with Chloride of Barium, but with Nitrate of Silver it gives a white precipitate entirely soluble in boiling Nitric Acid—indicating absence of Sulphuric and Hydrochloric Acids.

Contains 2 per cent. anhydrous Prussic Acid.

Medicinal Properties.

As this acid is a dangerous poison, it should never be prescribed alone.

The vapour is sometimes applied to the eye.

It is sedative, antispasmodic, allays vomiting, is useful in gastrodynia, and in dyspeptic palpitations. Used externally to allay itching of the skin; as Lotion 2 drms. to 8 oz. of Rose Water, as Ointment from ½ drm. to 1 drm. to each ounce of Zinc Ointment.

Prescribed in Almond Emulsion for cough, and with Bicarbonate of Soda and Peppermint Water for dyspepsia.

Dose.—2 to 8 minims.

(Same as Austr. Russ. and U.S. 2 per cent.; Belg. 2·5 per cent.; Fr. *Acide Prussique Médicinal*, 10 per cent.; not in Ger.)

INCOMPATIBLES.—Salts of Silver, Copper, Iron, Red Oxide of Mercury, Sulphurets.

ANTIDOTES.—In cases of poisoning, the antidotes are, fresh air and artificial respiration, with cold affusion; freshly precipitated Oxide of Iron, with an alkaline carbonate.

Preparation.

VAPOR ACIDI HYDROCYANICI.

Hydrocyanic Acid, 10 to 15 minims; Cold Water, 60 minims; mix in a suitable apparatus, and let the vapour that arises be inhaled.

Not Official.

Scheele's Prussic Acid, now obsolete, was nearly three times the strength of that of the Pharmacopœia.

ACIDUM NITRICUM.

NITRIC ACID.

Syn. AZOTIC ACID.

Colourless. Contains 60 per cent. of anhydrous Acid, NO_5 or N_2O_5, or 70 per cent. of HO,NO_5, or HNO_3.

Test.—Sp. g. 1·420. 90 grains by weight, mixed with half an ounce of distilled water, require for neutralization 1000 grain-measures of the volumetric solution of Soda. Evaporated, it leaves no residue. Diluted with six volumes of distilled water, it gives no precipitate with Chloride of Barium or Nitrate of Silver—indicating absence of Sulphuric and Hydrochloric Acid.

5 measures of Acid, sp. g. 1·500, and 2 of water mixed, condenses into $6\frac{1}{2}$ measures, and makes the sp. g. 1·420.

Medicinal Properties.

It is strongly corrosive, and is applied as a caustic to phagedenic sores and chancres by means of a pointed glass rod. When diluted it is refrigerant, tonic, and antiseptic; and if very much diluted forms a drink in febrile diseases, especially typhus, and is used also as an injection in phosphatic calculus.

(Same as Fr. U.S.; Russ. sp. g. 1·200, 28 per cent.; Ger. sp. g. 1·185, 30 per cent.; Belg. 53·4; Austr. 48 per cent.)

INCOMPATIBLES.—Alcohol, Alkalies, Oxides, Sulphate of Iron, Acetate of Lead, all Carbonates and Sulphurets.

ANTIDOTES.—In case of poisoning by Nitric Acid, the antidotes are Chalk, Magnesia, emollient drinks, Albumen.

Preparation.

ACIDUM NITRICUM DILUTUM. Colourless.

Nitric Acid, 6; Distilled Water sufficient to make the mixture when cooled to 60°, measure 31. Contains 15 per cent. of anhydrous Acid.

Test.—Sp. g. 1·101. Six fluid drachms (361·3 grains by weight) require for neutralization 1000 grain-measures of volumetric solution of Soda, and therefore contain exactly one equivalent in grains of anhydrous Acid, namely 54 grs.

5 minims contain 1 minim of strong acid.

Prescribed with bitter infusions and Tincture of Orange. Infusion of Roses made with this acid, instead of Sulphuric Acid, and sweetened, is the most elegant form for administering Quinia with an astringent. Sulphuric Acid, by precipitating the Tannate of Quinia, makes a turbid mixture (Pharm. Journ., vol. i. p. 585).

Dose.—10 to 30 minims.

(Russ. sp. g. 1·094; U.S. sp. g. 1·068; (Belg. 17·5, Austr. 21 per cent.); Ger. equal weights, sp. g. 1·086–9; not in Fr.)

ACIDUM NITROHYDROCHLORICUM DILUTUM.

DILUTE NITRO-HYDROCHLORIC ACID.

Nitric Acid, 3; Hydrochloric Acid, 4; Water, 25.—Mix the acids twenty-four hours before adding the water. Colourless.

The two acids are very properly ordered to be mixed together twenty-four hours, to develope the Chlorine before the water is added.

Test.—Sp. g. 1·074. 6 fluid drachms (352·4 grains by weight) require for neutralization 920 grain-measures of the volumetric solution of Soda.

16 minims contain 1½ minim of Nitric Acid and 2 minims of Hydrochloric Acid.

Medicinal Properties.

Tonic, stomachic, alterative. Externally as a lotion or bath, for obstructions of the liver.

Dose.—5 to 20 minims in 1½ oz. Water, with Succus Taraxaci, or Tinct. Aurantii.

Antidote.—Albumen freely administered, after evacuating the stomach.

(The concentrated acids are directed in all the foreign Pharmacopœias, Fr. *Eau Régale*; Ger. and Russ. Acid. Chloronitrosum. The U.S. orders the concentrated as well as the diluted; the latter corresponds in strength to the British diluted acids.)

Directions for Preparing and Using the Bath.

Mix 8 ounces by measure of this acid with one gallon of pure water, temperature 96° or 98° F. Let a flannel roller* of ten or twelve inches wide, and sufficient to encircle the body twice, be soaked in the fluid and then wrung, so as to remain only damp. Apply this instantly to the body, covering it with a piece of oiled silk to avoid damping the dress. It should be worn constantly, but should be changed, soaked, and wrung, morning and evening. Glass, glazed earthenware, or wooden vessels should be used. Sponges and towels to be kept in water to prevent them corroding.

Aqua Regia consists of the strong acids—1 Nitric, 2 Hydrochloric, mixed.

ACIDUM PHOSPHORICUM DILUTUM.

DILUTED PHOSPHORIC ACID.

$3HO,PO_5$ or H_3PO_4, eq. 98, dissolved in water.

Colourless. Contains 10 per cent. of anhydrous Acid, PO_5 or P_2O_5.

Test.—Sp. g. 1·080. 6 fluid drachms (355 grains by weight) poured upon 180 grains of Litharge in fine powder, leave, after evaporation, a residue which, heated to redness, weighs 215·5 grains, and is anhydrous Phosphate of Lead, showing that there is 35·5 grs. or half an equivalent of anhydrous Acid. It is not precipitated by Sulphuretted Hydrogen, Chloride of Barium, Nitrate of Silver acidulated with Nitric Acid, or by a solution of Albumen—indicating absence of metals, Sulphuric Acid, Hydrochloric Acid, and Metaphosphoric Acid. When mixed with an equal volume of pure Sulphuric

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* These, with the oiled silk attached, can be had of the Chemists, ready made.

Acid, and then introduced into the solution of Sulphate of Iron, it does not communicate to it a dark colour—indicating absence of Nitric Acid.

Six fluid drachms contain half an equivalent PO_5, or a quarter of an equivalent P_2O_5.

Medicinal Properties.

Tonic and refrigerant, having properties similar to Sulphuric Acid, but more palatable, and has the property of allaying a tickling cough: it is said to correct the phosphates in the urine, and to allay thirst in diabetes. Given with Phosphate of Lime in rickets. It is also found useful in cases of vomiting and diarrhœa, arising from a bilious attack; given in frequent doses.

Dose.—10 to 30 minims largely diluted with water.

(Fr. 52 per cent., sp. g. 1·454; Belg. 40 per cent., sp. g. 1·350; Ger. 20 per cent.; Austr. Acid. Phosphoric. 16 per cent., sp. g. 1·117; Russ. sp. g. 1·062; U.S. 8 per cent., sp. g. 1·056.

Incompatibles.—Lime Water, Calcareous Salts, Carbonate of Soda.

May be prescribed with some bitter and aromatic tinctures and syrups, or with syrup of the Phosphate of Iron, but not with the syrup of Pyrophosphate of Iron, as the mixture becomes solid.

Used to prepare Syrupus Ferri Phosphatis, and several non-official formulæ.

Not Official.

Acidum Phosphoricum Glaciale has the appearance of broken glass; it is not pure, but contains Phosphate of Soda.

Acidum Phosphoricum Siccum.—A white powder, very deliquescent, prepared by burning Phosphorus in Oxygen or dry air.

Dose.—1 gr. in pill, with Quinia and other remedies.

ACIDUM SULPHURICUM.

SULPHURIC ACID. OIL OF VITRIOL.

Colourless; contains 96·8 per cent. of Sulphuric Acid, HO,SO_3, eq. 49; or H_2SO_4, eq. 98; and corresponds to 79 per cent. anhydrous Acid, SO_3 or SO_3.

Test.—Sp. g. 1·843.* Half a fluid drachm (50·6 grains by weight) mixed with an ounce of distilled water, requires for neutralization 1000 grain-measures of volumetric solution of Soda. Evaporated in a platinum crucible, leaves no residue. Diluted with six times its volume of distilled water, it gives no precipitate with Sulphuretted Hydrogen. When a solution of Sulphate of Iron is poured upon it, no purple ring is formed at the surface of the two solutions—indicating absence of fixed impurities, Arsenic and Nitrous Acid. Sulphate of Lead falls in a white precipitate by dilution merely. Arsenic is detected by Sulphuretted Hydrogen; Nitrous Acid by Sulphate of Iron.

Medicinal Properties.

A powerful caustic, and when so used it is made into a paste with an equal

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* True Monohydrated Sulphuric Acid has a sp. g. 1·848.

quantity of charcoal; when diluted it is tonic, refrigerant, astringent, exciting the appetite and promoting digestion; it diminishes night sweating.

(In all the Pharmacopœias, ranging from sp. g. 1·843 to 1·847.)

INCOMPATIBLES.—Alkalies and their Carbonates, Salts of Lead and Lime.

ANTIDOTES.—In case of poisoning by Sulphuric Acid, Magnesia is preferred to Chalk.

Preparation.

ACIDUM SULPHURICUM AROMATICUM. ELIXIR OF VITRIOL. Intense red.

Contains 10·9 per cent. of anhydrous Acid.

Sulphuric Acid, 3; Rectified Spirit, 40; Cinnamon in powder, 2; Ginger in powder, 1¼: mix the acid gradually with the spirit, add the powders, and macerate for seven days, and filter.

Test.—Sp. g. 0·927. Six fluid drachms (304·2 grains by weight) require for neutralization 830 grain-measures of the volumetric solution of Soda, containing therefore 33·2 grains of anhydrous Acid.

Best prescribed alone, to be taken in water.

Dose.—5 to 30 minims.

(U.S. 10·5 per cent.; not in others.)

Not Official.

MYNSICHT'S ELIXIR OF VITRIOL.—Cinnamon, Ginger, Cloves, each 3; Calamus Aromaticus, 8; Galangal, 12; Sage, 4; Peppermint, 4; Cubebs, 2; Nutmeg, 2; Aloeswood, 1; Lemon-peel, 1; Sugar-candy, 32; Rectified Spirit, by weight, 144; Sulphuric Acid, by weight, 96. Digest for three weeks.

Dose.—5 to 10 minims.

ACIDUM SULPHURICUM DILUTUM. Colourless.

Contains 11·14 per cent. of anhydrous Acid.

Sulphuric Acid, 3; Distilled Water, q. s. to measure 35¾: mix gradually; or 1350 grains by weight of Acid, and when the mixture has cooled add Distilled Water sufficient to measure 20 oz.

Test.—Sp. g. 1·094. 6 fluid drachms (359 grains by weight) require for neutralization 1000 grain-measures of the volumetric solution of Soda, indicating 1 equivalent or 40 grains of the anhydrous acid. If the strong Acid contains Sulphate of Lead, it is precipitated when the Acid is diluted.

Six fluid drachms contain one equivalent SO_3, or half an equivalent $\mathbf{SO_3}$.

12 minims contain 1 minim of strong Sulphuric Acid.

Prescribed largely diluted in mixtures: or in cough linctuses, with Confection of Hips and Syrup of Mulberries.

Dose.—5 to 20 minims.

(Ger. and Russ. 1 by weight and 5 of water, sp. g. 1·113–7; Belg. 13·5; Austr. 16·6, sp. g. 1·117; Fr. 1 and 10 by weight; and U.S. sp. g. 1·082.)

Contained in Infusum Rosæ Acidum, 1 in 80.

ACIDUM SULPHUROSUM.

SULPHUROUS ACID.

Sulphurous Acid SO_2, eq. 32, or $\mathbf{SO_2}$ eq. 64, dissolved in water.

Colourless, with a pungent Sulphurous odour; contains 9·2 per cent. by weight, or about 30 times its volume, of Sulphurous Acid gas.

Should be freshly prepared and kept in well-filled blue bottles, as it changes (by long keeping) into Sulphuric Acid.

Test.—Sp. g. 1·040. 34·7 grains mixed with a little mucilage of Starch does not acquire a permanent blue colour with a volumetric solution of Iodine, until 1000 grain-measures of the latter have been added. Evaporated, it leaves no residue. This is a test of its strength, for if there is sufficient Sulphurous Acid, it will convert the whole of the 1000 grain-measures of volumetric solution of Iodine into Hydriodic Acid, which acid does not permanently render Starch blue.

The test of the Pharmacopœia is too high; the best Acid that we find in use is only of the sp. g. 1·020 and about half the strength of that ordered in the British Pharmacopœia.

Medicinal Properties.

It is a powerful deoxidizing agent, disinfecting and antiseptic, and destructive to vegetable life. Dr. Dewar, of Kirkcaldy, has lately published a pamphlet, sold by Simpkin and Co., in which he gives the successful results of its use by a vulcanite spray producer in cases of diphtheria, sore-throat, bronchitis, tooth-ache, and to parts affected with painful neuralgia. For this purpose, it is diluted with 1 or 2 parts of water; this strength will also answer as a lotion for wounds, cuts, ulcers, bed-sores, scalds, and burns; for gargles, 1 to 5 of water; it destroys the germs of fungi in wounds and parasitic lichen on the skin.

Dose.—½ to 1 drm., in a wine-glass full of water, three times a day, relieves constant sickness.

(U.S.; not in others.)

Not Official.

Sulphite of Soda and Hyposulphite of Soda will be found under "Soda;" still as they are used for the purpose of eliminating Sulphurous Acid, they are noticed here.

ACIDUM TANNICUM.

TANNIC ACID.

An acid, $C_{54}H_{22}O_{34}$, or $C_{27}H_{22}O_{17}$, eq. 618, obtained from Galls. In pale yellow amorphous powder or in thin glistering scales.

100 Galls produce 33 Tannic Acid.

Solubility in Water, 10 in 8; in Rectified Spirit, 10 in 8; in Ether, sparingly; in Glycerine, 1 in 3, or if warmed, 1 in 2; also in Olive Oil.

Test.—Exposed to heat it partly melts, swells up, blackens, and at length burns away with a brilliant flame, leaving no residue. The organic matter is first reduced to charcoal, and then burnt away—indicating absence of earthy matters. It strikes a blue colour with persalts of Iron, and precipitates Gelatine, which distinguishes it from Gallic Acid.

Medicinal Properties.

Useful when applied in the dry state to cancer; 1 of Acid dissolved in 6 of Olive Oil, excellent application for burns. 8 grs. in 1 oz. water injected

3 times a day into the nostrils, good in coryza (cold in the head). 60 grs. in 10 oz. of Rose Water to be used with a spray producer for relaxed sore-throat. This may also be injected in chronic gonorrhœa with advantage.

Styptic, astringent, in uterine hæmorrhage, dysentery, and diarrhœa.

Dose.—2 to 10 grs.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Mineral Acids, Alkalies, Salts of Antimony, Lead, Silver, and Persalts of Iron, the Vegetable Alkaloids, Gelatine, and Emulsions.

Prescribed in water, and may be combined with the protosalts (but not with the persalts) of Iron; with Potash, Soda, and Ammonia. 1 minim of Glycerine with 4 grs. make a nice pill. Externally as a styptic, dissolved in Glycerine; as a wash, 5 grs. to 1 oz. of water; in ointments 40 grs. to 1 oz. 60 grs. to 1 oz. of Chalk makes an astringent dentifrice. For an injection, 5 grs. to 1 oz. of water.

Preparations.

GLYCERINUM ACIDI TANNICI. Dark greenish-brown if made with commercial acid; brownish-yellow if with pure.

Tannic Acid, 1; Glycerine, 4. Rub well together, and dissolve by a gentle heat. (By weight 1 in 6, by measure 1 in $4\frac{1}{2}$.)

(U.S. 1 and 4; Fr. 1 and 5 of Glycerine of Starch.)

Dose.—10 to 40 minims.

SUPPOSITORIA ACIDI TANNICI. Light drab.

Tannic Acid, 36 grs.; Benzoated Lard, 44 grs.; White Wax, 10 grs.; Oil of Theobroma, 90 grs. Melt the Wax and Oil with a gentle heat, then add the Tannic Acid and Benzoated Lard previously rubbed together, and mix thoroughly. Pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

Each conical suppository will contain 3 grains of Tannic Acid.

U.S. with Theobroma Oil, and contains 5 grains each.

SUPPOSITORIA ACIDI TANNICI C. SAPONE.

Tannic Acid, 36 grs.; Glycerine of Starch, 50 grs.; Curd Soap, in powder, 100 grs.: mix, and add Starch Powder sufficient, (90 grs.,) to form a mass, to be divided into 12 conical suppositories containing 3 grs. each:

Note.—Suppositories containing 10 grs. each are made as follows:—
Tannic Acid, 60 grs.; Glycerine of Starch, 70 grs.; Castile Soap, 130 grs.; Starch, 130 grs.: mix, and divide into 6. They keep well.

TROCHISCI ACIDI TANNICI. Light fawn.

Tannic Acid, 360 grs.; Tincture of Tolu, $\frac{1}{2}$ oz.; Refined Sugar, 25 oz.; Gum Acacia, 1 oz.; Mucilage Acacia, 2 oz.; Distilled Water, 1 oz. Dissolve the Tannic Acid in the water; add, first the Tincture of Tolu previously mixed with the Mucilage, then the Gum and the Sugar, also previously well mixed. Form the whole into a proper mass; divide it into 720 lozenges, and dry these in a hot-air chamber with a moderate heat.

Each lozenge contains half a grain.

Dose.—1 to 6 lozenges.

(U.S. 1 grain in each.)

Not Official.

SUPPOSITORIUM ACIDI TANNICI CUM OPIO.—Tannic Acid, 3 grs.; Powder of Opium, 1 gr.; Stearine, 11 grs.; mix.

PESSARY OR VAGINAL SUPPOSITORY.—Tannic Acid, 10 grs ; Stearine sufficient to make 2 drms. For one suppository ; used in leucorrhœa.

1 drm. of Tannic Acid in a conical suppository with 7 minims of Glycerine placed in the vagina, and plugged in with a sponge, effectually stops hæmorrhage.

SCHUSTER'S PASTILLES.—Tannic Acid, 30 grs., Opium, 1 gr., Glycerine, q. s. to form suitable cylinders for the male urethra.

ACIDUM TARTARICUM.

TARTARIC ACID. DEXTROTARTARIC ACID.

A colourless crystalline acid, $2HO,C_8H_4O_{10}$, or $H_2C_4H_4O_6$, eq. 150, obtained from the Acid Tartrate of Potash. In oblique, rhombic prisms, of a strongly acid taste.

Solubility in Water, 10 in 8 : in Rectified Spirit, 1 in 8.

Test.—100 grains neutralize 133 grains of Bicarbonate of Potash. 75 grains dissolved in water require for saturation 1000 grain-measures of volumetric solution of Soda. Its aqueous solution is not affected by Sulphuretted Hydrogen, and gives no precipitate with solution of Sulphate of Lime, or Oxalate of Ammonia—indicating absence of metallic contamination, Oxalic Acid, and lime. If free from lime, it should leave no residue when burnt. It is distinguished from all other acids by forming with a solution of neutral salts of Potash a crystalline precipitate (a bitartrate).

Medicinal Properties.

The same as Citric Acid, for which it was once substituted in saline mixtures.

Dose.—10 to 30 grs. in water.

(In all the Pharmacopœias.)

INCOMPATIBLES.—The Alkalies; Salts of Potash, of Lime, of Mercury, and of Lead, and the Vegetable astringents.

When citric acid was very dear, tartaric acid was much employed to make saline draughts, and it frequently perplexed the dispenser, for if the bicarbonate of potash was added to a solution of tartaric acid, bitartrate was immediately formed, and was precipitated, whereas if the tartaric acid was added to the potash salt, it might be added to the point of saturation, and remain perfectly soluble.

Contained in the tartrates of alkalies, antimony, and iron.

ACONITI FOLIA.

ACONITE LEAVES.

HERB.

The fresh leaves, blue flowers, and flowering tops of *Aconitum Napellus*, gathered when about one-third of the flowers are expanded, from plants cultivated in Britain.

Medicinal Properties.

Anodyne. Relieves acute rheumatism, gastrodynia, and carcinoma. It

diminishes expectoration in phthisis, and lessens the frequency of the pulse; has also been found useful in tetanus.

Preparation.

EXTRACTUM ACONITI. Black.

Take 112 pounds of fresh leaves and flowering tops, bruise them, press out the juice, heat it gradually to 130°, and separate the green matter by a calico filter. Heat the strained liquor to 200° to coagulate the albumen, and again filter. Evaporate the filtrate by a water bath to the consistence of a thin syrup; then add to it the green colouring matter previously separated, and stirring the whole together assiduously, evaporate at a temperature not exceeding 140° to a pill consistence.

100 lb. of plant produces 50 lb. of juice = 7 lb. extract, subject to variation.

Dose.—1 to 2 grs.

(Same as Austr.; Belg. ditto, with Sugar of Milk; Fr. from fresh plant without the chlorophyll, also alcoholic, like U.S., from dried leaves.

Not Official.

Succus.—Aconite Herb juice, 3; Rectified Spirit, 1: mix, and after seven days filter.

Dose.—15 to 20 minims.

ACONITI RADIX.

ACONITE ROOT.

The root (a black tap-root) is collected during winter and dried, or imported from Germany; the younger roots, of a lighter colour, are not considered so potent.

Medicinal Properties.

Same as that of the plant, but possessed in a stronger degree. Internally, it lowers the pulse; externally, it relieves rheumatic and neuralgic pain.

Preparations.

LINIMENTUM ACONITI. Brown.

Aconite Root, in powder, 20; Camphor, 1; Rectified Spirit to percolate, 20; moisten the root for three days, then pack in a percolator, and pour sufficient Rectified Spirit upon it to produce with the Camphor 20.

= (1 in 1).

Applied with a camel's-hair pencil alone, or mixed, in equal proportions, with soap liniment or compound camphor liniment, and rubbed on the part, relieves acute neuralgia.

TINCTURA ACONITI. Light Brown.

Powdered Root, 1; Rectified Spirit to percolate, 8; macerate for forty-eight hours with three-fourths of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press the marc and add spirit to make up 8. = (1 in 8).

Dose.—5 to 15 minims twice or thrice a day.

5 minims given every three or four hours, increasing the dose to 20 minims, succeeded in curing a case of neuralgia in the face, when every other remedy tried had failed.

It is said by Dr. Fleming to be less likely to irritate the bowels than the extract.

Two minims of the Tincture subcutaneously injected into the arm with $\frac{1}{3}$ gr. of Acet. Morphiæ, speedily relieved convulsions after labour.

(U.S. 1 in $2\frac{1}{2}$; Russ. 1 and 8; Ger. 1 and 10 Proof Spirit by weight; Austr. Spirituous; Belg. Fr. made with leaves.)

Symptoms of poisoning by Aconite, violent purging, numbness of limbs.

ANTIDOTES.—In case of poisoning by Aconite, the antidotes are emetics, stimulants internal and external.

Not Official.

EXTRACTUM ACONITI RAD. ALCOHOLIC. Same as Ger. and Fr. Dose $\frac{1}{2}$ gr.

CHLOROFORMUM ACONITI. Powdered Root, 20; Chloroform to percolate 20, 1 of this mixed with 7 of Liniment of Aconite, sprinkled on impermeable piline, and applied, or painted on with a camel's hair brush, relieves neuralgia in almost every form.

ACONITIA.

ACONITINE.

An alkaloid, $C_{60}H_{47}NO_{14}$, eq. 533, obtained from Aconite Root. A white, usually amorphous powder.

Solubility 1 in 150 in cold Water, 1 in 50 in boiling Water, more soluble in Alcohol; entirely in pure Ether. Alkaline to test paper.

Test.—When burnt it leaves no residue.

Medicinal Properties.

Not for internal use. It is a very strong poison.

It relieves acute nervous pain when rubbed on the part in the form of ointment, producing a tingling sensation, followed by numbness.

(Austr. Belg. Ger. Russ. and U.S.; not in Fr.)

Preparation.

UNGUENTUM. Cream-colour when fresh, but becomes pinkish when kept.

Aconitia, 8 grs.; Rectified Spirit, $\frac{1}{2}$ drm.; dissolve and add Lard, 1 oz.; mix. =(1 in 60).

A most expensive preparation. The Linimentum Aconiti is reasonable in price and effective.

Not Official.

ACTÆA RACEMOSA.

BLACK SNAKE ROOT.

TINCTURA.

Bruised Root, 1; Proof Spirit, 4; macerate fourteen days, and strain.

Medicinal Properties.—Given internally for neuralgia and rheumatism.

Dose.—30 to 60 minims.

CIMICIFUGIN. The resin obtained from *Actæa racemosa* is given in doses of 1 to 3 or 4 grs., as a nervine tonic and sedative.

ADEPS PRÆPARATUS.

PREPARED LARD.

Syn. AXUNGIA, *Edin.*

Hog's fat deprived of its membranes, and purified by heat.

Take of the internal fat of the abdomen of the hog, perfectly fresh, 14 pounds. Remove as much of the membranes as possible, cut the fat into small pieces, put it into a suitable vessel with about 4 gallons of cold water, and while a current of water is running through the vessel, break up the masses of fat with the hands, exposing every part to the water, so that whatever is soluble may thus be dissolved and carried away. Afterwards, collect the washed fat on a sieve or in a cloth, drain away as much as possible of the water, liquefy the fat at a heat not exceeding 212° and strain through flannel, pressing the residue while hot, then put into a pan heated by steam, and keep it at a temperature a little above 212°, stirring it continually until it becomes clear and entirely free from water; finally strain through flannel.

Soluble entirely in Ether and in Oil of Turpentine; melts at 100° F.

Lard is not adulterated as a rule, but it was frequently prepared in the country with little care, and consequently bad in colour and odour; now, however, it is made upon a very large scale, by London manufacturers, of superior quality.

The Author has found, if the membrane be first carefully picked out from the flare of recently-killed pork, and it is then liquefied over a water bath at a boiling heat, strained through flannel, and again heated until bright and entirely free from water, it keeps better than if prepared by the process directed in the Pharmacopœia.

It is apt to grow rancid by keeping, and mouldy if it contains water.

It is the basis of several ointments.

Medicinal Properties.

Emollient. Added to poultices to prevent their drying and sticking to the skin. Used also in scabies, and to destroy pediculi.

(In all the Pharmacopœias.)

Used in all the ointments, except those prepared with Benzoated Lard; if mixed with Red Oxide of Mercury, it gets blue on keeping.

ADEPS BENZOATUS.

BENZOATED LARD.

Prepared Lard, 16 oz.; Benzoin, in powder, 160 grains: heat together in a water bath for two hours, stirring occasionally, and strain; lastly, stir till cold. (Out of the 160 grs. of Siam benzoin in tears, 50 grs. remain undissolved.) =(1 in 64).

Used for making Suppositories, and for the following Ointments, Galls, Lead, Sulphur, and Zinc.

Keeps well.

Not Official.

ADEPS ODORIFERUS, made by mixing Lard and Magnolia Pomade, in equal weights.

ADEPS OXYGENATUS is made by heating 8 of Lard with 1 Nitric Acid, sp. g. 1·500, added by degrees, and stirring till Nitrous Acid gas is given off, then remove from the fire and continue the stirring until it solidifies. Useful to dilute Citrine Ointment; for when Lard is used it reduces the mercury, and thereby destroys the lemon colour of the ointment. It is, however, found too hard for use in cold weather, and is then better prescribed with half its amount of Almond Oil.

(Ger., Lard 16, Nitric Acid, 1.)

Good Substitutes for Lard are—

LINIMENTUM SIMPLEX (Edin.).—Wax, 1; Olive Oil, 4; liquefied together over a water bath. This does not become rancid for many months.

A mixture of Cacao butter and the best Olive Oil, in equal weights, keeps longer free from rancidity perhaps than any other substitute for lard, and is preferable to it for preparing Zinc Ointment.

Kokum Oil 2, and Oil of Almonds 3 by weight, forms another good substitute, and keeps remarkably sweet. (Olive Oil will not answer.)

An unctuous substance imported from America under the name of Cosmoline, a soft parafine; said to be emollient, and does not become rancid.

ÆTHER ACETICUS.

ACETIC ETHER.

$C_4H_5O, C_4H_3O_3$, or $C_2H_5C_2H_3O_2$.

May be obtained by distilling a mixture of dry Acetate of Soda, 8 parts; Rectified Spirit, 5 parts; Sulphuric Acid, 10 parts; adding the distilled

product to half its weight of Chloride of Calcium in a stoppered bottle; letting them remain together for 24 hours, and then decanting and rectifying the etherial liquid.

Characters and Tests.—A colourless liquid, with an agreeable etherial odour. Sp. g. 0·910. Boiling point 166°. Soluble in all proportions in Rectified Spirit, and in Ether; solubility in water, 1 in 12.

Dose.—20 to 60 mins.

(Austr. Ger. and Russ. sp. g. ·900–4.)

ÆTHER.

ETHER.

Syn. ÆTHER SULPHURICUS, *Edin. Dub.*

Colourless; contains 92 per cent. by volume of pure Ether (Oxide of Ethyl), C_4H_5O, eq. 37, or $\mathbf{C_4H_{10}O}$, eq. 74, with about 8 per cent. of rectified spirit.

Solubility in Water, 1 in 10; freely in Rectified Spirit. It should be diluted with spirit before being administered, it then mixes readily with water.

Test.—Sp. g. ·735. 50 measures agitated with an equal volume of distilled water, are reduced to 45 by an absorption of 10 per cent. It scarcely reddens litmus; agitated with half its volume of a saturated solution of Chloride of Calcium, it is not lessened in bulk—indicating absence of acid and water.

Characters and Properties.

It is colourless, of a strong and sweet odour, hot and pungent in taste. It evaporates speedily in the open air, with the production of considerable cold. When good, it evaporates from the hand without leaving a disagreeable odour. It boils below 105°, and its vapour is very dense and very inflammable. It dissolves Iodine and Bromine freely; Sulphur and Phosphorus sparingly. It dissolves Corrosive Sublimate freely, and if Ether be boiled with Calomel contaminated with it, decanted and evaporated, the crystals of corrosive sublimate are left. It is also a solvent of the volatile and fixed oils, many resins and balsams, caoutchouc, and most of the organic vegetable alkaloids. It does not dissolve Potash and Soda, in which respect it differs from Alcohol. Water dissolves a tenth of its volume of Ether, and reciprocally Ether takes up about the same proportion of water. When water dissolves more than a tenth of its volume, the Ether contains water or Alcohol or both. Ether unites in all proportions with Alcohol.

Note.—Methylated Ether leaves an odour after it has evaporated.

Medicinal Properties.

It is a powerful, diffusible stimulant, expectorant, antispasmodic, and narcotic, is of great use in Dyspnœa. Used to expel flatus from the stomach, and to allay pain and cramp in that organ. In nausea it is given as a cordial. It was used 25 years ago as an anæsthetic,* and is still preferred by some to Chloroform.

Dose.—20 to 40 minims.

(Same as Belg. ·740; Austr. ·730; and Fr. ·723; Ger. Russ. and U.S. ·728.)

Contained in Collodium, Collodium Flexile, and Liquor Epispasticus. Employed in the preparation of Extractum Ergotæ Liquidum, etc.

Preparation.

SPIRITUS ÆTHERIS. Called HOFFMAN'S ANODYNE SPIRIT. Sp. g. ·809.

Ether, 1; Rectified Spirit, 2. =(1 in 3).

Sp. g. ·809.

Dose.—30 to 60 minims.

(U.S. Spiritus Ætheris Compositus, with Ethereal Oil; Belg. Æther Sulphuricus Alcoholicus, sp. g. ·795; Russ. 1 in 3; Ger. 1 in 4, sp. g. ·812; Austr. 1 in 4, sp. g. ·820; Fr. equal weights.)

Prescribed with Camphor Water, and frequently with Sal Volatile or Volatile Tincture of Valerian.

Contained in Tinctura Lobeliæ Ætherea.

Not Official.

SPIRITUS ÆTHERIS MURIATICUS. Sp. g. ·860.

Syn.—SP. SALIS DULCIS; CLUTTON'S FEBRIFUGE SPIRIT.

A very old preparation, and is still prescribed for feverish symptoms.

Dose.—30 to 60 minims.

(Ger. Sp. Etheris Chlorati.)

ÆTHER PURUS.

PURE ETHER.

Ether, C_4H_5O or $C_4H_{10}O$, free from Alcohol and Water; shake 20 of

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* The Author devised the first apparatus for the inhalation of Ether, which he has presented to the Museum of University College. Mr. Liston performed the first capital operation in this country with this apparatus; the patient not suffering the least pain, nor, indeed, after the return of consciousness, could he be persuaded that his leg was off, until he had placed his hand upon the stump.

Ether with 10 of Water in a bottle, and after a few minutes decant the Ether, mix it with 10 of fresh Water, and shake again and again decant. Put the decanted Ether into a retort, with $\frac{1}{8}$ of recently-burnt Lime and 2 of dried Chloride of Calcium; attach closely a receiver, and let them stand twenty-four hours, then distil with a gentle heat.

Boils at 96° F.; density of Vapour, 2·586.

Sp. g. ·720.

(Austr. sp. gr. ·725.)

Medicinal Properties.

Inhaled for surgical operations, 2 oz. will generally suffice for an operation lasting ten minutes if inhaled from a well-constructed inhaler in a room at the temperature of 70° F. to 75°, but not higher; it is also inhaled with great benefit in painful asthma.

The following are the figures of the Apparatus for inhaling Ether, invented by the Author in 1846, and the only modification now made is in the mouth-piece, which is cushioned :—

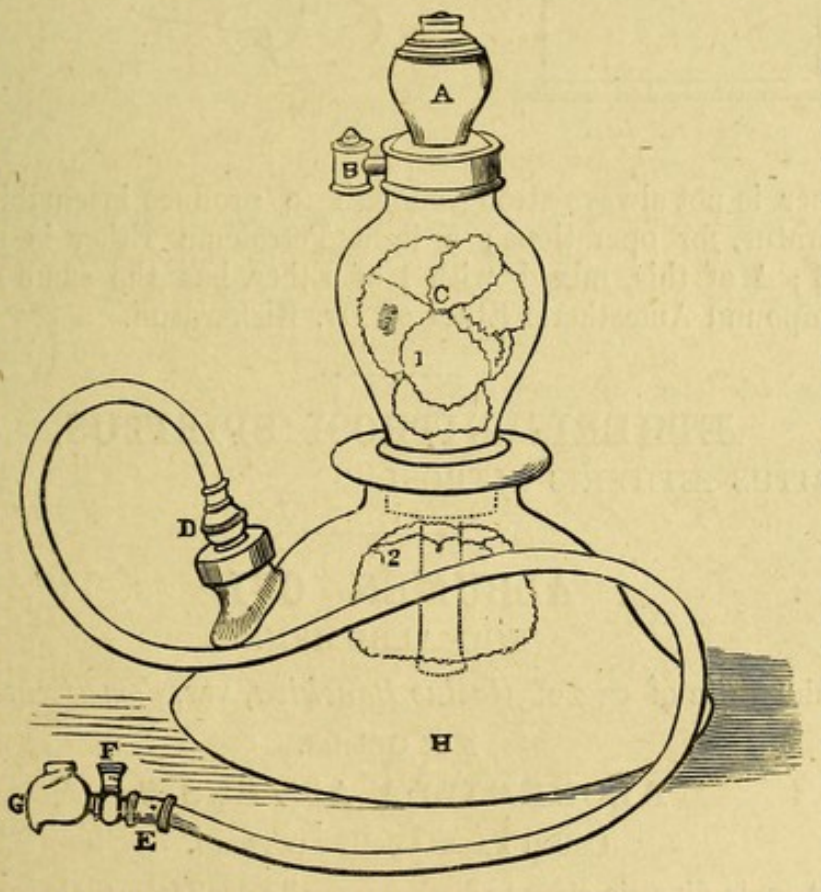

Fig. 1. — A. The urn with its stopper, into which the ether is poured. B. Valve which admits the air. C. Contains sponge saturated with ether. D. Valve which opens at each inspiration, and closes at each expiration. E. Ferrule for regulating the quantity of atmospheric air admitted. F. Valve for the escape of expired air. G. Mouth-piece constructed to close the nose. H. Lower vase.

The larger apparatus is for the table. It is made of glass and consists of two compartments containing sponges and a flexible tube fitted with a mouth-piece. The upper compartment has a stopper, so contrived that the ether may be introduced from time to time without deranging the apparatus. It has a valve, which, when in action, admits the necessary quantity of air; and, when at rest, entirely prevents the escape of ether. The lower compartment is vase-shaped, and from it rises a flexible tube fitted with a mouth-piece; this closes the nose also whilst inhalation is proceeding. There is an adjusting ferrule near to the mouth-piece, for the admission of a small quantity of air at the commencement of inhalation.

The smaller or more portable apparatus consists of a metal cylinder, filled with a spiral arrangement of flannel to absorb the ether, and over the entire surface of which the air has to pass before it is inhaled. (Fig. 2.) The principle of the large inhaler is retained as regards the arrangement of the valves, but in a more compact form.

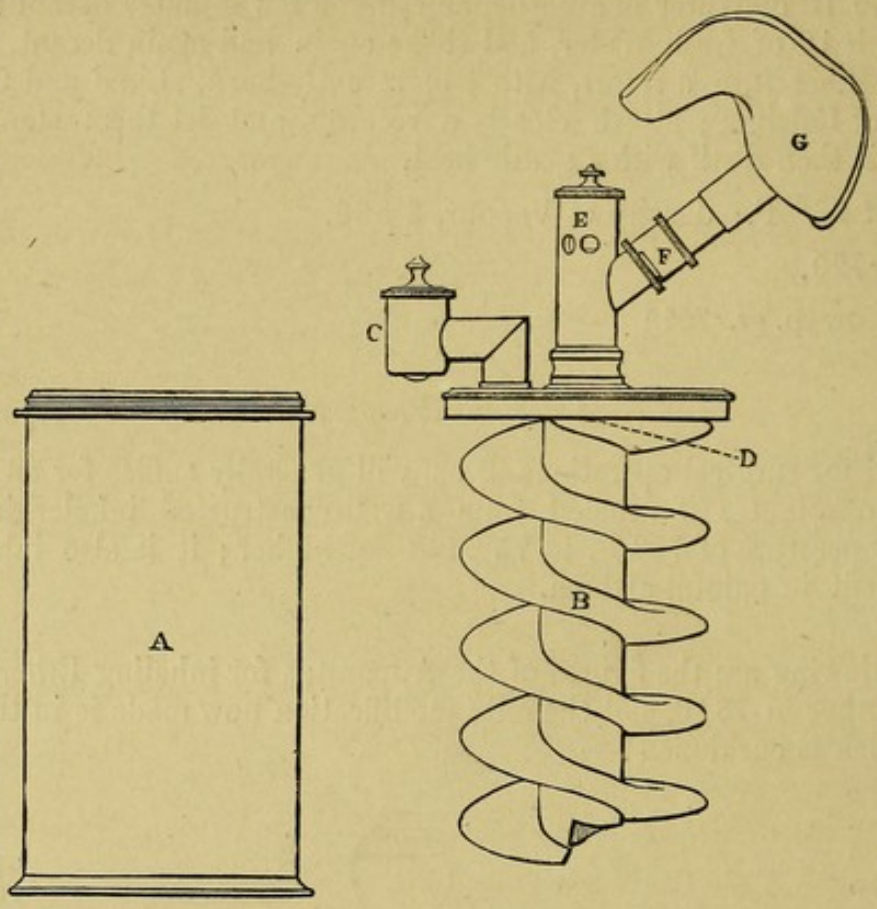

Fig. 2.—A. The cylinder. B. The coil covered with flannel. C. The valve for admitting the air. D. Valve for allowing ether to be inspired. E. Valve for allowing air to be expired. F. Ferrule for regulating the quantity of atmospheric air necessary to prevent coughing. G. The mouthpiece.

This arrangement prevents the troublesome coughing often experienced when the patient is forced to breathe the vapour of ether in a pure state.

The mouthpiece is also fitted with spherical valves to prevent the air expired entering the apparatus. (Fig. 1.)

This Ether is not always strong enough to produce insensibility with the spray apparatus, for operations; a light Petroleum Ether is made, of the sp. g. ·625; 4 of this, mixed with 1 of Ether, has the same sp. g. (·640) as the Compound Anæsthetic Ether of Dr. Richardson.

ÆTHERIS NITROSI SPIRITUS.

See SPIRITUS ÆTHERIS NITROSI.

ALBUMEN OVI.

EGG ALBUMEN.

The liquid white of egg of *Gallus Banckiva*, var. *domesticus*.

Not Official.

ALCHEMILLA ARVENSIS.

Called PARSLEY BREAKSTONE.

Astringent, tonic, diuretic, given to discharge small calculi from the kidney and bladder.

DECOCTUM.—Flower-heads, 1 oz.; Water, 20 oz. Boil ten minutes and strain.

Dose.—A wineglassful three times a day.

ALCOHOL AMYLICUM.

FOUSEL OIL.

Used in the production of Valerianate of Soda.

ALOE BARBADENSIS.

BARBADOES ALOES.

The juice of the leaf of the *Aloe vulgaris*, inspissated; imported from Barbadoes in gourds.

In the Island of Barbadoes they cut the leaves transversely and allow the juice to flow out. This juice is evaporated in boilers to an extract; and if carefully prepared, is of a liver colour.

Solubility: in Water, 75 per cent.

It is found by experiment that the aqueous extract is far more active than is the resinous portion of Aloes; the Barbadoes Aloes containing a larger amount of this than the Socotrine, is perhaps the reason why the Barbadoes is the most purgative. Thus, 2 grs. are equal to 3 grs. of Socotrine.

Medicinal Properties.

Purgative, acting chiefly on the large intestine. Employed as an enema in dislodging ascarides from the rectum, also as a stimulating cathartic in the constipation of amenorrhœa.

Dose.—2 to 4 grs.

(Fr. and U.S.; not in others.)

Contained in Pil. Cambogiæ Comp., Pil. Colocynthidis Comp., and Pil. Colocynthidis et Hyoscyami.

Preparations.

ENEMA ALOES BARBADENSIS.

Barbadoes Aloes, 40 grs.; Carbonate of Potash, 15 grs.; mucilage of Starch, 10 oz.: mix for one enema.

EXTRACTUM ALOES BARBADENSIS. Black.

Barbadoes Aloes, 1 lb., in small pieces, treated with 1 gallon of boiling Water for twelve hours, cooled, and the clear liquor evaporated to dryness.

Dose.—1½ to 3 grs. British Ph. 2 to 6 grs.

(100 of Aloes yield 75 of extract.)

PILULA ALOES BARBADENSIS. Black.

Barbadoes Aloes, in powder, 2; Hard Soap, in powder, 1; Oil of Caraway, ½; Confection of Roses, 1. Mix. =(1 in 2).

Dose.—4 to 8 grs.

Like the Pil. Aloes Diluta of Dr. Marshall Hall.

PILULA ALOES ET FERRI. Intense greenish-brown.

Barbadoes Aloes, 2; Sulphate of Iron, 1½; Compound Powder of Cinnamon, 3; Confection of Roses, 4: mix. 6 of Confection required. =(1 in 5).

Dose. 5 to 10 grs.

Not Official.

ALOINE.—A yellow crystalline substance, obtained from Aloes.

Dose.—1 to 2 grs. in pill.

ALOE SOCOTRINA.

SOCOTRINE ALOES.

The juice of the leaf of one or more undetermined species of Aloe, inspissated.

It is not known exactly how they prepare the Aloes in Socotra. It is supposed that the leaves are boiled, and if that be true it may account for the large quantity of resin they contain, compared with the Barbadoes, for long boiling converts some of the extractive matter into resin.

Usually imported in skins and casks from Bombay; produced in Socotra.

Solubility in Water, 50 per cent,

Medicinal Properties.

Purgative, but slow in action. Given in mesenteric disease and distended bowels: said to aggravate hæmorrhoids. Although the purgative property acts chiefly on the lower portion of the intestinal canal, it produces on the upper part tonic and stomachic effects, when small doses only are given. One grain, with ⅓ gr. Extract of Nux Vomica, is an excellent pill for this purpose and to relieve chronic dyspepsia. Aloes, combined with Rhubarb and Scammony, where there is a defective secretion of bile; with iron and myrrh for amenorrhœa.

Dose.—3 to 6 grs.

(In all the Pharmacopœias.)

Contained in Extractum Colocynth. Co.; Pil. Rhei Co., and Tinct. Benzoini Co.

Preparations.

DECOCTUM ALOES COMPOSITUM. Deep blood-red.

Extract of Socotrine Aloes, 120 grs.; Myrrh, 90 grs.; Saffron, 90 grs.; Carbonate of Potash, 60 grs.; Extract of Liquorice, 1 oz.; Compound Tincture of Cardamoms, 8 oz.; Distilled Water, a sufficiency. Reduce the Extract of Aloes and Myrrh to coarse powder, and put them, together with the Carbonate of Potash and Extract of Liquorice, into a suitable covered vessel with a pint of Distilled Water, boil gently for five minutes, then add the Saffron; let the vessel with the contents cool, then add the Tincture of Cardamoms, and covering the vessel closely, allow the ingredients to macerate two hours; finally strain through flannel, pouring as much Distilled Water over the contents of the strainer as will make the strained product measure 30 oz. More liquorice would make it palatable. 4 grs. in 1 oz. = (1 in 120).

The Compound Decoction is by far the most valuable preparation of Aloes, and not drastic in action, even in large doses.

Dose.—½ to 2 oz. as a mild cathartic, tonic, and antacid. Known to the public as the Baume de Vie.

Extract of Liquorice covers the taste of Aloes better than anything else. The Brit. Ph. increased the Aloes, but did not increase the Liquorice in proportion; the preparation is therefore disagreeably bitter. A small addition of the Liquorice makes it palatable. It is a most valuable aperient; 1 oz. or 1½ oz. equal to 6 grs. Aloes acts naturally without griping, whereas 3 grs. of Aloes in a pill will probably purge and gripe too. A valuable paper on Aloes (*Medical Times and Gazette*, Jan. 4, 1868) records the fact, that a very much larger dose of Aloes can be given in solution than in the solid form.

ENEMA ALOES SOCOTRINÆ.

Socotrine Aloes, 40 grs.; Carbonate of Potash, 15 grs.; mucilage of Starch, 10 oz.: mix for one enema.

As an anthelmintic 3 to 4 ounces only should be used.

EXTRACTUM ALOES SOCOTRINÆ. Black.

Socotrine Aloes, 1 lb.; treated with one gallon of boiling Water for twelve hours, and the clear liquor evaporated to dryness.

Dose.—1½ to 3 grs. Brit. Ph. 2 to 6 grs.

(In all the Pharmacopœias except U. S. 100 of Aloes yield 50 extract.)

The extract being more active than the Aloes, a smaller pill can be given, and it has the advantage of acting more pleasantly.

PILULA ALOES SOCOTRINÆ. Very dark brown.

Socotrine Aloes in powder, 2; Powdered Hard Soap, 1; Volatile Oil of Nutmeg, ⅛; Confection of Roses, 1. Mix. =(1 in 2).

Dose.—5 to 10 grs.

(Belg. and Fr., Pil. Aloes cum Sapone, 1 in 2; U. S. 1 in 2; not in others.)

PILULA ALOES ET ASSAFŒTIDÆ. Brown.

Socotrine Aloes in powder, 1; Assafœtida, 1; Powdered Hard Soap, 1; Confection of Roses, 1. (¼ Confection is sufficient.) Mix. Of each=(1 in 4).

Cathartic and antispasmodic.

Dose.—5 to 10 grains.

(U.S. 1 in 3, omitting Conf. Rosæ; not in others.)

PILULA ALOES ET MYRRHÆ. Reddish-brown.

Socotrine Aloes, 2; Myrrh, 1; Dried Saffron, ½; Confection of Roses, 2½. (3 are required.) Mix. =(1 in 3).

Stimulant and cathartic.

The formula is very old. It was called Pil. Rufi two hundred years ago.

Dose.—5 to 10 grs.

(Fr.; U.S. with Aromatic powder; not in others.)

TINCTURA ALOES. Black.

Socotrine Aloes, 1; Extract of Liquorice, 3; Proof Spirit, 40; macerate seven days, press, and wash the marc with spirit to make 40. =(1 in 40).

Dose.—1 to 2 drms.

(U.S. 1 in 30; Belg. 1 in 6; Fr. with Cape Aloes and Proof Spirit, 1 and 5 by weight; Ger. with Rectified Spirit and without Liquorice, 1 and 5; Russ. 1 and 6 by weight.)

VINUM ALOES. Red.

Aloes, 1½ oz.; Ginger in coarse powder, 80 grs.; Cardamom Seeds, bruised, 80 grs.; Sherry, 40 oz.; digest seven days, strain, and make up to 40 oz. Nearly 2 grs. in each fluid drachm=(1 in 26¾).

Proportions: (very nearly) Aloes 8, Ginger 1, Cardamoms 1, Sherry 214.

Dose.—1 to 2 drms.

(U. S. 1 in 16; not in others.)

ALUMINIUM.

ALUMINUM.

Al; eq. 13·75; **Al**; eq. 27·5.

A silver-white metal, sonorous, and lighter than glass, having sp. g. 2·560. Indicated by Sir Humphry Davy in 1808; made by Wöhler by decomposing its chloride with Sodium in 1828, and first produced in ingots by M. Deville in 1854. It resists the action of Nitric and Sulphuric Acids, but is readily attacked by Hydrochloric Acid. Its oxide, being identical with Sapphire, forms an impermeable crust on the surface of the metal, and protects it from further action of the air. Its use is limited at present to jewellery, but, from its extreme lightness and tenacity, it promises to be much more extensively employed if some means of soldering it together could be discovered.

Neither Aluminum nor Alumina is in the British Pharmacopœia. Alumina, however, is much used to fine turbid medicinal waters, or other solutions, and is easily obtained by adding in excess a solution of Carbonate of Potash to a solution of Alum, and well washing the precipitate.

Roche alum is scarcely ever used.

Fuller's Earth and Armenian Bole are aluminous earths.

ALUMEN.

ALUM.

Sulphate of Alumina and Ammonia, $NH_4O,SO_3,Al_2O_3\,3SO_3,+24HO$, or $\mathbf{NH_4,Al\,(SO_4)_2,12H_2O}$.

Alum is produced by the combustion of Alum Schist, and subsequent exposure to air, and by the addition of Sulphate of Ammonia.

In colourless transparent crystalline masses, exhibiting the faces of the regular octahedron.

Solubility in Water, 1 in 12; in boiling Water, 10 in 8.

Insoluble in Rectified and Proof Spirit.

Test.—Entirely soluble in hot solution of Soda evolving Ammonia. Not coloured blue by a mixture of the Ferrocyanide and Ferridcyanide of Potassium,—indicating absence of Iron.

Medicinal Properties.

Astringent, given internally in ten-grain doses for menorrhagia and in lead poisoning; purgative in drachm doses; emetic in repeated doses. A saturated solution in water forms an excellent styptic for hæmorrhage and leech-bites, nævi, etc.

Prescribed in syrup or treacle, 15 grs. three times a day for internal hæmorrhage; has been known to succeed in bleeding from the kidney when gallic acid has failed; may be combined with kino, etc.; also used as a gargle for relaxed throat; or for an injection in leucorrhœa, etc., 1 to 2 drms. in 6 oz. of water; as a lotion for the eyes in children or adults when there is mucus or purulent matter,—1 to 3 grs. in 1 oz. of water.

(In all the Pharmacopœias.)

Dose.—10 to 15 grs.; a teaspoonful in honey or treacle acts as an emetic.

Preparation.

ALUMEN EXSICCATUM. *Syn.* ALUMEN USTUM. Dried Alum. Opaque white.

Heat the Alum in a porcelain capsule till it liquefies; raise and continue the heat, not allowing it to exceed 400°, till aqueous vapours cease to be disengaged, and then reduce the residue to powder.

100 parts of Alum yield 55 parts of dried Alum.

For external use only. Escharotic, used to remove fungous flesh.

(In all the Pharmacopœias.)

Not Official.

ALUM CATAPLASM.—Alum, 60 grs.; the whites of two eggs.

ALUM GARGLES.—Alum, 1 drm.; Honey, 2 drms.; water, 6 oz.: mix. *Middlesex Hospital.*

Alum, 1 drm.; Tinct. Myrrh, ½ drm.; water, 4 oz. *Consumption.*

ALUM WHEY.—Alum, 120 grs. in a pint of milk.

IRON ALUM is a Sulphate of the Peroxide of Iron and Sulphate of Ammonia or of Potash, and is especially useful in bleeding from the kidneys; it arrests the hæmorrhage and the anæmia that accompanies it; is considered more astringent than alum.

Dose.—5 to 10 grs.

The aqueous solution will, even after filtration, let fall peroxide of iron.

Chloride of Aluminium, called Chlor-Alum, is employed as a disinfectant.

AMMONIACUM.

AMMONIACUM.

A gum-resinous exudation from the stem of *Dorema Ammoniacum*, in tears and masses, of a pale cinnamon colour, brittle, and when broken has a white and shining surface. Collected in Persia and the Punjaub.

Contained in Emplastrum Galbani, and in Pilula Scillæ Composita, Pil. Ipecacuanhæ et Scillæ.

Medicinal Properties.

Antispasmodic, stimulant, expectorant, in chronic catarrh, bronchitic affections, and asthma, either in mixture or in pill.

Dose.—10 to 20 grs.

(In all the Pharmacopœias.)

Preparations.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO. *See* HYDRARGYRUM.

As the value of this preparation depends chiefly upon the Mercury it contains, the formula is given under Hydrargyrum.

MISTURA. A milk-like emulsion.

Ammoniacum, ¼ oz., rubbed down with water, 8 oz. and strain. =(1 in 32).

Dose.—½ to 1 oz. as an expectorant; may be combined with 15 minims of Tincture of Squills, or 15 minims of Fœtid Spirit of Ammonia.

(Same as U.S.; not in others.)

Not Official.

MISTURA AMMONIACI COMP.—Comp. Tinct. Camphor, ½ drm.; Oxymel of Squills, ½ drm.; Ammoniacum Mixture, 1 oz. *Consumption.*

MIST. AMMONIACI IPEC. ET LOBELIÆ.—Ipecac. Wine, 10 mins.; Ethereal Tinct. Lobelia, 10 mins.; Ammoniacum Mixture, Water, of each ½ oz. *Chest.*

AMMONIUM.

AMMONIUM.

NH_4; eq. 18.

Ammonium is the name given to the hypothetical compound metallic base of the Ammonia Salts. It has never been isolated, and it does not seem to be able to exist in an uncombined state.

The reasons for assuming its existence are many. It is capable of replacing the simple metals in most of their combinations, and its compounds present many analogies to those of Potassium. It also forms, under certain circumstances, a very bulky amalgam with Mercury, which, however, soon breaks up into Mercury, Ammonia, and Hydrogen. Its oxide, NH_4O, does not appear to have been separated; but Hofmann has obtained several bodies having exactly this composition, in which all the atoms of Hydrogen are replaced by certain organic radicals. These bodies are almost as powerful alkalies as Potash itself, are free from odour, and furnish perhaps the best arguments in favour of the Ammonium theory.

The Ammonium Salts must, for the most part, be looked upon as Salts of Ammonium in which this compound plays the part of a metal, and on this account the terms Chloride of Ammonium, etc., have been substituted for those formerly used, such as Muriate of Ammonia. The following formulæ will explain the change:—

Muriate of Ammonia,	Chloride of Ammonium,
NH_3HCl.	$\mathbf{NH_4Cl}$.

AMMONII BROMIDUM.

NH_4Br, or $\mathbf{NH_4Br}$; eq. 98.

In small colourless crystals, sublimes unchanged, does not exhibit a blue colour with mucilage of Starch and Chlorine,—showing absence of Iodine.

Solubility in Water, 1 in 1½; in Rectified Spirit, 1 in 13.

Medicinal Properties.

An excellent nervine, good in hysterics; especially useful for sleeplessness of nervous persons where there is no organic disease; relieves neuralgic pain.

For whooping cough, dose for children, 1 to 5 grs. three times a day in water.

Dose.—5 to 20 grains.

(U.S.; not in others.)

INCOMPATIBLES.—Acids and Acid Salts, and Sp. of Nitrous Æther.

Not Official.

GARGLE.—5 grs. to 1 oz. Water, for relaxed larynx.

LOZENGES, 2 grains each, are given to Children for Whooping Cough; are convenient for travellers; dose 1 to 3 lozenges.

AMMONII CHLORIDUM.

CHLORIDE OF AMMONIUM.

Syn. AMMONIÆ HYDROCHLORAS; AMMONIÆ MURIAS; SAL AMMONIAC.

NH_4Cl, or $\mathbf{NH_4Cl}$; eq. 53·5.

Prepared by sublimation; colourless, inodorous, translucent, fibrous masses, tough and difficult to powder.

Solubility in Water, 1 in 4; in Rectified Spirit, 1 in 55.

Test.—When heated it volatilizes without decomposition, and leaves no residue.

Medicinal Properties.

Expectorant in chronic bronchitis, is a cholagogue and emmenagogue; diaphoretic, diuretic, and alterative in rheumatism, useful in portal dropsy, given in doses of 20 or 30 grs. in half a tumbler of cold water every 4 or 6 hours, in scrofulous and syphilitic enlargement of the glands; useful in hepatitis, when the acute stage is passed and suppuration set in. In facial neuralgia, in doses of 30 grains three times a day, and relieves after 4 or 5 doses, otherwise it is of no use to continue it. Externally rubbed moist on corns and warts removes them; as a stimulant and resolvent in bursæ and indolent tumours, also in acne simplex.

Dose.—10 grains in a claret-glassful of cold water, frequently repeated, allays distressing fits of coughing in bronchitis. 10 mins. Sp. Chloroform and 30 of Syrup renders it very palatable.

(In all the Pharmacopœias. Austr. Ger. and Russ. Ammonium Chloratum.)

INCOMPATIBLES.—Alkalies, Alkaline earths, and their Carbonates; Lead and Silver Salts.

Not Official.

DRAUGHT.—Ammonii Chloridi, gr. xv; Tinct. Limon., ♏xlv; Sp. Chloroformi, ♏x; Aquæ, ad ℥iss.

LOTION.—1 oz. with 1 oz. Rectified Spirit and 10 oz. Water: Vinegar is sometimes added, to be applied as a dressing for bruises.

LOZENGES, 2 or 3 grains each, are much resorted to for bronchitis.

Dose.—2 to 4 lozenges.

Not Official.

AMMONII IODIDUM.

IODIDE OF AMMONIUM.

Similar in action to the Iodide of Potassium, but more active.

Dose.—2 to 5 grs. three times a day.

An ointment of it is made with ℥ij to 1 oz. of Lard, to be used night and morning.

AMMONIA.

AMMONIA.

This important compound is chiefly produced artificially, but it exists in some volcanic products, and is discoverable in sea-water. It is found also in putrid urine and in the salts produced by the decomposition of animal matter.

Its history in the form of Sal Ammoniac is very ancient. This salt was manufactured in very early times from soot afforded by the combustion of camels' dung, from which it was obtained by sublimation. The process was chiefly conducted in the neighbourhood of the temple of Jupiter Ammon in Egypt, and to this circumstance it owes its name; it was afterwards obtained either from putrid urine or by the destructive distillation of animal substances.

The chief source at present is the liquor from the gas-works, but the Ammonia produced in this way is apt to contain impurities, particularly the organic bases known as "the compound Ammonias."

The purest form of Ammonia is that obtained as a by-product in the manufacture of Borax. The Boracic Acid of Tuscany, when saturated with Soda, evolves very considerable quantities of pure Ammonia, and the Liquor Ammoniæ and Carbonate of Ammonia, produced in this way, are sold under the names of Volcanic Ammonia, and are to be preferred to all others.

The whole of the Preparations of Ammonia are here grouped.

AMMONIÆ ACETATIS LIQUOR.

SOLUTION OF ACETATE OF AMMONIA. MINDERERUS SPIRIT.

$NH_4O,C_4H_3O_3$, or $N_4C_2H_3O_2$ dissolved in water.

Carbonate of Ammonia $3\frac{1}{4}$ or sufficient. Acetic Acid (28 per cent.) 10; Distilled Water, 50.

Dissolve the Carbonate in the Acid, and add the Water. Colourless.

Should be made with Volcanic Ammonia, and rendered neutral to test-paper by the addition of either ingredient; but the Carbonic Acid should be expelled from the solution by heat before testing, or the test-paper may indicate neutrality when alkali is in excess.

Medicinal Properties.

Diaphoretic and refrigerant. Internally, it increases the secretion by the skin and kidneys, therefore useful in febrile and inflammatory diseases, and in dysmenorrhœa. Externally, in the proportion of 1 to 10 water, as a collyrium in chronic ophthalmia, or mixed with weak spirit for a cooling lotion.

Dose.—2 to 6 drms.

(Same as Austr. U. S., Ger. and Russ., made with Caustic Ammonia. Sp. gr. 1·030.)

A nice fever mixture is made with Liq. Ammon. Acet. ℥ij, Ammon. Carbon. gr. viij, Succ. Limon. ℥ij, Syrup ℥j, Mist. Camphor ℥ss, Aqua ad ℥ij: mix; a fourth part every six hours.

INCOMPATIBLES.—Acids; Potash, Soda, and their Carbonates, Lime Water, Salts of Lead, Silver, and Metallic Sulphates.

AMMONIÆ BENZOAS.

BENZOATE OF AMMONIA.

$NH_4O,C_{14}H_5O_3$, or $NH_4C_7H_5O_2$, eq. 139.

In colourless laminar crystals.

Solution of Ammonia, 3 or a sufficiency; Benzoic Acid, 2; Distilled Water, 4: dissolve and evaporate, keeping the Ammonia in slight excess, and set aside to crystallize; when $3\frac{1}{2}$ of Ammonia is used it makes a neutral salt.

Solubility of the neutral Salt, 1 in 5 of Water; in Rectified Spirit, 1 in 12.

Test.—When heated, it sublimes without residue.

Medicinal Properties.

Diuretic, employed in dropsy, and in gout when chalk-stones are deposited near the joints. It is more soluble than Benzoic Acid, and therefore acts more quickly. Is valuable in catarrhus vesicæ with alkaline urine, also in cases of phosphatic deposit. Benzoic Acid, when taken into the body, appears to take up Glycocol and form Hippuric Acid. The Ammonia does not, like Potash and Soda, pass through the kidneys.

Dose.—10 to 20 grs. in water.

(Same as U. S.; Fr. Benzoate d'Ammoniaque; not in others.)

INCOMPATIBLES.—Persalts of Iron, Liquor Potassæ, and Acids.

AMMONIÆ CARBONAS.

CARBONATE OF AMMONIA.

Sesquicarbonate of Ammonia, $2NH_4O,3CO_2$, 118, or $N_4H_{16}C_3O_8$, 236.

In translucent crystalline masses; volatile and pungent.

Sublimed from a mixture of Chalk and Sal Ammoniac.

Solubility in Water, 1 in 4; in Spirit, sparingly.

Test.—59 grains dissolved in an ounce of Distilled Water are exactly neutralized by 1000 grain-measures of the volumetric solution of Oxalic Acid; 15 grains are neutralized by 17 grains of Citric Acid, or a tablespoonful of Lemon Juice. Volatilizes entirely when heated.

Medicinal Properties.

Antacid, stimulant, sudorific, and expectorant. Frequently combined with Ipecacuanha in bronchitis. Rarely as an emetic in $\frac{1}{2}$ drm. doses.

Dose.—3 to 10 grs. in Camphor Water $\frac{1}{2}$ oz., and Water 1 oz., mixed.

(In all the Pharmacopœias. U. S. Am. Carb.; Austr. Belg. Ger. and Russ. Ammonium Carbonicum; Fr. Carbonate d'Ammoniaque.)

INCOMPATIBLES.—Acids, Acidulous Salts, Earthy Salts, and Lime Water.

Preparations.

SPIRITUS AMMONIÆ AROMATICUS. SP. SAL VOLATILE. Sp. g. ·870. Colourless.

Carbonate of Ammonia, 8 oz.; Strong solution of Ammonia, 4 oz.; Volatile Oil of Nutmeg, 4 drms.; Oil of Lemon, 6 drms.; Rectified Spirit, 6 pints; Water, 3 pints: distil. 7 pints.

Or in parts, thus:—16, 8, 1, $1\frac{1}{2}$, 240, 120: distil 280.

This is a great improvement on the London process; it contains a larger quantity of Carbonate of Ammonia, and does not change in colour by keeping; moreover, it has a most agreeable flavour, and is in the most preferable form for an antacid.

A domestic remedy for nervous headache, combined with Spirit of Chloroform.

Dose.—20 to 60 minims in camphor-water.

(Same as U. S.; Belg. a mixture; Fr. Alcoolatum Aromaticum Ammoniacale with Carbonate; not in others.)

Contained in Tinctura Guaiaci Ammoniata, Tinctura Valerianæ Ammoniata.

Not Official.

Liquor Volatilis Cornu Cervi, or Spirit of Hartshorn.—Saturated Solution of Carbonate of Ammonia of the old Pharmacopœias, distilled from Hartshorn.

Hartshorn and Oil.—3 of Sp. Hartshorn and 4 of Oil of Almonds: mix.

AMMONIÆ CITRATIS LIQUOR.

SOLUTION OF CITRATE OF AMMONIA.

Citrate of Ammonia, $3NH_4O,C_{12}H_5O_{11}$, or $3NH_4C_6H_5O_7$, dissolved in water. Colourless.

Strong Solution of Ammonia, $2\frac{3}{4}$ or sufficient; Citric Acid, 3; Distilled Water 20: dissolve the Acid in the water, and add the Ammonia until the liquid is neutral to test-papers.

Dose.—2 to 6 fluid drms.

(Not in other Pharmacopœias.)

AMMONIÆ LIQUOR FORTIOR.

STRONG SOLUTION OF AMMONIA.

Ammoniacal Gas, NH_3, dissolved in Water, contains 32·5 per cent.

Test.—Sp. g. ·891. About 1 fluid drachm (52·3 grains by weight) requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid. When diluted with four times its volume of Distilled Water, it does not give precipitates with solution of Lime, Oxalate or Hydrosulphuret of Ammonia, or Ammonio-Sulphate of Copper, and when treated with an excess of Nitric Acid is not rendered turbid by Nitrate of Silver or by Chloride of Barium—indicating freedom from carbonates, lime, metals, sulphides, chlorides, and sulphates.

1 fluid drachm contains 15·83 grains of Ammonia.

(U. S. ·900, 26 per cent.; Belg. Ammonia Liquida, ·935. 17 per cent.: Fr Ammoniaque Liquide, ·920; not in others.)

Contained in Linimentum Camphoræ Compositum.

Best given in the form of Liq. Ammoniæ.

Preparations.

LINIMENTUM AMMONIÆ. A semi-solid cream.

Solution of Ammonia, 1: Olive Oil, 3: mix. =(1 in 4).

A counter-irritant.

(Fr. 1 in 9; Ger. and Austr. 1 in 5; Belg. 1 in 10, Fort. 1 in 5; U. S. 1 in 3.

LIQUOR AMMONIÆ. SOLUTION OF AMMONIA. Sp. g. ·959. Colourless.

Strong Solution of Ammonia, 1; Water, 2: mix. =(10 per cent.).

1 fluid drachm contains 5·2 grains of Ammonia.

(Same as Austr. Ammonia Pura Liquida; Ger. and Russ. Liquor Ammonii Caustici, U.S. Aqua Ammoniæ;—Belg. and Fr. Liq. Amm. Fort. only.)

Medicinal Properties.

Stimulant antacid and antispasmodic; relieves nervous headache, and is useful in pneumonia, bronchitis, and dyspepsia. Counteracts the after-effects of alcohol and delirium tremens. Stimulant in low states of the system, as typhoid forms of fever. Externally (applied to the nostrils) in syncope; excellent application to the sting of a wasp or the bite of the adder. On the skin it is a powerful rubefacient, and as an embrocation a counter-irritant in pains and stiffness of joints, etc.

Dr. Halford injected 30 minims of Liquid Ammonia into the veins for snake bites;—the operation requires great care, using a six-minim syringe; it should only be used in almost hopeless cases.

Dose.—10 to 20 minims in some bland fluid. Dr. Tyler Smith injected into the vein of the right arm 8 minims with 24 minims of Water, when the patient was sinking from puerperal fever, and she recovered. Half an ounce swallowed by mistake caused death by suffocation.

Not Official.

TINCT. AMMON. COMP.—EAU DE LUCE.—Mastic, 2 drs.; Rectified Spirit, 9 drs.; Ol. Lavand., 14 min.; Strong Liquor Ammoniæ, 20 oz.: dissolve. Stimulant, antispasmodic.

Dose.—5 to 10 minims in water.

LOTIO CRINALIS.—Ol. Amygdal., 1 oz.; Liq. Ammon. Fort., 1 oz.; Sp. Rosmar. 4 oz.; Aq. Mellis, 2 oz.: mix.

SPIRITUS AMMONIÆ FŒTIDUS.

FETID SPIRIT OF AMMONIA.

Colourless when first made; becomes yellow by keeping.

Strong Solution of Ammonia, 2; Assafœtida in small pieces, 1½; Rectified Spirit, sufficient; macerate the Assafœtida in 15 of Spirit twenty-four hours, distil, add the distillate to the Ammonia and make up with Spirit to 20.

Medicinal Properties.

Stimulant, antispasmodic, combined with Ammoniacum mixture excellent for catarrh and asthma of old people.

Dose.—½ to 1 drachm.

(Not in other Pharmacopœias.)

INCOMPATIBLES.—Acids, and Acidulous Salts.

Not Official.

HAUSTUS AMMONIACI FŒTIDUS.—Fetid Spirit of Ammonia, 15 mins.; Ammoniacum Mixture, 1½ oz. *St. Bartholomew's.*

AMMONIÆ NITRAS.

NITRATE OF AMMONIA.

NH_3,NO_5,HO or $\mathbf{NH_4NO_3}$.

Produced by neutralising diluted nitric acid with solution of ammonia or carbonate of ammonia, evaporating the solution until crystals are obtained, and keeping these fused at a temperature not exceeding 320° until the vapour of water is no longer emitted.

Characters and Tests.—A white deliquescent salt, in confused crystalline masses, having a bitter acrid taste. Soluble in less than its own weight of water, and sparingly soluble in rectified spirit. A solution of one part in eight parts of distilled water gives no precipitate with solution of nitrate of silver or of chloride of barium. Heated with caustic potash, it evolves ammonia; with sulphuric acid it emits nitric acid vapour. It fuses at a temperature of 320°, and at 350° to 450° it is entirely resolved into nitrous oxide gas, NO or $\mathbf{N_2O}$, and the vapour of water.

(U. S.; not in others.)

AMMONIÆ PHOSPHAS.

PHOSPHATE OF AMMONIA.

$2NH_4O,HO,PO_5$; or $\mathbf{(NH_4)_2HPO_4}$; eq. 132.

In colourless transparent prisms, which, upon exposure to air, lose Water and Ammonia, and become opaque.

Strong Solution of Ammonia, 8; Dilute Phosphoric Acid, 20; add the Ammonia to the Acid until it is alkaline, then evaporate by a gentle heat, and crystallize.

Solubility in Water, 1 in 2; insoluble in Rectified Spirit.

Test.—If 20 grains be dissolved in water, and the solution of Ammonio-sulphate of Magnesia be added, a crystalline precipitate falls, which, when well washed upon a filter with solution of Ammonia diluted with an equal volume of water, dried, and heated to redness, leaves 16·8 grains. The crystalline precipitate is the Ammonio-phosphate of Magnesia, and when this is heated to redness the Ammonia is driven off, and the Phosphate of Magnesia is left.

Medicinal Properties.

Diaphoretic and discutient. Given in gout and rheumatism to render the urates of soda and lime in the urine soluble. Of great value in cases of uric acid calculus.

Dose.—5 to 20 grs. 3 or 4 times a day in water.

(Belg.; Ger. Ammonium Phosphoricum; not in others.)

Should not be prescribed in too condensed a form when tinctures form part of the mixture, on account of its sparing solubility in spirituous menstrua.

AMYGDALA AMARA.

BITTER ALMONDS.

The seed of the bitter almond tree, brought from Mogadore.

Introduced only for expressing the oil from it.

Not Official.

MISTURA AMYGDALÆ AMARÆ.—Made in the same proportions as Mistura Amygdalæ.

Useful in cough, and as a lotion to allay itching of the skin. It was a favourite vehicle for giving tartarized antimony, in doses of ⅛ grain, to subdue inflammatory action of the lungs and relieve cough. The mixture contains a variable amount of prussic acid.

Dose.—½ to 1½ oz.

AMYGDALA DULCIS.

JORDAN ALMONDS.

The seed of the sweet almond tree, *Amygdalus communis*, cultivated about Malaga.

Test.—Not bitter nor evolving the odour of Bitter Almonds when bruised with water.

Medicinal Properties.

Demulcent; useful in catarrhal affections. Dr. Pavy has proposed, as a substitute for bread or starchy food for diabetic patients, cakes made of Sweet Almonds, and these are at present sold.

(Both Bitter and Sweet Almonds are contained in all the Pharmacopœias.)

Preparations.

MISTURA AMYGDALÆ. Like milk.

Compound Powder of Almonds, 1; water, 8: triturate and strain.
=(1 in 8).

A vehicle for cough medicines.

Dose.—1 to 2 oz.

(U.S. 1 in 16; Fr. Emulsion Simple; not in others.)

OLEUM AMYGDALÆ. Pale yellow.

The oil obtained by pressure from either Bitter or Sweet Almonds.

Dose.—2 to 4 drms.

(In all the Pharmacopœias.)

1 oz. Oil, with ½ oz. Mucilage, ¼ oz. Sugar, and 6 oz. of Distilled Water, makes a nice cough mixture.

Contained in Unguentum Cetacei; Unguentum Simplex. Used in preference to Olive Oil, as it makes a whiter ointment.

Equal parts of this, and Lime water scented with Lemon, is sold for Glycerine and Lime juice.

PULVIS AMYGDALÆ COMPOSITUS. A pale straw-coloured coarse powder.

Blanched Jordan Almonds, 8; Refined Sugar, 4; Gum Arabic, 1: rub the almonds into a paste, then add the sugar and gum previously mixed; rub lightly together, and pass through a coarse sieve.

Dose.—60 to 120 grs.

(Not in other Pharmacopœias.)

AMYL NITRIS.

NITRITE OF AMYL.

$C_{10}H_{11}O,NO_3$ or $C_5H_{11}NO_2$.

Produced by the action of nitric or nitrous acid on amylic alcohol.

Characters and Tests.—An ethereal liquid of a yellowish colour, and peculiar, not disagreeable odour. Specific gravity, 0·877. Boiling point, 205°. Insoluble in water. Soluble in rectified spirit in all proportions. If it be added drop by drop to caustic potash while fused by the application of heat, valerianate of potash will be formed.

Medicinal Properties.

Anodyne, useful in Asthma, and for Angina Pectoris.

Dose.—By inhalation, the vapour of 2 to 5 minims, to be used with caution.

(Not in other Pharmacopœias.)

AMYLUM.

WHEAT STARCH.

Starch procured from the seed of common wheat. In white columnar masses, which become blue with a solution of Iodine.

Medicinal Properties.

A good application to the face and hands, when affected by cutaneous eruptions. In the form of violet powder, which is merely scented starch, it is useful to prevent the low inflammation that may be caused by the chafing of the skin of fat infants.

(In all the Pharmacopœias; Fr. Amidon.)

Preparations.

GLYCERINUM AMYLI. PLASMA. An opaque, soft-solid jelly.

Starch, 1; Glycerine, 8. (By weight 1 in 11, by measure 1 in 9).

Rub them well together, then heat the mixture gradually to 240°, constantly stirring until a translucent jelly is formed.

(Fr. Glycéré d'Amidon, by weight 1 in 16. Ger. Starch 2, Water 1, Glycerine 10.)

MUCILAGO AMYLI.

Starch, 1; Distilled Water, 40; boil with stirring, for a few minutes. (= 1 in 40).

Used in enemas, either in large quantity as a vehicle for purgatives, or in small quantity for sedatives or astringents which are to be retained and absorbed. As an enema *per se*, it is soothing and slightly astringent, and is useful in typhoid fever, when the object is rather to regulate than arrest the diarrhœa. It is used extensively to stiffen bandages for fractures, etc.

(Belg. Decoctum, 1 in 25; not in others.)

Not Official.

AMYLUM IODATUM, *Belg.*—Iodine, 1; Starch, 10; Alcohol, 10. Dissolve the iodine in the alcohol; mix gradually the starch by rubbing in a glass mortar; moisten the mixture with a little cold water, place it in a bolt-head surrounded by hot water for two or three hours, shaking occasionally; when cold, wash with weak alcohol, and dry with a gentle heat.

ANETHI FRUCTUS.

DILL FRUIT.

The fruit of *Anethum graveolens*, cultivated in Britain or imported from Southern Europe.

Medicinal Properties.

Stimulant, aromatic, and carminative: chiefly given to children in cases of flatulency or hiccough.

(Fr. Aneth; not in others.)

Preparations.

AQUA ANETHI.
Bruised Fruit, 1; Water, 20; distil, 10. =(1 in 10).

(Not in other Pharmacopœias.)

Dose.—½ to 1 oz.

A vehicle to cover the taste of soda salts.

OLEUM ANETHI. Pale straw-colour.
The oil distilled in Britain from the fruit. Sp. g. ·977 to ·990.

Dose.—1 to 4 minims, on sugar.

(Not in other Pharmacopœias.)

ANISI OLEUM.

OIL OF ANISE.

The oil distilled in Europe from the fruit of the *Pimpinella Anisum*, or from the fruit of the *Illicium Anisatum*, Star Anise, imported from China.

Test.—Concretes at 50° F. Is colourless and highly refractive. Sp. g. ·980.

Medicinal Properties.

Stimulant, aromatic, and carminative: used to relieve flatulence, and to diminish the griping of purgative medicines.

Dose.—1 to 4 minims, on sugar.

(In all the Pharmacopœias.)

Contained in Tinctura Camphoræ Comp., and Tinctura Opii Ammoniata.

ESSENTIA ANISI. Colourless.
Oil of Anise, 1; Rectified Spirit, 4: mix. = (1 in 5).

(Not in other Pharmacopœias.)

Dose.—10 to 20 minims.

ANTHEMIDIS FLORES.

CHAMOMILE FLOWERS.

The dried flower-heads of the *Anthemis nobilis*, single and double, wild and cultivated.

Medicinal Properties.

Tonic, aromatic, and stomachic, In large doses, emetic. Useful in atonic dyspepsia.

(In all the Pharmacopœias.)

Preparations.

EXTRACTUM ANTHEMIDIS. Black.

Chamomile Flowers, 1 lb.; Oil of Chamomile, 15 minims; Distilled Water a gallon: boil the chamomile in the water till the volume is reduced to one-half, then strain, press, and filter; evaporate the filtered liquor by a water bath to a pill consistence, adding the oil of chamomile at the end of the process.

Dose.—2 to 10 grains.

(Same as Fr. Camomille; Austr. with spirit; not in others.)

INFUSUM ANTHEMIDIS.

Chamomile Flowers, ½; boiling Water, 10: infuse for fifteen minutes. = (1 in 20).

Dose.—As a stomachic, 1 to 3 oz., as an emetic, 5 to 10 oz.

(U. S. 1 in 32; Fr. 1 in 200; not in others.)

OLEUM ANTHEMIDIS. Greenish at first, and changes to yellow.

Distilled in Britain from the flowers.

Dose.—2 to 4 minims.

(In all the Pharmacopœias except U. S.)

Stimulant and carminative. Prescribed in pills with rhubarb or other powder.

1 cwt. of flower-heads yield about 1½ oz. essential oil.

ANTIMONIUM.

ANTIMONY.

Sb; or **Sb**; eq. 122.

Of a silvery-White colour, brittle and crystalline. Sp. g. 6·7.

This metal rarely occurs native, but generally as the black sulphuret, the Stibium of the ancients. It was first made known in the metallic state by Basil Valentine towards the end of the fifteenth century. It is prepared on the large scale by roasting the sulphuret (mixed with charcoal to prevent caking) until it is converted into oxide, which is then reduced by means of charcoal and carbonate of potash. It is extensively employed in the manufacture of type-metal and the alloy known as Britannia metal. It melts at about 800° F., and as the ingot cools its surface has a beautiful stellated appearance; the alchemist considered this star as a mysterious guide to the secrets of transmutation. It is volatile at a white heat.

ANTIMONII OXIDUM.

OXIDE OF ANTIMONY.

Teroxide of Antimony, SbO_3, eq. 146; or Sb_2O_3, eq. 292.

A white powder, fusible at a low red-heat.

Prepared by decomposing a solution of Terchloride of Antimony with Carbonate of Soda.

Test.—Does not yield any sublimate when fused in a test-tube; dissolves entirely when boiled with an excess of Acid Tartrate of Potash—indicating absence of Arsenic, and other impurities.

Medicinal Properties.

Diaphoretic. Less active than the tartrate.

Dose.—1 to 3 grs. in a pill.

(Same as U. S. and Fr. par précipitation; Belg. Antimonium Depuratum; Austr. Antimonium Oxidatum; not in others.)

Preparation.

PULVIS ANTIMONIALIS. A white powder.

Oxide of Antimony, 1; precipitated Phosphate of Lime, 2: mix. =(1 in 3).

Dose.—2 to 6 grs.

(Same as Fr. Poudre Antimoniale de James; Belg. by calcination; not in others.

Introduced as a substitute for the celebrated James's Fever Powder. The analyses which have been made from time to time of James's Powder do not indicate anything very mysterious in its composition. It appears to consist mainly of Antimonious Acid, Phosphate of Lime, and perhaps a little Oxide of Antimony. We cannot suppose that there is any chemical combination between the Phosphate of Lime and the Antimonious Acid. It is probably a mere mixture of the two, and if so, it is difficult to see what part the Phosphate of Lime plays in its medicinal action. It is by no means established that the patent medicine is superior to the preparation of the London Pharmacopœia, and it is a question whether some definite antimonial compound like the potassio-tartrate is not superior to such empirical mixtures as James's Powder and its imitations. It is surely only a relic of past ages to go on in this way. If the object be to imitate James's Powder, the preparation of the British Pharmacopœia is further off than ever, as it contains Oxide of Antimony, while Antimonious Acid makes up the bulk of the quack medicine. But it may perhaps be a better preparation, and might be still better if the Oxide of Antimony, a substance of perfectly definite composition, were made to take the place of these mixtures altogether.

ANTIMONII CHLORIDI LIQUOR.

SOLUTION OF CHLORIDE OF ANTIMONY.

Terchloride of Antimony, $SbCl_3$, eq. 228·5, dissolved in Hydrochloric Acid.

Prepared by boiling Black Sulphuret of Antimony in Hydrochloric Acid. A yellowish-red liquor; introduced chiefly for the purpose of preparing the Oxide of Antimony.

Test.—Sp. g. 1·470. 1 drm. mixed with a solution of ¼ oz. of Tartaric Acid in 4 oz. of water, forms a clear solution, which, if heated with Sulphuretted Hydrogen, gives an orange precipitate, weighing, when washed and dried at 212° F., at least 22 grs. (Golden Sulphuret of Antimony.)

Medicinal Properties.

A caustic; it usually acts without causing much pain or inflammation, and after the separation of the eschar forms a clean healthy ulcer. Sometimes applied to cancerous growths. Never used internally.

(Austr. Butyrum Antimonii, sp. g. 1·35; Belg. Stibii Liquidum, sp. g. 1·44; Fr. Beurre d'Antimoine; not in others.

ANTIMONIUM NIGRUM.

BLACK ANTIMONY.

Syn. PREPARED SULPHURET OF ANTIMONY.

Native Sulphide of Antimony, SbS_3, or Sb_2S_3, purified from Siliceous matter by fusion, and afterwards reduced to fine powder.

Dissolves entirely in Hydrochloric Acid, evolving Sulphuretted Hydrogen.

Used only to procure Sulphuretted Hydrogen, and to make Antimonium Sulphuratum and Liquor Antimonii Chloridi.

ANTIMONIUM SULPHURATUM.

SULPHURATED ANTIMONY.

Syn. ANTIMONII OXYSULPHURETUM; ANTIMONII SULPHURETUM AUREUM; ANTIMONII SULPHURETUM PRÆCIPITATUM.

Tersulphuret of Antimony, SbS_3, or Sb_2S_3, an orange-red powder, with a small and variable amount of Teroxide of Antimony, SbO_3 or Sb_2O_3.

A bright orange or golden-red powder, without odour and with a slight taste.

Insoluble in Water, readily dissolved in Caustic Soda; also in Hydrochloric Acid.

Test.—60 grains dissolved in Hydrochloric Acid, and dropped into water, give a white precipitate which, when washed and dried, weighs about 53 grains (Oxychloride of Antimony). When heated with 12 times its weight of Hydrochloric Acid (sp. g. 1·160) with the aid of heat, it is nearly all dissolved, with the evolution of Sulphuretted Hydrogen. Exposed to heat, it takes fire, and burns with a greenish-blue flame, giving off sulphurous acid gas; the metal remains as a greyish oxide.

Medicinal Properties.

Alterative, diaphoretic, and emetic; uncertain in action from its slight solubility, depending on the acidity of the stomach. Usually prescribed with Calomel and Guaiacum, as in Pilula Hydrargyri Subchloridi Composita, for secondary syphilis and cutaneous eruptions; or with Henbane or Hemlock in chronic rheumatism.

Dose.—1 to 5 grs. in pill.

(U. S. Antimonium Sulphuratum; Fr. Sulfure d'Antimoine; Austr. Belg. Ger. Stibium Sulphuratum Aurantiacum.)

Contained in Pilula Hydrargyri Subchloridi Composita.

ANTIMONIUM TARTARATUM.

TARTARATED ANTIMONY.

In colourless transparent crystals, exhibiting triangular facets.

Tartrate of Antimony and potash, $SbO_3,KO,C_8H_4O_{10}+2HO$, or $KSbC_4H_4O_7H_2O$, eq. 343.

A double salt, being a Tartrate of Antimony and Tartrate of Potash, with two equivalents of water.

Oxide of Antimony, 5; Acid Tartrate of Potash, 6; Distilled Water, 40. Dissolve and crystallize.

Solubility: in cold Water, 1 in 20; in boiling Water, 1 in 2; partially soluble in Proof Spirit; insoluble in Alcohol.

Test.—20 grs. dissolve without residue in a fluid ounce of distilled water at 60° F., and the solution gives with Sulphuretted Hydrogen an orange precipitate which, when washed and dried at 212° F., weighs 9·91 grs. (Golden Sulphuret of Antimony.)

Medicinal Properties.

Diaphoretic, expectorant, depressant, and emetic. Relieves the chest in pneumonia and in bronchitis. In continued small doses it relaxes, and causes increased secretion from the mucous membranes and skin, and is a *depressant* to the whole vascular system.

As a febrifuge, it is given either in aqueous solution, or as Vinum or Pulvis Antimonialis. In repeated small doses it is used in midwifery in cases of rigidity of the os uteri, or heat and dryness of the passages.

Externally, in the form of ointment, it acts as a powerful irritant to the skin, producing a pustular eruption. Is used as a counter-irritant for children: it should, however, be applied with great caution, both on account of its highly irritant properties, and its liability to be absorbed into the system.

Dose.—As a diaphoretic, $\frac{1}{16}$ to $\frac{1}{6}$ gr.; as a depressant, $\frac{1}{6}$ to 1 gr.; as an emetic, 1 to 2 grs.

(Same as Belg. Antimonium Tartarizatum; Austr. Kalium Stibiato-Tartaricum; Ger. Tartarus Stibiatus; Fr. Tartrate de Potasse et d'Antimoine; U. S. Antimonii et Potassæ Tartras.)

INCOMPATIBLES.—Gallic and Tannic Acids, Alkalies and Lead Salts. Astringent infusions, as Bark, Rhubarb, etc.

ANTIDOTES.—In case of poisoning by Tartar Emetic, the antidotes are, Tannic Acid, Catechu, vegetable astringents.

Preparations.

UNGUENTUM ANTIMONII TARTARATI. White.

Tartarated Antimony in fine powder, 1; Simple Ointment, 4: mix. =(1 in 5).

(Same as U. S. Ung. Antimonii; Austr. Ung. Autenriethi; Ger. and Russ. Ung. Tartari Stibiati; Fr. Pommade Stibiée, all 1 and 4; Belg. Ung. Tartari Stibiati, 1 in 8.)

VINUM ANTIMONIALE. Pale yellowish-brown.

Tartarated Antimony, 2 grs.; Sherry, 1 oz. =(1 in 240).

Note.—The Tartarated Antimony does not dissolve in the Sherry readily; it is better to dissolve it in about ten times its weight of hot water, and then add the wine.

Each fluid drachm contains ¼ gr.

Dose.—5 to 30 minims as a diaphoretic, in saline mixtures combined with Mindererus Spirit to relieve cough. 2 mins. for a child one year old.

(In all the Pharmacopœias, and of the same strength nearly; U. S. Vinum Antimonii; Ger. Vinum Stibiatum, 1 in 250; all with Sherry; Austr. V. Stibiato-Tartaricum, 1 in 250; Belg. V. Antimoniatum, and Fr. Vin Émétique; 1 in 300; Russ. V. Stibio-Kali Tartarici, 1 in 240; all with Malaga wine.)

AQUA.

WATER.

The Pharmacopœia orders the purest Water that can be obtained, cleared, if necessary, by filtration. It must be remembered that water obtained in different localities varies much in respect to its purity, and that the earthy and saline matters *actually dissolved* in it cannot be separated by filtration alone.

The purest water is from the Wenham Lake ice and the Norwegian ice. After these may be taken Distilled Water and snow-water. Rain-water contains about a millionth part of Ammonia, and probably about the same amount of Chloride of Sodium. The following table will show how great a difference exists in the quantity of Lime and saline matters dissolved in various natural waters:—

Loch Katrine, supplying Glasgow, contains				2 grs.	in the gallon.
River Dee	„	Aberdeen	„	4	„
„ Tay	„	Perth	„	5	„
Water supplied to Liverpool			„	5	„
Claremont water			„	5·7	„
Farnham, in Surrey			„	7·25	„
Thames, supplying London			„	19 to 22, according to locality.	
Water supplied to Watford			„	22·75	„
Spring water			„	40 to 60	„
River Jordan			„	75	„

Seawater, shores of the Baltic	contains	1100 grs.	in the gallon.
„ Frith of Forth	„	2100	„
„ off Boulogne	„	2240	„
„ German Ocean	„	2380	„
„ open Atlantic, Canaries	„	2450	„
„ English Channel, near Havre		2520	„
„ „ Bayonne	„	2660	„
„ Mediterranean, Marseilles	„	2870	„
Dead Sea Water (sp. g. 1·211)	„	17200	(Marcet).

Professor Clark, of Aberdeen, invented a soap test, made by dissolving 1 oz. of white curd soap in 1 gallon of proof spirit, to ascertain the amount of Lime in water; and proposed a method of softening all waters impregnated with carbonate of lime, held in solution by carbonic acid, by adding just so much lime-water as is capable of uniting with the carbonic acid. The whole of the carbonate of lime in the water, as well as that produced by the action of the carbonic acid upon the lime-water added, is precipitated, leaving the water comparatively pure. By this process three-fourths of the hardness of Thames water is removed; and the water from the Chalk which rises at Watford is reduced by Clark's process from 18 degrees of hardness to 2 or 3 degrees. Care, however, must be taken not to add more lime-water than is just sufficient for the purpose, otherwise this agent will contaminate the water. For further particulars the reader is referred to the 'Pharmaceutical Journal,' vol. vi. p. 526.

The Thames water, when supplied for long voyages, after being kept in tanks about four months, undergoes a kind of fermentation, which lasts for a few weeks, and after this change the water becomes bright, pleasant to drink, and will keep for months or years without further change, a property which scarcely belongs to any other river water.

Attention has been drawn to the contamination of drinking waters by the infiltration of sewage; and several wells, previously esteemed for the brilliant and cool taste of the water, have since been abandoned as being totally unfit for drinking or culinary purposes.

AQUA DESTILLATA.

Purest water distilled through a block-tin worm, rejecting the first portion that comes over.

Distilled water has, when freshly drawn, an unpleasant odour, which is removed by passing it through a charcoal filter, or by exposing it to air, but Carbonic Acid is in that case absorbed by it, and Subacetate of Lead will then render it milky. If water is distilled through leaden pipes, it becomes impregnated with lead; the same is the case with natural soft water passing through leaden pipes. The royal buck-hounds were poisoned at Ascot from this cause. Zinc wire reaching the whole length of the column of water so impregnated displaces the Lead. Water containing Sulphate of Lime seems less likely to become impregnated with Lead than that containing the Chlorides.

The Waters of the British Pharmacopœia, which are all distilled, except Aq. Camphoræ, are as follow; the formulæ are given under the names of the substances from which they are prepared.

AQUA ANETHI. From the dried fruit.	Dose, ½ to 1 oz.
AQUA AURANTII FLORIS. From the flowers. Imported.	½ to 1 oz.
AQUA CAMPHORÆ. (Formerly Mistura Camphoræ.)	1 to 2 oz.
AQUA CARUI. From the dried fruit.	1 to 2 oz.
AQUA CINNAMOMI. From the bark.	½ to 1 oz.
AQUA DESTILLATA.	
AQUA FŒNICULI. From the dried fruit.	1 to 2 oz.
AQUA LAUROCERASI. From fresh leaves.	5 to 30 min.
AQUA MENTHÆ PIPERITÆ. With oil and distilled.	1 to 2 oz.
AQUA MENTHÆ VIRIDIS. With oil and distilled.	1 to 2 oz.
AQUA PIMENTÆ. From the dried unripe berries.	1 to 2 oz.
AQUA ROSÆ. From the fresh petals.	½ to 1 oz.
AQUA SAMBUCI. From the fresh flowers.	½ to 1 oz.

It was thought proper in former Pharmacopœias to add spirit to the several distilled Medicated Waters, to preserve them from change, but Mr. Warington has shown, by experiment, that this is an error. He kept bottles of Dill and Anise Waters with and without spirit for two years, and found that those without spirit kept well, whilst those with spirit had become acidified by the spirit changing into Acetic Acid.

ARECA.

ARECA NUT.

The seed of the Areca Catechu, Linn., the betel-nut tree. Imported from the East Indies. A remedy for tape-worm. A paste is also made of the powder for a dentifrice.

Dose.—½ to ¾ oz.

ARGENTUM.

SILVER.

Ag; or **Ag**; eq. 108.

A white, malleable, ductile, and tenacious metal, bears a brilliant polish, and is soft when pure. Sp. g. 10·5; fuses at 1873° F. It is one of the most ancient metals, the Luna or Diana of the alchemists. It occurs native, sometimes arborescent, sometimes in masses; it is seldom, however, pure. The mines of Peru and Mexico are the richest. The mines of Saxony, Bohemia, Swabia, and Konigsberg in Norway, are the richest in Europe. It has been found in Cornwall and Devonshire. It is found as a sulphuret. It is readily acted on by Sulphuretted Hydrogen.

Soluble in Nitric Acid, and precipitated by Hydrochloric Acid.

ARGENTI NITRAS.

NITRATE OF SILVER.

AgO,NO_5; or $\mathbf{AgNO_3}$; eq. 170.

In colourless tabular right rhombic prisms, or in white cylindrical rods. Solubility, 100 grains in 50 minims water, measuring 80 minims.

It is stated by Brande, Garrod, and Ure, that this salt is soluble in its own weight of water at 60° F., and in half its weight at 212°, but the author finds that it is soluble in half its weight of water at 60° F.

Test.—10 grains dissolved in 2 fluid drachms of distilled water give, with Hydrochloric Acid, a curdy, white precipitate (Chloride of Silver), which, when washed and thoroughly dried, weighs 8·44 grains, soluble in a solution of Ammonia—indicating the proper amount of metal. The filtrate, when evaporated by a water bath, leaves no residue—indicating absence of impurities. Nitrate of Silver may be adulterated with Nitrate of Soda or Potash, and these, of course, will remain after the Chloride of Silver has been precipitated and removed.

Medicinal Properties.

Tonic and antispasmodic. It is considered a reliable remedy in epilepsy, though its *modus operandi* is not perfectly understood. It is said to produce most good in this disease when it acts upon the bowels. It is useful in cholera and angina pectoris, as well as in chronic diseases of the stomach accompanied with pain and vomiting. 1 gr. in pill has been given three times a day for six or eight weeks, for ulceration of the stomach, with great success. In typhoid fever, for inflammation and ulceration of the ileum, in pills, dose $\frac{1}{4}$ to $\frac{1}{2}$ grain; if diarrhœa be the principal symptom, an injection of 3 or 4 grains to 6 fluid ounces of water is useful to promote cicatrization of internal ulcers. The discoloration of the skin occasioned by its use is first indicated by a dark line on the edges of the gums. This is said to be removed by a steady course of Acid Tartrate of Potash. Points are applied externally to poisoned wounds, pustules, ulcers, and erysipelatous inflammations, also to uterine polypi; 2 to 4 grains to the ounce is employed for lotions or injections, or as a collyrium for ulcers of the cornea and aphthous affections of the mouth: it is an excellent application for sore nipples. Sir G. D. Gibb employs 30 to 40 grains to the ounce to inject on the larynx; 10 grains to the ounce is used to sponge a relaxed throat, or 20 grains to the ounce for diphtheria.

Swollen chilblains are sometimes painted with a strong solution of Nitrate of Silver.

Dose.—$\frac{1}{6}$ to $\frac{1}{3}$ gr. or more. Prescribed in pills with crumb of bread.

$\frac{1}{60}$ gr. 3 times a day is a good nerve tonic.

(In all the Pharmacopœias; Ger. and Russ. Lapis Infernalis.)

Incompatibles.—The Alkalies and their Carbonates, the Chlorides, and all Acids (except Nitric and Acetic); Iodide of Potassium, Solutions of Arsenic, and astringent infusions.

Antidotes.—In case of poisoning by Nitrate of Silver, the antidote is Solution of Common Salt, given in some demulcent drink.

Not Official.

Lotio Argenti Nitratis Etherea. *London Hospital.*—Nitrate of Silver, 20 grs.; Distilled Water, 1 drm.; Sp. Nitrous Ether to 1 oz.

Lotio Argenti Nitratis Fortis. *Fever Hospital.*—Nitrate of Silver, 60 grs.; Distilled Water, 1 oz.: dissolve.

Mild Caustic Points, made by fusing Nitrate of Potash in various proportions with Nitrate of Silver, are used by oculists and others; thus—

No. 1	consists of	1	Nitrate of Silver and	2	of Nitrate of Potash.*
2	„	1	„	3	„
3	„	1	„	3½	„
4	„	1	„	4	„

Strong Solution of Iodide of Potassium, or Cyanide of Potassium, will remove the black stains on the skin produced by Nitrate of Silver.

* This is called in the Germ. Ph. Argent. Nitr. c. Kali Nitrico, in the Russ. Arg. Nitr. bis mitigatum.

ARGENTI OXIDUM.

OXIDE OF SILVER.

AgO, eq. 116; or Ag_2O, eq. 232.

A dark olive-brown powder, insoluble in Water, but soluble in Nitric Acid.

Test.—When heated to redness, 116 parts leave 108 of pure Silver. It is dissolved by Nitric Acid, and precipitated by Chloride of Sodium; the supernatant liquor ought not to be discoloured by Sulphide of Ammonium; —indicating absence of copper,

Medicinal Properties.

It has the general therapeutic qualities of the Nitrate, without its escharotic effect, and, as it is said, without discolouring the skin. A valuable astringent in hæmorrhages.

Dose.—½ to 2 grs. in form of pill.

(U.S.; not in other Pharmacopœias.)

If prescribed with Creasote or with the Chlorides in pills, the Oxide must be first diffused through some simple powder, or the heat produced in rapidly reducing the Silver or Chlorine combining with it, causes the mass to become red-hot, or to explode.

ARGENTUM PURIFICATUM.

PURE SILVER.

Test.—If Ammonia be added in excess to a solution of the metal in Nitric Acid, the resulting solution exhibits neither colour nor turbidity; used only to prepare Nitrate of Silver.

ARMORACIÆ RADIX.

HORSE-RADISH ROOT.

The fresh root of the *Cochlearia Armoracia*, cultivated in Britain.

Its virtues are taken up by water and alcohol. When distilled with alcohol, it yields none of the oil. The root may be kept fresh for some time, if buried in sand in a cool place.

Medicinal Properties.

It is highly stimulant, exciting the stomach, and promotes the secretions, especially that of urine. Used in atonic dyspepsia; also as a sudorific in chronic rheumatism. The Infusion used as a gargle for aphonia.

(Belg.; Fr. Raifort; not in others.)

Preparation.

SPIRITUS ARMORACIÆ COMPOSITUS. Colourless.

Fresh Root sliced, 20; dried Orange Peel, 20; Nutmeg, bruised, ½; Proof Spirit, 160; Water, 40: mix, and distil over 160. =(1 in 8).

Dose.—1 to 3 drms.

(Not in other Pharmacopœias.)

Not Official.

INFUSUM COMPOSITUM. — Fresh Root, sliced, 1; Black Mustard Seed, 1; Compound Spirit of Horse-radish, 1; boiling Distilled Water, 20: macerate two hours; strain, and add the spirit.

Dose.—1 to 2 oz. as a warm stimulant. Used also as a gargle for aphonia.

It is found in practice that a temperature of 150° to 180° makes the strongest infusion.

Aconite Root was mistaken for this root, which seems incredible, unless we reflect that country people are in the habit of putting into the ground again Horse-radish that has been scraped until only the crown and a remnant of the root vanishing to a point remain, which resemble the tap-root of Aconite.

ARNICÆ RADIX.

ARNICA ROOT.

The rhizome and rootlets of the *Arnica montana*, or Leopard's Bane, dried; imported from the south of Europe.

Medicinal Properties.

Stimulant, acting on the brain and the whole nervous system; irritant to the stomach and bowels; peculiarly useful in diseases attended with a debilitated or typhoid state of the system. Used externally for bruises and wounds, and after extraction of teeth to allay pain.

(Austr. Belg. root and flowers; U. S. flowers; not in others.)

Preparation.

TINCTURA ARNICÆ. Pale greenish-yellow.

Bruised Root, 1; Rectified Spirit to percolate 20: macerate forty-eight hours with 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit, let it drain, wash the marc, press, filter, and make up to 20. =(1 in 20).

Dose.—1 to 2 drms.

(Belg.; Fr.; U. S. 1 in 5; Russ. 1 and 6; Austr. 1 in 7; Ger. 1 and 10, all from flowers and by weight.)

Used externally, it should be mixed with an equal quantity of hot water, and applied with lint.

Symptoms of poisoning by Arnica are violent vomiting, intense headache, diarrhœa, colic, depression of pulse.

ANTIDOTES.—Opium, Morphia.

Not Official.

ARNICA OPODELDOC.—White Soap, 4; Rectified Spirit, 10; Tincture of Arnica, 5; Camphor, 1. Dissolve by heat, and strain.

ARSENICUM.

ARSENIC.

As : or **As**; eq. 75.

A bluish-grey metal, of great brilliancy, quickly tarnishing on exposure. It has a sp. g. of 5·9, and volatilizes at 356° F., its fumes having the odour of garlic.

It is found in most countries usually combined with other metals. Its oxide is also a natural production, though chiefly found in the flues of furnaces in which various metallic ores are roasted.

See ACIDUM ARSENIOSUM.

ASSAFŒTIDA.

ASSAFŒTIDA.

The gum resin exuded from the excised root of *Narthex Assafœtida*. Procured in Affghanistan and the Punjaub. Imported from Bombay.

It yields all its virtues to alcohol, and forms a clear tincture, which becomes milky on the addition of water.

Medicinal Properties.

It is a moderate stimulant, a powerful antispasmodic, an efficient expectorant, and feeble laxative. Useful in cases of flatulency in the bowels, in hysteric paroxysms and other kinds of nervous affections; also in some forms of chronic bronchitis. Was recommended by the late Mr. Worms for the Cattle Plague.

Dose.—5 to 20 grs.

(In all the Pharmacopœias.)

Contained in Pilula Aloes et Assafœtida.

Preparations.

ENEMA ASSAFŒTIDÆ.

Assafœtida, 30 grs.: Water, 4 oz.: rub the Assafœtida with the Water added gradually so as to form an emulsion for one enema.

(Not in other Pharmacopœias.)

PILULA ALOES ET ASSAFŒTIDÆ 1 in 4. *See* ALOES.

PILULA ASSAFŒTIDÆ COMPOSITA. *Syn.* PIL. GALBANI COMP. Dark brown. Assafœtida, 2; Galbanum, 2; Myrrh, 2; Treacle by weight, 1: melt together in a water bath. =(Assaf. and Galb., of each 1 in $3\frac{1}{2}$)

Dose.—5 to 10 grs.

(U.S. Assafœtida, 3; Soap, 1; not in others.)

SPIRITUS AMMONIÆ FŒTIDUS, 33 grs. in 1 oz. *See* AMMONIA.

TINCTURA ASSAFŒTIDÆ. Deep reddish-brown.

Assafœtida (small fragments), 1; Rectified Spirit, 8; macerate seven days, strain, filter, and add spirit to make 8. =(1 in 8).

Dose.—½ drm. to 1 drm.

(U.S. 1 in 7¾; Austr. Belg. Fr. Ger. 1 in 5; Russ. 1 and 6 by weight).

Prescribed with Aromatic Spirit of Ammonia, or with Mucilage, as the resin separates when mixed with water only. Alone or with Tincture of Valerian and Hyoscyamus, in flatulent hysteria.

ATROPIA.

ATROPIA.

An alkaloid, in colourless acicular crystals, $C_{34}H_{23}NO_6$, or $C_{17}H_{23}NO_3$, eq. 289, obtained from Belladonna Root.

Solubility in Water, 1 in 500; in Rectified Spirit, 1 in 8; entirely in pure Ether.

Test.—Its solution in water is alkaline, and gives a citrine yellow precipitate with Terchloride of Gold. Leaves no ash when burnt with free access of air.

Medicinal Properties.

For external use only. Like Belladonna, it dilates the pupil of the eye. The Unguentum Atropiæ is a much cleaner preparation than Unguentum Belladonnæ.

(In all the Pharmacopœias.)

ANTIDOTES.—In case of poisoning by Atropia, the antidotes are the same as for Belladonna.

Preparations.

LIQUOR ATROPIÆ. Colourless,

Atropia, 4 grs.; Rectified Spirit, 1 drm.; dissolve and add Water, 7 drms.: mix.

Soon spoils by keeping. =(1 in 120).

Each drachm contains half a grain.

Dose.—1 minim.

(In no other Pharmacopœia.)

This quantity of spirit causes pain when applied to the eyes, but a smaller quantity hardly holds the Atropia in solution. The Sulphate dissolves without the aid of spirit Neither this solution nor that of the Sulphate keeps long without change. Dr. Fleming made a solution prior to that of the Pharmacopœia of 1 gr. in Hydrochloric Acid, q.s. Water, 5 drms. Rectified Spirit, 5 drms. Mix. *Dose.*—10 minims = $\frac{1}{60}$th of a gr. for an adult, increasing daily the dose by 2 or 4 minims until a slight sore-throat, wide pupil, and dim sight are produced. The dose for a child was 1 minim for a year old, increasing a minim for each year up to 10 years old; should be given on an empty stomach.

UNGUENTUM ATROPIÆ. Cream-colour.

Atropia, 8 grs.; Rectified Spirit, ½ drm.; Lard, 1 oz.: dissolve the atropia in the spirit and mix with the lard. =(1 in 60).

30 grains of Ointment, = ½ grain, may be used at one application.

(In no other Pharmacopœia.)

ATROPIÆ SULPHAS.

SULPHATE OF ATROPIA.

Atropia, 120 grains; Distilled Water, ½ oz.; Dilute Sulphuric Acid, a sufficiency. Mix the atropia with the water, add the acid gradually, stirring them together until the atropia is dissolved and the solution is neutral. Evaporate to dryness at a temperature not exceeding 100°.

Solubility in Water, 1 in 4.

(Ger. and Russ. Atropinum Sulphuricum.)

LIQUOR ATROPIÆ SULPHATIS. Colourless.

Sulphate of Atropia, 4 grs.; Distilled Water, 1 oz.: dissolve.

Dose.—1 to 2 minims = $\frac{1}{120}$th to $\frac{1}{60}$th of a grain.

More suitable for ophthalmic use, being free from spirit.

The solutions of Atropia are very prone to change, and should therefore be always made at the time required. The sulphate dissolves the instant it is put into the water. The Atropia requires the aid of spirit for its solution.

Soon spoils by keeping.

Not Official.

ATROPINE PAPER AND ATROPINE GELATINE, in books proposed by Mr. Streatfield and in bottles of discs by Mr. Ernest Hart, are extensively used by oculists to dilate the pupils of the eye,—a small square or disc being introduced between the eye and the lower lid.

SOLUTIONS FOR SUBCUTANEOUS INJECTION.

Sulphate of Atropine, 1 grain; Water, 1 drm.: 2 to 3 minims for each injection. Every minim contains $\frac{1}{60}$th of a grain.

Sulphate of Atropine, 1 grain; Acetate of Morphia, 10 grains; Water, 1 drm. Every minim contains $\frac{1}{60}$th of a grain of Sulphate of Atropine, and $\frac{1}{6}$th of a grain of Acetate of Morphia: 2 to 3 minims for each injection.

AURANTII FLORIS AQUA.

ORANGE-FLOWER WATER.

The distilled water of the flowers of Bitter Orange, *Citrus Bigaradia*, and of Sweet Orange, *Citrus Aurantium;* prepared mostly in France.

Test.—Not coloured by Sulphuretted Hydrogen—indicating absence of Lead.

Medicinal Properties.

A mild tonic, but chiefly used as a flavouring vehicle.

Dose.—½ to 1 oz.

(U.S. Austr. Fr. Eau Distillée de Fleur d'Oranger; Ger. Russ. Aqua Florum Aurantii, Aqua destillata equal parts; not in others.)

Preparation.

SYRUPUS AURANTII FLORIS. Colourless.

Orange-flower Water, 8; Refined Sugar, 48; Distilled Water, 16, or a sufficiency: heat the sugar and water together, strain and when nearly cold,

add the orange-flower water. When finished, should weigh 72 oz. and measure 54 oz. Sp. g. 1·330.

Dose.—1 to 2 drms.

(Belg. and U.S.; Fr. Ger. water 5, sugar 9; Russ. triple water 10, sugar 16; not in others.)

AURANTII CORTEX.

BITTER ORANGE PEEL.

The outer part of the rind of the ripe fruit of the *Citrus Bigaradia*, fresh and dried. Imported from the South of Europe.

Medicinal Properties.

It is a mild tonic, carminative and stomachic; seldom used alone, but a useful addition to Infusions and Decoctions.

(In all the Pharmacopœias.)

Contained in the following preparations of Gentian, Infusum, Mistura, and Tinctura.

Preparations.

INFUSUM AURANTII.

Dried Bitter Orange Peel, cut small, 1; boiling Water, 20: infuse for fifteen minutes and strain. =(1 in 20).

Dose.—1 to 2 oz.

(Not in other Pharmacopœias.)

INFUSUM AURANTII COMPOSITUM.

Dried Bitter Orange Peel, cut small, ½ oz.; Fresh Lemon Peel, 120 grs.; Cloves, bruised, 60 grs.; boiling Water, 20 oz.: infuse for fifteen minutes and strain. =(1 in 40).

Dose.—1 to 2 oz.

(Not in other Pharmacopœias.)

SYRUPUS AURANTII. Straw-colour, not quite bright.

Tincture of Orange Peel, 1; Syrup, 7: mix. =(1 in 8).

Dose.—1 to 2 drms.

U.S. sweet peel, spirit, and sugar; Belg. peel, water, and sugar; Ger. and Russ. peel, wine, and sugar; Austr. peel, weak spirit, sugar, and tincture; Fr. fresh orange juice, sugar, and water.)

TINCTURA AURANTII. Pale brown.

Dried Bitter Orange Peel, cut small and bruised, 1; Proof Spirit, 10; macerate for seven days in a closed vessel with occasional agitation, then strain, press, and filter, add sufficient Proof Spirit to make 10. =(1 in 10).

Dose.—1 to 2 drms.

It is much prescribed with mineral acids, but should not be prescribed with nitrohydrochloric acid, for after a time chlorine is formed, and destroys the flavour of the orange; prescribed with Quinia in tonic mixtures.

Austr. 1 and 10; Belg. and Ger. 1 and 5 by weight; Russ. 1 and 6; Fr. Alcoolat d'Écorce d'Oranger is a spirit distilled from fresh Orange Peel, also Brit. formula; U.S. 1 in 8.)

TNCTURA AURANTII RECENTIS..

The thin yellow and fresh rind of Bitter Orange 6 oz.; Rectified Spirit 20 oz.; digest for 7 days and press.

Dose.—1 to 2 drms.

VINUM AURANTII. Light brown.

Wine made in Britain; it is, in fact, the Orange Wine sold in the shops of grocers and others, containing about 12 per cent. of Alcohol and some free acid.

(Belg. with dried peel and Malaga wine; not in others.)

Introduced to prepare Quinine Wine, also Vinum Ferri Citratis.

BALSAMUM CANADENSE.—*See* TEREBINTHINA CANADENSIS.

Not Official.

BALSAMUM DIPTEROCARPI.

GURJUN BALSAM OR WOOD OIL.

Resembles Copaiba in appearance, and possesses similar properties.

Dose.—20 to 30 minims.

BALSAMUM PERUVIANUM.

BALSAM OF PERU.

A Balsam obtained from *Myroxylon Pereiræ* (*Myrospermum* of Sonsonate), It exudes from the trunk of the tree after the bark has been scorched and removed. From Salvador, in Central America.

A reddish-brown or nearly black liquid, translucent in thin films, having a characteristic odour and bitter taste.

Soluble in 5 parts of Rectified Spirit.

Test.—Not diminished in volume when mixed with water.

Medicinal Properties.

A warm and stimulating tonic and expectorant. Useful in chronic catarrhs, asthma, and other pectoral complaints, and in rheumatism; also to restrain excessive discharges, as gleets, etc. Externally for chronic indolent ulcers and for sore nipples.

Dose.—10 to 15 minims as an emulsion with mucilage or yolk of egg.

(In all the Pharmacopœias.)

Administered diffused in water by means of Sugar and the Yolk of Egg or Gum Arabic.

Not Official.

UNGUENTUM.—Balsam, 1; Lard, 7.

An excellent application for sore nipples or cracked lips.

UNG. B. PERUV. RESINOSUM.—Balsam, 1; Resin Ointment, 1: mix. Applied upon cotton-wool for bed-ridden sores.

BALSAMUM TOLUTANUM.

BALSAM OF TOLU.

A Balsam obtained from *Myroxylon Toluifera*. It exudes from the trunk of the tree after incisions have been made in the bark. From Tolu, New Granada.

A soft solid, of a brownish colour and aromatic balsamic odour.

Test.—Entirely dissolved by alcohol and the volatile oils.

Medicinal Properties.

Similar to those of the Balsam of Peru.

Dose.—10 to 20 grs., in the form of emulsion, with mucilage and sugar.

(In all the Pharmacopœias except Austr.)

Contained in Tinctura Benzoini Composita.

Preparations.

SYRUPUS TOLUTANUS. Colourless, slightly opaque.

Balsam of Tolu, $1\frac{1}{4}$; Sugar, 32; Water, 20: boil the balsam with the water in a lightly covered vessel half an hour, stirring occasionally, and adding water when required; when cold, make up to 16; filter, add the sugar, and dissolve. Finished, weighs 48 and measures 36. Sp. g. 1·330.

$=(1 \text{ in } 28\frac{4}{5})$.

Dose.—1 to 2 drms., in cough mixtures.

(Belg. with 5 per cent. spirit; Fr. strength undefined; the following are made with Tincture,—U.S. 1 in 18; Belg. extemporaneous 1 in 20; and Russ.; not in Austr. and Ger.)

TINCTURA TOLUTANA. Pale brown.

Balsam of Tolu, 1; Rectified Spirit, 8: dissolve, filter, and make up to 8.

$=(1 \text{ in } 8)$.

Dose.—15 to 30 minims, mixed with mucilage or syrup.

(U.S. 1 in 10; (Fr. and Belg. 1 in 5; Russ. 1 and 6, by weight;) not in Austr. and Ger.)

BEBERIÆ SULPHAS.

SULPHATE OF BEBERIA.

The Sulphate of an alkaloid,

$C_{35}H_{20}NO_6,HO,SO_3$, eq. 341, or $C_{35}H_{40}N_2O_6H_2SO_4$, eq. 682,

obtained from the bark of the *Nectandra Rodiæi* (Bebeeru), the Greenheart tree, growing in British Guiana. In dark-brown thin translucent scales, yellow when in powder, with a strong bitter taste.

Soluble in Water, 1 in 80; in Spirit sparingly.

Test.—Entirely destructible by heat. Water forms with it a clear brown solution, which soon spoils by keeping.

Medicinal Properties.

Tonic and antiperiodic, an imperfect substitute for Quinia; sometimes given in menorrhagia.

Dose.—1 to 3 grs. as a tonic; 5 to 10 grs. as an antiperiodic.

(Not in other Pharmacopœias.)

INCOMPATIBLES.—Alkalies and their Carbonates, Bromide and Iodide of Potassium, Lime Water, Tartaric Acid, and Tartrates, Astringent Infusions and Tinctures.

BELÆ FRUCTUS.

BAEL FRUIT.

The half-ripe fruit of *Ægle Marmelos*, dried; from Malabar and Coromandel.

In fragments with a brownish-orange dried pulp adhering to the rind.

Medicinal Properties.

Has been much extolled for diarrhœa and dysentery, and is given in combination with Syrup of Red Gum or other astringents.

Preparation.

EXTRACTUM BELÆ LIQUIDUM. Intense brown.

Bael, 1; Distilled Water, 15; Rectified Spirit, $\frac{1}{8}$: macerate for twelve hours in 5 of the water, pour off the liquid, repeat the operation twice for one hour. Press, filter, and evaporate to 1, including the spirit.

A fluid ounce is equal to a solid ounce.

Dose.—1 to 2 drms.

(Not in other Pharmacopœias.)

BELLADONNA.

DEADLY NIGHTSHADE.

HERB.

The fresh leaves and branches to which they are attached; also the leaves separate from the branches, carefully dried, of *Atropa Belladonna;* gathered, when the fruit has begun to form, from wild or cultivated plants in Britain.

Medicinal Properties.

Belladonna is a powerful narcotic, possessing diaphoretic and diuretic properties, and is exceedingly valuable in convulsions, neuralgia, whooping-cough, paralysis, and diseases having their seat chiefly in the nervous system. Dr. Nunnely successfully treated habitual constipation by giving $\frac{1}{6}$ to $\frac{1}{2}$ grain of Extract on rising in the morning, which rarely failed to produce a healthy stool after breakfast; and, by continuing its use for a week or fortnight, it restored the natural action of the bowels. For nocturnal incontinence of urine, dose 5 to 10 minims of the Tincture, with the same dose of Tinct. Perchloride of Iron three times a day. ('Lancet,' Oct. 22, 1870.) In loss of tone and irritable state of the generative organs, giving rise to nocturnal emissions, although it has slightly aphrodisiacal properties. For treatment of typhoid fever, see 'Medical Times,' Feb. 5, 1870.

The Extract, given in 1-grain doses, relieves rheumatism.

For external use the liniment of the root is the cleanest and most effective.

(Belg. and U.S. leaves, fresh and dried; Ger. leaves and branches; Austr. leaves and herb; Fr. leaves and fruit.)

INCOMPATIBLES.—Caustic Alkalies, Opium, Strychnia.

ANTIDOTES.—In case of poisoning by Belladonna, the antidotes are, an emetic of 10 grs. of Sulphate of Copper; afterwards Opium should be administered in the proportion required to counteract the effects of the Belladonna.

Preparations.

EMPLASTRUM BELLADONNÆ. Intense olive.

Extract of Belladonna, 3; Resin Plaster, 3; Rectified Spirit, 6: rub the extract and spirit together in a mortar, and when the insoluble matter has subsided, decant the clear solution, remove the spirit by distillation or evaporation, and mix the alcoholic extract thus obtained with the resin plaster melted at the heat of a water-bath, continuing the heat until with constant stirring the plaster has acquired a suitable consistence: yields only 3½.

3 of Extract produces only ½ Alcoholic Extract, and this with 3 of Resin Plaster is too soft to use, but if Pitch Plaster is substituted it makes it of a good consistence.

It should be spread with a moderately warm iron.

The Author, who has suffered much from lumbago, has long since abandoned Belladonna plasters: he finds 7 parts of Linimentum Belladonnæ and 1 part Chloroform sprinkled thinly on impermeable piline and applied, relieves in a very short time, and is clean to use, whereas a plaster is at best a disagreeable application and slow in action.

(Similar to U.S. with Alcoholic Extr. of the Root 1, Resin Plaster, 2; Belg. with Extract and Oil of Belladonna; Ger. with powder of the leaves, 1 in 4; not in others.)

EXTRACTUM BELLADONNÆ. Black.

Take 118 lb. of fresh leaves and tender branches, bruise in a stone mortar or suitable apparatus, and press out the juice, heat it gradually to 130°, separate the green colouring matter by a calico filter, heat the strained liquor to 200° F. to coagulate the albumen, and again filter, evaporate the filtrate by a water-bath to the consistency of a thin syrup, then add to it the green colouring matter previously separated, and, stirring the whole together assiduously, continue the evaporation at a temperature not exceeding 143°, until the extract is of a suitable consistence for forming pills.

100 lb. of herb yields 56 lb. of juice = nearly 4 lb. extract (viz. 63 oz.).
100 lb. leaves, when dried, weigh 16 lb.

Dose.—¼ to ½ gr., gradually increased to 1 or 2 grs. 1 gr. given in a pill for rheumatism.

(Austr. from Root; Belg. with clear juice of the herb evaporated and mixed with the powder of the same, so that the whole can be reduced to powder, —also an extract of the herb with fæculæ evaporated to dryness,—also an aqueous extract from the dried root, and alcoholic extracts from the herb and from the seeds; Ger. and Russ. from leaves and flowering branches, made with weak spirit; Fr. clarified juice evaporated; U.S. same as Br.,— and an alcoholic extract from the powder of the leaf, also a liquid extract of the root with Glycerine.)

SUCCUS BELLADONNÆ.

Freshly pressed juice 3; Rectified Spirit 1: mix, after 7 days filter. To be kept cool.

Dose.—5 to 15 mins.

TINCTURA BELLADONNÆ. Intense brown.

The dried leaves in coarse powder, 1; Proof Spirit, 20: macerate forty-eight hours in 15 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, add the remaining spirit, let it drain, wash and press the marc; filter and make up 20. =(1 in 20).

60 minims may be considered about equal in therapeutical strength to 1 gr. of the extract.

Dose.—From 5 to 20 minims.

(U.S. 1 in 7¾; (Austr. from the Root; Belg. 1 in 5 by weight;) not in others; Belg. and Fr. have an ethereal tincture, and Belg. and Ger. have a tincture of the fresh herb.)

UNGUENTUM BELLADONNÆ. Dusky brown.

Extract of Belladonna, 1; rubbed with a few drops of water, and add Lard, 5½.

This is not a clean application; it is used to allay irritation of the bladder, by rubbing it upon the perineum; ½ to 1 drm. of Liniment of Belladonna to 1 oz. of Lard answers as well, and does not colour the skin.

(U. S. 1 in 9; Belg. with dried leaves; Fr. Cérat, 1 in 10; not in others.)

ROOT.

The dried root of the plant collected in early spring, cultivated or imported.

(In all the Pharmacopœias.)

Preparations.

LINIMENTUM BELLADONNÆ. Light reddish-brown.

The powdered root, 20; Camphor, 1; Rectified Spirit, 20: moisten the root for three days, then pack in a percolator, and add sufficient spirit to produce, with the camphor, 20. A fluid ounce is equal to a solid ounce.

Four times the strength of the extract of the leaves and stalks.

Prescribed with equal parts of Soap Liniment or Compound Camphor Liniment. An excellent topical application for neuralgic pain. When an oily liniment is required, the chloroform of belladonna mixes best, as it readily dissolves in the oil.

(In no other Pharmacopœia.)

ATROPIA. *See* ATROPIA.

Not Official.

CHLOROFORMUM BELLADONNÆ.—Powdered root, 20; sufficient Chloroform to percolate, 20: mixes with oils, but not readily with spiritous liniments.

Applied with equal parts or more of camphor liniment or olive oil, for painful rheumatism; or 1 part of this mixed with 7 parts of linimentum belladonnæ, and sprinkled on impermeable piline, when applied to the loins in lumbago, should be firmly pressed with the hands on the part to ensure perfect contact for five minutes, and is then a very speedy remedy.—One of this will make a bright liniment with 3 of Eau de Cologne.

LINIMENTUM BELLADONNÆ COMP.—Liniment. Belladonnæ, 7; Chloroformi Belladonnæ, 1: mix.

Used upon impermeable piline for rheumatism.

SUPPOSITORIUM.—Extract of Belladonna, 2 grs.; Stearine, 13: mix, and form into a cone for one suppository.

BENZOINUM.

BENZOIN.

The Balsamic Resin, exuded from incisions made in the stem of the *Styrax Benzoin*, a native of Sumatra, Java, Borneo, Laos, and Siam.

There are several qualities of Benzoin in the market; two, however, are chiefly used in medicine, one in agglutinated masses, the other in tears (from Siam) being the purest, and having the stronger odour.

Solubility. The tears wholly soluble in Rectified Spirit, and in Solution of Potash. The mass contains impurities, which are left after treating it with Alcohol.

Sp. g. 1·062 to 1·093.

Medicinal Properties.

Stimulant, expectorant, styptic.

Dose.—10 to 30 grs., rarely given in powder.

(In all the Pharmacopœias.)

Preparations.

ACIDUM BENZOICUM. *See* ACIDUM BENZOICUM.

ADEPS BENZOATUS, 10 grs. to 1 oz. *See* ADEPS.

TINCTURA BENZOINI COMPOSITUS. Intense reddish-brown. FRIAR'S BALSAM. TRAUMATIC BALSAM.

Benzoin, 8; prepared Storax, 6; Balsam of Tolu, 2; Socotrine Aloes, 1½; Rectified Spirit, 80: macerate seven days, filter, and wash the marc with spirit to make up 80. =(1 in 10).

Dose.—½ to 1 drm., triturated with mucilage or yolk of egg.

(U. S. much the same: Belg. and Fr. Baume du Commandeur, more complex; Russ. with Bals. Peru; not in Austr. and Ger.)

Internally given for chronic cough.

Applied externally to languid ulcers, cuts, or wounds.

Not Official.

UNGUENTUM BENZOINI (U. S.)—Benzoin, in coarse powder, 1; Lard, 16: heat together in a water-bath two hours; strain and stir till cool.

This benzoated lard is much used for ointments; the benzoin is said to preserve the lard.

TINCTURA BENZOINI.—Benzoin, 1; Rectified Spirit, 10: dissolve and strain.

(Russ. and Ger. 1 and 6; Austr.; Belg. 1 in 5, all by weight; not in others.)

LOTIO BENZOINI.—A nice lotion to protect the face from the heat of the sun is made with Tincture of Benzoin, 1; Rose-Water, 40.

Not Official.

BETULA ALBA.

COMMON EUROPEAN BIRCH.

OLEUM.—Has the odour of Russia leather; has been used for chronic eczema.

BISMUTHUM.

BISMUTH.

Bi; or **Bi**; eq. 210.

Met with in commerce, is generally impure.

BISMUTHUM PURIFICATUM.

Sp. g. 9·8; fuses at 507° F. A crystalline metal of greyish-white colour, of a distinct roseate tinge; dissolved in a mixture of equal volumes of Nitric Acid and Distilled Water, it forms a solution which, by evaporation, yields colourless crystals that are decomposed on the addition of water, giving a white precipitate. If the mother-liquid from which the crystals have been separated be added to Solution of Carbonate of Ammonia, the precipitate formed and the solution are free, or nearly free, from colour.

Employed for the preparations of Bismuth.

BISMUTHI CARBONAS.

CARBONATE OF BISMUTH.

$2(BiO_3,CO_2),HO$, eq. 521; or $2(Bi_2CO_5),H_2O$, eq. 1042.

A white powder; blackened by Sulphuretted Hydrogen, insoluble in Water, soluble with effervescence in Nitric Acid; when added to Sulphuric Acid, coloured with Sulphate of Indigo, the colour of the latter is not discharged; if to Nitric Acid mixed with half its volume of Distilled Water, as much Carbonate of Bismuth be added as the Acid will dissolve, one volume of this solution poured into 20 volumes of water will yield a white precipitate. The Nitric Acid Solution gives no precipitate with Dilute Sulphuric Acid or with Solution of Nitrate of Silver.

Medicinal Properties.

Similar to the Subnitrate.

Dose.—5 to 20 grs.

(U. S.)

The following prescription is a good one—

Bismuth. Carbonatis, 2 drms.; Pulv. Tragac. ver. 20 grs.; Aq. Flor. Aurant., Syr. ejusdem, āā 2 drms.; Aqua to 6 oz. Should this be made of double strength, it will solidify. If Acacia Gum be used instead of Tragacanth, it will settle as a hard mass in the bottle.

BISMUTHI SUBNITRAS.

Syn. WHITE BISMUTH, NITRATE OF BISMUTH, MAGISTERY OF BISMUTH.

$BiO_3,NO_5,2HO$; or $BiNO_4,H_2O$, eq. 306.

A heavy white powder in minute crystalline scales.

Insoluble in Water.

Test.—It dissolves in Nitric or Hydrochloric Acid, diluted with half a volume of Distilled Water, without effervescence; is not precipitated by Diluted Sulphuric Acid,—indicating absence of Lead. When mixed with Dilute Sulphuric Acid in excess, and subjected to Marsh's test, it yields no Arsenic, or merely a trace.

Medicinal Properties.

It is highly useful in pyrosis, some forms of vomiting, and irritative dyspepsia; also in diarrhœa. When the powder is prescribed in mixture, it should be suspended in Mucilage of Tragacanth, and a dose of Carbonate of Magnesia is frequently given with it. Externally it is used as a cosmetic, and in lotion for some chronic skin diseases.

Dose.—5 to 15 grs. in pill at meals.

(In all the Pharmacopœias. Fr. Sous-nitrate de Bismuth; Ger. Bismuthum Sub-nitricum; Russ. Bismuthum Nitricum Basicum.)

INCOMPATIBLES.—Potash, Soda, Ammonia, and their Carbonates.

Preparations.

LIQUOR BISMUTHI ET AMMONIÆ CITRATIS. Colourless.

Purified Bismuth, 1; Nitric Acid, 2; Citric Acid, 2; Solution of Ammonia, a sufficiency: mix the nitric acid with half its volume of distilled water, and add the bismuth in successive portions. When effervescence has ceased, apply for ten minutes a heat approaching that of ebullition, and decant the solution from any insoluble matter. Evaporate the solution until it is reduced to 2, then add the citric acid previously dissolved in 4 of distilled water and afterwards the solution of ammonia in small quantities at a time, until the precipitate formed is redissolved and the solution is neutral or slightly alkaline to test paper: dilute with distilled water to the volume of 20.

Sp. g. 1·122. One fluid drachm contains 3 grs. of Oxide of Bismuth.

Dose.—½ to 1 drm.

TROCHISCI BISMUTHI. White.

White Bismuth, 3¼ oz. and 18 grs.; Carbonate of Magnesia, 4 oz.; precipitated Carbonate of Lime, 6 oz.; Sugar, 29 oz.; Gum Arabic, 1 oz.; Mucilage, 2 oz.: Rose Water, a sufficiency: make 720 lozenges.

Each lozenge contains 2 grains of Subnitrate of Bismuth.

Dose.—1 to 6 lozenges.

(Fr. Tablettes, 1½ gr. in each; not in others.)

Not Official.

UNGUENTUM.—Subnitrate of Bismuth, 1; Simple Ointment, 4.

Lotio Bismuthi.—Nitrate of Bismuth, 6 grs.; Corrosive Sublimate, ½ gr.; Spirits of Camphor, 1½ minim; Water to 1 oz.: mix. *Skin Hospital.*

A soothing lotion in chronic cases.

BISMUTHI OXIDUM.

OXIDE OF BISMUTH.

Bi_2O_3; or $\mathbf{Bi_2O_3}$.

Take of

Subnitrate of Bismuth	1 pound
Solution of Soda	4 pints.

Mix and boil for five minutes; then having allowed the mixture to cool and the oxide to subside, decant the supernatant liquid, wash the precipitate thoroughly with distilled water, and finally dry the oxide by the heat of a water-bath.

Characters and Tests.—A dull-lemon yellow powder. Heated to incipient redness it is not diminished in weight. It is insoluble in water, but soluble in nitric acid mixed with half its volume of water, and if it be thus dissolved to saturation, the solution mixed with ten or twenty times its volume of water yields a white precipitate. The nitric acid solution gives no precipitate with diluted sulphuric acid, nor with solution of nitrate of silver, dropped into it. Solution of chloride of ammonium added to the nitric acid solution gives a white precipitate, and if this be treated with excess of solution of ammonia, then filtered, and the clear filtrate neutralised with hydrochloric acid, it will not become turbid.

Dose.—5 to 15 grains.

BORAX.

BORAX.

Biborate of Soda, $NaO,2BO_3+10HO$, eq. 191; or $\mathbf{Na_2B_4O_7,10H_2O}$, eq. 382.

A salt imported in a crude state from India; large quantities are also manufactured from the native Boracic Acid of Tuscany, and the native Borate of Lime of Peru.

In transparent colourless crystals, sometimes slightly effloresced. A hot saturated solution when acidulated with any of the Mineral Acids, lets fall as it cools a scaly crystalline deposit (Boracic Acid), a solution of which in spirit burns with a green flame.

Solubility in Water, 1 in 22; boiling Water, 1 in 2; 2 ounces of Borax are dissolved by 2 ounces of Glycerine, and the solution measures only 3¼ ounces. By the aid of 1 of Glycerine, 1 part of Borax will dissolve in 12 of Water. Insoluble in Rectified Spirit; with mucilage it solidifies.

Test.—191 grains dissolved in 10 fluid ounces of distilled water require for saturation 1000 grain-measures of the volumetric solution of Oxalic Acid. Biborate of Soda is an alkaline salt, and the quantity of Oxalic Acid required to render it neutral is the proof that it is not contaminated with neutral salts.

Medicinal Properties.

Refrigerant and diuretic. Causes contraction of the uterus; and is combined with ergot and cinnamon-water to produce expulsion of the placenta. Used as an emmenagogue. Externally in skin diseases. A saturated solution is applied with great success in pityriasis versicolor, and it acts by dissolving the epidermis, and so removing the parasite.

Dose.—5 to 30 grains.

(In all the Pharmacopœias; Fr. Borate de Soude.

INCOMPATIBLES.—Mineral Acids and most of their salts. Mucilage of Acacia.

Preparations.

GLYCERINUM BORACIS. Colourless.

Borax in powder, 1; Glycerine, 4: rub together until dissolved.
(By weight 1 in 6, measure 1 in $4\frac{3}{4}$.)

Dose.—$\frac{1}{2}$ to $1\frac{1}{2}$ drm.

(U. S. Glycer. Sodii Boracis.)

MEL BORACIS.

Finely powdered Borax, 1; Clarified Honey, 7: =(1 in 8).

(U. S. 1 in 9; not in others.)

Applied to aphthæ of the mouth.

A great improvement in Mel Boracis would be to dissolve 1 of Borax in 1 of Glycerine, and then add 6 of Honey.

Not Official.

GARGARISMA.—Borax, 1 drm.; Honey, 2 drms.; Water, 4 oz. *Consumption Hospital.*

LOTIO.—Borax, 1; Rose-water, 24.

1 Borax, 1 Glycerine, 16 Rose-water.

Used as a cosmetic.

TINCTURA MYRRHÆ ET BORACIS.—Myrrh, 1; Eau de Cologne, 16; Borax 1; Water, 3; Syrup, 3.

For the teeth and gums.

UNGUENTUM.—Borax, 1; Simple Ointment, 8.

For chilblains or cracked nipples.

BROMUM.

BROMINE.

Eq. 80.

A liquid non-metallic element, obtained from sea-water and from some saline springs.

A dark brownish-red, very volatile liquid, with a strong disagreeable odour.

Sp. g. 2·966; boils at 117°; used to prepare Ammonii Bromidum, Potassii Bromidum.

Medicinal Properties.

Applied to cancer in the womb by means of lint dipped in the following mixture: Bromine, 12 minims; Rectified Spirit, 1 drachm,—using, at the same time, an injection as follows: Bromine, 12 minims; Rectified Spirit, 2 drachms; Water, 16 oz. Mix.

BUCHU FOLIA.

BUCHU LEAVES.

Syn. DIOSMA.

The dried leaves of the *Barosma betulina*, *B. crenulata*, *B. serratifolia*, imported from the Cape of Good Hope.

Water and Alcohol extract their virtues, which probably depend on volatile oil and extractive.

Medicinal Properties.

Tonic, stomachic, diuretic, and diaphoretic. Given chiefly in complaints of the urinary organs, attended with excess of uric acid, for morbid irritation of the bladder and urethra, diseases of the prostate, and retention or incontinence of urine. Also in dyspepsia, chronic rheumatism, cutaneous affections, and dropsy.

Dose.—20 to 40 grs. in powder.

(In all the Pharmacopœias except Austr.)

Preparations.

INFUSUM BUCHU.

Buchu bruised, 1 ; boiling Distilled Water, 20 : infuse for an hour and strain. =(1 in 20).

Dose.—1 to 2 oz.

(U. S. 1 in 16 ; not in others.)

TINCTURA BUCHU. Deep greenish-brown.

Buchu bruised, 1 ; Proof Spirit, 8 : macerate for forty-eight hours with ¾ of the spirit, pack in a percolator, and let it drain, then pour on the rest of the spirit ; when it ceases to drop, press and wash the marc, filter and make up to 8. =(1 in 8).

Dose.—1 to 2 drms.

(Not in other Pharmacopœias.)

Not Official.

BYNE.

MALT.

EXTRACTUM BYNES. EXTR. MALTI, Ger. Extract of Malt.

Bruised Malt, 10 ; Cold Water, 10 : macerate 3 hours, then add Warm Water, temperature 150° F. 40 ; digest the whole at 150° F. for 1 hour and strain, now bring the clear liquid to the boiling point and pass it through a flannel bag ; evaporate to 10, again pass through the bag, lastly evaporate to 5.

Dose.—A dessertspoonful 3 or 4 times a day, as a nutrient.

Has been used in Guy's Hospital for more than half a century.

CADMIUM.

CADMIUM.

Cd, eq. 56 ; or Cd, eq. 112.

A white metal closely resembling Tin, but harder and more tenacious, sp. g. 8·6 ; fuses at 442° F. Does not become oxidized except when heated ; the oxide is orange-coloured, not volatile, and easily reducible.

CADMII IODIDUM.

IODIDE OF CADMIUM.

Cd I, eq. 183; or $Cd I_2$, eq. 366.

It may be formed by direct combination of Iodine and Cadmium in the presence of water.

In flat micaceous crystals, white and of a pearly lustre, which melt at 600°, forming an amber-coloured fluid.

Test.—Ten grains dissolved in water, and Nitrate of Silver added in excess, give a precipitate, which when washed with water, and afterwards with half an ounce of Solution of Ammonia and dried, weighs 12·5 grains.

(Not in other Pharmacopœias.)

UNGUENTUM. Cream-colour; changes by keeping.
Iodide of Cadmium, 1; Simple Ointment, 7: mix. =(1 in 8).

This may be used when the Unguentum Plumbi Iodidi is objected to, as the latter imparts a yellow colour to the skin.

Not Official.

CADMIUM SULPHURICUM.—Ger. and Russ.

CAJUPUTI OLEUM.

OIL OF CAJUPUT.

The Oil distilled from the leaves of the *Melaleuca minor*, imported from Batavia and Singapore.

Very mobile, transparent, of a fine pale bluish-green colour. It has a strong, agreeable odour, and a warm, aromatic taste, and leaves a sensation of coldness in the mouth.

Solubility: entirely in Alcohol.

Test.—Sp. g. ·914. Dropped on water, it speedily evaporates. It burns rapidly, without leaving any residue.

Contained in Linimentum Crotonis.

Medicinal Properties.

A powerful topical and general stimulant, antispasmodic, and diaphoretic. Efficacious in dropsy, chronic rheumatism, hysteria, flatulent colic, and other spasmodic and nervous affections, and in low states of the system. Externally, largely diluted with Olive Oil (1 to 2), used to allay chronic rheumatism and gout pains. Applied with lint for toothache.

Dose.—1 to 3 minims on a lump of Sugar, or in any bland fluid.

(In all the Pharmacopœias.)

Preparation.

SPIRITUS CAJUPUTI. Colourless.
Oil of Cajuput, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Dose.—50 to 100 minims.

(Not in other Pharmacopœias.)

CALCIUM.

CALCIUM.

Ca, eq. 20 ; or **Ca**, eq. 40.

Calcium, a brilliant white combustible metal, was discovered by Sir Humphry Davy in 1808. Sp. g. 1·5. It is the metallic base of Lime.

CALCII CHLORIDUM.

DRY CHLORIDE OF CALCIUM.

CaCl, eq. 55·5 ; or $CaCl_2$, eq. 111.

Crystals fused and evaporated till it becomes solid, and finally dried at about 400°. In white agglutinated masses, very deliquescent; evolves no Chlorine or Hypochlorous Acid on the addition of Hydrochloric Acid, and is entirely soluble in twice its weight of Water, also in Alcohol.

Brit. Ph. Dose.—10 to 20 grs.

(U.S. Aust. Russ. Calcium Chloratum Siccum.)

Not Official.

CHLORIDE OF CALCIUM, MURIATE OF LIME IN CRYSTALS.—Consists of equal weights of Water and dried Chloride of Calcium.

5 grs. of the crystal in 2 oz. of water, and a fourth part given frequently, arrests sickness when most remedies fail.

It is also given in glandular diseases.

LIQ. CALCII CHLORIDI.—2 oz. of dried Chloride in 8 oz. Distilled Water.

Dose.—30 minims.

CALX.

LIME.

CaO, eq. 28 ; or **CaO**, eq. 56.

The oxide of the metal Calcium, in hard flaky masses, which, when well sprinkled with water, should crack, swell up, evolve much heat, and crumble to powder.

Solubility.—At 32° F. twenty oz. of water dissolves 13·25 grs.

60°	ditto	11·6
212°	ditto	6·7

Test.—If previously slaked, it dissolves without effervescence in Dilute Hydrochloric Acid, and if this solution be evaporated to dryness, and the residue redissolved in water, only a very scanty precipitate forms on the addition of Saccharated Solution of Lime—indicating absence of Phosphate of Lime.

(In all the Pharmacopœias. Aust. Russ. Calcaria Caustica.)

Preparation.

CALCIS HYDRAS.—Which see.

CALX CHLORATA.

CHLORINATED LIME.

A product obtained by exposing Slaked Lime to the action of Chlorine as long as the latter is absorbed; it possesses bleaching and disinfecting properties.

Consists of 1 equivalent of Hypochlorite of Lime, 1 eq. of Chloride of Calcium, and a variable amount of Hydrate of Lime.

A dull white powder with a feeble odour of Chlorine, partially soluble in Water.

Test.—10 grains mixed with 30 grains of Iodide of Potassium, and dissolved in 4 fluid ounces of water, produce, when acidulated with 2 fluid drachms of Hydrochloric Acid, a reddish solution which requires for the discharge of its colour at least 850 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 30 per cent. of Chlorine liberated by Hydrochloric Acid.

In this test, the Hydrochloric Acid, acting on the Hypochlorite of Lime, liberates Chlorine, and this reacting on the Iodide of Potassium, sets free an equivalent quantity of Iodine, which, if the Chlorinated Lime be good, will require the quantity stated of solution of Hyposulphite of Soda to convert it into colourless Iodide of Sodium and Tetrathionate of Soda.

(Same as U.S. Calx Chlorinata; Austr. Ger. and Russ. Calcaria Hypochlorosa; Belg. Chloruretum Calcis; Fr. Hypochlorite de Chaux.)

Preparations.

LIQUOR CALCIS CHLORATÆ. Colourless.

Chlorinated Lime, 1; Distilled Water, 10; triturate and shake well together for three hours in a bottle, and strain. =(1 in 10).

Test.—Sp. g. 1·035. 1 fluid drachm (60 grains by weight) mixed with 20 grains of Iodide of Potassium dissolved in 4 ounces of water, when acidulated with 2 drachms of Hydrochloric Acid, gives a red solution, which requires for the discharge of its colour 500 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 13 grains of available Chlorine in a fluid ounce. (Explanation of Test given under CALX CHLORATA.)

Medicinal Properties.

Not much employed internally; externally as a lotion to foul ulcers, burns, chilblains, and cutaneous eruptions, especially the itch. A disinfecting agent.

Dose.—20 to 40 minims in a wineglassful of water.

(Same as Belg. and Russ.; also a weak solution, 1 of strong solution in 4 water; Fr. 1 in 45; not in others.)

ANTIDOTES.—In case of poisoning by Chloride of Lime the antidotes are, Emetics, White of Egg, Milk, Flour; not Acids.

VAPOR CHLORI.

Chlorinated Lime, 2 oz.; cold Water, sufficient to moisten it: the vapour to be inhaled from a suitable apparatus.

Not Official.

CALCIS CARBOLAS.—*See* ACIDUM CARBOLICUM.

CALCIS CARBONAS.—*See* CRETA PRÆPARATA.

CALCIS CARBONAS PRÆCIPITATA.

PRECIPITATED CARBONATE OF LIME.

CaO,CO_2, eq. 50; or Ca,CO_3, eq. 100.

A white crystalline powder. Insoluble in water.

Chloride of Calcium, 5; Carbonate of Soda, 13; boiling Water, 80: dissolve each in 40, mix, and precipitate.

Test.—With Dilute Nitric Acid it gives a clear solution, which, if perfectly neutral, and deprived of Carbonic Acid by boiling, is not precipitated by Saccharated Solution of Lime added in excess, or by the solution of Nitrate of Silver—indicating the absence of phosphates and chlorides.

Medicinal Properties.

Antacid and astringent; a corrective for diarrhœa.

Dose.—10 to 100 grs., in powder or mixture.

(Same as Austr. Fr. Ger. Russ. and U.S.; not in others.)

CALCIS HYDRAS.

SLAKED LIME.

CaO,HO, eq. 37; or Ca,H_2O_2, eq. 74.

A white powder, strongly alkaline and caustic.

Lime, recently burned, 32; Water, 20: slake the lime, sift the powder and keep in a bottle. Should be recently prepared.

Solubility: sparingly soluble in Water (1 in 900); the solution, on exposure, soon acquires a film of Carbonate of Lime.

Test.—Should not effervesce on the addition of an acid.

Medicinal Properties.

Used in diarrhœa connected with acidity, and in some cases of dyspepsia; also in some calculous affections, and given to children for rickets. Given to correct chronic vomiting, and vomiting of pregnancy.

INCOMPATIBLES.—Vegetable and Mineral Acids, Alkaline and Metallic Salts, Tartar Emetic.

Preparations.

LINIMENTUM CALCIS. A thickish cream.

Solution of Lime, 1; Olive Oil, 1: mix. =(1 in 2).

(Russ. and U.S. are made with Linseed Oil, and then called Carron Oil; Belg. Solution of Lime, 88, Almond Oil, 12, mix; Fr. Linim. Calcaire, Solution of Lime, 9, Almond Oil, 1, but rejecting the water and using only the cream; not in Austr. and Ger.)

Use.—The best liniment to apply to burns and scalds.

LIQUOR CALCIS. SOLUTION OF LIME, or LIME WATER. Colourless.

Slaked Lime, 1; Water, 80.

Bottles containing lime water should be kept full, and well closed from the air.

Each ounce contains about ½ gr. of lime.

Dose.—½ to 2 oz. as an antacid. *Brit. Ph. dose.*—1 to 4 oz.

(Same as U.S.; Fr. Eau de Chaux: Austr. Belg. Ger. and Russ. Aqua Calcariæ.)

Water becomes saturated with much less lime than ordered, therefore Liquor Calcis is of the same strength in all.

Used for Lotio Hydrargyri Flava et Nigra.

LIQUOR CALCIS SACCHARATUS. Colourless, but becomes more or less brown by keeping.

Slaked Lime, 1; Refined Sugar in powder, 2; Distilled Water, 20: digest for some hours, and strain. =(1 in 68).

1 oz. = 12 oz. Lime water.

Test.—Sp. g. 1·052. 1 fluid ounce (460·2 grains by weight) requires for neutralization 254 grain-measures of standard solution of Oxalic Acid, which corresponds to 7·11 grains of Lime.

Dose.—15 to 60 minims in milk.

CALCIS HYPOPHOSPHIS.

HYPOPHOSPHITE OF LIME.

$CaO,PO,2HO$ or $Ca2PH_2O_2$.

Obtained by heating phosphorus with hydrate of lime and water until phosphuretted hydrogen gas ceases to be evolved, then filtering the liquid, separating uncombined lime with carbonic acid gas, and evaporating the remaining solution until the salt separates in a crystalline condition.

Solubility in water 1 in 6; insoluble in spirit.

Characters and Tests.—A white crystalline salt, with a pearly lustre, and a bitter nauseous taste. Heated to redness it ignites.

Medicinal Properties.

Given in cases of nervous and general debility and pulmonary consumption.

Dose.—5 to 10 grs. in water.

(Russ. Calcaria Hyperphosphorosa; U.S.; not in others.)

CALCIS PHOSPHAS.

PHOSPHATE OF LIME.

$3CaO,PO_5$, eq. 155; or $Ca_3P_2O_8$, eq. 310.

A light white amorphous powder.

Insoluble in water.

Test.—10 grains dissolve perfectly, and without effervescence, in Dilute Hydrochloric Acid—indicating absence of carbonate. The solution yields with Ammonia a white precipitate, which is insoluble in boiling Solution of Potash, and when washed and dried weighs 10 grains.

Medicinal Properties.

For rickets and mollities ossium; said to be useful in scrofulous affections, and to promote union of bone fractures.

Dose.—10 to 40 grs.

(Austr. Calcaria Phosphorica; Fr. U.S. Ger; not in others.)

Contained in Pulvis Antimonialis,—2 parts in 3.

Not Official.

CALENDULA.

COMMON MARYGOLD.

Has lately been revived, and the Tincture (4 oz. to the pint of Proof Spirit) employed.

As an antispasmodic, sudorific and emmenagogue; also in low fevers.

Dose.—1 to 2 drms.

CALUMBÆ RADIX.

CALUMBA ROOT.

The root of the *Jateorrhiza Columba* and *Cocculus palmatus*, sliced transversely and dried; from the forests of Eastern Africa between Ibo and the Zambesi. It is easily reduced to powder, which has a greenish tinge; it becomes browner with age, and deepens when it is moistened.

Test.—Moistened with a solution of Iodine, it becomes black—indicating presence of Starch.

A decoction is not blackened by the persalts of Iron—indicating absence of astringent matter.

Medicinal Properties.

A bitter stomachic and tonic, useful in debility of the digestive organs. Given in convalescence from acute diseases, combined with Alkalies or Bismuth. It is one of the few bitters that can be prescribed with Salts of Iron.

Dose.—Of the powder 10 to 20 grs. three or four times a day.

Frequently given with powdered Ginger and Rhubarb.

(In all the Pharmacopœias.)

Preparations.

EXTRACTUM CALUMBÆ. Becomes mouldy by keeping.

Calumba, cut small, 1; Distilled Water, 5: macerate in half the water for twelve hours, strain and press; macerate again with the remaining water, strain and press; mix and filter the liquors, and evaporate with the heat of a water-bath to pill consistence.

8 Root yield 1 Extract.

Dose.—2 to 10 grs.

(Austr. Fr. Ger. and Russ. Extr. Colombo, with Proof Spirit; Belg. Alcoholicum et Aquosum; U.S. fluid only.)

An Extract made with Spirit keeps well.

INFUSUM CALUMBÆ.

Calumba, coarsely powdered, 1; cold Distilled Water, 20: macerate one hour, and strain. =(1 in 20.)

Calumba root contains starch and mucilage, both of which are dissolved by hot water; cold water dissolves the mucilage only.

Dose.—1 to 2 oz.

(U.S. allows both cold and hot water, 1 in 32; not in others.)

Physicians prescribing for patients who wish to take with them a supply of their medicines containing Infusion of Calumba, will find 2 drachms of Tincture to be of about the same therapeutical strength as 1 oz. of the Infusion.

TINCTURA CALUMBÆ. Reddish-brown.

Bruised Calumba, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—½ to 2 drms.

(Same as Fr. and U.S.; Belg. 1 in 5; Russ. Tinct. Colombo 1 and 6, Rectified Spirit by weight; not in others.)

CAMBOGIA.

GAMBOGE.

A Gum Resin, from *Garcinia Morella*, imported from Siam.

Soluble in Rectified Spirit, which is rendered of an opaque yellow by water; in Ammoniated Alcohol, which is not rendered turbid by the addition of water; in Ether to the amount of four-fifths.

Test.—An emulsion made with boiling water, and cooled, does not become green on addition of Solution of Iodine,—indicating absence of flour or starch.

Medicinal Properties.

It is employed in the treatment of dropsy, attended with torpidity of the bowels, generally in combination with Elaterium, Bitartrate of Potash, or Jalap. Also in cases of obstinate constipation, and has frequently been found effectual in the expulsion of the tapeworm. As it is apt to occasion much sickness and griping, it is best given in small doses, repeated at short intervals, until it operates.

It may be given in pill or emulsion, or dissolved in an alkaline solution; the last method has been recommended in dropsical complaints.

Dose.—1 to 5 grs. In cases of tænia, may be increased to 10 or 15 grs.

(U.S. Gambogia; Belg. Fr. Ger. and Russ. Gummi Gutti; not in Austr.)

Preparation.

PILULA CAMBOGIÆ COMPOSITA. Intense brown.

Gamboge, 1; Barbadoes Aloes, 1; Compound Powder of Cinnamon, 1; Hard Soap, 2; Syrup, a sufficiency: mix. (1 in 6 nearly).

Dose.—5 to 10 grs.

(Fr. Pilules des Bontius, contains Ammoniacum and Vinegar instead of Cinnamon and Soap; not in others.)

CAMPHORA.

CAMPHOR.

$C_{16} H_{20} O_2$.

A concrete volatile oil, obtained from the wood of *Camphora officinarum*, imported in a crude state from China and Japan, and sublimed in bell-shaped masses. The Borneo Camphor from the Dryobalanops, though virtually the same as the official, is valued by the Chinese a hundred times more.

Solubility in Water, 1 in 1000; in Rectified Spirit, 1 in 1¼; or by weight, 1 in 1; freely in Chloroform, Ether, volatile and fixed Oils, and Acetic Acid; but not in Alkalies. Carbonic Acid, Bicarbonate of Magnesia, and Myrrh increase its solubility in water. Milk is a solvent and a good vehicle to administer it in.

Test.—Its sp. g. varies from ·986 to ·996. It evaporates entirely, if left exposed to the air. It melts at 288° F., boils at 400°, and in close vessels sublimes unchanged.

Medicinal Properties.

Stimulant at first, afterwards sedative; antispasmodic, and diaphoretic.

In moderate doses, it produces (in health) mental exhilaration, increases the heat of the skin, and occasions diaphoresis. Given in repeated doses relieves strangury and distension of the bladder. It allays nervous irritation, and produces a general placidity of feeling. It is useful in cholera and diarrhœa, and in large doses it causes giddiness and disposition to sleep. It is an antaphrodisiac, and given in chordee. Camphor Spirit mixed with warm water to bathe the nostrils is highly useful in hay fever.

It is a good vehicle for giving Carbonate of Ammonia, and if the proportions are nicely balanced, makes a pleasant draught; thus, Carbonate of Ammonia 5 grs., Camphor Water ½ oz., water 1 oz.

Dose.—2 to 10 grs.

(In all the Pharmacopœias.)

Contained in Linimentum Aconiti, Lin. Belladonnæ, and other Liniments and Ointments.

Preparations.

AQUA CAMPHORÆ. *Syn.* MISTURA CAMPHORÆ.

Camphor, broken small, ½ oz.; Distilled Water, 1 gallon: digest at least two days, confining the camphor under the water.

Dose.—1 to 2 oz. = ½ or 1 gr. of Camphor.

(Belg. Mistura Camphoræ, and made with a small quantity of Spirit; Fr. Eau Camphrée; U.S. with a little Spirit and Carbonate of Magnesia; not in others.

LINIMENTUM CAMPHORÆ. Pale straw.

Camphor, 1; Olive Oil, 4: dissolve.

(Same as U.S.; Russ. Ol. Camph. 1 in 8; Belg. Ger. and Fr. Oleum Camphoratum by weight 1 in 10; also Brit. formula; Austr. Ol. Camph. 1 and 3.)

LINIMENTUM CAMPHORÆ COMPOSITUM. Colourless.

Camphor, 5; English Oil of Lavender, ¼; Strong Solution of Ammonia, 10; Rectified Spirit, 30: dissolve the oil and camphor in the spirit, and gradually add the ammonia.

Stimulating. Most useful in tic-douloureux and chronic rheumatism. Painful neuralgia has been relieved by applying lint previously soaked in the liniment and covered with a dry napkin until redness is produced, and then lightly rubbing the part with a solution of Bimeconate of Morphia until relieved.

(Same as Fr.; not in others.)

SPIRITUS CAMPHORÆ. Colourless.

Camphor, 1; Rectified Spirit, 9: dissolve. =(1 in 10).

Dose.—10 to 30 minims in Milk or on Sugar.

(U.S. 1 in 7½; Austr. 1 and 9; Fr. (Alcoöl Camphré) Ger. 1 in 10; Russ. Camphor 1; Spirit 9; water 3.

TINCTURA CAMPHORÆ COMPOSITA. Light brown.

Opium, in coarse powder, 40 grs.; Benzoic Acid, 40 grs.; Camphor, 30 grs.; Oil of Anise, ½ drm.; Proof Spirit, 20 oz.: macerate seven days, strain, wash the marc with spirit, and filter 20 oz. =(1 of opium in 240).

Known as Paregoric Elixir. 1 drm. contains ¼ gr. Powder of Opium=⅛ gr. of Extract.

Given to allay spasmodic cough in bronchitis and in phthisis.

Dose.—15 to 60 minims.

(U.S. Belg.; Fr. 1 *Extract* of Opium in 242, therefore twice the strength of British; Ger. and Russ. alike, Tinct. Opii Benzoica 1 in 200 contains 4 times more Benzoic Acid and more than twice the amount of Aniseed and Camphor; not in Austr.)

Symptoms of poisoning by Camphor: convulsions, lividity of countenance, stupor, arrest of urinary secretions.

Antidote: Coffee.

Not Official.

CAMPHOR BALLS.—Camphor, 2; White Wax, 5; Spermaceti, 3; Oil of Almonds, 3; Tincture of Tolu, ¼: melt, and pour into half-ounce gallipots.

CAMPHORA CUM CRETA.—Camphor, 1; Prepared Chalk, 8: powder the camphor by rubbing it with a few drops of rectified spirit, mix in the chalk, and pass the whole through a sieve. A dentifrice.

CERATUM.—Camphor, 2; White Wax, 3; Lard, 4; Oil of Almonds, 3: melt.

ESSENTIA.—Camphor, 1; Rectified Spirit, 20:—or Camphor, 1; Rectified Spirit, 18; Tincture of Myrrh, 2. In domestic use for making Julep. Given for diarrhœa, 5 minims every 10 or 15 minutes in water till diarrhœa is arrested.

SPIRITUS CAMPHORÆ FORTIOR.—A saturated solution.

UNGUENTUM.—Russ. Camphor, 3; White Wax, 1; Lard, 9: mix.

VINEGAR CAMPHORATED.—Camphor, 1; Alcohol, 60; Vinegar, 180: mix.

CANELLÆ ALBÆ CORTEX.

WHITE CANELLA BARK.

The Bark of *Canella alba;* from the West Indies.

Contained in Vinum Rhei.

CANNABIS INDICA.

INDIAN HEMP.

The flowering tops of the female plant of the *Cannabis sativa,* from which the resin has not been removed, dried. Cultivated in India.

We are indebted to Dr. O'Shaughnessy for the first introduction of Indian Hemp into this country, He brought over a quantity from India, which the Author converted into extract for him, and distributed amongst a large number of the profession under Dr. O'Shaughnessy's directions.

Medicinal Properties.

Has been given in tetanus, and might be tried in large doses for hydrophobia.

Dr. Clendinning used it largely, and his opinion is as follows:—"It acts as a soporific or hypnotic in conciliating sleep; as an anodyne in lulling irritation; as an antispasmodic in checking cough and cramp; as a nervine stimulant in removing languor and anxiety, and raising the pulse and spirits without any drawback or deduction on account of indirect or incidental inconveniences, producing tranquil sleep without causing constipation, nausea, or other effect or sign of indigestion, without headache or stupor." Coffee and cocoa aid the action.

More recently, Dr. Russell Reynolds has found it very successful in certain cases of insomnia, neuralgia, and spasm. He says it relieves these derangements of the nervous system, without interfering with any one of the functions of organic life, and does not produce the after suffering of misery which follows many opiates.

Most valuable in allaying all disturbance of the spinal cord, and is given in hay fever.

Cigarettes are made for asthma and nervous palpitation, when there is no congestion of the head, heart, or lungs.

Not prescribed in powder.

(U.S. Austr. Belg. and Russ.; Fr. has only "Hachisch" prepared from the leaves; Ger. Fructus.)

INCOMPATIBLES.—Waters and Watery Infusions; requires mucilage to make it mix.

ANTIDOTE.—In case of over-dose, hot brandy-and-water may be given, vegetable acids, such as lemon juice, vinegar, and the like, and the patient be allowed to sleep. A blister to the nape of the neck is recommended to control its violent action.

Preparations.

EXTRACTUM CANNABIS INDICÆ. Most intense green.

Indian Hemp, in coarse powder, 1; Rectified Spirit, 5; macerate seven days, press out the tincture, distil off the spirit, and evaporate.

Soluble in Olive Oil.

Dose.—¼ to 1 gr. in pill.

(Same as Austr. U.S. Ger. and Russ.; not in others.)

6 of Indian Hemp yields 1 of Alcoholic Extract.

TINCTURA CANNABIS INDICÆ. Intense green.

Extract of Indian Hemp, 1; Rectified Spirit, 20: dissolve. =(1 in 20).

22 minims contain 1 grain of extract. (480 minims = 437·5 grain-measures.)

Dose.—5 to 20 minims with 1 drm. of mucilage, adding 1 oz. of water.

(Same as Ger. and U.S.; Russ. 1 and 6; not in others.)

☞ The Tincture should be previously triturated with the mucilage, or the resin will be precipitated by the water.

CANTHARIS.

CANTHARIDES.

The *Cantharis vesicatoria* dried; collected in Spain, France, Russia, Sicily, and Hungary. Contains a crystalline principle, called Cantharidine.

Test.—Free from mites.

The powder should be dry and kept closely corked, for if at all damp it is apt to acquire a putrid odour.

Medicinal Properties.

Externally its effects are rubefacient and irritant; by continued application it is vesicant. For the latter purpose the Charta or Liquor Epispasticus is used, and is especially effective in inflammation of deep-seated parts, as in pleuritis, pericarditis, pneumonia, etc. It acts for a longer period, and is less irritating to the patient than Ammoniacal or Acetic Acid embrocations. Internally as tincture in chronic affections of the nervous system, paraplegia, etc. It has a diuretic effect, and is given in gleet or other mucous discharges; but it should be given cautiously, for it sometimes produces strangury.

It is used as an application to ringworm. It is the basis of most of the applications used to increase the growth of hair.

In chronic inflammation of the bladder it should *not* be used as a counter-irritant, from its irritating effects on the urinary organs when absorbed by the skin. A solution of Nitrate of Silver (½ drm. to 1 oz. of water) is to be preferred.

(In all the Pharmacopœias.)

ANTIDOTES.—In case of poisoning by Cantharides the antidotes are, Emetics, Emollient Drinks, Opiates by the mouth and rectum.

Preparations.

ACETUM CANTHARIDIS. Intense brown.

Cantharides, in powder, 2; Glacial Acetic Acid, 2; Acetic Acid (28 per cent.), 18, or a sufficiency: add the glacial acetic acid to 13 of acetic acid, and in this mixture digest the cantharides for two hours at a temperature of 200° F.; when cold place them in a percolator, and when the liquid ceases to drop, pour over the residuum the remaining 5 of acetic acid, and when the percolation is finished, press and make the whole liquid up to 20.

CHARTA EPISPASTICA. BLISTERING PAPER. White.

White Wax, 4; Spermaceti, 1½; Olive Oil, 2; Resin, ¾; Canada Balsam, ¼; Cantharides, in powder, 1; Distilled Water, 6: digest all the ingredients excepting the Canada balsam in a water bath for two hours, stirring them constantly, then strain, and separate the plaster from the watery liquid; mix the Canada balsam with the plaster melted in a shallow vessel, and pass slips of paper over the surface of the hot liquid, so that one surface of the paper shall receive a thin coating of plaster.

(U.S. Charta Cantharidis), (Fr. Papier Épispastique No. 1.), both only half the strength; not in others.)

EMPLASTRUM CANTHARIDIS. Dark brown.

Cantharides, in very fine powder, 12; Yellow Wax, 7½; prepared Suet, 7½; Resin, 3; prepared Lard, 6: melt the last four together, and stir in the first.

=(1 in 3).

(Austr. Belg. Fr. Emplastr. Vesic. 1 in 3; Ger. and Russ. 1 in 4; not in U.S.)

Oiled tissue paper, or very thin silk, is sometimes placed between the plaster and the skin, to prevent irritant action on the urinary organs. In France, powdered Camphor is sprinkled on the blister for the same purpose.

EMPLASTRUM CALEFACIENS. Yellow.

Cantharides, in coarse powder, 4; boiling Water, 20; expressed Oil of Nutmeg, 4; Yellow Wax, 4; Resin, 4; Soap Plaster, 52; Resin Plaster, 32: infuse the cantharides in the water six hours, strain and press through calico, and evaporate till reduced to one-third, then add the rest and melt all together, =(1 in 25).

(U.S. Emplastrum Picis cum Cantharide, 1 in 39; not in others.)

LIQUOR EPISPASTICUS. Blistering Fluid. Greenish-brown.

Powdered Cantharides, 8; Acetic Acid, 4; Ether 20: macerate the cantharides in the acetic acid twenty-four hours, and add ether to percolate 20. (=1 in $2\frac{1}{2}$).

(U.S. Linimentum Cantharides 1, Oil of Turpentine 8, digest hot three hours and strain; not in others.)

Applied with a camel-hair brush, speedily produces a blister.

TINCTURA CANTHARIDIS. Straw-colour.

Cantharides, in coarse powder, 1; Proof Spirit, 80: macerate, agitating occasionally, for seven days in a closed vessel, strain, press, filter, and add sufficient proof spirit to make up 80. =(1 in 80).

Dose.—5 to 20 minims.

(U.S. 1 in 30; Austr. 1 and 5; Fr. with Alcohol, and with Acetic Ether 1 in 10 by weight; Ger. with Rectified Spirit, 1 and 10; Russ. 1 and 6, Rectified Spirit; Belg. 1 in 5 by weight, also an ethereal tincture.)

UNGUENTUM CANTHARIDIS. Olive-brown.

Cantharides, in fine powder, 1; Olive Oil, 6; Yellow Wax, 1: digest the cantharides in the oil for twelve hours; and for $\frac{1}{4}$ hour at 212°; strain, and add the melted wax, and stir till cold. =(1 in 8).

Employed to promote discharge from a blistered surface.

(Austr. 1 in 3; Belg. 1 in 6; Fr. Pommade Épispastique Verte, 1 in 33, and P. E. Jaune, 1 in 17; Ger. 1 in 7; U.S. 1 in 12; Russ. Cantharides, 9; Wax, 12; Olive Oil 24.)

Not Official.

Hair Wash.—Vinegar of Cantharides, 1; Glycerine, 1; Tincture of Bark, $\frac{1}{2}$; Orange-flower Water, 8; Rose Water, 8: mix.

Linimentum Crinale.—Cantharidine, 1 gr.: Acetic Ether, $\frac{1}{4}$ oz., dissolve and add Rectified Spirit, 3 oz.; Castor Oil, 2 oz.; Oil of Lavender, 15 minims.

This Liniment is highly recommended to be applied to the head where the hair is falling off, and is said even to cause it to grow on bald places; but after applying it a few times the head should be washed, or it may accumulate and cause too much irritation.

Unguentum Stimulans.—Erasmus Wilson's. Cantharides in powder, 3; Lard 12; macerate with a moderate heat for twenty-four hours and filter through paper.

The following are also employed as blistering agents:—

Brown's Blistering Tissue; Papier d'Albespeyres, No. 1, 2, and 3: 3 is the strongest.

CAPSICI FRUCTUS.

CAPSICUM FRUIT.

The ripe fruit of the *Capsicum fastigiatum* dried; imported from the coast of Guinea, and from the East and West Indies, and distinguished in commerce as Guinea Pepper and Pod Pepper.

It yields its virtues to Water, Alcohol, Ether, Acetic Ether, and the fixed and volatile Oils.

Medicinal Properties.

A powerful stimulant, used chiefly as a condiment. In intermittent fevers with Quinine, in low forms of fever, diarrhœa, cholera, and in the black vomit of hot climates. In dyspepsia and sea-sickness. Used as a gargle in scarlet fever and malignant sore-throat. Externally as a rubefacient.

Dose.—½ to 1 gr. of the powder in a pill, or in dinner pills.

(In all the Phermacopœias; Fr. Poivre de Guinée.)

Preparation.

TINCTURA CAPSICI. Light yellowish-green.

Capsicum, bruised, 1; Rectified Spirit, 27: macerate forty-eight hours with three-fourths of the spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remaining spirit; as soon as it ceases to drop, wash the marc with spirit to make up 27. =(1 in 27).

Dose.—10 to 20 minims.

(U. S., made with proof spirit; Belg. Tinct. Piper, Hispan, 1 and 6; Ger. 1 and 10; Russ. Tinct. Capsici, 1 and 6 by weight; not in others.)

Not Official.

GARGARISMA.—Tinctura Capsici, ½ to 1 drm. in 8 oz. of Infusion of Roses.

CAPSICIN.—An acrid soft resin or oil obtained by digesting the Alcoholic Extract in Ether and evaporating the Ethereal solution. It is a thick liquid of a yellowish-red colour, which is liquefied by heat and at a high temperature volatilizes. ½ a grain only thus volatilized in a large room will cause all who respire the air of the room to cough and sneeze. It is soluble in Alcohol, Ether, and Oil of Turpentine.

OLEORESIN CAPSICI, U.S.

LINIMENTUM CAPSICI (the concentrated Tincture of Dr. Turnbull).—Capsicum, 1; Rectified Spirit, 3: macerate seven days and strain.

Used externally for swollen chilblains and as a counter-irritant, but not when the skin is broken. For chilblains, saturate a piece of sponge or flannel with a tincture, and rub the chilblain well until a strong tingling is produced. Continue daily until recovery. A small dossil of lint or cotton, dipped into the tincture, is an excellent remedy for toothache.

Tissue paper imbued with a strong tincture of this drug, and perhaps a little mustard oil, is sold as a sinapism, to produce counter-irritation, under the name of Sinapine.

CARBO ANIMALIS.

ANIMAL CHARCOAL—BONE BLACK.

The residue of bones which have been exposed to a red-heat without the access of air; consists principally of charcoal, phosphate, and carbonate of lime.

CARBO ANIMALIS PURIFICATUS.

PURIFIED ANIMAL CHARCOAL.

From which its earthy salts have been almost wholly removed.

Bone Black, 16; Hydrochloric Acid, 10; Distilled Water, a sufficiency.

Digest the Bone Black in the acid mixed with twice the quantity of water in a moderate heat for two days, thoroughly wash on a calico filter, until what passes through it gives scarcely any precipitate with nitrate of silver; dry, and heat to redness, in a covered crucible.

Test.—If it contains Carbonate of Lime, Hydrochloric Acid will cause effervescence, and the solution obtained will give a precipitate with Carbonate of Ammonia; and if Phosphate of Lime be present, the acid will dissolve the salt, and yield it as a precipitate on the addition of Ammonia. When burned at a high temperature, with free access of air, it leaves scarcely any residue.

Medicinal Properties.

Dr. Garrod, and Dr. Rand of Philadelphia, state that it has the property of counteracting the poisonous effects of Morphia, Strychnia, and Aconitia. Dr. Rand says that these alkaloids may be swallowed with impunity if mixed in due proportion with Purified Animal Charcoal. It destroys the fœtor of ulcers, etc. It is much used as a decolorizing agent in various pharmaceutical processes.

Dose.—20 to 60 grs.

(Austr. Belg. U. S. Russ. and Ger.; not in others.)

A convenient mode of application to putrid sores has been furnished by Messrs. Pichot et C^ie^, Paris, in their "Papiers Carbonifères," and a softer substance called Charpie, also Sachets de Charpie Carbonifères.

CARBO LIGNI.

WOOD CHARCOAL.

Wood charred by exposure to a red-heat without access of air.

The Oak, Beech, and Hazel are chiefly employed.

Test.—When burned at a high temperature, with free access of air, it leaves not more than 2 per cent. of ash.

Medicinal Properties.

Antiseptic and absorbent. Given in powder or in capsules in cases of distension by intestinal gas, and in foul eructations; also in dyspepsia attended with flatus and acidity. Externally, as a poultice, it absorbs the fœtor of ulcers.

Respirators of Charcoal are made to protect the lungs from poisonous gases.

Dose.—20 to 60 grs.

(In all the Pharmacopœias; Fr. Charbon Végétal.)

Preparation.

CATAPLASMA CARBONIS.

Wood Charcoal, ½ oz.; Bread, 2 oz.; Linseed Meal, 1½ oz.; boiling Water, 10 oz.: soak the bread in the water near the fire, add the linseed meal and half the charcoal, stirring to a soft poultice, sprinkling the remainder of the charcoal on the surface.

(Not in other Pharmacopœias.)

Charcoal Biscuits, containing 10 grains, are sold by Mr. Bragg.

Charcoal capsules of gelatine, containing 4 grains, are also in use.

Charcoal Cautery, Getchell's. Charcoal, 21; Nitre, 1; Powder of Acacia, 3; water to make a paste and form sticks about 2 inches long and thick as the little finger, but rounded at the point, and dry them.

CARDAMOMUM.

CARDAMOMS.

The seeds of the *Elettaria Cardamomum* contained in their capsules, which are to be removed when the seeds are employed. Cultivated in Malabar.

Medicinal Properties.

Cordial and carminative; less heating and stimulating than some others. A useful adjuvant to purgatives to prevent griping.

Dose.—Of the seeds powdered, 5 to 20 grs.

1 of fruit yields ¾ of seeds.

(In all the Pharmacopœias.)

Contained in Extractum Colocynthidis Compositum, Pulvis Cinnamomi Compositus, Pulvis Cretæ Aromaticus, Tinctura Gentianæ Composita, Tinctura Rhei and Vinum Aloes.

Preparation.

TINCTURA CARDAMOMI COMPOSITA. Deep lake colour.

Cardamom seeds, freed from their pericarps, bruised, 1; Caraway, bruised, 1; Raisins, freed from their seeds, 8; bruised Cinnamon, 2; Cochineal, in powder, ½; Proof Spirit, 80: macerate forty-eight hours with ¾ of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour upon it the remainder of the spirit, and when it ceases to drop, press, wash the marc with spirit to make up 80. =(1 in 80).

Dose.—½ to 2 drms.

(Same as Fr.; U. S. 1 in 50, contains Honey, and is made with the *fruit* of the Cardamoms; Belg. Tinctura Simplex; not in others.)

Contained in Decoctum Aloes Compositum, Mistura Ferri Aromatica, Mistura Sennæ Composita, Tinctura Chloroformi Composita.

Not Official.

CARNIS EXT.—Extract of Meat.

CARNIS EXTRACTUM, Ger.—Has an agreeable odour, grateful flavour, and is freely soluble in water.

Liebig says, "Vegetable Albuminates contained in bread, peas, beans, and potatoes, are identical with Albuminates contained in the flesh of animals; and when these are added to extract of meat, they impart to it the peculiar nutritive value which distinguishes meat in our estimation from other food."

CARUI FRUCTUS.

CARAWAY FRUIT.

The dried Fruit of the *Carum Carui*. Cultivated in England and Germany.

Medicinal Properties.

Aromatic, stomachic, and carminative. Used occasionally in flatulent colic, and as an adjuvant to other medicines.

(Austr. Fr. Russ. U. S.; not in others.)

Contained in Conf. Opii, Conf. Piperis, Pulv. Opii Comp., Tinct. Cardamomi Comp., and Tinctura Sennæ.

Preparations.

AQUA CARUI.

Caraway, bruised, 1; Water, 20; distil 10. =(1 in 10).

Dose.—1 to 2 oz.

(Russ. made with oil; not in other Pharmacopœias.)

OLEUM CARUI. Pale straw.

The Oil distilled in Britain, sp. g. ·964.

Added to purgative medicines to prevent griping.

Dose.—2 to 4 minims.

(Belg. Ger. and U. S.; Fr. Huile Volatile de Carvi; not in others.)

CARYOPHYLLUM.

CLOVES.

The unexpanded flower-bud of the *Caryophyllus aromaticus* dried; cultivated in Penang, Bencoolen, and Amboyna.

Test.—It emits, when indented with the nail, an oil of a strong fragrant odour. Becomes black with Salts of Iron—indicating astringent matter.

Medicinal Properties.

Stimulant, aromatic, and carminative; sometimes administered in substance or infusion to correct nausea, vomiting, and flatulency, and to promote digestion. But chiefly used to qualify other medicines.

The powder contained in Infus. Aurantii Co., Mist. Ferri Aromatica, Vin. Opii.

Dose.—In substance 5 to 10 grs.

(In all the Pharmacopœias; Fr. Girofles.)

Incompatibles.—Lime Water, Metallic Salts, Mineral Acids, Gelatine.

Preparations.

INFUSUM CARYOPHYLLI.

Cloves, bruised, 1; boiling Distilled Water, 40; infuse half an hour, and strain. =(1 in 40).

Dose.—1 to 2 oz.

(U. S. 1 to 65; not in others.)

OLEUM CARYOPHYLLI.

The Oil distilled in Britain, sp. g. 1·034 to 1·061 : is colourless at first, and becomes reddish-brown by keeping. Soluble in Alcohol, Ether, and strong Acetic Acid.

Used as an adjunct to purgatives; or applied to carious teeth.

Contained in Confect. Scammonii, Pil. Colocynth. Co., Pil. Coloc. et Hyoscyami.

Dose.—1 to 4 minims.

(In all the Pharmacopœias.)

CASCARILLÆ CORTEX.

CASCARILLA BARK.

The Bark of the *Croton Eleuteria*, from the Bahamas.

Medicinal Properties.

Aromatic, stomachic, and tonic. Used in dyspepsia, chronic diarrhœa dysentery, and in recovery from acute diseases. Formerly used in intermittent fevers, but now almost entirely superseded by Cinchona for that purpose.

Dose.—In powder 10 to 30 grs.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Lime Water, Metallic Salts, and Mineral Acids.

Preparations.

INFUSUM CASCARILLÆ.

Cascarilla, in coarse powder, 1; boiling Distilled Water, 10: infuse an hour, and strain. =(1 in 10).

Dose.—1 to 2 oz.

(50 per cent. stronger than U. S.; not in others.)

This infusion quickly changes, and will scarcely keep good for a day in summer.

1 oz. of Infusion is of about the same therapeutical strength as ¼ oz. of Tincture, but the Infusion is by far the most aromatic, and when it is prescribed with an aromatic Tincture keeps good.

TINCTURA CASCARILLÆ. Dark reddish-brown.

Cascarilla, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remainder of the spirit, and when it ceases to drop, wash the marc, press, filter, and make up 8. =(1 in 8).

Dose.—½ to 2 drms.

(Fr. Ger. and Belg. 1 in 5; Russ. 1 and 6 Rectified Spirit, by weight); not in others.)

This tincture is frequently prescribed with the diluted mineral acids, and then the resin is separated, which fills the mixture with minute floccules; it is therefore better, when giving acids, to prescribe the infusion.

CASSIÆ PULPA.

CASSIA PULP.

The pulp of the pods of the purging Cassia, *Cassia Fistula*, imported from the East or West Indies.

Medicinal Properties.

Laxative. Useful in small doses for habitual costiveness. Large doses occasion nausea, flatulence, and griping; generally given in combination.

Dose.—As a laxative, 60 to 120 grs.; as a purgative, 1 to 2 oz.

(Belg. Fr. U. S., Cassia Fistula; not in others.)

Contained in Confectio Sennæ; 1 part in 8 nearly.

CASTOREUM.

CASTOR.

Preputial follicles of the Beaver dried, and the oil sacs rejected, imported from Hudson's Bay.

Medicinal Properties.

Moderately stimulant and antispasmodic. In large doses it quickens the pulse, and increases the heat of the skin, but as usually employed in small doses, it chiefly affects the nervous system. Used in low forms of fever with nervous symptoms, in spasmodic diseases, in hysteria and epilepsy.

Dose.—Of the powder 5 to 10 grs.

(In all the Pharmacopœias.)

Preparation.

TINCTURA CASTOREI. Deep red.

Castor, in coarse powder, 1; Rectified Spirit, 20: macerate seven days, strain, and wash the marc with spirit sufficient to make up to 20.

=(1 in 20).

Dose.—½ to 1 drm.

(U.S. 1 in 15 (Russ. 1 and 6 by weight; Belg. and Fr. and Ger. 1 and 10 by weight); not in Austr.)

CATAPLASMATA.

The Cataplasms were contained in the London Pharmacopœia only, and are adopted by the Brit. Ph. with very slight modification. The formulæ will be found under the names of the substances from which they are prepared.

CATAPLASMA CARBONIS, 1 in 28.
CATAPLASMA CONII, 1 powder in 14.
CATAPLASMA FERMENTI.—See Cerevisiæ, 1 in 4½.
CATAPLASMA LINI, 1 powder in 3½.
CATAPLASMA SINAPIS, 1 powder in 6.
CATAPLASMA SODÆ CHLORATÆ, 1 solution in 7.

Cataplasms that are not official are enumerated in the Index.

CATECHU PALLIDUM.

PALE CATECHU.

An extract of the leaves and young shoots of the *Uncaria Gambir*, prepared at Singapore and in the Eastern Archipelago.

It generally occurs in cubical reddish-brown pieces, porous, bitter and astringent in taste.

Solubility: entirely soluble in boiling Water; the solution, when cold, is not rendered blue by Iodine. Of 100 parts, only 60 are dissolved by cold Water, and the solution is bright. 30 parts of Isinglass precipitate the whole of the astringent matter.

Test.—Sp. g. 1·390.

The pale Catechu being already in the Edin. the Brit. 1864 retained it with the black; but the black is the one adopted by other Pharmacopœias, and is preferred in the arts and manufactures; it is well known to be by far superior to the pale in astringency, and always to be had of good quality, it is therefore a matter of surprise and regret that it has been rejected from the British Pharmacopœia.

Catechucin is not precipitated by Gelatine.

Medicinal Properties.

A powerful astringent. Used chiefly in diarrhœa and some forms of atonic dyspepsia accompanied with pyrosis; also as a remote astringent for hæmorrhage and mucous discharges. Lozenges are the best medium for administering it in relaxed conditions of the uvula.

Dose.—10 to 30 grs. in powder.

INCOMPATIBLES.—The Alkalies, Metallic Salts, and Gelatine.

Preparations.

INFUSUM CATECHU.

Pale Catechu, in coarse powder, 160 grs.; Cinnamon, bruised, 30 grs.; boiling Distilled Water, 10 oz.: infuse half an hour, and strain. =(1 in 27).

Dose.—1 to 2 oz.

(U.S. Compositum; not in others.)

PULVIS CATECHU COMPOSITUS. Reddish-brown.

Pale Catechu, 4; Kino, 2; Rhatany, 2; Cinnamon, 1; Nutmeg, 1: mix. =(1 in $2\frac{1}{2}$).

Dose.—15 to 30 grains. Aromatic, astringent.

(Not in other Pharmacopœias.)

TINCTURA CATECHU. Deep reddish-brown.

Pale Catechu, in coarse powder, $2\frac{1}{2}$; Cinnamon, bruised, 1; Proof Spirit, 20: macerate for seven days with agitation, strain, press, and filter, and add spirit to make up 20. =(1 in 8.)

Dose.—$\frac{1}{2}$ to 2 drms.

(U.S. 1 in 10; Russ. 1 and 6 Rectified Spirit; Belg. Fr. Tinct. Cachou, and Ger. 1 and 5, by weight.)

TROCHISCI CATECHU. Light brown.

Pale Catechu, in powder, 720 grs.; Refined Sugar, in powder, 25 oz.; Gum Arabic, in powder, 1 oz.; Mucilage of Acacia, 2 oz.; Distilled Water, a sufficiency; divide into 720 lozenges.

Each lozenge contains 1 grain of Catechu.

Dose.—1 to 3 lozenges.

Not Official.

CATECHU NIGRUM.—Black Catechu, Terra Japonica, Pegu Catechu, Cutch.—An extract of the Acacia Catechu, dried and imported from Pegu. It generally occurs in irregularly-shaped blackish-brown masses, astringent and bitter in taste.

Solubility. Of 100 parts, only 88 are dissolved by cold water, the solution being very turbid. 60 parts of Isinglass precipitate the whole of the astringent matter.

Test.—Sp. g. 1·450.

Dose.—5 to 15 grs.

(In all the Pharmacopœias except Austrian and British.)

The pale Catechu contains only about half the astringent matter of the black.

*** As **GUMMI RUBRUM** is advantageously used as a substitute for Catechu, it may be proper to mention it here, but it will be found in the alphabetical order with its preparations.

CERA ALBA.

WHITE WAX.

Yellow Wax, bleached by exposure to moisture, air, and light. British and imported.

Test.—Not unctuous to the touch: does not melt under 150° F.

Solubility: entirely in Oil of Turpentine, insoluble in Alcohol and Ether, slightly soluble in boiling Alcohol and Ether.

Medicinal Properties.

Emollient; chiefly employed as an ingredient in Ointments.

(In all the Pharmacopœias; Fr. Cire Blanche.)

Contained in Unguenta Cetacei, Plumbi Subacetatis, and Simplex; also in Suppositoria and Charta Epispastica.

Preparation.

UNGUENTUM SIMPLEX. White.

White Wax, 2; Prepared Lard, 3; Almond Oil, 3: melt together, and stir till it becomes solid. This is necessary, because the Ointment is apt to granulate if the stirring is not continued until it solidifies. =(1 in 4).

(U.S. Lard 8, Yellow Wax 2; Austr. Lard 8, Wax 2; Belg. Lard 11, Wax 2; Ger. Unguentum Cereum, Olive Oil 5, Wax 2; Fr. Cérat Simple, Oil of Almonds 6, Wax 2.)

Not Official.

Cold Cream.—White Wax, 1; Spermaceti, 1; Oil of Almonds, 6; Rose Water, 9, Otto of Rose to perfume it. Melt together, by means of a water-bath, the oil, spermaceti, and wax, then gradually add the rose-water, and stir till cold.

CERA FLAVA.

YELLOW WAX.

The prepared honeycomb of the hive-bee. British and imported.

Test.—Not unctuous to the touch; does not melt under 140° F.; yields nothing to cold Rectified Spirit; but is entirely soluble in Oil of Turpentine. Boiling Water in which it has been agitated, allowed to get cold, is not rendered blue by Iodine—indicating absence of flour, with which it was formerly mixed it is, however, rarely adulterated now.

Medicinal Properties.

Chiefly used in medicine as an ingredient of plasters and ointments.

(In all the Pharmacopœias ; Fr. Cire.)

Contained in several of the Emplastra and Unguenta.

CEREVISIÆ FERMENTUM.

BEER YEAST.

The ferment obtained in brewing beer. It consists of numerous microscopic round or oval confervoid cells.

Insoluble in Alcohol or Water.

Medicinal Properties.

Antiseptic and stimulant, and has been recommended in typhus and typhoid fever. May be used in low states of the nervous system. Externally to prevent the formation of boils and carbuncles. It is, however, superseded by more convenient medicines.

Dose.—(Fresh) ½ to 1 oz. every two hours, alone or with water.

(Belg. U.S. ; not in others.)

Preparation.

CATAPLASMA FERMENTI.

Beer Yeast, 6; Flour, 14; Water (100° F.), 6; mix. Place the mass near the fire till it rises.

Useful in foul and sloughing ulcers.

CERII OXALAS.

OXALATE OF CERIUM.

$2CeO,C_4O_6+6HO$, or $CeC_2O_4,3H_2$; eq. 234.

A white insoluble powder. Introduced into practice by Sir James Simpson, of Edinburgh. Cerium was discovered in 1803, and is now obtained chiefly from a mineral called Cerite. Oxalate of Cerium is made by mixing powdered Cerite with an equal weight of Sulphuric Acid, roasting the resulting mass in a reverberatory furnace to decompose the resulting Sulphate of Iron. The roasted mass is finely powdered and sifted upon the surface of cold water, which must be rapidly stirred. The filtered liquid is precipitated by Oxalic Acid, and the precipitate washed and dried, this still contains traces of Lanthanium and Didymium.

Test.—10 grs. when incinerated loses 5·2 grs. in weight.

Medicinal Properties.

Sedative, tonic. Of great value in general chronic intestinal eruption, irritable dyspepsia, gastrodynia and pyrosis, in chronic vomiting, and vomiting during pregnancy. In convulsive diseases, as chorea and epilepsy, and it does not produce the discoloration of the skin, as does the use of Nitrate of Silver.

Dose.—1 to 2 grs. two or three times daily, in pills made with Confection of Hips or Extract of Gentian.

(U. S.; not in others.)

CETACEUM.

SPERMACETI.

A white concretion prepared from the oily matter in the head of the *Physeter macrocephalus*, or sperm whale, inhabiting the Pacific and Indian Oceans.

Nearly pure Cetine, separated by cooling, filtration and pressure, from the oil, and afterwards purified.

Soluble in Fixed Oils and in boiling Ether or Alcohol.

Test.—Scarcely unctuous to the touch; does not melt under 100° F.

Contained in Charta Epispastica.

(In all the Pharmacopœias.)

Medicinal Properties.

Emollient and demulcent, in chronic diarrhœa. Externally it is much employed for ointments and cerates.

Dose.—20 to 60 grs. boiled in milk, two or three times daily.

(In all the Pharmacopœias; Fr. Blanc de Baleine.)

Preparation.

UNGUENTUM CETACEI. Cream-colour.

Spermaceti, 5; White Wax, 2; Almond Oil, 20, or a sufficiency; stir constantly till it cools.

The Author finds 17 of Oil sufficient in summer.

(Same as Belg.; Russ. Spermaceti 3, White Wax 3, Olive Oil 14, Rose Water 2 by weight; not in others.)

A cool dressing, applied on lint. Red oxide of mercury changes less with this than with lard.

Not Official.

MISTURA CETACEI.—Spermaceti, 60 grs.; Proof Spirit, 15 minims, finely pulverize the Spermaceti by aid of the spirit, and add by degrees half the yolk of an egg, at first only sufficient to make a stiff paste, which should be made very smooth by diligent trituration, then the rest, and make up with water to 4 ounces.

Dose.—1½ oz. Given for coughs and irritation of the mucous membrane.

(Ceratum Cetacei Russ. Spermaceti 5, White Wax 5, Olive Oil 12 by weight.)

CETRARIA.

ICELAND MOSS. CARRAGEEN.

The entire Lichen, *Cetraria Islandica*, native of the north of Europe.

Medicinal Properties.

Demulcent, nutritious, and slightly tonic. Well calculated for affections of the mucous membrane of the lungs and bowels with debility of the digestive organs or system generally. Useful in chronic catarrhs and other chronic pulmonary affections attended with copious purulent expectoration, in dyspepsia, chronic dysentery and diarrhœa, and in debility succeeding acute disease

(In all the Pharmacopœias.)

Preparation.

DECOCTUM CETRARIÆ.

Iceland Moss, 1; first wash with cold water, then add Distilled Water, 30; boil ten minutes and strain 20. =(1 in 20).

Dose.—1 to 2 oz.

(Same as U. S.; Belg. 1 in 25; not in others).

Not Official.

ICELAND MOSS JELLY.—Iceland Moss, 1; Water, 12: boil down to 6, strain and add Sugar, 2.

CHARTA EPISPASTICA.

See CANTHARIDES.

CHARTA NITRATA. Ger.

See POTASSÆ NITRAS.

CHARTA SINAPIS.

See SINAPIS.

CHIRATA.

CHIRETTA.

The entire plant of the *Ophelia Chirata*, collected in Northern India, when the fruit begins to form.

Medicinal Properties.

The same as Gentian, but is a purer bitter.

(U. S.; not in others.)

Preparations.

INFUSUM CHIRATÆ.

Chiretta, cut small, 1; Distilled Water (at 120° F.), 40: infuse half an hour and strain. =(1 in 40).

Dose.—1 to 2 oz.

(Not in other Pharmacopœias.)

Salts of Iron may be given in this infusion when a strong bitter is desired as a vehicle.

TINCTURA CHIRATÆ. Very deep brown.

Chiretta, cut small and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—15 to 60 minims; Brit. Ph. dose ½ to 2 drms.

(Not in other Pharmacopœias.)

Not Official.

EXTRACTUM CHIRATÆ.

Dose.—2 to 5 grains.

CHLORAL HYDRAS.

HYDRATE OF CHLORAL.

$C_4HCl_3O_2,2HO$; or $C_2HCl_3O.H_2O$.

Chloral, produced by the action of dry chlorine gas on anhydrous alcohol, purified by treatment, first with sulphuric acid and afterwards with a small quantity of lime, and finally converted into the solid hydrate by the addition of water.

Characters and Tests.—In colourless crystals, which do not deliquesce on exposure to air. It has a pungent but not an acrid odour, and a pungent and rather bitter taste. On the application of a gentle heat it fuses to a colourless transparent liquid, which, as it cools, begins to solidify at a temperature of about 120°. It boils in a test-tube, with pieces of broken glass immersed in it, at about 205°, and at a slightly higher temperature it volatilises on platinum foil without residue. Soluble in less than its own weight of distilled water, rectified spirit, or ether, and in four times its weight of chloroform. The aqueous solution is neutral or but slightly acid to test paper. A solution in chloroform when mixed by agitation with sulphuric acid does not impart colour to the acid. 100 grains of hydrate of of chloral dissolved in an ounce of distilled water and mixed with 30 grains of slaked lime, submitted to careful distillation with a suitable apparatus, should yield not less than 70 grains of chloroform.

Dose.—5 to 10 grains.

3 ozs. will dissolve in 1 oz. of water, and measures 2 fluid ounces, 5½ drams; if to this be added 23 minims of water, every minim will contain a grain.

The solution keeps well, and is handy for dispensing.

Chloral was introduced in 1869, and Mr. Spencer Wells was one of the first to prescribe it.

Medicinal Properties.

An excellent hypnotic, producing sound and placid sleep; suitable for hypochondriacal affections, chorea, nervous disturbances, and restlessness, where opium and Indian hemp disagree. Good also in asthma, whooping cough, delirium tremens, scarlet fever, diminishes the temperature of the body, has been found useful in idiopathic tetanus, in doses 30 to 60 grains ('Lancet,' Dec. 31, 1870); also for cancer, 20 to 30 gr. doses ('Lancet,' May 14, and June 4, 1870); 10 grs. three times a day ('Medical Times,' Dec. 31, 1870).

Dr. Tuke after trying it on several maniacal patients with good results, reports, "Its advantages over other hypnotics are as follows: that it is more uniform in its action and its effects more lasting, it has no depressing influence, it does not constipate nor produce nausea."

Its great value in obstetric cases, see 'Medical Times,' Jan. 1, 1870, 'Lancet,' Sept. 24, 1870; also in delirium tremens, 'British Medical Journal,' July 16, 1870.

Dose.—From 10 to 60 grs.

An admirable calming draught is made with 15 grs. Hydrate of Chloral and 5 minims of solution of Bimeconate of Morphia.

Dr. Liebreich employs 7 grains, in solution, for subcutaneous injection.

Effects from an over-dose or repeated over-doses, are cramp in the legs, swimming in the head, flushed face, closed eyes, with injected conjectiva, and in some cases death.

(Ger. Chloralum Hydratum Crystallisatum ; Russ. and U.S. ; not in others.)

SYRUPUS CHLORAL.

Hydrate of Chloral, 80 grs. ; water, ½ oz. ; Syrup, ½ oz. : mix.

= 1 in 6.

Dose.—½ to 2 drms.

Not Official.

CROTON-CHLORAL HYDRATE.

Is a very efficient remedy in pure neuralgia of the face and head, without causing drowsiness. It relieves dyspnœa of spasmodic asthma, and irritative cough of phthysis, or of chronic laryngitis.

See a Paper by Dr. Yeo, in the 'Lancet," Jan. 31, 1874.

Dose.—1 to 2 grs. every hour or 2 hours, but may be increased to 5 or even 10 grs. if the patient bears it well.

CHLORI LIQUOR.

SOLUTION OF CHLORINE.

Chlorine Gas dissolved in half its volume of Water, and constituting 0·006 of the weight of the solution.

A yellowish-green fluid, smelling strongly of Chlorine.

Hydrochloric Acid, 6 ; Black Oxide of Manganese, in fine powder, 1 ; Distilled Water, 34 : put the manganese into a gas bottle, pour on it the acid mixed with 2 of the water ; apply a gentle heat, and pass the gas through a bottle containing 2 more of water into the remainder of the water contained in a large bottle, which is to be kept cold till the gas ceases to come over ; the bottle should then be closed by the hand and shaken till the gas is absorbed.

Test.—Sp. g. 1·003. Evaporated, it leaves no residue. When 20 grains of Iodide of Potassium, dissolved in 1 ounce of distilled water, are added to 1 fluid ounce (439 grains by weight) of the preparation, the mixed solution acquires a deep red colour, which requires for its discharge 750 grain-measures of the volumetric solution of Hyposulphite of Soda, corresponding to 2·66 grains of Chlorine. Test explained under CALX CHLORATA.

Medicinal Properties.

Stimulant and antiseptic. Useful in advanced stages of scarlatina, typhoid fever, and chronic affections of the liver. Diluted, as a gargle in smallpox, scarlatina, and putrid sore-throat. As a wash for ulcers, cancerous sores, buboes, and large abscesses. Dr. Scott, of India, gave it for biliary obstructions in conjunction with the Nitrohydrochloric Acid baths.

Dose.—10 to 20 minims, in a wineglassful of water.

(In all the Pharmacopœias ; Same as Austr. Chlorina Liquida ; U. S. Aqua Chlorinii ; Belg. ; Ger. contains 4 per cent. of Gas ; Fr. Chlore Dissous ; Ger. and Russ. Chlorum Solutum.

INCOMPATIBLES.—Salts of Lead and Silver.

ANTIDOTES.—In case of poisoning by Chlorine Water, the antidotes are, Albumen White of Egg, Milk, Flour.

VAPOR CHLORI.—*See* CALX CHLORATA.

Not Official.

LIQUOR CHLORI.—Chlorate of Potash, 30 grs.; Hydrochloric Acid, ½ oz.; Water ½ oz.: mix. *London; Middlesex.*

CHLOROFORMUM.

CHLOROFORM.

$C_2 H Cl_3$, or **C H Cl$_3$**, eq. 119·5.

Syn. TERCHLORIDE OF FORMYL.

It is a colourless, limpid, and volatile fluid, the vapour of which is not inflammable, obtained by distillation from a mixture of Chloride of Lime, Caustic Lime, and weak Spirit, the heat being very carefully applied.

Solubility, in Rectified Spirit, 10 in 6; in Ether, 1 in 7; in Water 1 in 200; freely in Olive Oil and Spirit of Turpentine. Will not dissolve in Glycerine.

Chloroform acts on vulcanite, and dissolves Caoutchouc, Gutta-percha, Mastic, Elemi, Tolu, Benzoin, and Copal. Amber, Sandarac, Lac, and Wax are only partially soluble. It also dissolves Iodine, Bromine, most of the organic alkaloids, the fixed and volatile oils, most resins and fats. It dissolves Sulphur and Phosphorus sparingly.

Test.—Sp. g. 1·496. Is not coloured on its being shaken with Sulphuric Acid. Dropped into water, it suddenly sinks and remains without opacity. It evaporates speedily, and leaves no residue and no unpleasant odour. Evolves no gas when Potassium is dropped into it.

NOTE.—Chloroform should not be prescribed with weak spirits or Glycerine, as it separates.

Mixed with strong spirits, Camphor Liniment, Soap Liniment, Olive Oil, or Oil of Turpentine, it dissolves perfectly, thus: Chloroform, Oil of Turpentine, of each 1, Soap Liniment, 2, makes a clear liniment.

Medicinal Properties.

Internally, a sedative, narcotic, and antispasmodic; on sugar for sea-sickness. May be given as an antiperiodic, when Bark and Quinine fail to effect a cure. Externally, stimulant in senile gangrene, and sloughing ulcers. The vapour is often applied to the eye, and also to the rectum or vagina. Its chief use, however, is to produce anæsthesia by inhalation during surgical operations, and the quantity required for each inhalation must depend on the duration of the operation to be performed. With Camphor relieves tooth-ache.

Dose.—1 to 5 minims, with yolk of egg and mucilage, in syrup, or in a teaspoonful of brandy. *British Pharm. dose.*—3 to 10 minims.

(Belg. and Fr. sp. g. 1·480; U.S. Purificatum 1·480; Austr. 1·490; Ger. and Russ. 1·492 to 1·496.)

ANTIDOTES.—In case of overdose of Chloroform, the antidotes are, fresh pure air and artificial respiration.

Preparations.

AQUA CHLOROFORMI.

Chloroform, 1 drm.; Distilled Water, 25 oz.: dissolve by shaking. = (1 in 200).

Dose.—½ to 2 oz.

LINIMENTUM CHLOROFORMI. Faint straw colour.

Chloroform, 1; Liniment of Camphor, 1: mix. =(1 in 2).

The oil in the Camphor Liniment prevents the evaporation of the Chloroform.

Stimulating on application to a tender skin.

(Fr. Chloroform 1, Almond Oil 9; U.S. Chloroform 2, Olive Oil 4; not in others.)

SPIRITUS CHLOROFORMI. Colourless.

Chloroformi, 1; Rectified Spirit, 19: dissolve. =(1 in 20).

Formerly called Chloric Ether, and of various strengths.

Test.—Sp. g. ·871.

Dose.—10 to 60 minims. 10 or 20 minims is frequently prescribed to give a sweetness to draughts, and to cover nauseous flavours.

(U.S.; not in other Pharmacopœias.)

TINCTURA CHLOROFORMI COMPOSITA. Deep lake-colour.

Chloroform, 2; Rectified Spirit, 8; Compound Tincture of Cardamoms, 10: mix. =(1 in 10).

Dose.—20 to 60 minims.

The Chloroform will separate if this Tincture is prescribed in too little water.

Not Official.

Liquor Chloroformi Camphoratus.—Camphor, 1; Chloroform, 2: dissolve.

A remedy for toothache, and topically applied for rheumatism.

Liquor Chloroformi Compositus.—Chloroform, 4 oz.; Ether, 1 oz.; Rectified Spirit, 4 oz.; Treacle, 4 oz.; Extract of Liquorice, 2½ oz.; Muriate of Morphia, 8 grs.; Oil of Peppermint, 16 minims; Syrup, 17½ oz.; Prussic Acid (2 per cent.), 2 oz.: dissolve the Muriate of Morphia and the Oil of Peppermint in the Rectified Spirit; mix the Chloroform and Ether with this solution; dissolve the Extract of Liquorice in the Syrup, and add the Treacle; shake these two solutions together and add the Prussic Acid.

This has been represented to the Author as the composition of the popular medicine called Chlorodyne, and he has published it in order that those who object to prescribe proprietary medicines may be able to prescribe a compound under the above name with a knowledge of its composition.

Dose.—5 to 10 minims.

Mistura Chloroformi c. Ammonia.—Spirit of Chloroform, 15 minims; Carbonate of Ammonia, 3 grs.; Decoction of Yellow Bark, 1 oz. *Dose*, 1 oz. *London Ophthalmic Hospital.*

Unguentum.—Chloroform, 1; Lard, 2: blend quickly by trituration.

Vapor.—Chloroform, 15 minims for one inhalation.

Tetrachloride of Carbon, sp. g. 1·590. Has been extensively used to produce anæsthesia; its action is said to be effective and pleasant to the patient.

Bichloride of Methylene.—Introduced by Dr. Richardson in November, 1867. It is a limpid dense fluid, sp. g. 1·395; when dropped into water about one-fourth of it is dissolved, the remainder separates like chloroform at the bottom of the vessel as a perfectly clear and distinct fluid, and the whole has a sweet pleasant odour, without the least smell of ether. It is now used in the larger operations.

Dr. Day says that it has the advantage over chloroform in that it is less apt to cause sickness, is more agreeable to inhale, and causes less excitement preparatory to the stage of anæsthesia; rarely more than 3 to 4 drms. are required for an operation lasting half an hour, and consciousness returns in a few seconds after inhalation is discontinued. He uses Dr. Junker's inhaler.

CINCHONA.

CINCHONA BARK.

From Peru and the western coast of South America.

The Peruvian bark was known in Europe so early as 1640, on account of its having cured the Countess of Chinchon of a fever. We are ignorant of its early history, and how the Spaniards in Peru became acquainted with its virtues; but the Jesuits secretly conveyed it from Peru to Spain, hence it was called the Jesuits' Bark. Little was further known of it until the time of La Condamine, who visited Peru in 1738, and after whom Humboldt and Bonpland named the plant the *Cinchona Condaminea*. It was long supposed that only one species existed; a vast number, however, have been discovered, all of which possess medicinal properties, though varying much, both according to their species and the locality of their growth. It has been distinguished in our Pharmacopœias by its colour. The names of only three are now retained—*Cinchona flava*, *C. pallida*, and *C. rubra*.

The Yellow Bark of Calisaya contains a fatty matter, cinchonic red, a yellow colouring-matter, Tannin or soluble red colouring-matter, Starch, Lignin, Kinate of Lime, and *Kinate of Quinia, with a comparatively small proportion of Kinate of Cinchonia*. Procured from the forests of Southern Peru.

The Pale Bark of Loxa (*C. Condaminea*) contains a fatty matter, the insoluble red colouring, the yellow colouring, Tannin, Starch, Gum, Lignin, Kinate of Lime, *Kinate of Cinchonia, with a very minute portion of Kinate of Quinia*. From the forests of Loxa, in the republic of Ecuador.

Red Bark contains the fatty matter, a large quantity of the cinchonic red, the yellow colouring-matter, Tannin, Starch, Lignin, Kinate of Lime, and *a large proportion both of Kinate of Quinia and Kinate of Cinchonia*. From the forests at the foot of Chimborazo.

Medicinal Properties.

Cinchona Bark is a decided tonic, with some degree of astringency. It is especially useful in fevers of a remittent and intermittent character, when it should be given, in full doses, shortly before the cold stage. It has been found highly beneficial in many chronic cases, although intermissions do not occur; chronic and pulmonary catarrh, chronic diarrhœa, and in every case of direct debility. It is the most valuable remedy in neuralgia, and one of the most reliable medicines to relieve erysipelas in convalescence from acute diseases. The Pale Bark appears to be best suited to commence with when the stomach is weak and irritable, containing chiefly Quinidia and Cinchonia. The Yellow, however, is a more reliable tonic when the stomach will bear its use. The Red Bark, containing both Cinchonia and Quinia, has been thought, by Dr. Rigby, to be on the whole the most serviceable.

Powdered Bark was used in the late war to stanch blood.

CINCHONÆ FLAVÆ CORTEX.

YELLOW CINCHONA BARK.

The Bark of the *Cinchona Calisaya*, collected in Bolivia and Southern Peru, formerly called *Cordifolia*. First used in England 1790.

It yields 3 to 3½ per cent. of Sulphate of Quinia.

The "Monopoly" Bark is most valued, and should be procured if possible. There are several kinds of Yellow Bark which are of an inferior kind. It would be well therefore to try them by the Pharmacopœia test, which is as follows:—

Test.—Boil 100 grains of the Bark, reduced to a very fine powder, for a quarter of an hour, in 1 fluid ounce of distilled water, acidulated with 10 minims of Hydrochloric Acid, and allow it to macerate for twenty-four hours. Transfer the whole to a small percolator, and after the fluid has ceased to drop, add at intervals about 1½ ounce of similarly acidulated water, or add until the fluid which passes through is free from colour. Add to the percolated fluid Solution of Subacetate of Lead until the whole of the colouring-matter has been removed, taking care that the fluid remains acid in reaction. Filter and wash with a little Distilled Water. To the filtrate add about 35 grains of Caustic Potash, or as much as will cause the precipitate which is at first formed to be nearly redissolved, and afterwards 6 fluid drachms of pure Ether. Then shake briskly, and having removed the Ether, repeat the process twice with 3 fluid drachms of Ether, or until a drop of the Ether employed leaves, on evaporation, scarcely any perceptible residue. Lastly, evaporate the mixed ethereal solutions in a capsule. The residue, which consists of nearly pure Quinia, when dry, should weigh not less than 2 grains, and should be readily soluble in Dilute Sulphuric Acid.

Dose.—15 grs. as a tonic; 60 to to 120 grs. in ague. May be combined with mineral acids.

INCOMPATIBLES.—Ammonia, Lime Water, Metallic Salts, and Gelatine.

Preparations.

DECOCTUM CINCHONÆ.

Yellow Cinchona Bark, in coarse powder, 1¼; Distilled Water, 20: boil ten minutes; when cold, strain and pour on the marc sufficient water to make up 20. =(1 in 16).

The decoction thus made extracts only about half the active principle of the Bark; the marc retains about the same quantity of Quinia as is found in the decoction. Formerly the Decoction was ordered to be strained while hot, and a large deposit fell on cooling; this deposit, however, contained only $\frac{1}{24}$th of the active part of the bark, and now by straining when cold this is rejected.

Dose.—1 to 2 oz.

(Same as U.S.; Belg. 1 in 10; not in others.)

EXTRACTUM CINCHONÆ LIQUIDUM. Intense brown.

Yellow Cinchona Bark, in coarse powder, 16; Distilled Water, a sufficiency; Rectified Spirit, 1: macerate the bark in 40 of water for twenty-four hours, then pack in a percolator, and add water until 240 have passed through, or until the bark is exhausted. Evaporate the liquor to 20 at a

temperature not exceeding 160°, then filter and continue the evaporation to 3 or until the sp. g. of the liquid is 1·200; when cold, add the spirit gradually, constantly stirring. Sp. g. 1·100.

1 part of this extract is equal to 4 of Bark.

Dose.—10 to 30 minims.

An excellent preparation.

(U.S. consists of ¼ part Glycerine, the fluid oz. = 1 oz. Bark; not in others.)

INFUSUM CINCHONÆ.

Yellow Cinchona Bark, in coarse powder, 1; boiling Distilled Water, 20: infuse two hours, and strain. =(1 in 20).

Dose.—1 to 2 oz.

(U.S. with Aromatic Sulphuric Acid; Fr. with Liquorice; not in others.)

TINCTURA CINCHONÆ. Deep reddish-brown; deposits much when kept.

Yellow Cinchona Bark, in coarse powder, 4; Proof Spirit, 20: macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit, and when it ceases to drop, press, and wash the marc with spirit to make 20. =(1 in 5).

Dose.—1 to 2 drams.

(U.S. with Alcohol, 1 in 5; Russ. Tinctura Chinæ Simplex, 1 and 6; (Belg. Tinctura Chinæ Flava; Ger. Tinctura Chinæ; Fr. Teinture de Quinquina, 1 and 5 by weight;) not in Austr.)

QUINIÆ SULPHAS. *See* QUINIÆ SULPHAS.

Not Official.

MISTURA CINCHONÆ COMPOSITA.—Carbonate of Ammonia, 4 grs.; Decoction of Bark, 1 oz. *Charing Cross Hospital.*

MISTURA CINCHONÆ C. ACIDO SULPHURICO.—Dilute Sulphuric Acid, 10 mins.; Decoction of Bark, 1 oz. *St. Thomas's Hospital.*

HAUSTUS CINCHONÆ COMP.—Liquid Extract of Bark, 20 mins.; Chlorate of Potash, 15 grs.; Spirit of Chloroform, 10 mins.; Water, 1½ oz.: mix. This taken every 2 hours cures corysa.

VINUM CHINÆ (Ger.).—Bark, 5; Port Wine, 100: digest 8 days and filter.

CINCHONÆ PALLIDÆ CORTEX.

PALE CINCHONA BARK.

The Bark of the *Cinchona Condaminea* collected about Loxa, in Ecuador.

Yields ·57 per cent. Quinidia and ·6 per cent. of Cinchonia.

Test.—200 grains of the bark treated in the manner directed in the test for Yellow Cinchona Bark, with the substitution of Chloroform for Ether, should yield not less than 2 grains of alkaloids; Brit. 1867 states 1 grain of alkaloids; chiefly Cinchonia and Quinidia, which are dissolved by Chloroform; Ether dissolving only Quinia.

Dose.—10 to 60 grs.

Contained in Mist. Ferri Aromatica.

Preparation.

TINCTURA CINCHONÆ COMPOSITA. Deep red; deposits slightly.

Pale Cinchona Bark, in coarse powder, 4; Bitter Orange Peel, cut small and bruised, 2; Serpentary, bruised, 1; Saffron, ¼; Cochineal, ⅛; Proof Spirit, 40: macerate forty-eight hours with 30 of spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remainder of the spirit; when it ceases to drop, press, and wash the marc with spirit to make up 40. =(1 in 10).

Dose.—½ to 2 drms.

(Belg. and Fr.; U.S. with Red Bark; Ger. Tinct. Chinæ Comp. with Gentian, Orange, and Cinnamon; not in others.)

CINCHONÆ RUBRÆ CORTEX.

RED CINCHONA BARK.

The bark of the *Cinchona succirubra*, collected on the western slopes of Chimborazo, formerly called *Oblongifolia*.

Red Bark yields two per cent. of Sulphate of Quinia and 1 per cent. of Sulphate of Cinchonia.

Test.—100 grains of the bark, treated in the manner directed in the test for Yellow Cinchona Bark with the substitution of Chloroform for Ether, yield not less than 2 grains of alkaloids; Brit. 1867, 1·5 grain of alkaloids. Chloroform dissolves all the alkaloids of Cinchona Bark.

INCOMPATIBLES.—Ammonia, Lime Water, Metallic Salts, Gelatine.

Not Official.

INFUSUM CHINÆ FRIGIDE PARATUM. Russ. Powder of Red Bark, 6 drms.; Distilled Water, 6 oz.; Dilute Phosphoric Acid, 20 mins.

CINNAMOMI CORTEX.

CINNAMON BARK.

The inner bark of shoots from the truncated stock of the *Cinnamomum Zeylanicum*, imported from Ceylon, and distinguished in commerce as Ceylon Cinnamon.

Medicinal Properties.

Warm and cordial to the stomach, carminative and astringent, chiefly used as an adjuvant to other medicines. Often employed in diarrhœa, with chalk. Efficacious in internal hæmorrhage.

Dose of the powder, 10 to 20 grs.

(In all the Pharmacopœias; Austr. Ger. and Russ. *Cinnamomum Ceylonicum*; Fr. Cannelle.)

Contained in Acidum Sulphuricum Aromaticum, Decoctum Hæmatoxyli, Infusum Catechu, Pulv. Catechu Co., Pulv. Cretæ Aromaticus, Pulv. Kino Compositus, Tinct. Cardam. Co., Tinct. Catechu, Tinctura Lavandulæ Comp., Vinum Opii.

Preparations.

AQUA CINNAMOMI.
Cinnamon, bruised, 1; Water, 16; distil, 8. =(1 in 8).

Dose.—1 to 2 oz.

(U.S. made with oil, 1 min to 1 oz.; Austr. Belg. Ger. and Russ. 1 in 10; Fr. Eau de Cannelle, 1 in 4.)

OLEUM CINNAMOMI. Yellowish when recent, gradually becoming red.
The Distilled Oil imported.

Possesses the carminative qualities of Cinnamon without its astringency.

Dose.—1 to 4 minims in pill, with powdered Mastich, or in sugar, or emulsion.

(In all the Pharmacopœias.)

PULVIS CINNAMOMI COMPOSITUS. Dark fawn.
Cinnamon, 1; Cardamoms, 1; Ginger, 1: mix. =(1 in 3).

Dose.—3 to 10 grs.

(Called Pulvis Aromaticus in all the foreign Pharmacopœias. Same as Belg.; U.S. Cinnamon 2, Ginger 2, Cardamoms 1, Nutmeg 1; Ger. Cinnamon 5, Cardamoms 3, Ginger 2; Russ. Cinnamon 4, Cloves, Mace, Nutmegs, Ginger, of each 1; not in others.)

TINCTURA CINNAMOMI. Deep brown.
Cinnamon, in coarse powder, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—1 to 2 drms.

(U.S. 1 in 10; (Austr. Belg. Fr. and Ger. 1 in 5, Russ. 1 and 6, by weight.)

Not Official.

COCA.

The leaves of the Erythroxylon Coca from Bolivia. They resemble the leaves of tea, but have a slightly visible curved line on each side of the midrib.

They are chewed by the natives to sustain them during the day, that they may defer eating till the evening. It has not been prescribed much in this country, but the author has been presented with some of it by Dr. Sieveking, and it will now be tried; it is said to produce a gentle exciting effect, with a disposition to sleep, not followed by languor or depression.

Preparations made from it are a Tincture and an Infusion.

COCCUS.

COCHINEAL.

The female insect, *Coccus Cacti*, dried; reared in Mexico and Teneriffe.

(In all the Pharmacopœias; Austr. Belg. Ger. Coccionella; Fr. Cochenille.)

Medicinal Properties.

Anodyne, given in whooping-cough.

Preparation.

TINCTURA COCCI. Lake-colour.

Cochineal, in powder, 1; Proof Spirit, 8: macerate seven days; strain, and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—30 to 90 minims twice a day. (Used chiefly for colouring medicines.)

(Belg. 1 in 5; Fr. 1 and 5; by weight; not in others.)

Not Official.

MIXTURE FOR WHOOPING COUGH.—Cochineal, 10 grs.; Subcarbonate of Potash, 20 grs.; Sugar, 1½ oz.; Water, 4 oz.: rub together and strain.

Dose.—15 minims four times a day for a child one year old; 30 minims, two years; 60 minims, four years.

Boiled apples in milk given for the food.

CARMINE, prepared from Cochineal, an excellent colouring agent for powders and ointments.

COLCHICI CORMUS.

COLCHICUM CORM.

The fresh corm or bulb of the *Colchicum autumnale*, collected about the end of June, stripped of its coats, sliced transversely, and dried at a temperature not exceeding 150° F.

Test.—Best tested by its bitterness.

Medicinal Properties.

Produces increased action of some of the secreting organs: the action of the skin is also increased; that of the heart diminished. Employed chiefly in gout, possessing a power of controlling the pain and inflammation. Affords relief in acute rheumatism and other inflammatory affections. May be used combined with other purgatives in cases of imperfect action of the liver. It has also been used in dropsy. It is apt to produce depression if given on an empty stomach. The Acetic Extract is frequently prescribed with Dover's Powder to relieve painful gout.

Dose of the powder, 2 to 8 grs. every four or six hours.

INCOMPATIBLES.—Tincture of Iodine, Guaiacum, and all astringent preparations.

ANTIDOTES.—In case of poisoning with Colchicum, emetics followed by demulcent drinks and, if coma be present, Brandy, Ammonia, Coffee, and other powerful stimulants may be given.

Preparations.

EXTRACTUM COLCHICI. Dark brown.

The expressed juice of fresh Colchicum Corms, cleared of deposit, boiled, strained, and evaporated to a proper consistence at a temperature of 160° F.

100 pounds of Corms yield 4 pounds of Extract.

Dose.—1 to 4 grs.

(Not in other Pharmacopœias.)

EXTRACTUM COLCHICI ACETICUM. Dark brown, and pungent odour.
Crushed fresh Corms, previously peeled, 19; Acetic Acid, 1: stir together, press, boil, and strain through flannel, and evaporate to a soft extract.

100 pounds of Corms yield 5½ pounds of Extract.

Dose.—1 to 2 grs., in pill, with an equal weight of Liquorice Powder.

(U.S.; not in others.)

VINUM COLCHICI. Light brown; deposits much.
Colchicum Corms, dried and sliced, 4; Sherry, 20: macerate seven days, and strain. =(1 in 5).

(U.S. 1 in 2½; not in others.)

Dose.—10 to 30 minims.

Not Official.

MISTURA COLCHICI.—Wine of Colchicum, 20 mins.; Carbonate of Magnesia 10 grs.; Pimenta Water, 1 oz. *Dose*, 1 oz. *London Ophthalmic.*

COLCHICI SEMINA.

COLCHICUM SEEDS.

The seed fully ripe.

Medicinal Properties.

Similar to those of the corm or bulb, but considered by some to be superior both in certainty of effect and in mildness of operation.

Preparation.

TINCTURA COLCHICI SEMINUM. Light brown.
Colchicum Seed, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, then pour on the remainder of the spirit; when it ceases to drop, wash the marc with spirit to make up 8. =(1 in 8).

Dose.—15 to 30 minims.

(U.S. 1 in 7½; (Austr. and Belg. 1 in 5; Ger. and Fr. 1 and 10 by weight;) not in Russ.)

Not Official.

MISTURA COLCHICI ALKALINA.—Tincture of Colchicum Seeds, 20 minims Bicarbonate of Potash, 10 grs.; Pimenta Water, 1 oz. *London Hospital.*

MISTURA COLCHICI C. MAGNESIÆ SULPHATE.—Tincture of Colchicum Seeds, 15 minims; Carbonate of Magnesia, 6 grs.; Sulphate of Magnesia, 30 grs.; Peppermint Water, to 1 oz. *University Hospital.*

TINCTURA COLCHICI COMPOSITA.—Colchicum Seeds, bruised, 1; Aromatic Spirit of Ammonia, 8; macerate for seven days, then press and strain.

Dose.—15 to 30 minims.

TINCTURA COLCHICI FLORUM.—Fresh Juice of the Flowers, 2; Brandy, 1.

Dose.—10 to 30 minims. This preparation closely resembles the Eau Médicinale, and is considered by some medical men to be the most effective preparation of any.

VINUM SEMINUM COLCHICI (Ger.).—Seeds, 1; Sherry wine, 10: digest eight days. Russ. Seeds, 1; Sherry wine, 6: digest eight days.

Dose.—20 minims.

COLLODIUM.

COLLODION.

Pyroxylin, 1; Ether, 36; Rectified Spirit, 12: mix the ether and spirit and add the pyroxylin. In a few days decant the clear solution.

(U.S. Pyroxylin 1, Ether 28, Rectified Spirit 8, by measure; Belg. Pyroxylin 1, Ether 29½, Rectified Spirit 2¾; Ger. Pyroxylin 1, Ether 18, Rectified Spirit 3; all by weight.)

Test.—Colourless and highly inflammable, with ethereal odour; it dries rapidly upon exposure to the air, and leaves a thin transparent film, insoluble in Water or Rectified Spirit. Poured on the skin, contracts in drying.

COLLODIUM FLEXILE. Colourless.

Collodion, 48; Canada Balsam, 2; Castor Oil, 1: mix. Applied to burns, ulcers, and abrasions of the skin.

(Same as U.S.; Ger. Collodium Elasticum, Collodion 50, Castor Oil 1: mix.)

Medicinal Properties.

Chiefly used for coating diseased or wounded parts with a protecting film. Applied to erysipelas when caused by internal injury, such as wounds, etc.

Not Official.

STYPTIC COLLOID. (DR. RICHARDSON'S.)—A Saturated Solution of Tannic Acid and Xyloidine or Gun-Cotton in Absolute Alcohol and Pure Ether. In the first step of the process, the Tannic Acid, rendered as pure as it can be, is treated with Absolute Alcohol, and digested in it for several days. Then the Pure Ether, also absolute, is added until the whole of the thick Alcoholic Mixture is rendered quite fluid. Lastly the Xyloidine is added until it ceases readily to dissolve. A little Benzoin may be added to give an agreeable odour to the Colloid.

It can be applied directly with a brush, or mixed with an equal quantity of ether, and used in the form of spray.

HÆMOSTATIC COLLODION. Dr. Pavisi's.—Collodion, 100; Carbolic Acid, 10; Tannic Acid, 5; Benzoic Acid, 5; dissolve. Is applied by means of a pencil, or by soaking strips of linen in it.

COLOCYNTHIDIS PULPA.

COLOCYNTH PULP.

The dried and decorticated fruit of the *Citrullus Colocynthis*, freed from the seeds; imported chiefly from Smyrna, Trieste, France, and Spain.

Medicinal Properties.

It is a powerful drastic hydragogue cathartic, dangerous in large doses. Used in obstinate constipation.

Dose.—2 to 8 grs. Not often prescribed alone, generally in combination as in Pil. Coloc. Co.

(In all the Pharmacopœias; Fr. Coloquinte.)

Preparations.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM. Black.

Colocynth, free from seeds, 6; Extract of Socotrine Aloes, 12; Scammony, or Resin of Scammony, in powder, 4; Hard Soap, in powder, 3; Cardamoms, freed from the capsules, in fine powder, 1; Proof Spirit, 160: macerate the colocynth in the spirit for four days; press out the tincture, distil off the spirit, and add to it the extract of aloes, the soap, and the scammony; then evaporate the residue by a water bath to a pilular consistence, adding the cardamoms towards the end of the process.

The product weighs 24, therefore in every 6 of Extract. Coloc. Compos. there is the power of $1\frac{1}{2}$ of pulp=$\frac{1}{2}$ Simple Extract, 3 Aloes, 1 Scammony, $\frac{3}{4}$ Hard Soap, $\frac{1}{4}$ Cardamoms, $\frac{1}{2}$ Water.

Dose.—2 to 5 grs. with 2 or 3 grs. of Extract of Hyoscyamus, to prevent griping.

(Fr. Brit. formula; U.S. made with simple Extract and about 50 per cent. stronger, it is kept in powder; Ger. about the same strength as U.S.; Russ. Extract Colocynth $\frac{3}{4}$, Aloes $2\frac{1}{4}$, Scammony 2, Extract of Rhubarb, $1\frac{1}{4}$; not in others.)

PILULA COLOCYNTHIDIS COMPOSITA. Black.

Colocynth, in powder, 1; Barbadoes Aloes, in powder, 2; Scammony, in powder, 2; Sulphate of Potash, in powder, $\frac{1}{4}$; Oil of Cloves, $\frac{1}{4}$; Distilled Water, a sufficiency (about $\frac{1}{4}$): mix. Dr. Gregory's favourite pill.

=(1 in 6).

Dose.—5 to 10 grs.

(Not in other Pharmacopœias.)

Made with Water as directed, the pill soon becomes hard—Syrup or Glycerine would have been better.

PILULA COLOCYNTHIDIS ET HYOSCYAMI. Black.

Colocynth, in powder, 1; Barbadoes Aloes, in powder, 2; Scammony, in powder, 2; Sulphate of Potash, in powder, $\frac{1}{4}$; Oil of Cloves, $\frac{1}{4}$; Extract of Hyoscyamus, 3; Distilled Water, a sufficiency: mix.

=(Pil. Coloc. Co. 6; Extr. Hyos. 3).

Dose.—5 to 10 grs. (Dr. Christison's favourite Pill.)

(Not in other Pharmacopœias.)

Not Official.

TINCTURA COLOCYNTHIDIS. Ger. Ph.—Colocynth pulp, in coarse powder, 1; Rectified Spirit, 10; Russ. 1 and 6 *by weight*.

Dose.—10 to 15 minims three times a day.

CONFECTIONES.

CONFECTIONS.

The following are now contained in the British Pharmacopœia, the formulæ for which will be found in this volume under the names of the substances from which they are prepared :—

CONFECTIO OPII. 1 of powder of Opium in 40. Dose, 5 to 20 grs.
CONFECTIO PIPERIS. Dose, 1 to 2 drms.
CONFECTIO ROSÆ CANINÆ. } Dose, 1 drm. or more.
CONFECTIO ROSÆ GALLICÆ. }
CONFECTIO SCAMMONII. Dose, 10 to 30 grs.
CONFECTIO SENNÆ. Dose, 1 to 2 drms.
CONFECTIO SULPHURIS. Dose, 1 to 2 drms.
CONFECTIO TEREBINTHINÆ. Dose, 1 to 3 drms. for adults, 1 drm. for children.

CONII FOLIA.

HEMLOCK LEAVES.

The fresh leaves and branches of the *Conium maculatum*, gathered from the wild British plants when the fruit begins to form; and the leaves carefully dried.

Test.—The leaf rubbed with Caustic Potash gives out strongly the odour of Conia.

Medicinal Properties.

Powerfully narcotic; anodyne, antispasmodic, and deobstruent. Used in chronic enlargement of the liver, chronic rheumatism, syphilis, neuralgic affections; allays the cough in bronchitic affections, pertussis, and phthisis. In the case of poisoning animals by Hemlock the brain is found free from engorgement, which shows that its action on that organ must be very different from the action of Opium. May be applied externally in the form of a cataplasm to ease pain, especially in cancer.

Dose.—2 to 8 grs. in powder.

INCOMPATIBLES.—Caustic Alkalies, Vegetable Acids, and Astringents.

ANTIDOTE.—In case of poisoning by Hemlock, emetics followed by stimulants internal and external.

Preparations.

CATAPLASMA CONII.

Hemlock Leaf, in powder, 1 oz.; Linseed Meal, 3 oz.; boiling Water, 10 oz.: mix the ingredients and add them to the water gradually, constantly stirring. (For 1 Cataplasm).

(In no other Pharmacopœia.)

EXTRACTUM CONII. Intense green when freshly made; gets brown by keeping.
Inspissated juice of the fresh plant, prepared as directed for Extractum Belladonnæ.

100 lb. plant yield 50 lb. juice = from 55 to 60 oz. extract; 100 lb. leaves, when dried, weigh 21 lb.

Dose.—4 to 8 grs.

(Austr. Belg. Extr. Siccum; Fr. Extrait de Ciguë, and Ger. Russ. and U. S. from clear juice.

PILULA CONII COMPOSITA. Dark olive.
Extract of Hemlock, 5; Ipecacuanha, 1; Treacle sufficient to form a mass.

Dose.—5 to 10 grs.

(Not in other Pharmacopœias.)

SUCCUS CONII. Light Brown.
Express the juice from bruised fresh leaves; to every 3 measures add 1 of Rectified Spirit. Filter after seven days.

12 minims = 1 grain of extract.

Dose.—30 to 60 minims.

(U. S. Juice 5, Alcohol 1; Belg. clarified, but without spirit; Fr. without spirit; not in others.)

VAPOR CONII.—INHALATION.
Extract of Hemlock, 1; Solution of Potash, 1; Distilled Water, 10: mix.

Put 20 minims of the mixture on a sponge, in a suitable apparatus, so that the Vapour of hot water passing over it may be inhaled.

(Not in any other Pharmacopœia.)

Not Official.

MISTURA CONII C. HYOSCYAMO.—Juice of Conium, 30 minims; Extract of Henbane, 5 grs.; Mucilage, 2 drms.; Water, to 1 oz. *Chest Hospital.*

CONII FRUCTUS.

HEMLOCK FRUIT.

The ripe fruit dried.

Medicinal Properties.

Narcotic and somewhat sedative to the circulation. Used in the same cases as Conii Folia.

Preparation.

TINCTURA CONII. Brown.
Hemlock Fruit, dried and bruised, 1; Proof Spirit, 8; macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator

and let it drain, then pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 8. =(1 in 8).

Dose.—½ to 1 drm.

(Belg. Tinct. Cicutæ, 1 in 5; Fr. and U. S. dried leaves; not in others.)

COPAIBA.

COPAIVA.

The Oleo-Resin, of a brown colour, obtained by incision from the trunk of the *Copaifera multijuga*, chiefly from the valley of the Amazon.

Solubility, entirely in Rectified Spirit, Ether, and the fixed and volatile Oils. Soluble in an equal volume of Benzole, insoluble in Water; does not gelatinize at 270° F.; is not fluorescent.

Test.—Sp. g. ·950 to 1·000. Dissolves one-fourth of its weight of Carbonate of Magnesia by the aid of heat, and remains transparent.

Medicinal Properties.

Stimulant. Acts upon the mucous membrane, more particularly on that of the genito-urinary organs and of the rectum. Used in gonorrhœa and gleet. Useful in chronic bronchitis when there is excessive mucous secretion.

To be avoided in febrile states of the system.

Dose.—20 to 60 minims three times a day.

(In all the Pharmacopœias; Fr. Baume de Copahu.)

Given floating on aromatic water, or sometimes with Spirit of Nitrous Ether. A less disagreeable form is that of emulsion, prepared by rubbing the Copaiba first with mucilage, or the yolk of an egg and sugar, and then with some aromatic water.

Both Copaiba and the Oil can be rendered emulsive by trituration with mucilage. 1½ oz. of mucilage should be used for every ounce of Copaiba, and either Cinnamon or Peppermint Water, with Tinct. of Orange or Ginger, covers the unpleasant taste. They are sometimes put into capsules.

Preparation.

OLEUM COPAIBÆ. Colourless or pale yellow.

The Oil distilled from Copaiva.

Dose.—5 to 30 minims in emulsion with mucilage or yolk of egg.

(Russ. Ol. Bals. Copaiba; U. S.; not in others.)

Not Official.

MISTURA COPAIBÆ.—(1.) Copaiba, 15 minims; Spirits of Nitrous Ether, 30 minims; Solution of Potash, 15 minims; Camphor Water to 1 oz. *London Hospital.*

(2.) Copaiba, 30 minims; Mucilage, 1 drm.; Spirit of Nitrous Ether, 30 minims; Peppermint Water to 1 oz. *Westminster Hospital.*

CORIANDRI FRUCTUS.

CORIANDER FRUIT.

The ripe fruit of the *Coriandum sativum* dried; cultivated in Britain.

Medicinal Properties.

Stimulant, aromatic, and carminative.

Dose.—20 to 60 grs.

(In all the Pharmacopœias.)

Contained in Confectio Sennæ, Mistura Gentianæ, Syr. Rhei, Tinctura Rhei, Tinct. Sennæ.

Preparation.

OLEUM CORIANDRI. Colourless.

The Oil distilled in Britain from the fruit.

1 lb. of fruit yields about 42 grs. of Oil.

Used to render medicines more palatable, and prevent griping.

Contained in Syrupus Sennæ.

Dose.—1 to 4 minims in pill or emulsion.

(Not in other Pharmacopœias.)

CREASOTUM.

$C_{28}H_{16}O_4$; eq. 216.

Creasote is a colourless, oily, strongly refracting fluid.

Solubility, sparingly in Water; freely in Alcohol, Ether; in Glacial Acetic Acid 1 in 1, but separates on the addition of water.

Creasote was discovered by Reichenbach, who found it in Wood Tar. It possesses the peculiar property of coagulating albumen and preserving animal substances from decay. Its name is derived from this latter property.

It is to the presence of this substance that the process of smoking hams owes its efficacy.

Test.—Boils at 400° F. Sp. g. 1·071. It is not solidified by the cold produced by the mixture of Hydrochloric Acid and Sulphate of Soda. A slip of deal dipped into it, and afterwards into Hydrochloric Acid, and then allowed to dry in the air, acquires a greenish-blue colour. Dropped on white filtering-paper, and exposed to a heat of 212° F., it leaves no translucent stain. It coagulates albumen. It turns the plane of a ray of polarized light to the right, whereas Carbolic Acid does not affect polarization. It is insoluble in Glycerine, whereas Carbolic Acid is very soluble.

If an equal volume of Glycerine and of Creasote be shaken together, they will afterwards separate and both be perfectly bright; if, however, Carbolic Acid be present the Glycerine is turbid, and if in sufficient quantity the Creasote is dissolved.

Medicinal Properties.

Astringent, narcotic, styptic, antiseptic, and escharotic. Given internally for chronic gonorrhœa and gleet, for arresting nausea in hysteria and pregnancy, and for obstinate sea-sickness. It has been given with advantage in malignant cholera and cholera infantium, and bleeding from the intestines. It allays thirst and craving for food in diabetes. One drachm in 15 or 20 oz. of water for a gargle in obstinate salivation. 1 drop to 1 oz., of water is injected into the bladder to obviate the putrid odour of the urine. Externally used, in the proportion of 1 drop to 1 drm. for a lotion, to eruptions of a scaly character, to burns and chilblains, to erysipelas of the face, with swelling and pain; toothache, when depending on caries, is relieved by its application.

Dose.—1 to 3 minims, diluted with weak mucilage (½ oz. to each minim); or in a pill with crumb of bread.

When prescribed in pills with Oxide of Silver, the mass will take fire unless the oxide be first mixed with Liquorice or other powder.

(In all the Pharmacopœias.)

Preparations.

MISTURA CREASOTI.

Creasote, 16 minims; Glacial Acetic Acid, 16 minims; Spirit of Juniper, ½ drm.; Syrup, 1 oz.; Distilled Water, 15 oz.: mix. =(1 in 484).

A good mode of administering Creasote; its unpleasant taste is concealed by the Juniper.

It dissolves in the Water without the aid of the Acid.

Mucilage will render Creasote emulsive with water.

Dose.—1 to 2 oz.

(Not in other Pharmacopœias.)

UNGUENTUM CREASOTI. Cream colour.

Creasote, 1; Simple Ointment, 8: mix. =(1 in 9).

(U. S. and Belg. (Ung. Kreosoti) 1 in 16; not in others.)

Employed in mild cases of ringworm.

VAPOR CREASOTI.—INHALATION.

Creasote, 12 minims; boiling Water, 8 oz.: mix the creasote and water in an apparatus so arranged that air may be made to pass through the solution for inhalation.

(Not in other Pharmacopœias.)

Not Official.

Aqua Creasoti. U. S. Creasote, 1; Water, 128; Ger. 1 and 100.

Liquor Carbonis Detergens.—An alcoholic solution of Coal Tar as obtained from the gas-works. It is almost black, smells strongly of Naphthaline, and is of light specific gravity. Prescribed by Mr. Startin to be used externally in skin diseases in the following manner:—Liq. Carbonis Detergentis, ½ oz.: Ac. Nitric. Dil. 1 drm.; Mist. Camphoræ ad 8 oz.; to be sponged over the part affected when irritable, and afterwards to be dried off with soft linen.

Mistura Creasoti c. Opio.—Creasote 1 minim; Comp. Tincture of Camphor, 30 minims; Spirit of Chloroform, 15 minims; Glycerine, 1 drm.; Water to 1 oz. *Chest Hospital.*

CRETA.

CHALK.

Used for producing Carbonic Acid Gas.

Chalk cliffs are remarkably absorbent of moisture, and cesspools even, made in the chalk, are always found dry.

CRETA PRÆPARATA.

PREPARED CHALK.

Carbonate of Lime, CaO,CO_2, or Ca,CO_3 nearly pure; eq. 50.

Chalk freed from most of its impurities by elutriation, and afterwards dried in small cones.

Solubility: almost entirely in Dilute Hydrochloric Acid (provided it contains no Sulphate of Lime or Silica), giving off small bubbles of Carbonic Acid. Insoluble in Water.

Test.—The salt formed by dissolving the Chalk in Hydrochloric Acid, if rendered neutral by evaporation to dryness and redissolved in water, gives only a very scanty precipitate on the addition of Saccharated Solution of Lime—indicating absence of Phosphate.

Medicinal Properties.

It is astringent and antacid. Combined with other astringents and aromatics, it is used in diarrhœa accompanied with acidity. One of the best antidotes for Oxalic Acid. Has been recommended in rachitis and in scrofulous affections. Used externally to burns and ulcers.

Prescribed in powder or suspended in mucilage.

Dose.—10 to 100 grs.

(U.S.; Belg. Carbonas Calcis Depuratus; Fr. Poudre de Craie; Russ. Calcaria Carbonica Cruda; not in others.)

Contained in Hydrargyrum cum Cretâ.

INCOMPATIBLES.—All Acids and Sulphates.

Preparations.

MISTURA CRETÆ.

Prepared Chalk, 1; Gum Arabic, in powder, 1; Syrup, 2; Cinnamon Water, 30: mix by trituration. =(1 in 34).

Dose.—1 to 2 oz. with astringent tinctures and opium.

(Fr.; Belg. 1 in 40; U. S. 1 with 1 of Glycerine in 18; not in others.)

Care should be taken to use the *Prepared* Chalk, as directed; the Precipitated Chalk has a crystalline character and is said to occasion irritation of the bowels.

PULVIS CRETÆ AROMATICUS. Dark fawn-colour.

Prepared Chalk, 11; Cinnamon, 4; Nutmeg, 3; Saffron, 3; Cloves, $1\frac{1}{2}$; Cardamom Seed, 1; Refined Sugar, 25; all in powder: mix.

=(1 Chalk in 4 nearly).

Dose.—30 to 60 grs.

(Fr.; same as British; not in others.)

PULVIS CRETÆ AROMATICUS CUM OPIO. Dark fawn-colour.

Aromatic Powder of Chalk, 39; Opium, in powder, 1: mix thoroughly and pass through a sieve. =(1 Opium in 40)

Dose.—10 to 40 grs.

(Fr.; same as British; not in others.)

Not Official.

CHOLERA MIXTURE.—Aromatic Powder, 3 drms.; Sp. Sal. Volatile, 3 drms.; Tincture of Catechu, 10 drms.; Compound Tincture of Cardamoms, 6 drms.; Tincture of Opium, 1 drm.; Chalk Mixture to make 20 oz.

This mixture was proposed by the Board of Health during the prevalence of cholera, and is useful in all cases of diarrhœa.

Dose.—1 oz. for an adult, ½ oz. for a child twelve years old, ¼ oz. for seven years old, after each liquid motion.

MISTURÆ CRETÆ C. OPIO.—(1.) Aromatic Confection, 12 grs.; Chalk, 24 grs.; Comp. Powder of Tragacanth, 6 grs.; Tincture of Kino, 12 minims; Spirits of Sal Volatile, 12 minims; Tincture of Opium, 6 minims; Peppermint Water to 1 oz.

Dose.—2 to 4 drms. in water for diarrhœa. *Skin Hospital.*

(2.) Aromatic Powder of Chalk, 20 grs.; Tincture of Opium, 5 minims; Spirit of Chloroform, 20 minims; Tincture of Capsicum, 2 minims; Pimenta Water to 1 oz. *Chest Hospital.*

UNGUENTUM CRETÆ.—Precipitated Chalk, 1; Spermaceti Ointment, 4: mix.

CROCUS.

SAFFRON.

The stigma and part of the style of the *Crocus sativus* dried; imported from Spain, France, and Naples.

Test.—When rubbed on the moistened finger it tinges it an intense orange-yellow. Pressed between the folds of filtering-paper it leaves no oily stain. Concentrated Sulphuric Acid instantly changes its colour to indigo-blue.

Medicinal Properties.

A slightly exhilarating stimulant. Useful for giving colour and flavour to official preparations.

Contained in Decoct. Aloes Comp.; Pil. Aloes et Myrrhæ; Tinct. Opii Ammoniata; Tinct Rhei; Tinct. Cinch. Comp.; Pulvis Cretæ Aromaticus.

(In all the Pharmacopœias; Fr. Safran.)

Preparation.

TINCTURA CROCI. Light brown.

Saffron, 1; Proof Spirit, 20: macerate forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 20. =(1 in 20).

Dose.—½ to 2 drms.

(Ger. and Fr. 1 and 10; Belg. 1 in 5; Russ. 1 and 6 by weight; not in others.)

CROTONIS OLEUM.

CROTON OIL.

The oil expressed from the seeds of the *Croton Tiglium*, a native of Hindostan, Ceylon, and the Moluccas. It may be separated by decoction in Water, or by the action of Ether, which dissolves the oil and leaves it behind on evaporation. 100 parts of seed yield about 50 or 60 of oil.

Solubility: wholly in Ether, Oil of Turpentine, and Olive Oil.

Test.—Agitated with its own volume in Alcohol and gently heated it forms a clear solution, from which about three-fourths of the oil separate on cooling.

Medicinal Properties.

A powerful hydragogue purgative, acting with great rapidity. In cases of obstinate constipation, and in apoplexy. Especially useful in dropsy following scarlet fever, in doses of $\frac{1}{8}$ to $\frac{1}{4}$ of a drop, rubbed up with mucilage, syrup and water. Applied externally in rheumatism, gout, neuralgia, glandular and other indolent swellings, and in laryngeal and pulmonary diseases in the form of liniment.

Dose.—⅛ to 1 minim.

(In all the Pharmacopœias; U.S. Ol. Tiglii.)

In pill with Crumb of Bread, or in combination with Comp. Ext. of Colocynth.

Preparation.

LINIMENTUM CROTONIS. Greenish-yellow.

Croton Oil, 1; Oil of Cajeput, $3\frac{1}{2}$; Rectified Spirit, $3\frac{1}{2}$: mix. =(1 in 8).

(Not in other Pharmacopœias.)

5 minims to 1 oz. of Olive Oil is used to promote the growth of hair.

ANTIDOTES.—In case of an over-dose which acts as a violent purgative, an emetic of 10 grains of Sulphate of Copper should be at once administered, followed by mucilaginous fluids and Opium to check the diarrhœa.

(Not in other Pharmacopœias.)

CUBEBA.

CUBEBS.

The unripe fruit of the *Cubeba officinalis*, dried, imported from Java.

Medicinal Properties.

Gently stimulant, with special direction to the urinary organs. Given in gonorrhœa, most safely when the inflammation is confined to the mucous membrane of the urethra. The Essential Oil in syrup is expectorant, useful

in croup, the soft membrane disappearing in a short time; useful in sore throat.

The tincture is given with an equal quantity of Tincture of Orange to cover the taste.

Dose.—For gonorrhœa 1 to 2 drms. of the powder, wrapped in moistened wafer-paper, three or four times a day. In other cases the dose may be reduced to 10 grs.

(In all the Pharmacopœias; Fr. Poivre à Queue.)

Preparations.

OLEUM CUBEBÆ. Faintly green.

The Oil, distilled in Britain.

Dose.—5 to 20 minims, suspended in Water by means of Mucilage and Sugar.

(Belg. and U.S. also Oleo-resin extracted by ether; not in others.)

TINCTURA CUBEBÆ. Straw-colour.

Cubebs, in powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain; pour on the remaining spirit, and when it ceases to drop, wash the marc with spirit to make up 8. =(1 in 8).

Dose.—1 to 2 drms.

(Same as U.S.; not in others.)

CUPRUM.

COPPER.

Cu, eq. 31·75; or **Cu**, 63·5.

Sp. g. 8·9: fuses at 1996° F. Copper, or Venus of the alchemists, has been employed from the earliest ages, and previously to the discovery of malleable iron was the principal ingredient in the formation of domestic utensils and instruments of war. It takes its name from the island of Cyprus, where it was wrought by the Greeks. It is found both native and in combination with Oxygen, Chlorine, and Sulphur; of these, the Sulphate only is official. The purest Copper is that which is deposited by electricity.

Copper wire No. 25 is used for preparing Spiritus Ætheris Nitrosi.

CUPRI SULPHAS.

SULPHATE OF COPPER. CUPRIC SULPHATE.

CuO,SO_3+5HO, eq. 124·75; or $CuSO_4,5H_2O$, eq. 249·5.

A filtered solution of the Sulphate of Copper of commerce, re-crystallized.

In oblique prismatic crystals of a clear blue colour. Sp. g. 2·104.

Solubility: in Water, 1 in 3. Whatever Ammonia or its carbonate throws down from this solution is re-dissolved by an excess of the precipitant, but not by pure Potash or Soda.

Test.—An aqueous solution of the salt to which twice its volume of Solution of Chlorine has been added, when treated with an excess of Solution of Ammonia, gives a sapphire-blue solution, leaving nothing undissolved—indicating absence of Iron and other impurities.

Medicinal Properties.

Astringent, tonic, and emetic. Given in epilepsy and chorea. Recommended also in croup and in chronic diarrhœa. The most reliable emetic in cases of narcotic poisoning. Externally, as a stimulant to ulcers, as an escharotic for warts, etc., and a styptic for bleeding surfaces. For lotions, in proportions from 2 to 4 grs. to 1 oz.; also 8 grs. to 1 oz. for prurigo genitalium. As an injection, to diminish excessive secretion from mucous membranes, especially in cases of prolapsus ani, where it affords permanent relief, the solution should be made 5 grs. to the oz. For urethral injections, 1 to 4 grs. in an ounce of water. It is also used in various affections of the eyes when astringent applications are required.

Dose.—½ gr. gradually increased to 2 grs. three times a day, in pill, as a tonic for epilepsy; 10 grs. in 2 oz. of water as a prompt emetic in cases of narcotic poisoning.

(In all the Pharmacopœias.)

Incompatibles.—Alkalies and their Carbonates, Lime Water, Mineral Salts (except the Sulphates), Iodides, and most astringent Vegetables.

Antidotes.—In case of poisoning by Sulphate of Copper, Albumen or White of Egg is the best antidote.

Not Official.

Cuprum Aluminatum, vel Lapis Divinus, Ger.—Sulphate of copper, Nitrate of Potash, and Alum, of each equal parts, in powder, fused in a glazed earthen crucible, powdered Camphor, to the extent of $\frac{1}{50}$th part of the whole, being added near the end of the process. When cold, break in pieces and keep in a closely-stoppered bottle. An eye-wash may be made of 2 grains to an ounce of distilled water.

(Fr. Pierre Divine.)

Haustus (Emeticus) Cupri Sulphatis.—Sulphate of Copper, 10 grs.; Water, 1½ oz.

Collyrium Cupri Sulphatis.—Sulphate of Copper, 2 grs.; Water to 1 oz.—*King's College Hospital.*

Pilula Cupri Comp.—Sulphate of Copper, ¼ gr.; Opium, ¼ gr.; Confection of Roses, *q. s.*—*Fever Hospital.*

CUSPARIÆ CORTEX.

CUSPARIA BARK; ANGUSTURA BARK.

The bark of the *Galipea Cusparia*, from tropical South America.

Test.—The inner surface touched with Nitric Acid does not become blood-red.

This test is to guard against the Strychnos Bark being mistaken for the Cusparia; the former contains Brucia, which becomes red by contact with Nitric Acid.

Medicinal Properties.

A stimulant tonic. Used in malignant bilious fever, intermittent fever, dysentery, and in convalescence from acute diseases. Probably more effective in warm than in temperate climates. Aromatics are generally combined with it, to prevent nausea.

Dose.—Of the powder 10 to 40 grs.

(U.S. Belg. Fr. Angustura; not in others.)

INCOMPATIBLES.—Mineral Acids, Perchloride of Iron, and other Metallic Salts.

Preparation.

INFUSUM CUSPARIÆ.

Cusparia, in coarse powder, 1; Distilled Water at 120°, 20: infuse two hours and strain. =(1 in 20).

(U.S. Inf. Angusturæ, 1 in 30; not in others.)

Dose.—1 to 2 oz.

CUSSO.

KOUSSO.

The flowers and tops of the *Brayera anthelmintica*, from Abyssinia.

Medicinal Properties.

Anthelmintic. Especially for tænia.

Dose.—¼ to ½ oz.

(Belg. Kousso; Ger. Kosso; U.S. Koosso; not in others.)

Preparation.

INFUSUM CUSSO.

Kousso, in coarse powder, ¼ oz.; boiling Distilled Water, 4 oz.: infuse fifteen minutes, without straining, for one dose.

(Not in other Pharmacopœias.)

Not Official.

CYDONIUM.

QUINCE SEED.

The seeds of the *Cydonia vulgaris*.

Their coriaceous envelope abounds in mucilage.

Medicinal Properties.—Demulcent. The decoction used externally for cracks in the skin. A nice neutral adjunct to eye-lotions in cases of irritation and inflammation.

DECOCTUM.—Quince Seed, 1; Distilled Water, 80: boil over a slow fire for ten minutes, and strain.

DECOCTA.

DECOCTIONS.

The following are the Decoctions of the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

	Proportion of active ingredients to the whole.	Dose.
DECOCTUM ALOES COMPOSITUM . .	1 in 120.	½ to 1½ oz.
DECOCTUM CETRARIÆ	1 in 20.	1 to 2
DECOCTUM CINCHONÆ FLAVÆ . .	1 in 16.	1 to 2
DECOCTUM GRANATI RADICIS . . .	1 in 10.	1 to 2
DECOCTUM HÆMATOXYLI	1 in 20.	1 to 2
DECOCTUM HORDEI.	1 in 15.	
DECOCTUM PAPAVERIS	1 in 10.	
DECOCTUM PAREIRÆ	1 in 14.	1 to 2
DECOCTUM QUERCUS	1 in 16.	
DECOCTUM SARSÆ	1 in 8.	2 to 10
DECOCTUM SARSÆ COMPOSITUM . .	1 in 8.	2 to 10
DECOCTUM SCOPARII	1 in 20.	2 to 4
DECOCTUM TARAXACI	1 in 20.	2 to 4
DECOCTUM ULMI	1 in 8.	2 to 4

Decoctions not official are enumerated in the Index.

DIGITALINUM.

DIGITALIN.

The active principle obtained from Digitalis.

An uncrystallizable light-brown powdery resinoid substance.

Solubility: readily in Spirit; dissolves in Acids, but does not form with them neutral compounds; almost insoluble in Water and in pure Ether.

Test.—Leaves no residue when burnt with free access of air.

Dose.—$\frac{1}{60}$ to $\frac{1}{30}$ of a gr.

(Austr. Russ. U.S. and Fr. Digitalina; in no other Pharmacopœia.)

This powerful poison might well have been omitted from the British Pharmacopœia, together with its dose, which in practical dispensing is as difficult to weigh as it is to test the purity of the drug itself. It will be very rarely, if ever, prescribed by careful practitioners.

DIGITALIS FOLIA.

DIGITALIS LEAF.

The dried leaf of the *Digitalis purpurea* (*Foxglove*), gathered from wild indigenous plants when about two-thirds of the flowers are expanded.

Medicinal Properties.

Sedative and diuretic, when disturbance arises from over-action of the heart. It is cumulative in action, and requires caution.

Dose.—½ to 2 grs. of the powdered leaf.

INCOMPATIBLES.—Sulphate and Tinct. Perchloride of Iron, preparations of Cinchona, Acetate of Lead.

ANTIDOTE.—In case of an overdose, a recumbent posture is of paramount importance; and after the stomach has been emptied, stimulants externally and internally should be employed.

Preparations.

DIGITALINUM.—*See* DIGITALINUM.

INFUSUM DIGITALIS.

Digitalis, dried, 30 grs.; boiling Distilled Water, 10 oz.: infuse one hour and strain. =(1 in 160).

Dose.—¼ to ½ oz.

(U.S. with Tincture of Cinnamon, 1 in 68; not in others.)

TINCTURA DIGITALIS. Dark greenish-brown.

Digitalis, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of spirit, agitating occasionally, pack in a percolator and let it drain, then pour on the remaining spirit; when it ceases to drop, press and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—10 to 30 minims; but in cases of delirium tremens, 1 drm. every three hours.

(U.S. 1 in 7½; Austr. Belg. Fr. 1 in 5;) Ger. with fresh plant; Russ. 1 and 6, by weight)

Not Official.

PILULA DIGITALIS COMP.—Digitalis Powder, ½ gr.; Squill, 1½ gr.; Blue Pill, 3 grs.: in one Pill. *Middlesex Hospital.*

SUCCUS DIGITALIS.—The Expressed Juice, 3; Rectified Spirit, 1.

This preparation may be given for a longer period than the tincture without causing nausea.

Dose.—5 to 10 minims.

Not Official.

DUGONG OIL.

Proposed as a substitute for Cod-Liver Oil, by Mr. Hobbs; it remains semi-solid at ordinary temperatures, has scarcely any odour when perfectly fresh, and not much taste, but it is far more expensive, and its use is consequently limited.

DULCAMARA.

DULCAMARA.

The dried young branches of the *Solanum Dulcamara* (Bittersweet), from indigenous plants which have shed their leaves.

Medicinal Properties.

Narcotic. Increases the secretions, particularly of the kidneys and skin. It has a peculiar action on the skin, and has been observed to impart a dark purple colour to the face and hands. Used in cutaneous eruptions, chiefly of a scaly character, as lepra, psoriasis, and pityriasis, a decoction being applied externally, at the same time it is used internally. Also in chronic rheumatism and catarrh.

(Austr. Belg. U.S. Fr. Douce-amère; not in others.)

Preparation.

INFUSUM DULCAMARÆ.

Dulcamara, bruised, 1; boiling Distilled Water, 10: infuse one hour, and strain. =(1 in 10).

Dose.—1 to 2 oz.

(U.S. and Belg. a decoction; not in others.)

ECBALII FRUCTUS.

SQUIRTING CUCUMBER FRUIT.

The fruit very nearly ripe of the Squirting Cucumber, *Ecbalium officinarum.*

(Fr. Ecbalium Agreste, Concombre Sauvage.)

ELATERIUM.

ELATERIUM.

A sediment from the expressed juice of the fruit of the *Ecbalium officinarum.*

The fruit is cut lengthwise, the juice lightly pressed out, strained through a hair sieve, then allowed to deposit; the clear liquor being poured off, the sediment thrown on a linen strainer to drain, and lastly dried on a porous brick with a gentle heat.

Test.—Does not effervesce with acids; yields half its weight to boiling Rectified Spirit. This solution concentrated and added to warm Solution of Potash yields, on cooling, not less than 20 per cent. of Elaterine in colourless crystals. It is not injured by light.

Medicinal Properties.

A powerful hydragogue cathartic. Especially used in dropsical affections connected with cardiac or renal disease. Its administration in a debilitated state of the system requires caution.

Dose.—To prevent it causing nausea, it may be given with Henbane, and is best given in doses of $\frac{1}{10}$ to $\frac{1}{2}$ gr. till it operates. Mr. Vance gave it with Gamboge in dropsy.

(In all the Pharmacopœias except Austr. Fr. and Ger.)

PULVIS ELATERII COMPOSITUS.

Elaterium, 1; Sugar of Milk 9; rub them together in a mortar until they are reduced to fine powder and intimately mixed.

Dose.—½ gr. to 5 grs.

ANTIDOTES.—In case of poisoning with Elaterium, Emollient and Emulcent drinks and enemata, to be followed by small but repeated doses of Opium and the use of the warm bath.

Not Official.

PILULA ELATERII.—Elaterium, ⅙ gr.; Extract of Henbane, 1 gr.; Extract of Gentian, 1 gr.: for 1 pill. (Hydragogue Pill.) *St. Mary's.*

MISTURA ELATERII.—Elaterium, 1 gr.; Syrup, 1 oz.; Vinegar of Colchicum, 2 drms.; Spirit of Nitrous Ether, 2 drms.; Tincture of Squills, 2 drms.: mixed. Dose, 1 drm.—*Westminster Hospital.*

ELEMI.

ELEMI.

A concrete resinous exudation, chiefly imported from Manilla.

Should have a fragrant, fennel-like odour, and is usually soft and unctuous to the touch, almost entirely soluble in Rectified Spirit.

Medicinal Properties.

Analogous to those of Turpentine. For external use only.

(In all the Pharmacopœias, except Russ. and U.S.)

Preparation.

UNGUENTUM ELEMI. Cream-colour.

Elemi, 1; simple Ointment, 4: melt and strain. =(1 in 5).

(Belg. and Ger. 1 Elemi and 1 of Venice Turpentine in 4; not in others.)

It has a pleasant odour, and is used to keep open issues and setons.

EMPLASTRA.

PLASTERS.

The Emplastra of the British Pharmacopœia are as follows, the formulas for which will be found under names of the drugs from which they are prepared:—

	Proportion of active ingredients in the mass.
EMPLASTRUM AMMONIACI CUM HYDRARGYRO	(Mercury) 1 in 5.
EMPLASTRUM BELLADONNÆ .	(Extract dissolved by Alcohol) 1 in 2.

	Proportion of active ingredients in the mass.
EMPLASTRUM CALEFACIENS	(Cantharides) 1 in 25.
EMPLASTRUM CANTHARIDIS	(Cantharides) 1 in 3.
EMPLASTRUM CERATI SAPONIS	(Soap) 1 in 5½.
EMPLASTRUM FERRI	(Peroxide of Iron) 1 in 11.
EMPLASTRUM GALBANI	(Galbanum) 1 in 11.
EMPLASTRUM HYDRARGYRI	(Mercury) 1 in 3⅔,
EMPLASTRUM OPII	(Opium) 1 in 10.
EMPLASTRUM PICIS	(Pitch) 1 in 2.
EMPLASTRUM PLUMBI.	
EMPLASTRUM PLUMBI IODIDI	1 in 8.
EMPLASTRUM RESINÆ	(Resin) about 1 in 10.
EMPLASTRUM SAPONIS	(Soap) 1 in 7.

Plasters which are not official are enumerated in the Index.

ENEMATA.

ENEMAS.

The following are the Enemas of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

	In each Enema.
ENEMA ALOES	40 grs. Aloes.
ENEMA ASSAFŒTIDÆ	30 grs. Assafœtida.
ENEMA MAGNESIÆ SULPHATIS	(Catharticum) 1 oz. Sulphate.
ENEMA OPII	½ drm. Tincture.
ENEMA TABACI	20 grs. Leaf.
ENEMA TEREBINTHINÆ	1 oz. Oil.

ERGOTA.

ERGOT.

The diseased seeds of the *Secale cereale*.*

Test.—Yields its virtues to Water and Alcohol. The aqueous infusion has an acid reaction. It is precipitated by Acetate and Subacetate of Lead, Nitrate of Silver, and Tincture of Galls. With Iodine, does not show evidence of Starch.

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* Ergot is common among grasses, and if it occurs in the pastures where cattle feed, it is said to occasion dry gangrene, causing the cattle to lose their hoofs and horns.

In percolating the powder with Ether, more than one-third of its original weight of Oil is extracted.

Medicinal Properties.

Has a special tendency to action upon the uterus in parturition when that organ has not sufficient muscular power, the os, however, being sufficiently dilated when parturition has commenced. Employed in uterine hæmorrhage and floodings. Given in albuminuria. It is of service also in pulmonary hæmorrhage. In amenorrhœa, if Iron is given for three weeks and the fourth week the Liquid Extract of Ergot be administered in 15 minim doses three times a day, it rarely fails to bring on catamenia in young persons. 15 minims given with 15 minims of Tincture of Henbane speedily relieves painful menstruation. It is given in certain conditions of mania with advantage.

Dose.—20 to 30 grs., infused in boiling water, to cause uterine contraction; 5 to 10 grs. three times a day in spinal cases.

(In all the Pharmacopœias; Austr. Belg. and Ger. Secale Cornutum; Fr. Seigle Ergoté.)

INCOMPATIBLES.—Astringents, Metallic Salts.

Preparations.

EXTRACTUM ERGOTÆ LIQUIDUM. Intense brown.

Ergot, in coarse powder, 16; Ether, 20, or a sufficiency; Distilled Water, 70; Rectified Spirit, 8. Shake the Ether in a bottle with half its bulk of the Water, and after separation decant the Ether. Place the Ergot in a percolator, and free it from oil by passing the washed Ether through it. Remove the marc, and digest in the remainder of the water at 160° F. for twelve hours. Press out the liquor and evaporate it to 9, and, when cold, add the 8 of spirit. Allow it to stand for an hour to coagulate, filter, and make up the quantity to 16. =(1 in 1).

Note.—The Ether here ordered is not sufficient; it should be 40 instead of 20, thus, 20 oz. should be poured upon the Ergot first, and, when it ceases to drop, 20 ounces more should be poured on it, and when that ceases to drop, the Ergot should be taken out and dried (to get rid of all the Ether) before it is digested in the water.

16 oz. of the Liquid Extract evaporated leaves 2¼ ounces of solid Extract.

Dose.—15 to 30 minims.

(U.S. with Glycerine and Acetic Acid; Austr. Belg. Russ. and Ger. have a solid extract; not in Fr.)

INFUSUM ERGOTÆ.

Ergot, in coarse powder, 1; boiling Distilled Water, 40: infuse half an hour and strain. =(1 in 40).

Should be made fresh on each occasion.

Dose.—1 to 2 oz.; used also as an injection for gleet.

(Not in other Pharmacopœias.)

TINCTURA ERGOTÆ. Intense reddish-brown.

Ergot, bruised, 1; Proof Spirit, 4: macerate forty-eight hours with 3 of the spirit, agitating occasionally, pack in a percolator, let it drain, then pour

on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 4. =(1 in 4).

Dose.—15 to 60 minims.

(Not in other Pharmacopœias.)

Not Official.

MISTURA ERGOTÆ COMP.—Liquid Extract of Ergot, 40 minims; Gallic Acid, 10 grs.; Cassia Water to 1 oz. *London Hospital.*

Not Official.

ERIGERON CANADENSE OLEUM.

Has been employed for arresting hæmorrhage in the dose of 5 minims every two hours.

Not Official.

EUCALYPTUS GLOBULUS.

THE BLUE GUM-TREE, A NATIVE OF TASMANIA.

The oil obtained from the leaves has a camphoraceous odour and yields Eucalyptol.

The bark and the leaves are febrifuge and useful in bronchitis.

The leaves have been used by Dr. Gimbert instead of lint for healing sores and removing odour.

Cigarettes made of the leaves are reputed to be efficacious in bronchial and asthmatic affections.

TINCTURA.—Leaves, 1; Bark, 1; Proof Spirit, 10. Dose, 1 to 4 drms.

EXTRACTUM FLUIDUM.—Leaves, 5; Bark, 5; Water, 8; Rectified Spirit, 2. Dose, 10 to 60 mins.

SPIRITUS.—Redistilled Oil, 1; Rectified Spirit, 49. Dose, 10 to 60 mins.

SYRUPUS.—Alcoholic Extract, 2; Rectified Spirit, 1; Syrup, 40. Dose, 1 to 4 drms.

EUCALYPTOL.—Dose, 5 to 10 mins.

For the above formulas, the author is indebted to Messrs. Savory and Moore.

EXTRACTA.

EXTRACTS.

The following is a complete list of the Extracts of the British Pharmacopœia, the mode of preparation for which will be found under the names of the drugs from which they are prepared:—

DOSE.	EXTRACTUM.	MENSTRUUM.
1 to 2 grs.	ACONITI (juice of fresh herb).	
1 to 3 grs.	ALOES BARBADENSIS.	Boiling water.
1½ to 3 grs.	ALOES SOCOTRINÆ.	Boiling water.
2 to 10 grs.	ANTHEMIDIS (dried flowers).	Boiling water.
1 to 2 drms.	BELÆ LIQUIDUM.	Cold water, 1 in 1.
¼ to 1 gr.	BELLADONNÆ (juice of fresh herb).	
2 to 10 grs.	CALUMBÆ (dried root).	Cold water.

DOSE.	EXTRACTUM.	MENSTRUUM.
¼ to 1 gr.	CANNABIS INDICÆ (dried herb).	Cold rectified spirit.
10 to 30 mins.	CINCHONÆ FLAVÆ LIQUIDUM.	Cold water, 4 in 1.
½ to 2 grs.	COLCHICI (juice of fresh corms).	
½ to 2 grs.	COLCHICI ACETICUM (fresh corms).	With Acetic Acid.
3 to 10 grs.	COLOCYNTHIDIS COMPOSITUM.	
2 to 6 grs.	CONII (juice of fresh herb).	
10 to 30 mins.	ERGOTÆ LIQUIDUM (dried Ergot).	Ether and water, at 160° F., 1 in 1.
15 to 30 mins.	FILICIS LIQUIDUM (dried rhizome).	Ether.
5 to 10 grs.	GENTIANÆ (dried root).	Boiling water.
	GLYCYRRHIZÆ (dried root).	Cold water.
1 drm.	GLYCYRRHIZÆ LIQUIDUM.	
10 to 30 grs.	HÆMATOXYLI (chips).	Boiling water.
5 to 10 grs.	HYOSCYAMI (juice of fresh herb).	
5 to 15 grs.	JALAPÆ (dried root).	Spirit and cold water.
5 to 20 grs.	KRAMERIÆ (dried root).	Cold water.
5 to 15 grs.	LACTUCÆ (juice of fresh flowering herb).	
5 to 15 grs.	LUPULI (dried catkins).	Spirit and hot water.
	MEZEREI ÆTHEREUM (dried Bark).	Ether.
½ to 2 grs.	NUCIS VOMICÆ.	Boiling Rectified Spirit.
½ to 2 grs.	OPII	Cold water.
10 to 40 mins.	OPII LIQUIDUM. (Stronger than Tinct. Opii.)	Cold water and spirit.
2 to 5 grs.	PAPAVERIS (dried capsules).	Boiling water and spirit.
10 to 20 grs.	PAREIRÆ (dried root).	Boiling water.
½ to 2 drms.	PAREIRÆ LIQUIDUM (dried root).	Boiling water and spirit.
$\frac{1}{16}$ to ¼ gr.	PHYSOSTIGMATIS (Calabar bean).	Cold Rectified Spirit.
3 to 5 grs.	QUASSIÆ (chips).	Cold water.
5 to 10 grs.	RHEI (dried root).	Cold weak spirit.
2 to 4 drms.	SARSÆ LIQUIDUM (root cut transversely).	Cold water and spirit.
¼ to ½ gr.	STRAMONII (dried seeds).	Ether and cold weak spirit.
5 to 30 grs.	TARAXACI (juice of fresh root).	

Extracts which are not official are enumerated in the Index.

Extracts are to be found in Pharmacopœias of very early date, and they are highly satisfactory preparations, as they represent very completely the properties of the plant from which they are made. They are moreover, as a general rule, well adapted for pills,—a convenient form and least objectionable to the patient.

Although the extracts from the fresh medicinal plants have been so long in use, many erroneous notions have prevailed as to the best made of making them. All previous Pharmacopœias order the *leaves* only to be employed, under the idea that the properties of the plant were most highly developed in

those organs. These leaves, again, were directed to be gathered for medicinal use before the flowering of the plant. The Author, who has been occupied in this branch of pharmacy for more than forty years, is entirely opposed to this plan, both as to the parts employed and the time of gathering. In a paper on "Preserved Juices," read at the Pharmaceutical Society in 1841,* he stated his opinion that the plant was in the highest state of perfection when fully one-third of the flowers were blown. The main object of the growth and inflorescence of a plant is the production of seed, and the whole vital power is concentrated about the period of inflorescence for this object; at this time, therefore, is the greatest perfection to be expected. That the production of the seed requires the whole vital energy of which the plant is capable, may be seen in the fact that many plants (annuals) are unable to survive it.

In a more recent paper,† he has shown that the active power resides by no means exclusively in the leaves; on the contrary, an extract prepared from the tender stalks is the more powerful. The plant selected for experiment was Belladonna, because in this case extremely accurate results could be obtained by determining the relative action of the two extracts on the eye. In consequence of these experiments, the British Pharmacopœia has ordered the tender stalks as well as the leaves for making extracts from fresh plants.

The perfection of extracts made from fresh vegetables depends much on the attention given to them during their preparation and to the temperature at which they are made. The lower the temperature during evaporation, the better the extract, if the time be not protracted so long as to cause some chemical change. It should be borne in mind that evaporation goes on only half as rapidly at 150° as it does at 180°, and only half at 180° as it does at 212°. Constant agitation materially influences the rate of evaporation. When the atmosphere is warm and very dry, extracts may be made without artificial heat.

Extracts should be kept in a cool, dry place, first because a summer temperature frequently causes them to ferment, even though they may have been made with great care, and secondly, because in a damp atmosphere they are apt to become mouldy.

FARINA TRITICI.

WHEATEN FLOUR.

The grain of Wheat, *Triticum vulgare*, ground and sifted.

Used only for Cataplasma Fermenti.

Made into a paste with honey, a most excellent application for boils.

Cataplasma Panis.—Grated Bread, and boiling water sufficient.

FEL BOVINUM PURIFICATUM.

PURIFIED OX BILE.

Fresh Gall, 1; Rectified Spirit, 2: agitate, and set aside for twelve hours, then decant, and evaporate to a pill consistence.

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* 'Pharmaceutical Journal,' vol. i. 1841.

† Ibid. Dec. 1861.

Solubility: soluble in Water and in Spirit. Insoluble in Ether.

Test.—Its watery solution gives no precipitate on the addition of Rectified Spirit.

Medicinal Properties.

Tonic and laxative. Used where there is a deficiency of bile.

It is not desirable that it should come in contact with the stomach, hence it is put into capsules or in pills coated with Tolu dissolved in Ether; the latter usually preferred.

Dose.—3 to 6 grs. dissolved in milk or in pill with Aloes.

(Austr. Ger. and Russ. equal weights of Gall and Rectified Spirit, Fel Tauri Depuratum Siccum; Belg. Fr. Fiel de Bœuf merely evaporated; not in others.)

Formerly the bile was evaporated without purification, and then the dose was much larger.

FERMENTUM.

See CEREVISIÆ FERMENTUM.

FERRUM.

IRON.

Fe, eq. 28; or **Fe**, eq. 56.

Sp. g. 7·8; fuses at 2786° F. The use of Iron in medicine is of great antiquity; it is said to have been the first mineral used internally, more than 3000 years ago.

Annealed Iron Wire is the purest we can get, and is ordered in the Pharmacopœia for making the various preparations. Iron Filings should by no means be trusted, as they are generally full of impurities.

Medicinal Properties.

Metallic Iron would exert no action in the living system, were it not for the acid which it generally meets with in the stomach. It is given in the state of fine division, as in Ferrum Redactum. The Peroxide was formerly used in the shape of Ferrum Præcipitatum, but latterly the Saccharo-Carbonate of Iron and the Citrate of Iron have taken its place. The Phosphates are much used, and the Tincture of the Perchloride, formerly called Sesquichloride, is still a favourite and reliable preparation; and for children the Vinum Ferri either made with Malaga or Sherry is preferred.

Of the preparations of Iron, some are astringent, and the astringent forms are pre-eminently tonic and peculiarly well fitted to improve the quality of the blood when impoverished from any cause. Hence they are useful in diseases characterized by debility, especially in anæmia, associated with or consequent upon inordinate discharges. The diseases in which they are usually employed are chronic anæmia, dyspepsia, when dependent on deficient energy of the digestive function, and neuralgia. They are contra-indicated in acute inflammatory diseases, producing, when injudiciously employed, headache, and other symptoms of an excited circulation.

The following are the preparations of Iron contained in the British Pharmacopœia :—

TINCTURA FERRI ACETATIS.

Deep brown colour, and deposits largely.

Solution of Persulphate of Iron, 5 ; Acetate of Potash, 4 ; Rectified Spirit, *q. s.* : dissolve the Acetate of Potash in 20 of water and add 16 of Spirit to the solution of Iron ; mix the two liquids, and shake well occasionally for an hour, then filter, and add to the filtered liquid sufficient Rectified Spirit to make up 40.

Dose.—5 to 30 minims.

(Not in other Pharmacopœias.)

Not Official.

Liquor Ferri Acetici, Ger.—Saturate Acetic Acid, sp. gr. 1·040, with freshly precipitated Peroxide of Iron ; previously well washed and pressed, it should have sp. gr. 1·134–1·138.

Tinct. Ferri Acet. Ætherea, Belg. Ger. and Russ.—Solution of Acetate of Iron, 9 ; Rectified Spirit, 2 ; Acetic Ether, 1 : mix. Dose : 10 to 20 minims.

Vin. Ferri Acet.—Dry Acetate of Iron, 2 drms. ; Sherry, 6 oz. : digest seven days. Dose : 1 to 2 drms.

Ferri Aceticum Siccatum.—The liquor carefully evaporated.

FERRI ARSENIAS.

ARSENIATE OF IRON.

Arseniate of Iron, $3FeO,AsO_5$, eq. 223 ; or Fe_3As_2,K_8, eq. 446 ; partially oxidized.

A tasteless amorphous powder, of a green colour.

Solubility : dissolves readily in Hydrochloric Acid ; insoluble in water.

Test.—The solution in Hydrochloric Acid when diluted gives no precipitate with Chloride of Barium—indicating absence of Sulphuric Acid. 20 grains dissolved in an excess of Hydrochloric Acid diluted with water, continues to give a blue precipitate with the Ferridcyanide of Potassium, until at least 170 grain-measures of the volumetric solution of Bichromate of Potash have been added : that it is to say, it must contain sufficient Protoxide of Iron to reduce this quantity of Bichromate of Potash.

Medicinal Properties.

Administered internally in obstinate herpetic and scaly affections of the skin. Also used in lupus, elephantiasis, psoriasis, chronic eczema, and lichens. Externally in cancerous affections, mixed with four times its weight of Phosphate of Iron, as a caustic application to cancerous ulcers. From its liability to be absorbed, its use requires great caution. An ointment may be made with twelve times its weight of simple cerate.

Dose.—$\frac{1}{16}$ gr., gradually increased to $\frac{1}{2}$ gr. in pill, three times daily.

(In no other Pharmacopœia.)

Antidotes.—In case of a poisoning dose, 10 grs. Sulphate of Copper in 2 oz. water is the most prompt emetic.

Not Official.

FERRI BROMIDI SOLUTIO.

Each fluid drachm containing 4½ grs. of Bromide.

Dose.—20 to 60 minims in water.

SYRUPUS.—Of the same strength and dose as the Solution.

FERRI CARBONAS SACCHARATA.

SACCHARATED CARBONATE OF IRON.

Carbonate of Iron, FeO,CO_2, eq. 58, or $FeCO_3$, eq. 116, mixed with Peroxide of Iron and Sugar, the Carbonate forming at least 57 per cent. of the mixture.

Sulphate of Iron, 2; Carbonate of Ammonia, 1¼; Boiling Distilled Water, 320; Refined Sugar, 1: dissolve the Sulphate of Iron and the Carbonate of Ammonia each separately in one-fourth of the water, and mix thoroughly the two solutions in a deep cylindrical and closed vessel; in twenty-four hours decant the supernatant liquid, and pour the remainder of the water on the sediment, stir well, and again pour off the liquor when clear. Collect the deposit on a calico filter, press, and rub in the sugar in a porcelain mortar. Dry it at a temperature not exceeding 212°.

The Sugar protects the Carbonate of Iron from oxidation.

Small coherent lumps of a grey-brown colour, with a sweet, very feeble, chalybeate taste.

Dissolves with effervescence in warm diluted Hydrochloric Acid.

Test.—Its solution in Hydrochloric Acid gives but a very slight precipitate with the Chloride of Barium—indicating a trace of Sulphate. 20 grains dissolved in excess of Hydrochloric Acid, and diluted with water, continue to give a blue precipitate with the Ferridcyanide of Potassium, until at least 208 grain-measures of the volumetric solution of Bichromate of Potash have been added—that is to say, it must contain sufficient Protoxide of Iron to reduce this quantity of Bichromate of Potash.

Medicinal Properties.

An excellent chalybeate. Possesses the advantage of having nearly all the iron in it in the state of protoxide, and of being readily soluble in acids. Not astringent. Useful in anæmic amenorrhœa.

Dose.—5 to 20 grs.

(Austr. and Russ. consist of ⅓ Carbonate of Iron; Ger. ⅕ Ferrum Carbonicum Saccharatum; not in others.)

INCOMPATIBLES.—Acids and Acidulous Salts; all Vegetable Astringents.

Preparations.

MISTURA FERRI COMPOSITA. Opaque, bluish-green; best made when wanted.

Sulphate of Iron, 25 grs.; Carbonate of Potash, 30 grs.; Myrrh, 60 grs.; Sugar, 60 grs.; Spirit of Nutmegs, 4 drms.; Rose Water, 9½ oz.

Reduce the Myrrh to powder, add the Carbonate of Potash and Sugar, and triturate them with a small quantity of Rose Water so as to form a thin

paste, then gradually add more Rose Water, and the Spirit of Nutmegs, continuing the trituration and further addition of Rose Water until about eight fluid ounces of milky liquid is formed, then add the Sulphate of Iron previously dissolved in the remainder of the Rose Water, and cork the bottle immediately.

The spirit of Nutmeg in this formula is increased to four times the amount of Brit. 1864, because the formula in Brit. Ph. 1867 contains five times less of the Oil.

It becomes reddish brown by keeping, if air is not excluded.

Dose.—1 to 2 oz. as a stimulating tonic.

(Same as U. S.; 2⅔ grs. Sulphate of Iron in the oz.)

PILULA FERRI CARBONATIS. Black; gets hard by keeping.

Saccharated Carbonate of Iron, 4; Confection of Roses, 1: mix. =(1 in 1¼),

Dose.—5 to 20 grs., as a tonic for delicate females and children.

(Same as Belg. Pil. Carbonatis Ferrosi; Fr. Pilules de Protocarbonate de Fer; U. S. and Ger. with honey and sugar; not in others.)

FERRI ET AMMONIÆ CITRAS.

CITRATE OF IRON AND AMMONIA.

In thin transparent scales of a deep red colour, slightly sweet and astringent in taste.

Solution of Persulphate of Iron, 8; Solution of Ammonia, 19½; Citric Acid in crystals, 4; Distilled Water, a sufficiency: mix 14 of Solution of Ammonia with 40 of the water, and to this add gradually the Solution of Persulphate of Iron previously diluted with 40 of the water, stirring constantly and briskly, let the mixture stand for two hours, stirring it occasionally, then put it on a calico filter, and when the liquid has drained away, wash the precipitate with the water until that which passes through the filter ceases to give a precipitate with Chloride of Barium; dissolve the Citric Acid in 8 oz. of the water, and having applied the heat of a water bath, add the Oxide of Iron previously well drained, stir them together until the whole or nearly the whole of the Oxide has dissolved. Let the solution cool, then add 5½ of Solution of Ammonia, filter through flannel, evaporate to the consistence of Syrup, and dry it in thin layers on flat porcelain or glass plates at a temperature not exceeding 100°, remove the dry salt in flakes and keep in a stoppered bottle.

Soluble in water, 10 in 5; 5 dissolved in 7½ of water measure 10; almost insoluble in Rectified Spirit.

Test.—Its solution in water, when acidulated with Hydrochloric Acid, gives a copious blue precipitate with the Ferrocyanide of Potassium—indicating Peroxide, but none with the Ferridcyanide—indicating absence of Protoxide. When incinerated with exposure to air, it leaves not less than 27 per cent. of Peroxide of Iron, which is not alkaline to litmus.

Medicinal Properties.

As a blood restorer it is a very effectual salt, and it possesses scarcely any astringency: it may often be given when the stomach will not bear the more astringent preparations of iron.

Dose.—5 to 10 grs., becomes moist if kept in paper.

(Fr. Citrate de Fer Ammoniacal, Ger. Ferrum Citricum Ammoniatum, and U. S.; Russ. Ferrum Citricum cum Ammonio Citrico; not in others.)

In prescribing the above Salt to be taken during effervescence, care must be taken to put the Salt of Iron into the Citric Acid Solution, and not into the Bicarbonate of Potash Solution, because if it be put into the latter, Carbonic Acid will be given off and the bottle burst. Tincture of Orange is the best flavouring agent, but prescribers are in the habit of ordering this Salt in Tincture of Orange Peel alone, in which it will not dissolve, therefore the division into doses is impracticable. The addition of only a small quantity of water will make the solution perfect.

INCOMPATIBLES.—Mineral Acids and Vegetable Astringents.

Preparation.

VINUM FERRI CITRATIS. Deep brown.

Citrate of Iron and Ammonia, 160 grs.; Orange Wine, 20 oz.: dissolve, and after three days filter. =(1 gr. in each drm.).

Dose.—1 to 4 drms.

(Not in other Pharmacopœias.)

The French have a *Sirop* of this, with Cinnamon and Sugar, 1 gr. in 40 minims.

Not Official.

HAUSTUS FERRI ET AMMONIÆ CITRATIS.—Citrate of Iron and Ammonia, 8 grs.; Carbonate of Ammonia, 2 grs.; Spirit of Chloroform, 10 minims; infusion of Quassia to 1 oz. *St. Bartholomew's Hospital.*

FERRI ET QUINIÆ CITRAS.

CITRATE OF IRON AND QUININE.

Citric Acid combined with Peroxide of Iron, Protoxide of Iron, and Quinia.

Thin scales of a greenish golden-yellow colour, somewhat deliquescent, entirely soluble in cold water.

Solution of Persulphate of Iron, 4½; Sulphate of Quinia, 1; Dilute Sulphuric Acid, 1½; Citric Acid, 3; Solution of Ammonia and Distilled Water, of each a sufficiency: mix 8 of the Solution of Ammonia with 40 of the Water, and to this add the Solution of Persulphate of Iron, previously diluted with 40 of the Water, stirring them constantly and briskly. Let the mixture stand for two hours, stirring it occasionally, then put it on a calico filter, and when the liquid has drained away, wash the precipitate with distilled water until that which passes through the filter ceases to give a precipitate with Chloride of Barium.

Mix the Sulphate of Quinia with 8 of the water, add the Sulphuric Acid, and when the salt is dissolved, precipitate the Quinia with a slight excess of Solution of Ammonia. Collect the precipitate on a filter, and wash it with

30 of the water. Dissolve the Citric Acid in 5 of the water, and having applied the heat of a water bath, add the Oxide of Iron, previously well drained; stir them together, and when the oxide has dissolved, add the precipitated Quinia, continuing the agitation until this also has dissolved. Let the solution cool, then add in small quantities at a time $1\frac{1}{2}$ of Solution of Ammonia, diluted with 2 of the water, stirring the solution briskly, and allowing the Quinia, which separates with each addition of Ammonia, to dissolve before the next addition is made. Filter the solution, evaporate it to the consistence of a thin syrup, then dry it in thin layers on flat porcelain or glass plates, at the temperature of 100°, remove the dry salt in flakes, and keep it in a stoppered bottle.

Solubility in water, 2 in 1.

Test.—Taste bitter as well as chalybeate. When burned with exposure to air, it leaves a residue which yields nothing to water (Oxide of Iron). 50 grains dissolved in an ounce of water, and treated with a slight excess of Ammonia, gives a white precipitate, which, when collected on a filter and dried, weighs 8 grains (Quinia). The precipitate is entirely soluble in pure Ether—indicating absence of Quinidia and Cinchonia. When burned, leaves no residue. When dissolved by the aid of an acid, forms a solution which, being decolorized by a little purified animal charcoal, turns the plane of polarization strongly to the left; (Cinchonia turns it to the right).

Medicinal Properties.

Astringent and tonic, combining the properties of both Iron and Quinia.

6 grains contain 1 grain of Quinine.

Dose.—5 to 10 grains as a tonic, three times a day, in solution or in pill.

(Belg. and U.S.; not in others.)

Incompatibles.—Alkalies and their Carbonates, Tannic Acid, Vegetable Astringents.

Not Official.

Mistura Ferri et Quiniæ Effervescens.—Citrate of Iron, 5 grs.; Sulphate of Quinia, 1 gr.; Citric Acid, 10 grs.; Water, 1 oz., to be taken with 10 grs. of Bicarbonate of Soda. *Consumption Hospital.*

FERRI IODIDUM.

IODIDE OF IRON.

FeI, eq. 155; or FeI_2, eq. 310; with about 18 per cent. of water of crystallization, and a little Oxide of Iron.

Crystalline, green with a tinge of brown, inodorous, deliquescent.

Fine Iron Wire, 1; Iodine, 2; Distilled Water, 10: introduce the Iron, Iodine, and 8 of the water into a flask, heat it for about ten minutes, then boil until the red colour is gone. Filter through paper into a polished iron dish, washing with the rest of the water, and boil until a drop of the solution taken out with an iron wire solidifies on cooling. Pour on porcelain; when cool, break into fragments, and keep in a stoppered bottle.

Solubility in water, 1 in 1.

Test.—It dissolves almost entirely in water, leaving but a very small quantity of red sediment.

Medicinal Properties.

It combines the properties both of Iodine and Iron, and is a most valuable tonic in the treatment of scrofulous diseases in cachectic subjects requiring Iron. It was first prepared for medicinal purposes by the Author, who devised a mode of keeping the solution in water perfectly neutral at all times, by merely putting into it a coil of soft iron wire, reaching from the surface to the bottom. Dr. A. T. Thomson first prescribed it.

N.B.—It consists of 1 Iron, 4½ Iodine, and 1¼ Water.

Dose.—1 to 5 grs. in solution; the pill is rather a questionable mode of administering it.

(Austr. Fr. (Iodure de Fer) Ger. and Russ. Ferrum Iodatum Saccharatum, 5 containing 1 of Iodide; Belg. Ferrum Ioduretum; not in others.)

INCOMPATIBLES.—Acids, Acidulous Salts, Alkalies and their Carbonates, Lime Water, Vegetable Astringents.

Preparations.

PILULA FERRI IODIDI. Black.

Fine Iron Wire, 40 grs.; Iodine, 80 grs.; Refined Sugar in powder, 70 grs.; Liquorice Root in powder, 140 grs.; Distilled Water, 50 minims: agitate the Iron with the Iodine and the Water in a strong stoppered ounce phial, until the froth becomes white. Pour the fluid upon the Sugar in a mortar, triturate briskly, and gradually add the Liquorice.

3½ grains contain 1 gr. of the Iodide.

Dose.—3 to 8 grs.

(Same as Fr. with Honey, Pilules de Protiodure de Fer selon Blanchard; U.S. orders them to be coated, by shaking them in a solution of sixty grains of Tolu in a dram of Ether; not in others.)

SYRUPUS FERRI IODIDI. Colourless and keeps so, in well-filled bottles; becomes coloured in bottles partly filled, but exposure to light will take out the colour.

Iron Wire, 1; Iodine, 2; Refined Sugar, 28; Distilled Water, 13. Make a syrup with the sugar and 10 of the water, and keep it hot. Put into a strong soda-water bottle, covered with a cloth, the iron wire, the iodine, and 3 of water, shake them together until the froth of the mixture becomes white, filter whilst still hot into the syrup. The product should be made up by water to weigh 43 or to measure 31½. Sp. g. 1·385.

Each fluid drachm contains 4⅓ grains of the Iodide.

Dose.—20 to 60 minims.

(Ger. 4 grs. in each drm.; U.S. 7½ grs.; Austr. 7 grs.; Belg. and Fr. about ¼ gr.; not in others.)

Not Official.

LIQ. FERRI IODIDI.

Treat the Iodine and Iron as directed in the formula for Syrup, omit the Sugar, and add a sufficient quantity of water to make the measure up to 31½ oz.

It is the same strength as the Syrup. A coil of Iron Wire must be made to traverse the whole of the column of the solution to keep it neutral.

Dose.—20 to 60 minims in a wine-glassful of *cold* water, the taste is like that of water fresh from a chalybeate spring.

MISTURA FERRI IODIDI. Iodide of Iron 1, Water 40. *Westminster Hospital.*

FERRI OXIDUM MAGNETICUM.

MAGNETIC OXIDE OF IRON.

Syn. FERRI OXIDUM NIGRUM, *Edin.*

Magnetic Oxide of Iron, Fe_3O_4, or $\mathbf{Fe_3O_4}$, combined with about 20 per cent. of water of hydration, and containing some Peroxide of Iron.

A dark greyish-black powder, strongly attracted by the magnet.

Solution of Persulphate of Iron, 5½; Sulphate of Iron, 2; Solution of Soda, 80; Distilled Water, a sufficiency: dissolve the Sulphate of Iron in 40 of the water, and add to it the solution of Persulphate of Iron, then mix this with the solution of Soda, stirring them well together; boil the mixture, let it stand for two hours, stirring it occasionally, then put it on a calico filter, and when the liquid has drained away, wash the precipitate with distilled water until what passes through the filter ceases to give a precipitate with Chloride of Barium; lastly dry the precipitate at a temperature not exceeding 120°.

Solubility: it dissolves without effervescence in Hydrochloric Acid, diluted with half its bulk of water.

Test.—20 grains moistened with Nitric Acid and calcined at a low red-heat, leave 15·8 grains of the Peroxide of Iron. 20 grains dissolved in Hydrochloric Acid continue to give a blue precipitate with the Ferridcyanide of Potassium, until 230 grain-measures of the volumetric solution of Bichromate of Potash have been added; that is to say, there should be sufficient protoxide present to reduce that quantity of bichromate.

Medicinal Properties.

In tic-douloureux and other neuralgic affections. Useful when it is desirable to continue the use of iron for a long time, or to give it in large doses.

Dose.—5 to 10 grs. twice or thrice daily in water.

(Austr. and Russ. Ferrum Oxydato-oxydulatum; not in others.)

This preparation was in great repute with Dr. Jephson, and is certainly more to be depended on than the Peroxide: it is the Ferroso-ferric Oxide of Berzelius, a compound of Protoxide and Peroxide of Iron.

MISTURA FERRI AROMATICA. Intense brown.

Pale Bark, in powder, 4; Calumba, in powder, 2; Cloves, bruised, 1; Iron wire, 2; Compound Tincture of Cardamoms, 12; Tincture of Orange Peel, 2; Peppermint Water, 50: macerate the first four ingredients in the last one for three days, agitating occasionally, filter, add the tinctures, and make up to 50.

Dose.—1 to 2 oz.

Much valued in Dublin as a tonic.

FERRI PERCHLORIDI FORTIOR LIQUOR.

STRONGER SOLUTION OF PERCHLORIDE OF IRON.

Perchloride of Iron, Fe_2Cl_3, eq. 162·5, in solution in water.

Miscible with water and alcohol in all proportions.

Iron Wire, 2 oz.; Hydrochloric Acid, 12 oz.; Nitric Acid, 9 drms.; Distilled Water, 8 oz. Mix 8 of the Hydrochloric Acid with the Water and pour the mixture on the Iron Wire, applying a gentle heat, so that the whole of the metal may be dissolved; filter the solution and add to it the remainder of the Hydrochloric and the Nitric Acid; heat the mixture briskly, until on the sudden evolution of red fumes the liquid becomes of an orange-brown colour, then evaporate by the heat of a water bath until it is reduced to 10 fluid ounces,

Test.—Sp. g. 1·44.—A drachm diluted with 2 ounces of water, gives upon the addition of an excess of Solution of Ammonia, a reddish-brown precipitate, which when well washed and incinerated weighs 15·62 grains.

(Same as Belg. sp. g. 1·480; Ger. Liq. Ferri Sesquichlorati 1·480 to 1·484, and contains 15 per cent. of Iron. Not in others.)

It is rather acid, and if desired to be more neutral, the solution can be evaporated lower, say to 4 or 5 oz., and then made up to 10 by the addition of water.

The neutral solution is preferred to apply to diphtheric patches, for injecting nævi, and generally as a powerful styptic.

Neutral Solution 2, Water 1, mixed, is the French Solution 30° Beaumé, sp. g. 1·260.

Preparations.

LIQUOR FERRI PERCHLORIDI. Pale brown. Of the same strength as Tinctura.

Strong solution of Perchloride of Iron, 1; Distilled Water, 3. =(1 in 4).

Sp. g. 1·105.

Dose.—10 to 30 minims.

This preparation has been introduced in order to save the expense of the Spirit used in the Tincture, which for hospital use may be worth consideration.

TINCTURA FERRI PERCHLORIDI. Light brown.

Strong Solution of Perchloride of Iron, 1; Rectified Spirit, 3: mix. Add the Solution to the Spirit. =(1 in 4).

Sp. g. 0·992, more correctly ·995.

(Same strength as U.S. Tinctura Ferri Chloridi; Belg. from the Salt and only half strength; Ger. Tinct. Ferri Chlorati; not in others.)

=(1 in 4).

Medicinal Properties.

The Tincture of Iron has long been considered the most valuable of all the Iron preparations; it is given in diabetes, acting especially on the kidneys in albuminuria, the urethra in gleet, and in giving tonicity to the bladder; is slightly aphrodisiac; in passive hæmorrhage and as a general tonic, having properties in common with the numerous salts of iron; highly useful in anæmia and chlorosis. It is a powerful styptic.

Dose.—10 to 30 minims in Water.

If given during effervescence with Bicarbonate of Soda, 9 grains is about equal to 60 minims of Tincture.

Incompatibles.—Alkalies and their Carbonates, Lime Water, Carbonate of Lime, Magnesia and its Carbonate: astringent vegetables render it black, and mucilage decomposes it.

Preparations of Iron can be given in Infusion of Quassia, or Calumba, but it tinges Infusion of Chiretta and Hops, and changes to brown or black those of Chamomile, Cusparia, Gentian, Orange, Cascarilla, Cloves, Digitalis, Bark, and all astringent infusions.

Not Official.

Liquor Ferri Chloroxydi.—Intensely blood-red colour, same strength as Tinct. Ferri Perchloridi and Liquor Ferri Perchloridi.

This preparation was made at the suggestion of Mr. Spencer Wells, who had noticed the paper by M. Jeannel, of Bordeaux, describing a yellow and red Peroxide of Iron, the latter being soluble in very dilute Hydrochloric Acid.

Mr. Spencer Wells has found that he can give this preparation to patients who cannot take the Tincture of Steel; he has also used it as a styptic at operations.

Tinct. Ferri Ammonio-Chloridi.—*Dose*, ½ to 1 drm.; rarely prescribed.

Mistura Ferri Effervescens.—Tincture of Perchloride of Iron, 60 minims; Acetic Acid, 7 drms.; Water, 1 oz. (Bicarbonate of Potash, ½ drm.; Water, ½ oz.) *Westminster Hospital.*

FERRI PERNITRATIS LIQUOR.

SOLUTION OF PERNITRATE OF IRON.

Pernitrate of Iron, Fe_2O_3, $3NO_5$, eq. 242, in solution in Water.

A clear solution, of reddish-brown colour.

Iron Wire, 1; Nitric Acid, 4½; Distilled Water, *q. s.*: dilute the Nitric Acid with 16 of water, dissolve the Iron (take care to moderate the action by occasionally adding part of the water), and add water to filter 30.

Test.—Sp. g. 1·107. 1 drachm treated with an excess of Solution of Ammonia gives a precipitate, which, when washed, dried, and incinerated, weighs 2·6 grains. It gives no precipitate with the Ferridcyanide of Potassium—indicating absence of Protoxide.

Medicinal Properties.

Tonic and astringent. Useful in chronic diarrhœa, especially when occurring in delicate and nervous females, when there are no inflammatory symptoms; also in menorrhagia; also both internally and as an injection in leucorrhœa, the injection being diluted so as to cause only slight heat and smarting.

Dose.—10 to 40 minims.

(U.S. Liquor Ferri Nitratis, half the strength; Belg. sp. g. 1·145; not in others.)

FERRI PEROXIDUM HYDRATUM.

HYDRATED PEROXIDE OF IRON.

Fe_2O_3,HO, eq. 89 ; or Fe_2O_3,H_2O, eq. 178.

A dark brown powder, without taste.

Moist Peroxide of Iron dried at 212° F. and reduced to powder.

Solubility: dissolves completely though slowly with the aid of heat, in Hydrochloric Acid, diluted with half its volume of water.

Test.—The solution in Hydrochloric Acid gives no precipitate with Chloride of Barium, or with the Ferridcyanide of Potassium—indicating absence of Sulphuric Acid and Protoxide.

Dose.—5 to 30 grs.

(In all the Pharmacopœias. Russ. Ferrum Oxydatum Hydratum; Austr. Ferrum Oxydatum Nativum Rubrum; Ger. and Fr. Ferrum Hydricum, called also Crocus of Mars, Rouge.)

Preparation.

EMPLASTRUM FERRI. Brownish-red. *Syn.* EMPL. THURIS; EMPL. ROBORANS.

Peroxide of Iron, 1; Burgundy Pitch, 2; Litharge Plaster, 8: melt the pitch and plaster together, and stir in the oxide. =(1 in 11).

(Same as U.S.; not in others.)

Used as a strengthening plaster, and to afford mechanical support to relaxed muscles.

FERRI PEROXIDUM HUMIDUM.

MOIST PEROXIDE OF IRON.

Hydrated Peroxide of Iron, $2\,Fe_2O_3,3\,HO$, eq. 187, with about 86 per cent. of uncombined water.

A soft moist pasty mass, of a reddish-brown colour.

Solution of Persulphate of Iron, 4; Solution of Soda, 38 or *q. s.*; Distilled Water, 20: mix the solution of Iron and the Water; pour the mixture into the solution of Soda, stirring occasionally for two hours; collect the precipitate on a calico filter, wash until it ceases to give a precipitate with Chloride of Barium. Keep it (without drying) in a porcelain pot, the lid being closed.

Should be recently made.

Solubility: dissolves readily in Hydrochloric Acid without the aid of heat.

Test.—Free from grittiness. Leaves on calcination about 12 per cent. of Peroxide of Iron.

Medicinal Properties.

Not eligible as a ferruginous preparation. It is, however, valuable as an

antidote to the poison of Arsenic : it operates by producing an insoluble, and therefore inert Subarseniate of Protoxide of Iron.

Dose.—¼ to ½ oz.

(In all the Pharmacopœias ; Ger. Ferrum Hydricum in Aqua.)

As an antidote, 2 to 4 drms. repeated until effective. A quantity equal at least to twelve times the supposed quantity of the poison taken, may be given.

LIQ. FERRI PERSULPHATIS.—*See* FERRI SULPHAS.

Not Official.

IRON SUGAR (Soluble Oxide of Iron).—Monsieur Chauteau's soluble Hydrated Oxide of Iron granulated with Sugar Candy.

FERRI PHOSPHAS.

PHOSPHATE OF IRON.

Phosphate of Iron, $3FeO,PO_5$, eq. 179 ; or $Fe_3P_2O_8$, eq. 358 ; partially oxidated.

A slate-blue amorphous powder. Becomes of a green hue by keeping.

Sulphate of Iron, 3 ; Phosphate of Soda, 2½ ; Acetate of Soda, 1 ; boiling Distilled Water, 80. Dissolve the Iron in one half of the Water, and the Salts of Soda in the other half ; mix and stir carefully. Transfer the precipitate to a calico filter, wash with hot distilled water until it ceases to give a precipitate with Chloride of Barium. Dry on porous bricks in a stove at a heat not exceeding 120° F. Keep in stoppered bottles.

Solubility : soluble in acids, insoluble in water.

Test.—If it is digested in Hydrochloric Acid with a lamina of pure Copper, a dark deposit does not form on the metal—indicating absence of Arsenic. 20 grains dissolved in Hydrochloric Acid continue to give a blue precipitate with red Prussiate of Potash until 250 grain-measures of Volumetric Solution of Bichromate of Potash have been added.

Medicinal Properties.

Tonic. Possesses the general properties of the ferruginous preparations. Given with advantage in amenorrhœa, some forms of dyspepsia, diabetes, and rachitis. It diminishes voracious appetite ; it invigorates and increases the power of digestion.

Dose.—5 to 10 grs.

(In all the Pharmacopœias ; Austr. Belg. ; Fr. Phosphate Ferroso-Ferrique, and U.S.)

Preparation.

SYRUPUS FERRI PHOSPHATIS. Colourless when fresh, but gets brown and deposits by keeping.

Granulated Sulphate of Iron, 224 grs. ; Phosphate of Soda, 200 grs. ; Acetate of Soda, 74 grs. ; Dilute Phosphoric Acid, 5½ oz. ; Refined Sugar, 8 oz. ; Distilled Water, 8 oz. Dissolve the Sulphate of Iron in 4 ounces of the Water, and the Phosphate and the Acetate of Soda in the remainder : mix the two solutions, and, after carefully stirring, transfer the precipitate to

a calico filter, and wash it with Distilled Water till the filtrate ceases to be affected by Chloride of Barium; then press the precipitate strongly between folds of bibulous paper, and add to it the Dilute Phosphoric Acid; as soon as the precipitate is dissolved, filter the solution, add the Sugar, and dissolve without heat. The product should measure exactly 12 ounces.

Each fluid drachm contains about 1 grain of Phosphate.

Dose.—1 to 4 drms.

(In no other Pharmacopœia.)

Not Official.

Syrupus Ferri Phosphatis Comp. (Parrish.)—This preparation is called Chemical Food, and contains in every fluid drachm 1 gr. Phosphate of Iron; 2½ grs. Phosphate of Lime, besides Soda and Potassa. Mr. Parrish, of Philadelphia, has published the formula of this very popular medicine, but no chemist appears to produce so perfect a preparation as Mr. Parrish himself, and the Author has therefore agreed to import it and to be his sole agent for Great Britain.

Dose.—1 to 2 drms.

Syrupus Ferri Hypophosphitis.—Sulphate of Iron, 1; Carbonate of Soda, 1½; Hypophosphorous Acid, 6; Diluted Phosphoric Acid, 1; Sugar, 12; Distilled Water, a sufficiency. Dissolve the sulphate and carbonate in separate portions of the water, mix the solutions, collect the precipitate, wash it, and dissolve it in the acids, and then add the sugar to form a syrup.

Dose.—1 drm.

Syrupus Ferri Phosphatis c. Quinia et Strychnia. (Easton's.)—Sulphate; of Iron, 2½ oz.; Phosphate of Soda, 3 oz.; Sulphate of Quinia, 1½ oz. and 48 grs.; Strychnia, 24 grs.; Diluted Phosphoric Acid, 56 oz.; Sugar, 56 oz.; Distilled Water, *q. s.* Dissolve the sulphate of iron and the phosphate of soda in separate portions of the water, mix the solutions collect the precipitate, wash it, dissolve it and the quinia and strychnia in the phosphoric acid, mix all together, add the sugar to form a syrup.

Dose.—1 drm., which contains 1 gr. Phosphate of Iron, 1 gr. Phosphate of Quinia, and $\frac{1}{32}$ gr. of Strychnia.

Syrupus Ferri Phosphatis c. Manganesio.—Phosphate of Iron, 72 grs.; Phosphate of Manganese, 48 grs.; Glacial Phosphoric Acid, 6 drms.; Sugar, 10 oz.; Water to make 12 oz. Dissolve the phosphoric acid in a small quantity of the water, add the phosphates, and dissolve by heat; then add the sugar and water to measure 12 oz.

Dose.—1 drm.

FERRI SULPHAS.

SULPHATE OF IRON.

FeO,SO_3+7HO, eq. 139; or $\mathbf{FeSO_4,7H_2O}$, eq. 278.

Pale bluish-green rhomboidal prisms, with little or no efflorescence.

Iron Wire, 4; Sulphuric Acid, 4; Distilled Water, 30. Pour the water on the iron placed in a porcelain capsule; add the acid, and when the disengagement of gas has nearly ceased, boil for ten minutes. Filter through paper; in twenty-four hours separate the crystals; dry on filtering-paper placed on porous bricks; keep in stoppered bottles.

Solubility: soluble in Water, 1 in 1½; the solution rapidly oxidizes on

exposure; insoluble in Alcohol and Proof Spirit, hence it cannot be dissolved in tinctures.

Test.—Crystals free from opaque rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with Sulphuretted Hydrogen, and one nearly white with Ferrocyanide of Potassium.

Medicinal Properties.

In harmony with the properties of iron salts in general, it is a powerful astringent, but is apt to irritate the stomach.

Dose.—3 to 5 grs. in pill, or recent solution.

(In all the Pharmacopœias.)

Dr. F. Farre gives 5 grains, with 3 grains of Sulphate of Quinia, four or five times a day, for enlarged spleen.

Preparations.

FERRI SULPHAS EXSICCATA. Greyish cream colour.

Sulphate of Iron exposed in a porcelain capsule to a moderate heat, which may be raised to 400°. Reduce to powder. Keep in stoppered bottles.

Prescribed in pills. 3 grains, which are equal to 5 of the crystallized salt, make a nice pill with 2 grains of Manna.

Dose.—½ to 3 grains.

(Same as U. S. heated to 300° F. till dry; Ger. to 212° F.; Belg.; not in others.)

LIQUOR FERRI PERSULPHATIS. Dark brown.

Sulphate of Iron, 8; Sulphuric Acid, ¾; Nitric Acid, ¾; Distilled Water, 12. Add the sulphuric acid to 10 of the water, and dissolve the sulphate of iron in the mixture with the aid of heat. Mix the nitric acid with the remaining 2 of the water, and add the dilute acid to the solution of sulphate of iron. Concentrate the whole by boiling, until, by the sudden disengagement of ruddy vapours, the liquid ceases to be black, and acquires a red colour. A drop of the solution is now to be tested with Red Prussiate of Potash, and if a blue precipitate be formed, a few additional drops of Nitric Acid should be added and the boiling renewed, in order that the whole may be converted into Persulphate of Iron. When the solution is cold, make up the quantity to 11 by the addition, if necessary, of Distilled Water.

Introduced for making several preparations of Iron.

N.B.—The quantity of Nitric Acid ordered is much too small to peroxidize the Iron.

This solution is a good styptic.

Not Official.

Mistura Ferri Laxans.—Sulphate of Iron, 2 grs.; Sulphate of Magnesia, 1 drm. Dil. Sulphuric Acid, 3 minims; Spirit of Chloroform, 20 minims; Peppermint Water to 1 oz. *St. Mary's Hospital.*

Lotio Ferri c. Conio.—Sulphate of Iron, 8 grs.; Extract of Conium, 8 grs.; Water, 1 oz. *St. Mary's Hospital.*

Lotio Ferri Sulphatis.—Sulphate of Iron, 2 grs.; Water 1 oz. *St. Bartholomew's Hospital.*

FERRI SULPHAS GRANULATA.

GRANULATED SULPHATE OF IRON.

$FeO,SO_3,+7HO$, eq. 139; or $FeSO_4, 7H_2O$, eq. 278.

Small granular crystals of a pale green colour, which are not so liable to become brown as those of the Ferri Sulphas.

Iron, 4; Sulphuric Acid, 4; Distilled Water, 30; Rectified Spirit, 8. Pour the water on the iron placed in a porcelain capsule; add the acid, and when the disengagement of gas has nearly ceased, boil for ten minutes; filter the solution into a jar containing the spirit, stirring the mixture so that the salt shall separate in minute granular crystals. Pour off the liquid, place the crystals on filtering-paper over porous bricks to dry. Keep in stoppered bottles.

Less liable to oxidation than Ferri Sulphas.

Solubility in Water, 1 in 1½; insoluble in Rectified Spirit.

Test.—Free from opaque, rust-coloured spots, and dissolving in water without leaving any ochry residue. The aqueous solution gives no precipitate with Sulphuretted Hydrogen, and one nearly white with Ferrocyanide of Potassium—indicating absence of Copper and Persulphate of Iron.

Medicinal Properties.—Same as Ferri Sulphas.

Dose.—3 to 5 grs.

(Not in other Pharmacopœias.)

FERRUM REDACTUM.

REDUCED IRON.

Metallic Iron, with a variable amount of Magnetic Oxide of Iron. A fine greyish-black powder, strongly attracted by the magnet, and exhibiting metallic streaks when rubbed with firm pressure in a mortar. Made by passing dry Hydrogen over Peroxide of Iron in a gun-barrel. It must be carefully preserved from the air.

Solubility: it dissolves in Hydrochloric Acid with the evolution of Hydrogen.

Test.—10 grains added to an aqueous solution of 50 grains of Iodine, and 50 grains of Iodide of Potassium, and digested with them in a small flask at a gentle heat, leave not more than 5 grains undissolved, which should be entirely soluble in Hydrochloric Acid. Is easily ignited and converted into brown oxide.

The Author finds between 4 and 5 grains are left, which are Magnetic Oxide, and therefore little more than half is *reduced Iron*.

Medicinal Properties.

It is one of the most powerful remedies in restoring the condition of the blood in all anæmic states of the system. It does not, however, possess the astringent properties of other preparations of Iron, and therefore cannot be used as a substitute in passive hæmorrhage. It is chiefly employed in chlorosis, amenorrhœa, chorea, and enlargement of the spleen following intermit-

tent fever. There is no pulverulent state of Iron so convenient as this for children, as it has no taste, and a very small dose is required.

Dose.—1 to 5 grs. several times daily, in powder or pill, or for children ¼ to 1 gr.

(In all the Pharmacopœias; Austr. Belg. Fr. Ger. U. S. and Russ.)

1 grain of this is equal, medicinally, to 5 grains of Citrate of Iron.

TROCHISCI FERRI REDACTI. Iron-grey.

Reduced Iron, 720 grs.; Refined Sugar, in powder, 25 oz.; Gum Acacia, in powder, 1 oz.; Mucilage of Acacia, 2 oz.; Distilled Water, 1 oz., or sufficient. Mix the iron, sugar, and gum, and add the mucilage and water to form a proper mass. Divide it into 720 lozenges, and dry them in a hot-air chamber with a moderate heat.

Each lozenge contains 1 gr. of reduced Iron.

Dose.—1 to 6 lozenges.

Not Official.

PILULA FERRI REDACTI.—Reduced Iron, 3 grs.; Balsam of Peru, 1 minim: in one pill. *St. Bartholomew's Hospital.*

FERRUM TARTARATUM.

TARTARATED IRON.

Syn. FERRI POTASSIO-TARTRAS.

Thin transparent scales of a deep garnet colour.

Solution of Persulphate of Iron, 5½; Solution of Ammonia, 10 or *q. s.*; Acid Tartrate of Potash in powder, 2; Distilled Water, *q. s.* Add the iron to 40 of the water; gradually pour this into the solution of ammonia previously mixed with 60 of water, stirring occasionally during two hours; collect the precipitate on a calico filter, wash it with distilled water until that which passes through ceases to become turbid with Chloride of Barium: mix intimately the precipitate with the acid tartrate of potash in a porcelain dish, and let it stand twenty-four hours, then apply a gentle heat not exceeding 140°, add gradually 20 of distilled water, and stir constantly till nothing more will dissolve: filter and evaporate at a temperature not exceeding 140° to the consistence of syrup; dry it in thin layers on glass plates at a temperature not exceeding 120°. Preserve the dried flakes in stoppered bottles.

Solubility in Water, 1 in 4; sparingly in Spirit.

If it does not scale, a little Ammonia being added will induce it.

Test.—By incinerating 50 grains of this preparation at a red-heat, and washing what is left with distilled water and again incinerating, a residue of Peroxide of Iron is obtained, weighing 15 grains.

Dose—5 to 10 grs.

(Same as Austr. Ferrum Kalio-tartaricum; U. S. Ferri et Potassio-Tartras; Fr. Tartras Ferrico-Potassicus; Ger. Tartarus Ferratus; not in others.)

VINUM FERRI. Intense olive-brown.

Fine Iron Wire (No. 35), 1 oz.; Sherry, 20 oz.: digest thirty days with frequent agitation. The bottle to be corked, but the wire not wholly immersed.

Dose.—1 to 4 drms.

(Not in other Pharmacopœias.)

Medicinal Properties.

Useful in restoring the blood, when a slight astringent is desired. May be prescribed with alkalies.

INCOMPATIBLES.—Mineral Acids, Lime Water, and all astringent vegetable preparations.

N.B.—The old Vinum Ferri, made with Malaga, is much sweeter than the British Pharmacopœia, and is sometimes ordered on that account.

MALATE OF IRON WINE.—In Devonshire a quantity of Iron Wire or Nails is digested in a bottle of Cider for a week, and a wineglassful three times a day is the dose.

FICUS.

FIG.

The dried fruit of the *Ficus Carica*, imported from Smyrna.

Medicinal Properties.

Nutritious, laxative, and demulcent. Chiefly used medicinally in constipation. Cut open and heated, it is a convenient suppurative cataplasm.

Contained in Conf. Sennæ.

FILIX MAS.

MALE FERN.

The dried rhizome, with the bases of the footstalks and portions of the root-fibres of *Aspidium* or *Nephrodium Filix-mas*, collected in summer. Indigenous.

Only the green rhizome should be used, the brown is inert. U. S.

Medicinal Properties.

The powder of the rhizome is slightly tonic and astringent; chiefly used as an anthelmintic and in tænia. It apparently acts by destroying the worm, the expulsion being aided by purgatives.

Dose.—Of the powder, 60 to 180 grs.

(In all the Pharmacopœias; Fr. Fougère.)

Preparation.

EXTRACTUM FILICIS LIQUIDUM. Intense green. *Syn.* OIL OF MALE FERN.

Fern Root in coarse powder, 1; Ether, 2½, or a sufficiency: pack closely in a percolator with 1 of the ether, add the rest at intervals until it passes through colourless; distil off the ether, and the liquid extract remains.

Dose.—60 to 80 minims in milk, or made into an emulsion with 1 to 2 drms. of very fresh mucilage, or ½ drm. to 1 drm. of powdered Acacia, or ½ drm. of compound powder of Tragacanth, and with peppermint water or milk to form a 2 oz. draught.

(In all the Pharmacopœias; Austr. Belg.; Fr. Extrait éthéré de Fougère Mâle; Ger. Russ. Extr. Filicis; U. S. Oleoresina, Filicis.)

Best given on an empty stomach, and one-third part of the dose should be given at intervals of half an hour.

Sold in capsules, 15 mimins in each.

Not Official.

MISTURA FILICIS.—Oil of Male Fern, 2 drms.; Comp. Powder of Tragacanth, 1 drm.; Peppermint Water to 2 oz. *St. Mary's Hospital.*

FŒNICULI FRUCTUS.

FENNEL FRUIT.

The fruit of the *Fœniculum dulce*, imported from Malta.

Medicinal Properties.

Stimulant, aromatic and carminative. In action similar to Anise. Much employed as a corrigent of less agreeable medicines. In infantile cases the infusion is frequently employed as an enema for flatus.

Preparation.

AQUA FŒNICULI.

Fennel Fruit bruised, 1; Water, 20: distil 10. =(1 in 10).

Dose.—1 to 2 oz.

(Austr. 1 in 20; Belg. Ger. 1 in 30; U. S. 1 in 30, also with Oil 1 in 512; Russ.; not in Fr.)

Not Official.

FUCUS VESICULOSUS.

Bladder-wrack collected from the rocks by the seaside and dried.

EXTRACTUM LIQUIDUM.—Take of the plant dried, 16; Rectified Spirit, 5: digest for seven days, press and filter.

Dose.—A teaspoonful, given for obesity; it also diminishes glandular swellings in scrofulous cases.

Smelling of fresh sea-weed is said to relieve hay asthma.

GALBANUM.

GALBANUM.

A gum resin obtained from an umbelliferous plant; imported from India and the Levant; in masses of greenish-yellow or reddish tears, translucent Usually heated to 212° F., and strained before using.

Sp. g. 1·212.

Medicinal Properties.

Similar to Assafœtida, but less powerful. A stimulating expectorant. Chiefly used in chronic affections of the bronchial mucous membranes; externally as a plaster to indolent swellings to promote resolution or suppuration.

(In all the Pharmacopœias.)

Preparations.

EMPLASTRUM GALBANI. Buff-colour.

Galbanum, 1; Ammoniac, 1; melt together and strain, then add Yellow Wax, 1; Litharge Plaster, 8, previously melted together. =(1 in 11).

(In all the foreign Pharmacopœias, but the formulas are different; Fr. Emplâtre Dyachylon Gommé; Ger. and Russ. Emp. Galb. Crocatum.)

PILULA GALBANI.

The Pilula Galbani Composita had found a place in the London Pharmacopœia for the last half-century, and would naturally be looked for under Galbanum; its name has been changed to Pilula Assafœtidæ Composita, and its composition somewhat altered. *See* ASSAFŒTIDA.

Pil. Galbani Comp. U. S. Galbanum, 3; Myrrh, 3; Soap, 1.

GALLA.

GALLS.

Excrescences on *Quercus infectoria*, caused by the punctures and deposited ova of *Diplolepis Gallæ-tinctoriæ;* from the Mediterranean and the East Indies.

Solubility; all the soluble matter of Galls is taken up by forty times their weight of boiling Water, and the residue is tasteless.

Galls contain about 35 per cent. of Tannin or Tannic Acid, and 5 per cent. of Gallic Acid, to which their therapeutic qualities may be attributed.

Medicinal Properties.

Powerfully astringent. Useful in hæmorrhages, as menorrhagia, hæmaturia, and hæmoptysis, also in increased mucous and other discharges. Externally to suppress hæmorrhage from the gums, nose, etc.; to lessen the discharge from mucous membranes, as in gleet, leucorrhœa, etc.; as a gargle, lotion, injection, or decoction, more or less diluted.

Dose.—(Of powder) 10 to 20 grs. several times a day.

(In all the Pharmacopœias; Fr. Noix des Galles.)

INCOMPATIBLES.—The Mineral Acids, Salts of Iron and Lead, Sulphate of Copper, Nitrate of Silver, Carbonates of Potash and Soda, Lime Water, Tartar Emetic, Ipecacuanha, and Opium, Infusions of Cinchona, Calumba, and Cusparia.

Preparations.

ACIDUM GALLICUM.—*See* ACIDUM GALLICUM.

ACIDUM TANNICUM.—*See* ACIDUM TANNICUM.

TINCTURA GALLÆ. Deep brown.

Galls, bruised, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then

pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 8. =(1 in 8).

Dose.—½ to 2 drms.

(Ger. 1 in 5; Russ. 1 and 6; U.S. 1 in 7½; not in others.)

UNGUENTUM GALLÆ. Deep fawn colour.

Galls in very fine powder, 80 grs.; Benzoated Lard, 1 oz.: mix. =(1 in 6½).

(U.S. 1 in 8; not in others.)

A useful application for hæmorrhoids.

UNGUENTUM GALLÆ CUM OPIO. Brown.

Ointment of Galls, 1 oz.; Opium in powder, 32 grs.: mix. =(Opium, 1 in 14⅔).

(Not in other Pharmacopœias.)

Applied to painful hæmorrhoids.

Not Official.

DECOCTUM GALLÆ.—Bruised Galls, 2½; Distilled Water, 40: boil to 20 and strain. =(1 in 8).

A most useful astringent lotion to suppress hæmorrhage from the gums or nose, and to lessen discharges from mucous surfaces.

SUPPOSITORIA contain 5 grs. powdered Galls and 1 gr. Opium in each.

GENTIANÆ RADIX.

GENTIAN ROOT.

The dried root of the *Gentiana lutea*, collected in the Alps, Apennines, and other mountainous districts of Europe.

Medicinal Properties.

Used in all cases of pure debility of the digestive organs, or when a general tonic is required.

Dose.—(Of the powder) 10 to 40 grs. This powder is prescribed in pills when a large quantity of Essential Oil is given, to absorb it.

(In all the Pharmacopœias; Fr. Gentiane.)

INCOMPATIBLES.—Sulphate of Iron, Nitrate of Silver, and Lead Salts.

Preparations.

EXTRACTUM GENTIANÆ. Intense brown.

Gentian sliced, 1; boiling Distilled Water, 10: macerate two hours, boil fifteen minutes, strain, and evaporate to a soft pilular consistence.

A good substance to add to powders to form them into pills.

Dose.—10 to 15 grs.

(Austr.; Fr. Ger. Russ. and U.S. with cold water; also Fluidum; not in Belg.

INFUSUM GENTIANÆ COMPOSITUM.

Gentian, sliced, 1; Orange Peel, cut small, 1; fresh Lemon Peel, 2; Boiling Water, 80: infuse one hour and strain. =(1 in 80).

(Dub. 1 in 40; U.S. 1 in 32, with Coriander and percolation; not in others.)

Dose.—1 to 2 oz.

MISTURA GENTIANÆ.

Gentian sliced, ¼ oz.; Bitter Orange Peel bruised, 30 grs.; Coriander, 30 grs.; Proof Spirit, 2 oz.; cold Distilled Water, 8 oz.: pour the spirit on the ingredients, and after two hours add the water. Infuse for two hours and strain.

Dose.—½ to 1 oz.

(U.S.; is not strong enough to keep without change for more than fifteen or sixteen days; not in others.)

TINCTURA GENTIANÆ COMPOSITA. Deep brown.

Gentian, bruised, 1½; Bitter Orange Peel, bruised, ¾; Cardamom Seeds, bruised, ¼; Proof Spirit, 20: macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, let it drain, and then pour on the remaining spirit; when it ceases to drop, wash the marc with spirit to make up 20. =(1 in 13⅓).

Dose.—1 to 2 drms.

(Same as Fr.; U.S. 1 in 15; (Ger. and Russ. 1 and 6, Tinctura Gentian. Simplex; Belg. 1 in 5, by weight;) not in Austr.)

Not Official.

MISTURA GENTIANÆ ALKALINA.—Dil. Hydrocyanic Acid, 3 minims; Bicarbonate of Soda, 15 grs.; Comp. Infusion of Gentian to 1 oz. *Consumption Hospital.*

MISTURA GENTIANÆ C. MAGNESIÆ SULPHATE.—Sulphate of Magnesia, 1 drm. Aromatic Spirit of Ammonia, 20 minims; Comp. Infusion of Gentian, 1 oz. *St. Mary's Hospital.*

MISTURA GENTIANÆ ET SENNÆ.—Infusion of Gentian, 6 drms.; Infusion of Senna, 3 drms.; Comp. Tinct. of Cardamoms, 1 drm. *St. George's Hospital.*

GLYCERINUM.

GLYCERINE.

A sweet principle, $C_6H_8O_6$, or $C_3H_8O_3$, eq. 92, obtained from fats and fixed oils. A colourless, thick fluid, oily to the touch, without odour, of a sweet taste, when diluted with an equal volume of Water does not change with Hydrosulphate of Ammonia, Ferrocyanide of Potassium, Nitrate of Barium, Oxalate of Ammonia, or Nitrate of Silver.

Solubility: in all proportions with water and Alcohol, but insoluble in Chloroform, Ether, and Oils. Combines with Sulphuric Acid; U. S. Ph.

It possesses great powers as a solvent, and is an excellent excipient for

many medicinal substances. It dissolves its own weight of Borax, and twice its weight of Crystallized Perchloride of Iron; it also dissolves Bromine and Iodine, the Iodide of Sulphur, the Chlorides of Potassium and Sodium, the fixed alkalies, some of the alkaline earths, and a large number of neutral salts. It also dissolves the vegetable acids, and either suspends or dissolves the vegetable alkaloids. Many solutions are made with it for medicinal purposes, as of the Salts of Morphia, Quinia, Strychnia, Veratria, Atropia, Tannic and Gallic Acids, and Arsenic.

It is antiseptic, 1 part to 10 Water, preserving animal substances equal to spirit.

Test.—Sp. g. 1·250, and contains 5 per cent. of Water. Found in commerce, 1·260.

(Same as U.S. and Fr., sp. g. 1·260; Ger. and Russ. sp. g. 1·230 to 1·250; Belg.; not in others.)

It may be obtained of a specific gravity of 1·270, and even of 1·280, though with great difficulty; this very concentrated state is never required in medicine.

Medicinal Properties.

Internally it is nutrient and demulcent. It has been proposed as a substitute for Cod-liver Oil, but its nutrient properties are far inferior. It is sometimes employed as a sweetening agent in the place of syrup.

As an external remedy it is highly valued, chiefly from its emollient and undrying properties. In skin diseases where emollient and soothing applications are required, as pityriasis, lepra, herpes, eczema, psoriasis, prurigo, and lichen. Useful as a moist dressing for wounds. Excellent for chilblains.

Used in poultices ($\frac{1}{14}$ or $\frac{1}{16}$), it keeps them soft for a long time.

Introduced into the ear on cotton, it relieves deafness arising from dryness of the external meatus.

Dose.—10 minims to 1 drm. 1 to 2 drms. Br. Ph.

Preparations.

GLYCERINUM ACIDI CARBOLICI	1 acid in 4½.
GLYCERINUM ACIDI GALLICI	1 acid in 4½.
GLYCERINUM ACIDI TANNICI	1 acid in 4½.
GLYCERINUM AMYLI	1 Starch in 8½.
GLYCERINUM BORACIS	1 Borax in 4½.

Contained in Linim. Potass. Iodidi cum Sapone.

The formulas for these are given under the several names quoted.

Not Official.

Glycerine Cream for Chilblains.—Glycerine, 1; Soft Soap, 1; Cherry-laurel Water, 1: mix.

Glycerine Cream with Camphor.—Glycerine, 2; Camphor, 1; Rectified Spirit, 1: mix.

Glycerine Ointment.—Glycerine, 8; Spermaceti, 4; White Wax, 1; Oil of Almonds, 16: add the Glycerine to the melted ingredients, and stir briskly till cold.

Austrian formula.—Glycerine, 15; Starch, 1.
German formula.—Glycerine, 10; Starch, 2; Water, 1.
Russian formula.—Glycerine, 14; Starch, 1; Water, 1.
} Heated together.

For chaps and excoriations.

GLYCERINE WITH ROSE WATER.—Glycerine, 1; Rose Water, 3: mix.

GLYCEROLE OF THE HYPOPHOSPHITES OF LIME, POTASH, AND SODA.—Hypophosphite of Lime, 1; Hypophosphite of Potash, 1; Hypophosphite of Soda. 1. Dissolve these in 40 of boiling water, filter, and add sugar, 40; Orange-flower Water, 2; Cherry-laurel Water, 2: dissolve, and add Glycerine, 12, and strain.

Dose.—1 or 2 drms.

PESSUS GLYCERINI.—Glycerine, 2; Starch, 3: heat together until incorporated, and then press into moulds, weighing 2½ drms. for each pessary.

Mr. Sarg, of Vienna, has introduced the following:—
Toilet Glycerine, very pure and slightly scented.
Liquid Glycerine Soap, in bottles. } These are especially valued for shaving.
Solid Glycerine Soap, in tins. }
Toilet Glycerine Soap, beautifully transparent, and containing nearly half its weight of Glycerine; emollient; imparting a softness to the skin, and preserving it from the effects of the weather.

GLYCYRRHIZÆ RADIX.

LIQUORICE ROOT.

The root or underground stem of the *Glycyrrhiza glabra*, fresh and dried; cultivated in Britain.

Medicinal Properties.

An excellent demulcent as a decoction in catarrhal affections, irritation of the mucous membrane of the bowels and urinary passages. A useful adjuvant to decoctions of bitter or irritating vegetable substances. In the form of extract and its solution it is a domestic remedy for cough.

(In all the Pharmacopœias; Ger. Glycyrrhizæ Echinatæ Radix.)

Contained in Pilula Ferri Iodidi, Pil. Hydrargyri.

Preparation.

EXTRACTUM GLYCYRRHIZÆ. Black.

Liquorice Root in coarse powder, 1; cold Distilled Water, 5; macerate the root in half of the water for twelve hours, strain and press; again macerate the pressed marc with the remainder of the water for six hours, strain and press; mix the strained liquors; heat to 212° F., strain and evaporate to a pill consistence.

Dose.—½ to 1 drm.

(U.S. fluid only, with Glycerine; Fr. Extr. Réglisse; Austr. Ger. Russ. and Belg. Liquiritia, fresh root.)

It is properly ordered to be prepared from the dried root, for when made from the fresh root it cannot be strained bright, and is liable to fermentation.

The Solazzi Juice is made from the *Glycyrrhiza Echina*.

Contained in confect. Sennæ, Decoctum Aloes Co., Mist. Sennæ Co., Tinct. Aloes, Trochisci Opii.

EXTRACTUM GLYCYRRHIZÆ LIQUIDUM.

Process the same as for Extractum Glycyrrhizæ, except that the strained liquid is to be evaporated until, when cold, its sp. g. is 1·160, then add one-eighth of its volume of Rectified Spirit, let it stand for twelve hours, and filter.

2 fluid ounces of this contain 1 oz. of solid extract.

Dose.—1 drm.

PULVIS GLYCYRRHIZÆ COMPOSITUS.*

Senna, in fine powder, Liquorice Root, in fine powder, of each 2 oz.; Refined Sugar, in powder, 6 oz.

Not Official.

PULVIS LIQUORITIÆ COMPOSITUS, Ger. and Russ.—Powdered Senna, Powdered Liquorice, of each 2; Powdered Fennel, Sulphur, of each, 1; White Sugar, 6: mix.

Dose.—A teaspoonful or more for women, less in proportion for children, as a mild aperient.

* This preparation was put into the British Pharmacopœia because the German one was much prescribed; but in consequence of the formula being altered, it is incumbent on the chemist to keep both formulas, and he may then remain in doubt which the prescriber means, unless P.B. or Ger. is added to his recipe. All this would have been unnecessary had the formula been copied verbatim, as is done in the Russian Pharmacopœia.

ELIXIR. Ger. and Russ.—*Seu* Elixir Pectorale Regis Danicæ. Extract of Liquorice, 1; Fennel Water, 3; *Anisated Liquid Ammonia, 1: mix.

* Oil of Anise, 1; Rectified Spirit, 24; Liquid Ammonia, 5: mix.

GOSSYPIUM.

COTTON WOOL.

The hairs of the various seeds of *Gossypium* carded.

Used to shield burns and scalds from contact of air.

Used in the preparation of Pyroxylin.

GRANATI RADICIS CORTEX.

POMEGRANATE ROOT BARK.

The bark of the root of the *Punica Granatum* dried: chiefly imported dried from the south of Europe.

Medicinal Properties.

Astringent and anthelmintic. It is considered more effective than turpentine in expelling tapeworm, and is less likely to cause nausea. Both in a a green and dry state it is found equally effective in India. The dried is imported.

(In all the Pharmacopœias; Fr. Grenadier.)

INCOMPATIBLES.—Alkalies, Lime Water, Metallic Salts, Gelatine.

Preparation.

DECOCTUM GRANATI.

Bark of Pomegranate Root, 1; Distilled Water, 20; boil to 10 and strain. =(1 in 10).

Dose.—1 to 2 oz.

(Belg. 1 and 6, boil to 4; not in others.)

Not Official.

An excellent remedy for tapeworm is as follows:—

Bruised Root-bark of Pomegranate, 2 oz.; Boiling Water, 24 oz.: macerate for 24 hours, and then boil till reduced to 18 oz. A third part early in the morning, a third part again in half an hour, and the remainder in another half-hour. A dose of Castor Oil should have been taken the previous morning, and solid food abstained from on that day. This rarely fails to bring away the entire worm in two hours, and the head at the thinnest end should be diligently sought for.

GUAIACI LIGNUM.

GUAIACUM WOOD.

The wood of the *Guaiacum officinale* sliced, or coarsely turned, imported from St. Domingo and Jamaica.

Test.—Nitric Acid applied to the dark or central wood produces a bluish-green colour.

(In all the Pharmacopœias; Fr. Bois de Gayac.)

Not often prescribed alone.

Contained in Decoctum Sarsæ Compositum.

GUAIACI RESINA.

GUAIAC RESIN.

The resin obtained from the stem of the *Guaiacum officinale* by natural exudation, by incision, or by heat.

In large masses of brownish or greenish-brown colour; fractured surface resinous, translucent at the edges.

Test.—A solution in Rectified Spirit strikes a clear blue colour when applied to the inner surface of a paring of raw potato.

Medicinal Properties.

A stimulant diaphoretic and alterative. It is employed in chronic forms of rheumatism accompanied by great debility, in which the symptoms are relieved by warmth.

Generally prescribed in composition with other medicines.

(In all the Pharmacopœias.)

Dose.—10 to 30 grs. three or four times a day until it causes hot sweating, with or without purging.

Contained in Pilula Hydrargyri Subchloridi Composita.

INCOMPATIBLES.—Mineral Acids, Spirit of Nitrous Ether.

Preparations.

MISTURA GUAIACI.

Guaiac Resin in powder, 2; Sugar, 2; Gum Arabic powder, 1; Cinnamon Water, 80: triturate, adding the Cinnamon water gradually. =(1 in 40).

Dose.—½ to 2 oz.

(Not in other Pharmacopœias.)

NOTE.—Gum Arabic does not suspend the Guaiacum well. It falls, and forms a compact sediment, which is difficult to disturb by shaking. If one-fourth the quantity of Tragacanth is used instead, it answers well.

TINCTURA GUAIACI AMMONIATA. Black. Coats the side of the bottle.

Guaiac Resin, in fine powder, 4; Aromatic Spirit of Ammonia, 20: macerate seven days, filter, and wash the filter with the Spirit to make up 20. =(1 in 5).

Dose.—½ to 1 drm., with 1 drm. of mucilage or yolk of egg, to form an emulsion.

(Same as U.S.; Belg. 1 in 8; Russ. and Ger. 3 in 5 of pure Ammonia and 10 of Spirit, by weight; not in others.)

Not Official.

HAUSTUS GUAIACI COMPOSITUS.—Ammoniated Tincture of Guaiacum, 1 drm.; Mucilage, 2 drms.; Camphor Water to 1½ oz. *Middlesex Hospital.*

TINCT. GUAIACI.—Guaiac, 1; Rectified Spirit, 5: digest fourteen days.

(Ger. and Russ. 1 and 6.)

Not Official.

GUARANA.

Guarana is merely the seeds of the *Paullinia* dried in the sun and then roasted and reduced to a fine powder; this is moistened with a little water, exposed to the night dew, and when got into a hard paste is rolled into cylinders; these are further dried in the chimnies of the huts. True Guarana is very hard, heavy, and, when powdered, is reddish-grey, whilst the sophisticated is much lighter in colour; it contains a substance analagous to Caffeine.

Medicinal Properties.

It is chiefly relied on for curing sick headache, but is useful in diarrhœa, dysentery, and as a tonic and stomachic in convalescence.

Dose.—30 grains, and repeated if necessary in 2 hours.

(Austr.)

Not Official.

GUMMI RUBRUM.

An exudation from the bark of the *Eucalyptus rostrata*, imported from Australia. Solubility, of 100 parts: 90 parts are dissolved by cold Water, the solution being clear. 27 parts of Isinglass precipitate all the astringent matter.

This gum adheres with great pertinacity to the mucous surfaces, and it is probably on this account that its astringency is more effective than that of Catechu. Kino, etc., although it contains less amount of astringent matter. Sir Ranald Martin introduced it in European practice.

Medicinal Properties.

Most useful in diarrhœa and dysentery: sometimes given with Extractum Belæ Liquidum.

DECOCTUM.—Gum, 1; Water 40: boil ten minutes, and strain.

EXTRACTUM LIQUIDUM.—Gum, 1; Water, 2: dissolve and strain.

Dose.—30 to 60 minims in a wineglassful of water.

A tablespoonful in a pint of water forms an astringent injection for the vagina or rectum.

SYRUPUS.—Liquid Extract, 20; Sugar, 12: dissolve.

Dose.—30 to 60 minims.

TINCTURA.—Gum 1; Rectified Spirit, 4: digest and strain. Mixes with water without becoming turbid.

Dose.—20 to 40 minims.

1 part of this with 6 or 8 of water, with Dilute Sulphuric Acid or with Syrup of Lemons, for gargles.

TROCHISCI.—A popular lozenge for the relaxed throat of public speakers, and when combined with Cayenne answers well for relaxed uvula.

GUTTA PERCHA.

GUTTA-PERCHA.

The concrete juice of *Isonandra gutta* (Hooker, 'Loudon's Journal of Botany,' 1848).

Characters and Tests.—In tough, flexible pieces, of a light brown or chocolate colour. Soluble or nearly soluble in chloroform, yielding a more or less turbid solution.

Preparation.

LIQUOR GUTTA-PERCHA.

Gutta-percha, in thin slices, 1 oz.; Chloroform, 8 fl. oz.; Carbonate of Lead, in fine powder, 1 oz. Add the Gutta-percha to 6 fluid ounces of the Chloroform in a stoppered bottle, and shake them together frequently until solution has been effected. Then add the Carbonate of Lead previously mixed with the remainder of the Chloroform, and having several times shaken the whole together, set the mixture aside, and let it remain at rest until the insoluble matter has subsided. Lastly, decant the clear liquid, and keep it in a well-stopped bottle.

Used only in the preparation of Charta Sinapis.

(The U.S. formula.)

HÆMATOXYLI LIGNUM.

LOGWOOD.

The heart of the *Hæmatoxylum Campechianum* sliced, imported from Campeachy in Central America, from Honduras and Jamaica. The cherry-red inner wood is the part used.

Medicinal Properties.

A mild astringent, without irritating properties, useful in atonic dyspepsia and ordinary chronic diarrhœa and dysentery, and in passive hæmorrhages.

(U.S.; Fr. Bois de Campéchu; Ger. and Russ. Lignum Campechiana; not in others.)

INCOMPATIBLES.—Mineral Acids, Metallic Salts, Lime Water, Tartar Emetic.

Preparations.

DECOCTUM HÆMATOXYLI.

Logwood, in chips, 1 oz.; Cinnamon, in powder, 60 grs.; Distilled Water, 20 oz.; boil ten minutes, adding the cinnamon towards the end, strain, and pour on the contents of the strainer sufficient water to make up 20 oz.

=(1 in 20).

Iron vessels should not be used.

Dose.—1 to 2 oz.

(U.S. 1 in 15 without Cinnamon; not in others.)

EXTRACTUM HÆMATOXYLI. Dark liver-colour.

Logwood, in fine chips, 1; boiling Distilled Water, 10: macerate twenty-four hours, boil to 5, strain and evaporate to an extract. Iron vessels should not be used.

Dose.—10 to 30 grs.

(Same as U.S. Ger. and Russ; not in others.)

Not Official.

MISTURA HÆMATOXYLI.—Lime Water, 2½ drms.; Decoction of Logwood to 1 oz. *Consumption Hospital.*

MISTURA HÆMATOXYLI COMP.—Extract of Logwood, 10 grs.; Wine of Opium, 5 minims; Ipecacuanha Wine, 10 minims; Chalk Mixture to 1 oz. For a dose. *Guy's Hospital.*

MISTURA HÆMATOXYLI C. CRETA.—Extract of Logwood, 11¼ grs.; Tincture of Catechu, 30 minims; Chalk Mixture to 1 oz. *Westminster Hospital.*

MISTURA HÆMATOXYLI INFANTIUM.—Decoction of Logwood, 1 drm.; Tincture of Catechu, 5 minims; Diluted Sulphuric Acid, 1 minim. Child's dose. *St. Mary's Hospital.*

Not Official.

HELLEBORUS NIGER.

TINCTURA.—Root, 1; Proof Spirit, 8. *Dose.*—½ to 1 drm.

EXTRACTUM.—Made with Proof Spirit. *Dose.*—3 to 5 grs.

HEMIDESMI RADIX.

HEMIDESMUS ROOT.

The root of the *Hemidesmus Indicus*, or Indian Sarsaparilla, dried; imported from India.

Medicinal Properties.

Diuretic. Useful as an alterative in some diseases of the kidneys.

It was brought to England by Dr. Ashburner about the year 1830, and was prescribed for skin diseases and indigestion, like Sarsaparilla, but it did not prove very satisfactory, and is now used chiefly as a flavouring agent.

(Not in other Pharmacopœias.)

Preparation.

SYRUPUS HEMIDESMI. Intense brown.

Hemidesmus, bruised, 1; Refined Sugar, 7; boiling Distilled Water, 5; infuse four hours, strain, and add the Sugar; dissolve. The product should weigh 10½ and measure 8. Sp. g. 1·335. =(1 in 8).

Dose.—1 to 4 drms.

(Not in other Pharmacopœias.)

HIRUDO.

THE LEECH.

Sanguisuga officinalis, the Speckled Leech (English Leech).

S. medicinalis, the Green Leech, imported chiefly from Hamburg. Also collected in large numbers in Spain, France, Italy, and Hungary.

The *S. officinalis*, belly greenish yellow, spotted with black. *S. medicinalis*, belly olive-green, not spotted. Fr. Sangsue médicinale.

Bleeding from leech-bites is sometimes difficult to stop. The following remedies have been applied with advantage:—Matico Leaf, Solution of Perchloride of Iron, Nitrate of Silver Point, and saturated Solution of Alum.

HORDEUM DECORTICATUM.

PEARL BARLEY.

The decorticated seeds of the *Hordeum distichon*, cultivated in Britain.

Wholly destitute of Hordein, abounding in starch, with some sugar, gluten, and gum. Fr. Orge Perlé.

Preparation.

DECOCTUM HORDEI.

Pearl Barley, 1; wash the Barley with cold water, then add Distilled Water, 15: boil twenty minutes, and strain.

Medicinal Properties.

Demulcent, used as a drink in the sick-room.

(Same as U.S.; Belg. half the strength; Fr. Tisane d'Orge; not in others.)

HYDRARGYRUM.

MERCURY.

Hg; eq. 100; or **Hg**, eq. 200.

A brilliantly-lustrous white metallic liquid, becoming solid at −39° F. Sp. g. 13·5.

From China, Almaden in Spain, and Idria in Carniola; also from California, America. It is sometimes found pure, but it is chiefly obtained from its sulphuret (native cinnabar) by distillation.

Mercury, as imported, is, after being squeezed through leather, nearly free from impurities. It was first employed medicinally by the Arabian physicians Avicenna and Rhazes, but they only ventured to use it externally against vermin and cutaneous diseases. We are indebted to that renowned empiric Paracelsus for its administration internally. *Pereira, Mat. Med.* 1849.

In this work Calomel is called the Subchloride of Mercury, and Corrosive Sublimate the Perchloride; and the British Pharmacopœia, 1867, has adopted these terms.

(In all the Pharmacopœias.)

Test.—Entirely volatile with heat, leaving no residue.

INCOMPATIBLES and ANTIDOTES will be found at page 158.

Medicinal Properties.

Mercury as a metal is seldom given alone. In a state of minute subdivision with Chalk, however, it has the effect of increasing the various secretions, its influence upon the salivary glands being the ordinary index of the amount of its action. It is cholagogue and purgative, and powerfully affects the mucous membranes of the intestinal canal. It causes the absorption and prevents the formation of morbid fluids, and is itself absorbed in all the tissues of the body.

It is used in congestion of the liver, kidneys, etc., in acute and chronic inflammation, and as a depletive in fevers. Of great use in syphilis, though frequently followed by serious and even fatal consequences.

As an alterative, it is a safe and efficient medicine.

Externally, as a topical stimulant to indurated and chronically-inflamed parts, and sometimes for introducing the mineral into the system.

Contained in Hydrargyrum cum Cretâ and Hydrargyrum Ammoniatum.

Preparations.

EMPLASTRUM HYDRARGYRI. Blue.

Mercury, 3 oz.; Olive Oil, $\frac{1}{8}$ oz.; Sublimed Sulphur, 8 grs.; Lead Plaster, 6 oz.: heat the oil, add the sulphur to it, gradually stirring till they unite; add the mercury and triturate till its globules disappear; then add to the mixture the lead plaster, previously liquefied, and mix the whole thoroughly. =(1 in $3\frac{2}{3}$).

(In all the Pharmacopœias.) U.S. rubbed with Oil and Resin, no Sulphur; Ger. and Russ. with Turpentine and Wax.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO. Brownish lead-colour.

Ammoniac, 12 oz.; Mercury, 3 oz.; Olive Oil, 1 drm.; Sulphur, 8 grs.: heat the oil, and add the sulphur to it gradually, stirring till they unite. With this mixture triturate the mercury until globules are no longer visible; and lastly add the ammoniac, previously liquefied by heat, mixing the whole carefully. =(nearly 1 in 5).

Applied as a discutient to glandular swellings, syphilitic nodes, and in chronic synovitis.

(Same as U.S.; not in others.)

LINIMENTUM HYDRARGYRI. Should be a lead-coloured cream, but is curds and whey.

Ointment of Mercury, 1; Solution of Ammonia, 1; Liniment of Camphor, 1: melt the ointment in the liniment, add the ammonia, and shake them together. =(1 Ointment in 3, or 1 of Mercury in 6).

(Not in other Pharmacopœias.)

A stimulating Liniment, applied to indolent ulcers, placed with lint in the armpits, a sure mode of producing salivation.

PILULA HYDRARGYRI. Blue.

Mercury, 2; Confection of Roses,* 3; Decorticated Liquorice Root in fine powder, 1: rub the mercury with the confection of roses until metallic globules are no longer visible, then add the liquorice, and mix the whole well together. =(1 in 3).

Dose.—3 to 6 grs. as an alterative, 10 grs. as a purgative.

(Same as Fr. and U. S.; Belg. Pilulæ Hydrargyricæ, 3 grs. contain 1 gr. of Mercury; not in others.)

SUPPOSITORIA HYDRARGYRI.

Ointment of Mercury, 60 grs.; Benzoated Lard, 20 grs.; White Wax, 20 grs.; Oil of Theobroma, 80 grs.: melt all but the mercurial ointment together, then add the ointment of mercury, and stir till well mixed, and immediately pour into moulds 15 grs. each, dividing the mass into 12 equal parts.

Each suppository contains 5 grs. of Mercurial Ointment.

UNGUENTUM HYDRARGYRI. Lead-colour.

Mercury, 16; Prepared Lard, 16; Prepared Suet, 1: rub them together until metallic globules cease to be visible. =(nearly 1 in 2).

(In all the Pharmacopœias; U. S. Austr. Belg. and Fr.; Fr. has also Pommade Mercuriale Simple, 1 in 4; Ger. and Russ. Ung. Hydr. Ciner., 1 in 3.)

UNGUENTUM HYDRARGYRI COMPOSITUM. Lead-colour.

Mercurial Ointment, 6; Yellow Wax, 3; Olive Oil, 3; Camphor, 1½: melt the wax and oil, and when the mixture is nearly cold, add the camphor in powder and the ointment of mercury, and mix.

This is Scott's celebrated absorbent Ointment, the Soap Cerate being replaced by the Oil and Wax.

It is an admirable Ointment to apply to carbuncles and other indolent tumours.

Not Official.

Unguentum Hydrargyri cum Ammoniæ Muriate (Dupuytren).—Mercurial Ointment, 16; Muriate of Ammonia in fine powder, 1: mix.

Applied to chronic glandular enlargements.

Capsulæ.—5 grs. of mercurial ointment in gelatine, is used for a vaginal suppository.

Not Official.

HYDRARGYRI BROMIDUM.

Hydrargyri Bromidum.—Pessaries made containing ½ gr. each.

Hydrargyri Bibromidum.—Pessaries made containing ⅛ gr. each, and an Ointment containing 4 grs. to the 1 oz.

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* In Exeter they prefer using Extractum Conii in the place of Confection of Roses.

HYDRARGYRI IODIDUM RUBRUM.

RED IODIDE OF MERCURY.

Syn. HYDRARGYRI BINIODIDUM, *Lond. and Edin.*

HgI, eq. 227; or HgI_2, eq. 454.

A crystallized powder of a vermilion colour.

Corrosive Sublimate, 4; Iodide of Potassium, 5; boiling Distilled Water, 80: dissolve the corrosive sublimate in 60, and the iodide of potassium in the remainder of the water, and mix the two solutions. When the temperature has fallen to that of the atmosphere, decant the supernatant liquor from the precipitate, and having collected the latter in a filter wash it twice with cold distilled water, and dry it at a temperature not exceeding 212° F. A very slight excess of Iodide of Potassium is necessary to convert all the Mercury into Iodide. A large excess combines with the Biniodide, and forms a soluble double salt (HgI, KI).

Solubility: almost insoluble in Water; dissolves sparingly in Alcohol, but entirely in Ether, or in the aqueous solution of Iodide of Potassium, Iodide of Zinc, and Chloride of Sodium.

Test.—It sublimes entirely at a red-heat, when it becomes yellow; it resumes its scarlet colour on cooling.

Medicinal Properties.

A powerful irritant poison, similar to the green iodide, only much more active. It is used internally in the same cases as corrosive sublimate; externally in scrofula and syphilis.

(In all the Pharmacopœias; Ger. and Russ. Hydrargyrum Biiodatum Rubrum.)

Dose.—$\frac{1}{16}$ increasing to $\frac{1}{4}$ gr.

Best given in a solution of Iodide of Potassium.

Preparation.

UNGUENTUM HYDRARGYRI IODIDI RUBRI. Scarlet, but blackens by exposure to light.

Red Iodide of Mercury in very fine powder, 16 grs.; Simple Ointment, 1 oz.: mix. =(1 in 28).

A most effective application for bronchocele, and a good application for warts and syphilitic nodes.

(Same as U.S.; Belg. 1 in 25; not in others.)

If applied to the eyelids, should be diluted to $\frac{1}{4}$ the strength, and then it is a rubefacient to delicate skins.

*** Light blackens this Ointment; it should therefore be kept in covered pots.

Not Official.

MISTURA HYDRARGYRI IODIDI.—Solution of Perchloride of Mercury, 1 drm.; Iodide of Potassium, 5 grs.; Infusion of Quassia, 1 oz. *Charing Cross.*

PILULA HYDRARGYRI BINIODIDI.—Red Iodide of Mercury, $\frac{1}{3}$ gr.; Extract of Hemlock, 2 grs.; Muriate of Morphia, $\frac{1}{4}$ gr.; Ginger, $1\frac{1}{2}$ gr.; Glycerine, *q. s.* for one pill. Once or twice a day in cachectic and tubercular affections. *Skin Hospital.*

SOLUTIO.—Biniodide, 3; Iodide of Potassium, 1; Water, 4: dissolve. 2 minims contain $1\frac{1}{2}$ gr. of Biniodide.

HYDRARGYRI IODIDUM VIRIDE.

GREEN IODIDE OF MERCURY.

Hg_2I; **HgI**, eq. 327.

A dull-green powder, which darkens in colour upon exposure to light.

Mercury, 1 oz.; Iodine, 278 grs.; Rectified Spirit, a sufficiency: rub the iodine and mercury in a porcelain mortar, occasionally moistening the mixture with a few drops of the spirit, and continue the trituration until metallic globules are no longer visible, and the whole assumes a green colour. The product thus obtained should be dried in a dark room, on filtering-paper by simple exposure to the air, and preserved in an opaque bottle.

This should be freshly made, as Biniodide of Mercury forms after being kept some time, and becomes evident in minute red specks pervading the mass.

If made by the humid way, it is yellow.

Insoluble in Water and Ether.

(In all the Pharmacopœias; Ger. Hydrargyrum Iodatum flavum.)

Test.—Entirely volatilized at a red-heat. When shaken in a tube with Ether, nothing is dissolved. Is not acted upon by Aniline at a boiling heat, but if Biniodide be present, a magenta colour is produced.

Medicinal Properties.

An irritant poison, similar to calomel in action. In small repeated doses it acts upon the lymphatic and glandular systems, and sometimes causes salivation. Employed as an ointment (1 part to 8 of Lard) for scrofulous and venereal eruptions, and chronic skin diseases.

Dose.—1 to 3 grs., and for children $\frac{1}{6}$ to $\frac{1}{2}$ gr.

Not Official.

Pilula Hydrargyri Iodidi.—Green Iodide of Mercury, $\frac{1}{2}$ gr.; Opium, $\frac{1}{4}$ gr.; Bread Mass, 2 grs. in 1 pill. *University Hospital.*

HYDRARGYRI NITRATIS LIQUOR ACIDUS.

ACID SOLUTION OF NITRATE OF MERCURY.

Nitrate of Mercury, HgO,NO_5; eq. 162; in solution in Nitric Acid.

A colourless and strongly acid solution.

Mercury, 4; Nitric Acid, 5; Distilled Water, $1\frac{1}{2}$: mix the nitric acid with the water in a flask, and dissolve the mercury in the mixture without the application of heat. Boil gently for fifteen minutes, cool, and preserve the solution in a stoppered bottle.

Test.—Sp. g. 2·246. Does not give any precipitate when a little of it is dropped into Hydrochloric Acid, diluted with twice its volume of water.

(Same as Ger. and Russ. Liquor Hydrargyri Oxydulati Nitrici, 10 per cent.; U. S. Liquor Hydrarg. Nitratis, sp. g. 2·165; Fr. Nitrate de Mercure Liquide; not in others.)

Medicinal Properties.

Caustic. Applied to syphilitic warts, ulcers, tubercles, etc. Used by Recamier in cancerous diseases. As a gargle, 1 or 2 minims to 1 oz. water. As an injection in gonorrhœa, 1 minim to 2 oz. water.

Preparation.

UNGUENTUM HYDRARGYRI NITRATIS. Lemon-colour. *Syn.* UNGUENTUM CITRINUM.

Mercury, 4; Nitric Acid, 12; Prepared Lard, 15; Olive Oil, 32: dissolve the mercury in the nitric acid with the aid of a gentle heat; melt the lard in the oil by a steam or water bath in a porcelain vessel capable of holding six times the quantity, and while the mixture is hot add the solution of mercury, also hot, mixing them thoroughly. If the mixture does not froth up, increase the heat till this occurs. (The heat required for this is 170° to 180° F.) =(1 in 15½).

Applied in chronic diseases of the skin as a stimulant and alterative; very efficacious in porrigo; in ophthalmic diseases, diluted with 1 or 2 parts of spermaceti ointment, and applied by means of a camel's-hair pencil to the eyelids.

(Same as U.S. Austr. Belg. and Fr. with less Acid; not in others.)

We are chiefly indebted to Dr. Duncan for the improved formula which, with some modification, is adopted by the British Pharmacopœia, so that we have now an ointment that remains soft, and retains its beautiful lemon-colour for a long time. Several able pharmaceutists have endeavoured from time to time to point out a better way of preparing it, and various proportions of the ingredients have been employed, as well as the ingredients themselves varied; thus, Butter or Neatsfoot Oil has been used in place of Olive Oil,—but none of the results obtained have equalled the formula here given.

INCOMPATIBLES.—Camphor and all reducing agents, as lard, etc.

HYDRARGYRI OXIDUM FLAVUM.

YELLOW OXIDE OF MERCURY.

HgO; or **HgO.**

Take of

Perchloride of Mercury	4 ounces
Solution of Soda	2 pints
Distilled Water	a sufficiency.

Dissolve the Perchloride of Mercury in four pints of Distilled Water, aiding the solution by the application of heat, and add this to the Solution of Soda. Stir them together; allow the yellow precipitate to subside; remove the supernatant liquor by decantation; thoroughly wash the precipitated oxide on a calico filter with distilled water; and finally dry it by the heat of a water-bath.

Characters and Tests.—A yellow powder readily dissolved by Hydrochloric Acid, yielding a solution which, with solution of Ammonia, gives a white precipitate. It is entirely volatilized when heated to incipient redness, being resolved into oxygen gas and the vapour of mercury.

(In all the Pharmacopœias except Belg. and Fr.; Ger. Viâ humidâ paratum; Russ. Oxidum precipitatum.

Not Official.

UNGUENTUM.—Yellow Oxide, 1; Lard, 5½; Wax, 1½; U. S.

1 gr. to 60 grs. of spermaceti ointment is the proper strength for the eyelids.

OLEATE OF MERCURY (10 per cent.).—Rub till dissolved 10 grs. of freshly precipitated yellow oxide of Mercury with 100 grs. of Olive Oil.

HYDRARGYRI OXIDUM RUBRUM.

RED OXIDE OF MERCURY.

Syn. HYDRARGYRI NITRICO-OXIDUM, *Lond.*

HgO, eq. 108; or **HgO**, eq. 216.

An orange-red powder.

Solubility: insoluble in Water; readily in Hydrochloric Acid.

Mercury, by weight, 8; Nitric Acid, 4½; Water, 2: dissolve half the Mercury in the Acid diluted with the water, evaporate to dryness, and triturate with the remainder of the Mercury until well blended. Heat in a porcelain capsule, repeatedly stirring, until acid vapours cease to be evolved. Keep in bottles.

Test.—Entirely volatilized at a red-heat, being at the same time decomposed into mercury and oxygen. If this be done in a test-tube, no orange vapours are perceived. Dissolves without residue in Hydrochloric Acid.

Medicinal Properties.

A powerful irritant. Internally, it excites vomiting and purging; however, it is rarely thus used. Chiefly employed as an escharotic, either in powder or ointment.

Dose.—¼ to 1 gr. in pill, in combination with Opium.

(Same as U.S.; Austr. Belg. Ger. and Russ. Hydrargyrum Oxidatum Rubrum; Fr. Oxide Rouge de Mercure.)

Preparation.

UNGUENTUM HYDRARGYRI OXIDI RUBRI. Red.

Red Oxide of Mercury in very fine powder, 62 grs.; Yellow Wax, ¼ oz.; Oil of Almonds, ¾ oz.: melt the Wax, add the Oil, and mix. =(1 in 8).

(U.S. 1 in 8; Fr. 1 in 16; Ger. 1 and 9; Belg. and Russ. with precipitated oxide 1 in 50; not in Austr.)

In order to make this ointment perfectly smooth, the oxide should be first well rubbed in a warm mortar with a little of the oil, the remainder added gradually.

Red oxide with both lard and simple cerate soon gets blue by keeping; with spermaceti ointment, however, it keeps its colour for months.

HYDRARGYRI PERCHLORIDUM.

PERCHLORIDE OF MERCURY.

Syn. HYDRARGYRUM CORROSIVUM SUBLIMATUM, Brit. 1864; HYDRARGYRI BICHLORIDUM, Lond.; HYDRARGYRI SUBLIMATUS CORROSIVUS, Edin.; HYDRARGYRI SUBLIMATUM CORROSIVUM, Dub.; CORROSIVE SUBLIMATE.

Chloride of Mercury, HgCl, eq. 135·5; or $HgCl_2$, eq. 271·0.

In heavy colourless masses of transparent prismatic crystals.

Solubility: in Water, 1 in 15; in Rectified Spirit, 1 in 7; soluble in Ether.

Test.—Entirely soluble in Ether. When heated, it sublimes without decomposition, or leaving any residue.

Medicinal Properties.

A powerful irritant in very small doses in syphilitic affections. Externally as lotion or ointment in chronic skin diseases, as an injection for chronic mucous discharges, and as a gargle for ulcerated sore-throat.

Dose.—$\frac{1}{16}$ to $\frac{1}{8}$ gr.

(Austr. Belg. Ger. and Russ. Hydr. Bichloratum Corros.; Fr. Deutochlorure de Mercure; U.S. Hydr. Chloridum Corros.)

INCOMPATIBLES.—Alkalies and their Carbonates, Lime-water, Tartar Emetic, Nitrate of Silver, Acetate of Lead, Albumen, Iodide of Potassium, Soaps, Decoction of Bark.

ANTIDOTES.—In case of poisoning by Corrosive Sublimate, Albumen, White of Egg, given in moderate quantity, lest an excess of it should redissolve the compound. 4 grs. of Corrosive Sublimate require the white of one egg; the yolk is equally effective. Wheaten Flour, Milk, and Protochloride of Tin have been recommended.

Preparation.

LIQUOR HYDRARGYRI PERCHLORIDI. Colourless. Deposits, on keeping, a mixture of yellow and blue precipitate.

Corrosive Sublimate, 10 grs.; Chloride of Ammonium, 10 grs.; Distilled Water, 20 oz.: dissolve. Each fluid drachm contains $\frac{1}{16}$ grain. =(1 in 960).

Dose.—30 to 120 minims.

(Same as Lond.; not in others.)

Perchloride of Mercury dissolves in fifteen times its weight of water, and needs not the aid of Chloride of Ammonium in this formula. P. L., 1809, formula had none, and kept well; this decomposes.

LOTIO HYDRARGYRI FLAVA.

Corrosive Sublimate, 18 grs.; Lime Water, 10 oz.: mix. =(1 in 266).

(Russ. Aq. Phagedænica Flava 3 grs. to 2 oz.; not in others.)

Not Official.

COLLYRIUM HYDRARGYRI.—Corrosive Sublimate, 1 gr.; Water, 6 to 8 oz.: mix.

GARGARISMA HYDRARGYRI.—Corrosive Sublimate, 4 grs.; Hydrochloric Acid, 8 minims; Water, 10 oz.

PILULA HYDRARGYRI PERCHLORIDI.—Corrosive Sublimate, $\frac{1}{8}$ gr., Hydrochlorate of Ammonia, $\frac{1}{8}$ gr.; Crumb of Bread, *q. s.*; Water, *q. s.* in one pill. *Westminster Hospital.*

PILULA HYDRARGYRI PERCHLORIDI C. ACONITO.—Perchloride of Mercury, $\frac{1}{10}$ gr.; Extract of Aconite, $1\frac{1}{2}$ gr.; Extract of Conium, 3 grs.: for one pill. Twice a day in cachectic, squamous, ulcerous, and tubercular affections. *Skin Hospital.*

UNGUENTUM HYDRARGYRI PERCHLORIDI.—Corrosive Sublimate, 2 grs.; Lard, 1 oz.: mix. For Porrigo. *Charing Cross Hospital.*

Liégeois' solution for subcutaneous injection is 1 gr. to 1 oz. Distilled Water $\frac{1}{10}$th part of this may be injected, in divided portions, in the course of one day.

HYDRARGYRI SUBCHLORIDUM.

SUBCHLORIDE OF MERCURY.

Syn. CALOMELAS, 1864, Edin. Dub.; HYDRARGYRI CHLORIDUM, Lond.; CALOMEL.

Hg_2Cl; or **HgCl**, eq. 235·5.

A dull white, heavy, and nearly tasteless powder. Is however liable to become fawn coloured by the action of light, unless it has been sublimed into steam.

Insoluble in Water, Rectified Spirit, or Ether.

Test.—Entirely volatilized by a sufficient heat—indicating absence of impurities. Warm Ether, which has been shaken with it in a bottle, leaves on evaporation no residue—indicating absence of Corrosive Sublimate.

Medicinal Properties.

Alterative, *cholagogue? purgative, and antiphlogistic.

As an alterative it is used in syphilitic affections, chronic skin diseases, and scrofula in adults,

Useful in chronic hepatitis and jaundice.

As a purgative in bilious headache, hepatic dropsy, melæna, inflammation of the brain and apoplexy.

As an antiphlogistic, 2 grs. combined with $\frac{1}{4}$ gr. opium, every four hours in inflammation of the serous membranes: *e.g.* iritis, pleurisy, and peritonitis.

For children, the absence of taste renders it convenient.

Its *local uses* are numerous, as in snuff, or as a gargle in venereal sore-throat, as an injection with or without lime-water, in blennorrhœa, and in fumigation; for this latter purpose a spirit lamp under a metal cup containing calomel, placed under a cane-seated chair on which the patient is seated, his body being covered with a blanket, or an apparatus contrived by Mr. Lee is still better. In a wide range of skin affections, it is invaluable as an ointment.

Dose.—As an alterative, $\frac{1}{2}$ to 1 gr. three times a day; as a purgative, 2 to 8 grs.

(In all the Pharmacopœias; U. S. Hydrargyri Chloridum Mite; Ger. and Russ. Hydrargyrum Chloratum Mite, both the levigated and the precipitated.)

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* Strange as it may appear, the Edinburgh Committee of the British Medical Association determined that neither Mercury, nor Podophyllin, nor Taraxacum, in whatever manner, dose, or form they may be administered, have the slightest influence in increasing the flow of bile from the liver; therefore not cholagogue.

The best form for making Calomel into pills is as follows: 2 of Calomel, 1 of soft Manna, 1 of compound Tragacanth powder. When made with mucilage they get very hard by keeping, and if made with conserve are apt to become moist.

Preparations.

LOTIO NIGRA.

Calomel, 3 grs.; Lime Water, 1 oz.: mix.

(Russ. Aq. Phagedica nigra 5 grs. to 1 oz.; not in others.)

PILULA HYDRARGYRI SUBCHLORIDI COMPOSITA. Bright orange.

Calomel, 1; Sulphurated Antimony, 1; Guaiac Resin in powder, 2; Castor Oil, 1: mix. =(1 in 5).

Dose.—5 to 10 grs. as an alterative.

(Belg. Pil. Alterans Plummeri, 1 in 3; U.S. Pil. Antimonii Comp. 1 in 6; not in others.)

UNGUENTUM HYDRARGYRI SUBCHLORIDI. Cream-colour. Gets slightly rancid by keeping.

Calomel, 1; prepared Lard, $5\frac{1}{2}$: mix. =(1 in $6\frac{1}{2}$).

(Not in others.)

Not Official.

Pilula Hydrargyri Subchloridi c. Coloc.—Calomel, 1 gr.; Comp. Colocynth Pill, 3 grs.; Ipecacuanha, $\frac{1}{2}$ gr.: in two pills. *Middlesex Hospital.*

Pilula Hydrargyri Subchloridi c. Jalapa.—Calomel, 1 gr.; Jalap, 4 grs.; Treacle, *q. s.*: in one pill. *St. Bartholomew's Hospital.*

Pilula Hydrargyri Subchloridi c. Opio.—Calomel, 1 gr.; Dover's Powder, $2\frac{1}{2}$ grs. *St George's Hospital.*

Pilula Hydrargyri Subchloridi c. Quinia.—Calomel, 1 gr; Sulphate of Quinia, 1 gr.: for one pill. *Westminster Ophthalmic Hospital.*

Pilula Hydrargyri Subchloridi c. Scammonia.—Calomel, 1 gr.; Scammony, 3 grs.; Treacle, *q. s.*: in one pill. *St. Bartholomew's Hospital.*

HYDRARGYRI SULPHAS.

HgO,SO_3, eq. 148; or $\mathbf{HgSO_4}$, eq. 296.

A white heavy crystalline powder, rendered yellow by affusion with hot water, and is then called Turpeth Mineral.

Used to prepare Calomel and Corrosive Sublimate.

HYDRARGYRUM AMMONIATUM.

AMMONIATED MERCURY.

Syn. White Precipitate of Mercury.

NH_2Hg_2,Cl; or $\mathbf{NH_2HgCl}$, eq. 251·5.

An opaque white powder.

Solubility: soluble in Hydrochloric Acid. Insoluble in Water, Alcohol and Ether.

Test.—Entirely volatilized at a red-heat. Digested with Caustic Potash, it evolves Ammonia.

(In all the Pharmacopœias except Fr.; Ger. Hydrargyrum Præcipitatum Album; Russ. Hydrarg. Amidato-bichloratum; Ph. 1788, Calx Hydrargyri Alba.)

Medicinal Properties.

Never given internally. Used in the form of ointment as a stimulating application for chronic skin diseases, as porrigo, impetigo, herpes, and sometimes scabies. The ointment is used for pediculi, but the powder can be used alone or mixed with rose-water, and the unpleasantness of greasing the linen avoided.

Preparation.

UNGUENTUM HYDRARGYRI AMMONIATI. Cream-colour.

Ammoniated Mercury, 62 grs.; Simple Ointment, 1 oz.: mix. =(1 in 8).

(U. S. 1 and 12; Ger. and Russ. Ung. Hydr. Præcipitati Albi, 1 and 9; not in others.)

HYDRARGYRUM CUM CRETA.

Syn. GREY POWDER.

Mercury, 1; Prepared Chalk, 2: triturate till the globules disappear. =(1 in 3).

By heat, part passes off in vapour; what remains corresponds to chalk in its chemical characters.

Best given by itself, or with rhubarb or other powder, as when rubbed with hard extract to form a pill, the Mercury sometimes separates in globules.

Dose.—3 to 8 grs.

(Same as Fr. and U. S. 3 and 5; not in others.)

INCOMPATIBLES.—Acids and Acidulous Salts.

HYOSCYAMI FOLIA.

HYOSCYAMUS LEAVES.

The fresh leaves and small branches of the *Hyoscyamus niger*, or Henbane, an indigenous biennial plant; collected when about two-thirds of its flowers are expanded. Also the leaves ONLY, carefully dried.

Its properties are completely extracted by Alcohol. The leaves yield by destructive distillation a very poisonous oil. The plant is said to contain a crystalline alkaloid, which is rarely obtained pure.

The biennial plant in the first year presents only a tuft of leaves; these die, and leave not a trace of the plant in the winter; they spring again in April and produce a stem, the leaves and the branches of this are used in medicine.

Medicinal Properties.

Narcotic. Similar in action to Belladonna and Stramonium, but milder. Used as a sedative in excited states of the nervous system when Opium, from

its constipating properties, is not advisable. It is also employed to diminish pain and allay irritation of the bladder, and to prevent the griping of purgative medicines. The fresh leaves are sometimes used as a cataplasm, or as a fomentation to allay pain in ulcers and tumours, and in gouty and rheumatic swellings. The juice of the plant dilates the pupil of the eye.

(Ger. Leaves; Austr. Belg. and U.S. Leaves and Seeds; Fr. Jusquiame, Leaves and Seeds.)

INCOMPATIBLES.—Vegetable Acids, Nitrate of Silver, Acetate of Lead, Liquor Potassæ or Sodæ.

ANTIDOTES.—The stomach pump, emetics, external and internal stimulants, Lemon Juice. According to the statement of some eminent writers, a large dose of Hyoscyamus may be taken with impunity.

Preparations.

EXTRACTUM HYOSCYAMI. Black.

The expressed juice of the leaves and young branches of the fresh plant treated as directed in Extract of Belladonna, and evaporated to an extract at a temperature not exceeding 140° F.

100 lbs. produce 50 lbs. juice = 5 lbs. Extract.
100 lbs. leaves, dried, weigh 15½ lbs.

Dose.—3 to 6 grs.

(U.S. Leaves, both aqueous and alcoholic, also Extractum fluidum; Belg. reduced to powder; Fr. clarified juice*; Ger. Austr. with recent plant and Rectified Spirit to get rid of the Albumen and Chlorophyll, and the clear juice evaporated to an extract.)

Note.—* Extract prepared from clear juice is twice the strength of ours.

SUCCUS HYOSCYAMI.

Freshly pressed juice, 3; Rectified Spirit, 1: mix and set aside seven days, then filter.

Dose.—½ to 1 drm.

TINCTURA HYOSCYAMI. Intense greenish-brown.

Hyoscyamus leaves, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, pack in a percolator, and when it has drained pour on the remaining spirit, and when it ceases to drop, press, and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—15 to 60 minims; 4 drms. have been given in severe insomnolence.

(Fr. 1 in 5, and Alcoolature with fresh Leaves and Spirit, equal weights, also Brit. Ph. formula; Belg. 1 in 5; Russ. 1 and 6, Rectified Spirit, by weight; U.S. by percolation, 1 in 7½; not in others.)

Not Official.

PILULA HYOSCYAMI C. SCILLA.—Extract of Henbane, 2 grs.; Comp. Squill Pill, 2 grs.; Ipecacuanha, ½ gr.: in one pill. *London Hospital.*

SUPPOSITORIUM HYOSCYAMI.—Extract, 5 grs.; Cacao Butter, 6 grs.; Lard, 4 grs.; Wax, 1 gr.: mix for one suppository.

Not Official.

IGNATIA AMARA.

EXTRACTUM.—Given in debility of the digestive organs.

Dose.—⅛ to 1 gr. in a pill three times a day.

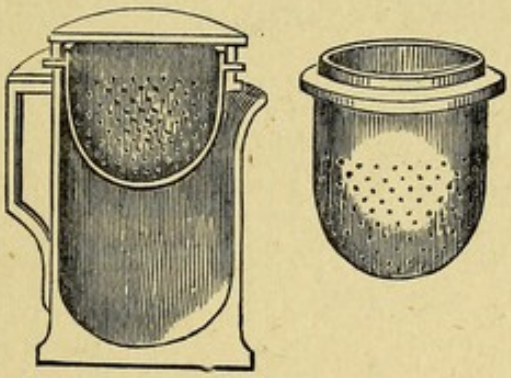
INFUSA.

INFUSIONS.

Infusions, though generally made with boiling water, are in some cases ordered to be made at a lower temperature, as in Infusum Calumbæ, the starch of which would be dissolved by boiling water, and would thus be objectionable to prescribe with Iodine. The mucilage and vegetable albumen present are, however, dissolved by cold water, and these render the infusion liable to change.

The Infusion Pot, invented by the Author and placed in the Exhibition of 1851, answers well for Infusions if proper sizes are used for the quantities ordered, so that the ingredients are held by the perforated basin in the upper part of the fluid and *under the surface.* The impregnated fluid becoming of greater density falls to the bottom, thus exposing the ingredients constantly to the continued action of fresh unimpregnated fluid until the action ceases, and the soluble matter most effectually extracted. *When hot infusions are made, boiling water should be first poured into the pot, to thoroughly warm it; this being thrown out, the ingredients are put into the colander, and the requisite quantity of boiling water poured upon them. The new pots have the directions for use, enamelled upon them.*

The annexed section of the Infusion Pot will show its construction:—



Concentrated Infusions are very largely used by general practitioners and some chemists; although very convenient and economical they have not the aroma of the freshly made infusion.

Infusions are very apt to change in hot weather, and several means have been proposed to preserve them. Small bottles filled to the brim with recently-made infusion, and placed in a boiler with hay and water, are kept at the boiling-point for five minutes, then tied over with a bladder or stoppered whilst hot. Infusions thus treated are preserved good for several weeks. Inf. Gentian. Co., Inf. Aurant. Co., so treated, kept good for three months. Infusion of Senna, which would change in twelve hours in hot weather, will keep for several days perfectly good if one grain of Nitre be dissolved in each ounce of the infusion.

The following are the Infusions of the British Pharmacopœia. The full formulas for these Infusions will be found under the names of the substances from which they are prepared.

It has been thought desirable, for the convenience of the dispenser, to add a table of the ingredients and time required.

Boiling Distilled Water is to be used, unless otherwise stated.

INFUSUM ANTHEMIDIS . . . ½ oz. Water 10 oz. Infus. ¼ hour and strain.

INF. AURANTII (peel cut small) . ½ . . . . 10 . . . ¼

INF. AURANTII COMP.

Orange Peel, cut small . . ¼ .
Fresh Lemon Peel, cut small 60 grs. . . 10 . . . ¼
Cloves (bruised) . . . . . 30 grs.

INF. BUCHU (leaves bruised) . . ½ oz. . . . 10 . . . 1

INF. CALUMBÆ (cut small) . . ½ . . cold 10 . . . 1

INF. CARYOPHYLLI (bruised) . ¼ . . . . 10 . . . ½

INF. CASCARILLÆ (coarse powder) 1 . . . . 10 . . 1

INF. CATECHU (coarse powder) 160 grs.
Cinnamon (bruised) . . 30 . } Water 10 oz. Infus. ½ hour and strain.

INF. CHIRATÆ (cut small) . . ¼ oz. . 120° 10 . . ½

INF. CINCHONÆ FLAVÆ (coarse powder) . . . . . ½ . . . . 10 . . . 2

INF. CUSPARIÆ (coarse powder) ½ . . 120° 10 . . . 2

INF. CUSSO (coarse powder) . . ¼ oz. . . . 4 . . . ¼ not strained.

INF. DIGITALIS (dried leaves) . 30 grs. . . . 10 . . . 1

INF. DULCAMARÆ (bruised) . 1 oz. . . . 10 . . . 1

INF. ERGOTÆ (coarse powder) . ¼ . . . . 10 . . . ½

INF. GENTIANÆ COMP.

Gentian (sliced) . . . . 60 grs.
Bitter Orange Peel (cut small) 60 grs. } . . 10 . . . 1
Fresh Lemon Peel (cut small) ¼ oz.

INF. KRAMERIÆ (bruised) . . ½ . . . . 10 . . . 1

INF. LINI . . . . . Linseed 160 grs.
Fresh Liquorice Root (sliced) 60 grs. } . . 10 . . . 4

INF. LUPULI . . . . . ½ oz. . . . 10 . . . 2

INF. MATICÆ (cut small) . . . ½ . . . . 10 . . . ½

INF. QUASSIÆ (chips) . . . . 60 grs. cold 10 . . . ½

INF. RHEI (sliced) . . . . . ¼ oz. . . . 10 . . . 1

INF. ROSÆ ACIDUM (broken petals) ¼
Dil. Sulph. Acid 1 drm. } . . . 10 . . . ½

INF. SENEGÆ (bruised) . . . ½ oz. . . . 10 . . . 1

INF. SENNÆ . . . . (Senna) 1 oz.
Ginger (sliced) 30 grs. } . . 10 . . . 1

INF. SERPENTARIÆ (bruised) . ¼ oz. . . . 10 . . . 2

INF. UVÆ URSI (bruised) . . ½ . . . . 10 . . . 2

INF. VALERIANÆ (bruised) . 120 grs. . . . 10 . . . 1

IODUM.

IODINE.

I, or **I**; eq. 127.

A non-metallic element, obtained principally from the ashes of sea-weeds, in the western islands of Scotland and Ireland, is also largely manufactured

in France. Sublimed in laminar crystals of a dark colour and metallic lustre, and of peculiar odour.

Solubility: sparingly in Water, 1 in 7000; in Alcohol, 1 in 12; in Ether, and in a solution of Iodide of Potassium, or Chloride of Sodium.

Test.—Entirely soluble in Ether. It sublimes without leaving any residue, and the portion which first comes over does not include any slender colourless prisms, emitting a pungent odour (Cyanide of Iodine). 12·7 grains dissolved in 1 ounce of Water containing 15 grains of Iodide of Potassium, require for complete discoloration 1000 grain-measures of the volumetric solution of Hyposulphite of Soda; *i. e.* to change the whole of the equivalent 12·7 grains of Iodine into colourless Iodide of Sodium and Tetrathionate of Soda.

Medicinal Properties.

It acts specially as a stimulant to the entire lymphatic system, causing absorption, promoting elimination by the kidneys, acting as an antidote to certain blood poisons, organic and inorganic, as syphilis and lead-poisoning. Also in chronic inflammation, to promote absorption and elimination in dropsies and chronic rheumatism. Most efficacious in glandular enlargements and morbid growths, as in bronchocele, scrofulous glands of the neck and abdomen, as an alterative in obstinate mucous discharges; caution, however, being used, as it may occasion wasting in healthy glands, such as the mammæ and testes. Externally, in chronic skin diseases, and over-enlarged and indurated parts and diseased joints, to cause absorption. A few drops of the tincture in half a pint of hot water may be inhaled in some forms of chronic bronchitis and phthisis. Best administered in the form of tincture, largely diluted with water. The skin coloured by iodine can be rendered colourless again by a saturated solution of hyposulphite of soda.

Dose.—Of free Iodine, ½ gr., gradually increasing.

(In all the Pharmacopœias.)

Contained in Pilula Ferri Iodidi and Syrupus Ferri Iodidi.

The Iodides of Cadmium, Iron, Mercury, Potassium, and Sulphur are official; those of Arsenic and Zinc are not official.

INCOMPATIBLES.—Ammonia, Metallic Salts, Mineral Acids, Vegetable Alkaloids.

ANTIDOTES.—Emetics aided by Demulcent Drinks, Starch, Flour, etc., diffused in water.

Preparations.

LINIMENTUM IODI. Intense blood-colour.

Iodine, 5; Iodide of Potassium, 2; Camphor, 1; Rectified Spirit, 40: dissolve. =(1 of Iodine in 9).

(Not in other Pharmacopœias.)

Proper strength to paint upon bursæ and enlarged glands.

LIQUOR IODI. Deep blood-colour.

Iodine, 20 grs.; Iodide of Potassium, 30 grs.; Distilled Water, 1 oz. =(1 of Iodine in 24).

(Not in other Pharmacopœias.)

TINCTURA IODI. Intense brown-red.

Iodine, ½; Iodide of Potassium, ¼; Rectified Spirit, 20: dissolve. =(1 of Iodine in 40)

Dose.—5 to 20 minims. Also an excellent application to the throat in diphtheria.

(The following without the Iodide of Potassium :—Austr. and U. S. 1 in 17, Fr. 1 in 12, Ger. and Russ. 1 and 10 by weight; not in others.)

Hyposulphite of Soda decolorizes Solutions of Iodine.

UNGUENTUM IODI. Deep brown.

Iodine, 32 grs.; Iodide of Potassium, 32 grs.; Proof Spirit, 1 drm.; rub together and add Prepared Lard, 2 oz. =(1 in 31).

(Belg. 1 in 25, without Iodide of Potassium; Fr. Pommade d'Iodure de Potassium, Iodurée, Iodine 1, Iodide of Potassium 5, Lard 40; U.S. Iodine 20, Iodide Potassium 4, Water 6, Lard 480, mix; U.S. Comp. and Russ. Iodine 15, Iodide Potassium 30, Water 30, Lard 480, mix; not in others.)

VAPOR IODI. Inhalation of Iodine.

Tincture of Iodine, 1 drm.; Water, 1 oz.: mix in a suitable apparatus, and having applied a gentle heat, let the vapour that rises be inhaled.

(Not in other Pharmacopœias.)

Not Official.

Gargarisma Iodi (St. Thomas's Hospital).—Tincture of Iodine, 2 drms.; Water 5 oz.: mix. (In ulceration of the tonsils.) =(1 in 20).,

Inhalatio Iodi c. Conio.—½ drm. to 1 drm. of Succus Conii being added to the above.

Liquor Ammoniæ Iodidi (Sir J. Y. Simpson).—Liq. Ammon. Fortiss., 2 oz.; Iodine, 10 grs.; Iodide of Potassium, 20 grs.; Rectified Spirit, 1 oz.: dissolve.

Lotio Iodi Comp.—Iodine, 1 dr.; Iodide of Potassium, 4 scruples; Water to 1 oz. *St. George's Hospital.*

Lugol's Solution.—Iodine, 20 grs.; Iodide of Potassium, 30 grs.; Water, 1 oz.; dissolve. Dose, 6 minims twice a day, gradually increasing the dose to 20 minims.

Lugol's Caustic.—Iodine, 60 grs.; Iodide of Potassium, 60 grs; Water, 2 drms.

Mistura Iodi Comp.—Tincture of Iodine, 8 minims; Iodide of Potassium, 5 grs.; Peppermint Water, 1 oz. *Charing Cross.*

Tinctura Iodi Decolorata, Ger.—Iodine, 10; Hyposulphite of Soda, 10; Distilled Water, 10: dissolve and add Alcohol Ammonia sp. g. 0·808 (10 per cent.) 16. Agitate, and then add Alcohol 75; set aside three days and filter.

Not Official.

IODOFORM.

A yellow crystalline substance. Solubility in Chloroform, 1 in 12; in Ether, 1 in 20; in Alcohol, 1 in 80. Insoluble in Water. Given to relieve cancer and abate the progress of the disease. Given to relieve sciatica and neuralgia; also useful in chancres, the powder being applied, or an ointment (1 drm. to 1 oz.) applied to cancerous or syphilitic sores.

Dose.—5 grs. in a mixture twice a day; the Iodoform should be finely powdered and at least twenty times its weight of mucilage employed to make it miscible with water.

IPECACUANHA.

IPECACUAN.

The dried root of the *Cephaëlis Ipecacuanha*, from Brazil. The active principle resides in the bark, the inner or woody part possessing scarcely any of its virtues. The so-called Wild Ipecacuanha is not to be used.

Ipecacuanha contains an alkaloid, *Emetina* ($C_{35}H_{25}NO_9$), separable as a whitish amorphous powder.

Medicinal Properties.

Emetic in large doses. In small doses it becomes absorbed and acts upon the different mucous surfaces, especially of the respiratory organs, and is therefore expectorant. It is diaphoretic and laxative; also sedative to the vascular system. Given in agues, to prevent the paroxysm. Ipecacuanha has long since been relied on in the East for the cure of dysentery in the acute stage. When the evacuations are frequent and accompanied with mucus, 20 to 30 grains are given; and if the stomach rejects it, a little opium is given with it, or a mustard poultice applied to the stomach.

Applied to the bites and stings of insects.

Dose.—In powder as an emetic, 15 to 30 grs.; as an expectorant, etc., ½ to 2 grs.

(In all the Pharmacopœias.)

Prescribed in ¼ to 1 gr. doses as an auxiliary in alterative pills.

Contained in Pil. Conii Comp., Trochisci Morphiæ et Ipecacuanhæ.

INCOMPATIBLES.—Salts of Lead, Mercury, Vegetable Acids, Astringent Infusions.

Preparations.

PILULA IPECACUANHÆ CUM SCILLA. Brown.

Compound powder of Ipecacuanha, 3; Squill, in powder, 1; Ammoniacum, in powder, 1; Treacle, *q. s.* =(3 Dover's Powder in 7).

Dose.—5 to 10 grs.

(Not in other Pharmacopœias.)

PULVIS IPECACUANHÆ COMPOSITUS. Light fawn-colour. *Syn.* PULVIS IPECACUANHÆ CUM OPIO; PULVIS DOVERI.

Ipecacuan, in powder, 1; Opium, in powder, 1; Sulphate of Potash, 8: mix. =(1 Opium, 1 Ipecac. in 10).

Dose.—5 to 10 grs.

(In all the Pharmacopœias, and is the well-known Dover's Powder; Austr. Pulv. Doveri, and Sugar instead of Sulphate of Potash; Ger. and Russ. Pulvis Ipecacuanhæ Opiatus. The original Powder of Dr. Dover was prepared by fusing 4 parts of Nitrate of Potash with 4 of Sulphate of Potash together, and reducing the product to fine powder; to this was added 1 of Ipecacuanha, 1 of Opium, and 1 of Liquorice; the French Codex adopts this formula for Poudre de Dower, using, however, the powdered Extract of Opium instead of Opium itself, which doubles the strength.)

An admirable anodyne diaphoretic; it is also most useful in dysentery and diarrhœa; in the latter case it is sometimes combined with calomel.

3 or 4 grs. will relieve heartburn, probably by allaying irritability.

TROCHISCI IPECACUANHÆ. Buff-colour.

¼ gr. in each lozenge.

Dose.—1 to 3 lozenges.

(Austr. and Ger. $\frac{1}{14}$ gr.; U.S. ¼ gr.; Fr. tablets $\frac{1}{7}$th gr. in each.)

TROCHISCI IPECACUANHÆ ET MORPHIÆ. Cream-colour.

$\frac{1}{12}$ gr. Ipecacuanha, $\frac{1}{36}$ gr. Hydrochlorate of Morphia, in each lozenge.

Dose.—1 to 6 lozenges.

(U.S. $\frac{1}{12}$ gr. Ipecac., $\frac{1}{40}$ gr. Sulphate Morphiæ, in each.)

VINUM IPECACUANHÆ. Yellowish-brown.

Ipecacuanha, bruised, 1 ; Sherry, 20 : macerate seven days, shaking occasionally, strain, and make up 20. =(1 in 20).

Dose.—As an expectorant, etc., 5 to 40 minims ; as an emetic, 3 to 6 drms.

(Same as Fr. ; U.S. with fluid Extract, about 1 in 14 ; Ger. and Russ. 1 and 10 ; not in others.)

Not Official.

HAUSTUS IPECACUANHÆ COMP.—Ipecacuanha Wine, 10 minims ; Paregoric, 30 minims ; Sp. Mindererus, 3 drms. ; Water to 1½ oz. *Middlesex Hospital.*

HAUSTUS IPECACUANHÆ ET AMMONIÆ.—Carbonate of Ammonia, 10 grs. ; Ipecacuanha Wine, 15 minims ; Chlorate of Potash, 20 grs. ; Water, 1 oz. *Fever Hospital.*

SYRUPUS IPECACUANHÆ (Ger.).—Bruised Ipecacuanha, 1 ; Rectified Spirit, 5 ; Water, 36 : digest twenty-four hours, and filter 40 ; add 66 of Sugar, and boil to a syrup.

Contains 1 per cent. Ipecacuanha ; U.S. made with fluid Extract, contains about 6 per cent.

Dose.—15 to 60 minims.

TINCTURA IPECACUANHÆ (Ger.).—Bruised Ipecacuanha, 1 ; Proof Spirit, 10 : digest eight days, press and make up to 10 ; this is about twice the strength of the Vinum.

(Russ. Ipecacuanha 1, Rectified Spirit 6, by weight.)

JALAPA.

JALAP.

The dried tubercules of the *Exogonium Purga ;* imported from Mexico.

Medicinal Properties.

A brisk cathartic, operating sometimes painfully, producing copious watery discharges. From its hydragogic powers, it is especially applicable to dropsy, when it is usually combined with Bitartrate of Potash or Calomel.

(In all the Pharmacopœias.)

Dose.—10 to 30 grs.

Contained in Pulvis Scammonii Compositus.

Preparations.

EXTRACTUM JALAPÆ. Intense brown.

Jalap, in coarse powder, 1 ; Rectified Spirit, 5 ; Distilled Water, 10 : macerate the Jalap in the spirit for seven days, press out the tincture, then filter and distil off the spirit, leaving a soft extract : again macerate the residual Jalap in the water for four hours, express, strain through flannel, and evaporate by a water-bath to a soft extract ; mix the two extracts and evaporate at a temperature not exceeding 140° F., to a proper consistence for forming pills.

100 lb. of Jalap yield 50 lb. extract.

Dose.—5 to 15 grs.

(Same as U.S. ; not in others.)

PULVIS JALAPÆ COMPOSITUS. Light fawn-colour.

Jalap, in powder, 5 ; Acid Tartrate of Potash, 9 ; Ginger, in powder, 1 : mix. =(1 in 3).

Dose.—20 to 60 grs.

(Same strength as U.S. without ginger ; not in others.)

RESINA JALAPÆ. Black, brittle, and shining.

A Resin obtained from Jalap by means of Rectified Spirit.

Jalap yields from 15 to 20 per cent. of resin.

Easily soluble in Rectified Spirit, but only partially so in Ether, and insoluble in Oil of Turpentine. When thrown on Sulphuric Acid becomes of a deep orange-colour.

Dose.—2 to 5 grs.

(Same as Ger. Fr. Austr. Russ. and U.S. ; not in Belg.)

JALAPINE, so largely prescribed, is nothing more than this Resin deprived of colour by Animal Charcoal ; it may be given in the same dose, and, being in fine division, is less likely to irritate the bowels.

TINCTURA JALAPÆ. Deep reddish-brown.

Jalap, in coarse powder, 1 ; Proof Spirit, 8 : macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, and when the fluid ceases to pass, pour on the remaining spirit, press, filter, and add spirit to make 8. =(1 in 8).

Dose.—½ to 2 drms.

(U.S. 1 in 5 ; Fr. 1 and 5 ; Belg. 1 in 5 by weight ;) not in others.)

Not Official.

MISTURA JALAPÆ Co.—Jalap, 7½ grs. ; Sulphate of Potash, 15 grs. ; Comp. Infusion of Senna, 1 oz. *Westminster Hospital.*

PILULA JALAPÆ C. CALOMEL.—Jalap, 6⅔ grs. ; Calomel, 1⅓ gr. ; Treacle *q.s.* in two pills. *Westminster Hospital.*

SAPO JALAPINUS.—Russ. Resin of Jalap or Jalapine, 2 ; Soap, 2 ; Sp. Wine, 4 ; S.A.

JUNIPERI OLEUM.

ENGLISH OIL OF JUNIPER.

The Oil distilled in Britain from the unripe fruit of the *Juniperus communis.*

Sp. g. 0·855. Of very superior flavour to the imported Oil.

Solubility in Spirit 1 in 10.

Medicinal Properties.

Stimulant, carminative, and diuretic, the latter property constituting its chief medicinal value. Used in debilitated dropsical cases, either alone or combined with other diuretics.

Dose.—1 to 3 minims.

(In all the Pharmacopœias except Fr.)

Preparation.

SPIRITUS JUNIPERI. Colourless.

English Oil of Juniper, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Dose.—30 to 60 minims.

(Russ. 1 and 64; U.S. and Belg. compound spirit; and Ger. by distillation: and weak.)

Not Official.

OL. JUNIP. EMPYREUM. JUNIPER TAR.—Huile de Cade, used in obstinate skin diseases.

KAMALA.

KAMALA.

A fine, granular, mobile, orange-red powder, consisting of minute glands, adhering to the capsules of the *Rottlera tinctoria;* imported from India.

Solubility: scarcely mixing with water, but for the most part soluble in, and forming a red-coloured solution with Alcohol and Ether.

Test.—Ether dissolves most of it, the residue consisting principally of tufted hairs; should be free from sand and earthy impurities,—that in the market at present is half sand.

Medicinal Properties.

Purgative. Successfully given in tænia.

Dose.—60 to 120 grs. of the powder suspended in Gruel, Mucilage, Treacle, or Syrup, will of itself expel the worm. A purgative should, however, follow.

(Austr. Ger. Russ. and U.S.; not in others.)

Not Official.

TINCTURA.—Kamala, 1; Proof Spirit, 5: macerate seven days and strain.

Dose.—1 to 2 drms.

KINO.

KINO.

The juice obtained, by incision, from the trunk of the *Pterocarpus Marsupium*, inspissated; imported from Malabar.

In small, angular, brittle, glistening, reddish-black fragments, translucent, and ruby-red on the edges, inodorous, astringent.

Solubility: of 100 grains Tellicherry Kino, only 88 grains are dissolved by cold Water, and 35 grains of Isinglass will precipitate the whole of the astringent matter from the solution. Compared with Pale Catechu it is more soluble in water, and the solution is more astringent.

Medicinal Properties.

A powerful astringent. Employed in obstinate diarrhœa and pyrosis. Also used for intermittents, with Cinchona. Externally, as a styptic, and in powder to indolent and flabby ulcers. Best given in diluted Alcohol.

Dose.—10 to 30 grs.

(In all the Pharmacopœias.)

Contained in Pulvis Catechu Compositus.

INCOMPATIBLES.—Mineral Acids, Alkalies and Carbonates, Metallic Salts and Gelatine.

Preparations.

PULVIS KINO COMPOSITUS. Reddish-brown. *Syn.* PULV. KINO CUM OPIO.
Kino, in powder, 15; Opium, in powder, 1; Cinnamon, in powder, 4.
=(1 Opium in 20).

20 grains contain 1 grain Opium, in powder.

Dose.—5 grs. and upwards, according to the quantity of Opium required.

(Not in other Pharmacopœias.)

TINCTURA KINO. Intense reddish-brown.
Kino, in powder, 1; Rectified Spirit, 10: macerate seven days, filter, and make up 10. =(1 in 10).

Dose.—½ to 2 drms.

(Same as U.S. (Belg. Ger. and Fr. all 1 and 5, Russ. 1 and 6 by weight); not in others.)

KOUSSO or KUSSO.—*See* CUSSO.

KRAMERIÆ RADIX.

RHATANY ROOT.

The dried root of the *Krameria triandra;* imported from Peru.

Medicinal Properties.

A powerful astringent; tonic. Used in chronic diarrhœa, passive hæmorrhages and mucous discharges, as menorrhagia, leucorrhœa; and generally where Kino and Catechu are beneficial. As a gargle in relaxed sore-throat. Locally in prolapsus ani or fistula ani.

Dose.—In powder, 20 to 60 grs.

(In all the Pharmacopœias.)

Contained in Pulvis Catechu Compositus.

INCOMPATIBLES.—Alkalies, Lime Water, Salts of Iron and Lead, Gelatine.

Preparations.

EXTRACTUM KRAMERIÆ. Reddish-black.

Rhatany, in coarse powder, 1; cold Distilled Water, 15: macerate twenty-four hours in 2 of the water, then percolate the whole. Evaporate, by a water-bath, to dryness.

Dose.—5 to 20 grs.

(Same as Belg. Fr.; Ger. Russ. Rhatania; U.S. solid and fluid; but Austr. with boiling water; not in others.)

INFUSUM KRAMERIÆ.

Rhatany, bruised, 1; boiling Distilled Water, 20: infuse one hour and strain. =(1 in 20).

Dose.—1 to 2 oz.

(U.S. 1 in 15; Fr. Tisane 1 in 50; not in others.)

TINCTURA KRAMERIÆ. Deep lake.

Rhatany, bruised, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator; when it ceases to drop, pour on the remaining spirit, and wash the marc with spirit to make up 8. =(1 in 8).

Dose.—1 to 2 drms.

(U.S. 1 in 5 (Austr. Belg. Fr. and Ger. 1 and 5; Russ. 1 and 6, Rect. Sp. by weight); not in others. Fr. has also Brit. Ph. formula.)

Excellent for the teeth and gums when either spongy or inflamed.

Not Official.

SUPPOSITORIUM.—Extract of Krameria, 8 grs.; Hydrochlorate of Morphia, $\frac{1}{10}$th gr.; Stearine, 10 grs.

LOZENGES are made of the Extract for relaxed throat.

LAC.

Fresh milk from the cow.

Used only for preparing Mistura Scammonii.

A good report on the milk supply of London, with the analysis of forty samples, will be found in 'Medical Times,' January 15, 1870.

LACTUCA.

LETTUCE.

The leaves and flowering tops of the wild indigenous plant *Lactuca virosa*.

Medicinal Properties.

Sedative, narcotic; said also to be gently laxative, powerfully diuretic, and somewhat diaphoretic. Employed in dropsy and in cases of visceral obstruction. Generally combined with Squill, Digitalis, or other diuretics.

Preparations.

EXTRACTUM LACTUCÆ. Intense brown.

The inspissated juice evaporated to a pilular consistence, according to the directions given for Extractum Belladonnæ.

100 lb. of the plant yield 50 to 55 lb. juice = 60 to 80 oz. of Extract.

Dose.—5 to 10 grs.

(Same as Belg. Ger. and Fr. (Thridace; Ext. Laitue); not in others.)

The extract from the root is stronger than that made from the leaves.

Not Official.

EAU DISTILLÉE DE LAITUE.—From Lettuce flowers, 1 in 1. Fr. Ph.

SUCCUS.—The expressed juice, 3; Rectified Spirit, 1: mix.

Dose.—1 to 2 drms.

LACTUCARIUM.—The juice from the incised flower-stalk, collected and dried.

(Russ. and U.S.; not in others.)

Dose.—3 to 8 grs.

TINCTURA LACTUCARII.—Lactucarium, 1; Proof Spirit, 10: digest seven days and filter.

Dose.—30 to 60 minims.

The preparations of lettuce are highly prized by some practitioners for their sedative qualities, whilst others aver that they are almost inert. The Author believes in their virtues.

LAUROCERASI FOLIA.

CHERRY-LAUREL LEAVES.

The fresh leaves of the *Prunus Laurocerasus*, common or Cherry-laurel.

Preparation.

AQUA LAUROCERASI.

Fresh leaves of common Laurel, 16; Water, 50; chop the leaves, crush them in a mortar, and macerate them in the water twenty-four hours: distil 20 of the liquid, shake the product, filter through paper, and preserve in a stoppered bottle. =(1 in $1\frac{1}{4}$).

(Austr. Belg. Fr. viz. in every 1000 minims there should be $\frac{1}{2}$ a minim of Anhydrous Hydrocyanic Acid;) Ger. same strength as Aqua Amygdalarum Amarum, viz. 1 minim of Anhydrous Hydrocyanic Acid in every 1000 mins. Aqua Amygdalarum Amarum Dilutum is 20 times weaker; also in Russ.)

Medicinal Properties.

Sedative. Similar to Hydrocyanic Acid.

Dose.—5 to 30 minims.

INCOMPATIBLES.—Same as Hydrocyanic Acid.

ANTIDOTES.—In case of overdose, the antidote should be as directed under Acidum Hydrocyanicum.

LAVANDULÆ OLEUM.

ENGLISH OIL OF LAVENDER.

The oil distilled in Britain from the flowers of *Lavandula vera*.

Medicinal Properties.

An aromatic stimulant and carminative. Useful in hysteria, hypochondriasis, and other nervous affections, also in flatulence and colic. Rarely given in a crude state. Used as an adjuvant to other medicines.

A hank of cotton moistened with it, and placed round the neck, prevents bugs biting that part.

Dose.—1 to 4 minims.

Contained in Linimentum Camphoræ Compositum.

Preparations.

SPIRITUS LAVANDULÆ. Colourless.

English Oil of Lavender, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Dose.—30 to 60 minims.

(Russ. 1 in 64; Fr. Alcoolat de Lavande; Ger. and U.S. fresh flowers; Austr. dried flowers; not in others.)

TINCTURA LAVANDULÆ COMPOSITA. Deep lake. *Syn.* SP. LAVAND. COMP.

English Oil of Lavender, 90 minims; English Oil of Rosemary, 10 minims; Cinnamon, bruised, 150 grs.; Nutmeg, bruised, 150 grs.; Red Sandal-wood, 300 grs.; Rectified Spirit, 40 oz.: macerate the Cinnamon, Nutmeg, and Red Sandal-wood in the spirit for seven days, then press out and strain, dissolve the Oils in the strained tincture and add sufficient Rectified Spirit to make 40 oz.

Or Spirit of Lavender, 30; Spirit of Rosemary, $3\frac{1}{3}$; Cinnamon, 1; Nutmeg, 1; Red Sandars, 2; Rectified Spirit, 128.

Dose.—$\frac{1}{2}$ to 2 drms.

(Same as Fr.; Russ. and U.S. (Sp. Lav. Co.); differs much from the Belg. Alcoholetum Compositum; not in others.)

Added to colour Liq. Arsenicalis.

LARIX EUROPÆA.

Inner bark of the Larch.

Astringent, gently stimulant, useful in bronchitis with copious expectoration.

TINCTURA LARICIS.

Larch Bark 1; Rectified Spirit 8: digest 7 days.

Dose.—20 to 25 minims.

LIMON.

LEMON.

The ripe fruit of the *Citrus Limonum*, imported from Southern Europe.

LIMONIS CORTEX.

LEMON PEEL.

The fresh outer part of the rind.

Medicinal Properties.

A warm aromatic. Added to stomachic tinctures and infusions. Particularly applicable to dyspepsia.

(Fr. Ger. U.S.; not in others.)

Contained in Inf. Aurant. Comp. and Inf. Gentian. Comp.

INCOMPATIBLES.—Mineral Acids and Lime Water.

Preparations.

OLEUM LIMONIS. Pale yellow.

The Oil expressed or distilled from fresh peel; imported chiefly from Sicily. The best Oil does not deposit by keeping.

Solubility, in Glacial Acetic Acid 1 in 10, in Spirit 1 in 7 to 10.

Sp. g. 0·851 as ordinarily procured. If three-fifths only are distilled, its sp. g. is reduced to 0·847.

Stimulant and carminative. Chiefly used, however, to impart flavour to other medicines. Externally, stimulant and rubefacient.

Its flavour and aroma suffer much from keeping; it should always be procured as fresh as possible.

Dose.—1 to 4 minims.

(Austr. Ger. Oleum. Citri; Russ. Oleum. Cort. Citri Æthereum; U.S.; not in others.)

Contained in Lin. Potass. Iod. cum Sapone, and Spiritus Ammoniæ Aromaticus.

SYRUPUS LIMONIS. Light brown.

Fresh Lemon Peel, 2; Lemon Juice, strained, 20; Refined Sugar, 36. Heat the lemon juice to the boiling point, and having put it into a covered vessel with the lemon peel, let them stand until they are cold, then filter and dissolve the sugar in the filtered liquid with a gentle heat. The product should weigh 56 and measure 41.

Sp. g. 1·340. =(2 Peel and 20 Juice in 41).

Dose.—1 to 2 drms.

(U.S. ½ strength; Russ. with Citric Acid and Oleosaccharate of Lemon; Fr. made with Alcoolature; not in others.)

TINCTURA LIMONIS. Pale brown.

Fresh Lemon Peel, sliced thin, 1; Proof Spirit, 8: macerate for seven days in a closed vessel with occasional agitation, strain, press, filter, and make up with spirit to 8. =(1 in 8).

Dose.—½ to 2 drms.

(Fr. Alcoolature, 1 Recent Peel to 2 of Alcohol; not in others.)

LIMONIS SUCCUS.

LEMON JUICE.

The expressed juice of the ripe fruit.

To preserve the juice it may be heated to 150°, filtered, and set aside in bottles completely filled. If this process be performed during the winter, it is said that the juice may be kept perfectly good for twelve months. Mr. Schweitzer states that if one-tenth part of Alcohol be added to fresh Lemon Juice, it prevents decomposition, and the juice is rendered fit for exportation.

Average quantity of Citric Acid in a fluid ounce is 32·5 grs., and the average sp. g. is 1·039.

Medicinal Properties.

Refrigerant; when diluted, a refreshing beverage in febrile and inflammatory affections.

In acute rheumatism, ½ to 1 pint daily. Combined with Opium and Cinchona. A local application in pruritus scroti, and uterine hæmorrhage.

Dose.—½ to 4 oz.

Contained in Syrupus Limonis.

Preparation.

ACIDUM CITRICUM. *See* ACIDUM CITRICUM.

LINIMENTA.

LINIMENTS.

This group has received some valuable additions in the British Pharmacopœia. The Pharmacopœia Committee, in order to guard against mistakes, have called *strong Tinctures* that are employed for external use by the name of *Liniments*, so that all the Tinctures may now be considered for *internal* use only.

The following are the Liniments of the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

	Proportion of the active ingredient to the whole.
LINIMENTUM ACONITI	1 in 1.
LINIMENTUM AMMONIÆ.	1 in 4.
LINIMENTUM BELLADONNÆ	1 in 1.
LINIMENTUM CALCIS	1 in 2.
LINIMENTUM CAMPHORÆ	1 in 5.
LINIMENTUM CAMPHORÆ COMP. Strong Ammonia. .	1 in 4½.

	Proportion of the active ingredient to the whole.
LINIMENTUM CHLOROFORMI	1 in 2.
LINIMENTUM CROTONIS	1 in 8.
LINIMENTUM HYDRARGYRI	1 of Mercury in 6.
LINIMENTUM IODI	of Iodine $1\frac{1}{8}$ in 10.
LINIMENTUM OPII	(Tinct. Opii) 1 in 2
LINIMENTUM POTASSII IODIDI CUM SAPONE	1 in 9.
LINIMENTUM SAPONIS.	
LINIMENTUM SINAPIS COMP.	(Oil Mustard) 1 in 40.
LINIMENTUM TEREBINTHINÆ	1 in $1\frac{1}{3}$.
LINIMENTUM TEREBINTHINÆ ACETICUM	1 in 3.

LINUM.

FLAX.

The plant *Linum usitatissimum* is almost universally grown, the seeds only being of medicinal value, from which are procured the Meal and the Oil of Linseed.

LINI FARINA.

LINSEED MEAL.

The seeds of the *Linum usitatissimum*, ground and deprived of the oil by expression, and the cakes reduced to powder.

(In all the Pharmacopœias; Fr. powder of the Seeds, Farine de Lin; Ger. Placenta Seminis Lini.)

Preparation.

CATAPLASMA LINI.

Linseed Meal, 4; Olive Oil, $\frac{1}{2}$; boiling Water, 10: mix the linseed meal with the oil, add the water gradually, constantly stirring.

Applied to inflamed and suppurating parts.

(Fr.; not in others.)

LINI SEMEN.

LINSEED.

The seeds of the *Linum usitatissimum*, the envelope or testa of which abounds in a peculiar gummy matter or mucilage, readily imparted to hot water.

(In all the Pharmacopœias.)

Medicinal Properties.

Demulcent and emollient. Employed in catarrh, dysentery, nephritic and calculous complaints, and inflammatory affections of the mucous membranes and urinary passages.

Preparations.

INFUSUM LINI.

Linseed, 160 grs.; fresh Liquorice Root, sliced, 60 grs.; boiling Distilled Water, 10 oz.: infuse four hours and strain. =(1 in 30).

(Same as U. S; not in others.)

INCOMPATIBLES.—Preparations of lead and iron, and most metallic salts.

OLEUM LINI. Brown.

The Oil contained in the inner part of the seed expressed without heat. Sp. g. ·927 to ·934.

(In all the Pharmacopœias.)

A useful emollient to burns or scalds, either alone or mixed with Lime Water.

Linseed Oil, when issuing from the seed whilst pressing, has scarcely any of the odour or taste of the Linseed Oil of the shops, but is acquired in a very short time by exposure to the air. For medicinal purposes it should be procured as fresh as possible.

LIQUORES.

SOLUTIONS.

The following are the Solutions of the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

	Weight of solid in measures of fluid.
LIQUOR AMMONIÆ.	⅓ the strength of Liq. Amm. Fort.
LIQUOR AMMONIÆ ACETATIS.	
LIQUOR AMMONIÆ CITRATIS.	
LIQUOR AMMONIÆ FORTIOR.	
LIQUOR ANTIMONII CHLORIDI.	
LIQUOR ARSENICALIS	1 in 120.
LIQUOR ARSENICI HYDROCHLORICUS .	1 in 120.
LIQUOR ATROPIÆ	1 in 120.
LIQUOR ATROPIÆ SULPHATIS	1 in 120.
LIQUOR BISMUTHI ET AMMON. CITRAT.	
LIQUOR CALCIS	1 in 800.
LIQUOR CALCIS CHLORATÆ	1 in 10.
LIQUOR CALCIS SACCHARATUS	1 in 68.
LIQUOR CHLORI. Solution of Chlorine.	
LIQUOR EPISPASTICUS. Blistering Liquid.	
LIQUOR FERRI PERCHLORIDI	1 in 4.
LIQUOR FERRI PERCHLORIDI FORTIOR.	1 in 1.
LIQUOR FERRI PERNITRATIS	1 in 6.
LIQUOR FERRI PERSULPHATIS.	
LIQUOR GUTTÆ PERCHÆ.	
LIQUOR HYDRARGYRI NITRATIS ACIDUS. Caustic.	

	Weight of solid in measures of fluid.
LIQUOR HYDRARGYRI PERCHLORIDI	1 in 960.
LIQUOR IODI . . . . . Iodine	1 in 25.
LIQUOR LITHIÆ EFFERVESCENS. . .	5 grs. in 10 oz.
LIQUOR MAGNESIÆ CARBONATIS . . .	1 in 37.
LIQUOR MAGNESIÆ CITRATIS.	
LIQUOR MORPHIÆ ACETATIS	1 in 123.
LIQUOR MORPHIÆ HYDROCHLORATIS .	1 in 123.
LIQUOR PLUMBI SUBACETATIS.	
LIQUOR PLUMBI SUBACETATIS DILUTUS	1 in 80.
LIQUOR POTASSÆ . . . . Hydrate of Potash	1 in 18.
LIQUOR POTASSÆ EFFERVESCENS.	
LIQUOR POTASSÆ PERMANGANATIS . .	1 in 120.
LIQUOR SODÆ . . . . . Hydrate of Soda	1 in 25.
LIQUOR SODÆ ARSENIATIS.	1 in 120.
LIQUOR SODÆ CHLORATÆ.	
LIQUOR SODÆ EFFERVESCENS Bicarbonate	1 in 320
LIQUOR STRYCHNIÆ	1 in 120.
LIQUOR ZINCI CHLORIDI.	

Liquors not official will be found in the Index.

LITHIA.

LITHIA.

LO ; eq. 15.

The Oxide of the Alkaline metal Lithium (L ; eq. 7), a silver-white, brilliant, ductile metal, having the density of 0·59, being therefore the lightest metal known.

This oxide was introduced into medicinal use by Dr. Garrod. It was discovered in 1817, by Arfvedson. It is obtained from several minerals,—Petalite, Lepidolite, and Triphylline, from the latter of which the Author has chiefly prepared it.

The process is tedious and difficult, and probably on that account omitted from the British Pharmacopœia.

The Carbonate and Citrate are the only preparations employed therapeutically.

LITHIÆ CARBONAS.

CARBONATE OF LITHIA.

LO,CO_2, eq. 37 ; or L_2CO_3, eq. 74.

In white powder or in minute crystalline grains.

Solubility : in cold Water, 1 in 100. Insoluble in Alcohol.

Test.—10 grains of the Salt neutralized with Sulphuric Acid and afterwards heated to redness, leave 14·86 grains of dry Sulphate of Lithia, which, when redissolved in Distilled Water, yields no precipitate with Oxalate of Ammonia or Solution of Lime—indicating absence of Lime and Magnesia. Imparts to the flame of burning Alcohol a carmine-red color.

Medicinal Properties.

Lithia, combined with Carbonic Acid, given in a diluted solution, as in Lithia Water, acts as a powerful diuretic, probably more so than the corresponding Salts of Potash or Soda. In certain states of the system in which Urate of Soda is liable to be deposited in the tissues, leading to the production of gouty inflammation, the administration of Lithia Salts is attended with advantage, probably by aiding elimination and likewise by assisting the solution of the urate in the animal fluids. Urate of Lithia is very soluble; Lithia salts are therefore most useful when Uric Acid abounds in the urine.

Dose.—3 to 6 grs. in 3 or 4 oz. aerated water.

(U. S. (and Ger. Lithium Carbonicum); not in others.)

LIQUOR LITHIÆ EFFERVESCENS. Colourless.

10 oz. contain 5 grs. Carbonate of Lithia.

Dose.—5 to 10 oz.

LITHIÆ CITRAS.

CITRATE OF LITHIA.

$3LO,C_{12}H_5O_{11}$; or $L_3C_6H_5O_7$; eq. 210.

A white, deliquescent, amorphous powder, made by acting upon 50 grains of Carbonate of Lithia with 90 grains of Citric Acid, dissolved in 1 oz. of water.

100 of Acid are required, and the Citrate is crystalline, not deliquescent.—Ed.

Solubility: in Water, 1 in 2½, without leaving any residue.

Test.—20 grains of the Salt, burned at a low red-heat, with free access of air, leaves 10·6 grains of white residue: Carbonate of Lithia.

Medicinal Properties.

Similar to those of the Carbonate.

Dose.—5 to 10 grs. largely diluted.

(U. S.; not in others.)

LOBELIA.

LOBELIA.

The herb *Lobelia inflata* in flower, dried; imported from North America.

Medicinal Properties.

In small doses it is diaphoretic and expectorant. More freely used, it is cathartic and emetic; but as an emetic it is too distressing as well as too

hazardous for general use, as it has a powerful effect on the respiration, and may cause death. It is chiefly used in spasmodic asthma, also in catarrh and other laryngeal and pectoral affections, severe croup, and chronic bronchitis. In some cases a useful adjunct to diuretics.

(Aust. Belg. Fr. and U.S.; not in others.)

ANTIDOTES.—In case of poisoning by Lobelia, the most active stimulants, internal as well as external, should be employed.

Preparations.

TINCTURA LOBELIÆ. Dark greenish-brown.

Lobelia, dried and bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour on the remaining spirit, and when it ceases to drop, press and wash the marc with spirit to make up 8. =(1 in 8).

(U. S. 1 in 7½; (Austr. 1 and 5; Belg. and Fr. 1 in 5 by weight;) Ger. 1 and 10; Russ. 1 and 6.)

Pharmacopœia Dose.—10 to 30 minims, but 1 drm. may be given for dyspnœa; 4 drms. as an emetic.

TINCTURA LOBELIÆ ÆTHEREA. Intense brownish-green.

Lobelia, dried and bruised, 1; Spirit of Ether, 8: macerate seven days, press, and strain 8. =(1 in 8).

Dose.—10 to 30 minims as an antispasmodic.

(Belg. 1 in 5 by weight; not in others.)

LUPULUS.

HOP.

The dried catkins of the female plant of the *Humulus Lupulus*, cultivated in England.

Medicinal Properties.

Tonic, stomachic, and moderately narcotic. Used in diseases of local debility with morbid vigilance and other nervous derangement, producing sleep where opiates are objectionable. Hops may be used topically as fomentation or poultice, as a resolvent or discutient in painful swellings and tumours.

(Austr. Belg. Russ. and U.S.; Ger. Glandulæ Lupuli; Fr. Houblon; not in others.)

The golden dust or glands attached to the scale of the Hop (Lupuline) is sometimes conveniently used in doses of 5 to 10 grs.

Very freshly dried Hops, made into a pillow, procure sleep.

INCOMPATIBLES.—Mineral acids, metallic salts.

Preparations.

EXTRACTUM LUPULI. Intense brown.

Hop, 8; Rectified Spirit, 15; Distilled Water, 80: macerate the hop in the spirit for seven days, press out the tincture, filter, and distil off the spirit, leaving a soft extract; boil the residual hop with the water for one hour,

then express the liquor, strain, and evaporate by a water bath to the consistence of a soft extract; mix the two extracts and evaporate at a temperature not exceeding 140° F., to a pilular consistence.

1 lb. yields 4 oz. Extract.

Dose—5 to 10 grs.

(Fr. Extrait Alcoolique de Houblon; Austr. and Belg. alcoholic from Lupuline; not in others.)

INFUSUM LUPULI.

Hops, 1; boiling Distilled Water, 20: infuse two hours and strain. =(1 in 20).

Dose.—1 to 2 oz.

(U.S. 1 in 32; Fr. 1 in 100; not in others.)

TINCTURA LUPULI. Deep red.

Hop, 1; Proof Spirit, 8: macerate forty-eight hours in 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, add to the remaining spirit, and when fluid ceases to drop, wash the marc, filter, and make up 8. =(1 in 8).

Dose.—½ to 2 drms.

(Russ. 1 and 6 Rect. Spirit; U.S. 1 and 6; (Belg. with Lupuline, 1 in 5—also Tinctura Vinosa, made with Alcohol and Malaga, 1 in 33 by weight); not in others.)

Not Official.

EXTRACTUM LUPULINÆ. Exhaust Lupuline with Rectified Spirit, and evaporate the strained liquor to a proper consistence. The extract produced is just half the original weight of the Lupuline employed.

Dose.—3 to 6 grs.

TINCTURA LUPULINÆ (U.S.).—Lupuline (or the powder attached to the scale of hops recently dried), 1; Rectified Spirit, 8: digest for seven days, strain, press the marc, filter, and add spirit to make up 8; or by percolation. =(1 in 8.)

Dose.—½ to 2 drms.

MAGNESIUM.

MAGNESIUM.

Mg, eq. 12; or **Mg**, eq. 24.

Magnesium, the metallic base of Magnesian Salts, does not exist native. It may be obtained artificially. When set on fire it produces a powerful actinic light, and is used by photographers on this account.

It is a brilliant grey metal, sp. g. 1·750, slightly resembling Silver, malleable, fusible at a low temperature, and convertible into Magnesia by the combined action of air and moisture.

Sulphate of Magnesia was first artificially obtained in England by Dr. Grew in 1675, by evaporation from the water of Epsom Spring (whence the name of Epsom Salts). The chief source of the Magnesia now sold is Magnesian Limestone, Double Carbonate of Magnesia and Lime, called Dolomite, and is obtained by a process discovered by Dr. Henry, of Manchester. Magnesia was first chemically distinguished from Lime by Dr. Black, in 1755, who also showed the difference between Magnesia and its carbonate. From the mode of procuring it, it is frequently termed Calcined Magnesia.

There are two kinds of Magnesia admitted into the Pharmacopœia, the heavy and the light. The former is that which is commonly used in pharmacy, it being smoother, more readily miscible with water, and is more compact. It is probably from these causes that it is preferred in medicine, and in the Pharmacopœia it is clearly meant to be used, unless the light is expressly ordered.

The forms in which Magnesia is used are :—Magnesia, M. Levis, Magnesiæ Carbonas, M. Carbonas Levis, and M. Sulphas.

MAGNESIA.

MAGNESIA.

MgO, eq. 20 ; or **MgO**, eq. 40.

Heavy Carbonate of Magnesia, heated in a Cornish crucible until all the Carbonic Acid is driven off.

It is a white, heavy powder, scarcely soluble in water, but readily dissolved by acids without effervescence. Its solution in Hydrochloric Acid, when neutralized by a mixed solution of Ammonia and Hydrochlorate of Ammonia, gives a copious crystalline precipitate when Phosphate of Soda is added to it.

Solubility : in cold Water, 1 in 5412 ; in hot Water, 1 in 36,000 ; like lime, it is more soluble in cold than in hot water.

Test.—Dissolved in Nitric Acid and neutralized with a mixture of Ammonia and Hydrochlorate of Ammonia, it does not give any precipitate with Oxalate of Ammonia or Chloride of Barium—indicating absence of Lime, and Sulphates.

Medicinal Properties.

Antacid, alterative, laxative and antilithic. Much used in dyspepsia, heartburn, sick headache, gout, and other complaints attended with acidity, and constipation. As a laxative, it may often be used with advantage when other medicines occasion nausea; generally combined with other purgatives. It is an excellent and mild purgative for children.

It frequently becomes aggregated into a solid mass when prescribed in mixtures, especially when prescribed with the sulphate.

Dose.—10 to 20 grs. as an antacid and alterative, 20 to 60 grs. as a purgative.

(U.S. and Fr. Hydrate de Magnésie ; not in others.)

Although the heavy powder is preferred by many for its smoothness, the light powder is found to be quicker in its action.

INCOMPATIBLES.—All Acids.

MAGNESIA LEVIS.

LIGHT MAGNESIA.

MgO, eq. 20 ; or **MgO**, eq. 40.

Light Carbonate of Magnesia, heated in a Cornish crucible until all the Carbonic Acid is driven off.

A bulky white powder, differing from Magnesia (heavy Magnesia) only in its great levity, the volumes corresponding to the same weight being in the ratio of $3\frac{1}{2}$ to 1.

It does not mix so readily with water nor does it make so smooth a draught as the heavy.

Test.—Does not effervesce with Acids.

Dose.—10 to 20 grs. as an antacid; 20 to 60 grs. as a purgative.

(In all the Pharmacopœias.)

Contained in Pulvis Rhei Comp.

MAGNESIÆ CARBONAS.

CARBONATE OF MAGNESIA (HEAVY).

$(MgO,CO_2)_3+MgO+5HO$, eq. 191; or $(\mathbf{MgCO_3})_3\mathbf{MgO.5H_2O}$, eq. 382.

A white rather heavy powder, precipitated from a boiling solution of Sulphate of Magnesia by a solution of Carbonate of Soda, the whole evaporated to dryness, and the dry residue digested in water and collected on a filter and washed, so that the Sulphate of Soda is entirely washed out.

Test.—With excess of Hydrochloric Acid it forms a clear solution, in which Chloride of Barium causes no precipitate—indicating absence of Sulphuric Acid. Another portion of the solution, supersaturated with Ammonia, when filtered, gives no precipitate with Oxalic Acid—indicating absence of Lime. 50 grains calcined at red-heat are reduced to 22.

Dose.—10 to 20 grains as an antacid; 30 to 60 grs. as a purgative.

(Ger. and Russ. Magnesia Carbonica; U.S.; not in others.)

Preparation.

LIQUOR MAGNESIÆ CARBONATIS. Colourless. *Syn.* FLUID MAGNESIA.

Is prepared by impregnating water with Carbonic Acid under pressure in which freshly-precipitated Carbonate of Magnesia is suspended.

Each fluid ounce contains 13 grains of Carbonate=5 grains of Calcined Magnesia.

Dose.—1 to 2 oz.

Not Official.

MISTURA ALBA.—Carbonate of Magnesia, 10 grs.; Sulphate of Magnesia, 1 drm. Peppermint Water, 1 oz. *King's College Hospital.*

MISTURA MAGNESIÆ C. RHEO.—Rhubarb, $7\frac{1}{2}$ grs.; Carbonate of Magnesia, 15 grs. Peppermint Water, to 1 oz. *St. Thomas's Hospital.*

MAGNESIÆ CARBONAS LEVIS.

LIGHT CARBONATE OF MAGNESIA.

$(MgO,CO_2)_3+MgO+5HO$, eq. 191; or $(\mathbf{Mg.CO_3})_3\mathbf{.MgO.5H_2O}$, eq. 382.

A very light powder, precipitated cold from Sulphate of Magnesia solution by Carbonate of Soda, the precipitate being washed in boiling water until the

washings do not precipitate with Chloride of Barium, is then dried at 212°. When examined under the microscope, it is found to be partly amorphous, with numerous slender prisms intermixed. In other respects it is similar to Magnesiæ Carbonas.

Solubility: in cold Water, 1 in 2493; in hot Water, 1 in 9000.

Dose.—10 to 20 grs. as an antacid; 30 to 60 grs. as a purgative.

(In all the Pharmacopœias; Fr. Carbonate de Magnésie.)

MAGNESIÆ CITRAS.

LIQUOR MAGNESIÆ CITRATIS.

Carbonate of Magnesia	100 grains
Citric Acid	200 grains
Syrup of Lemons	½ fluid ounce
Bicarbonate of Potash, in crystals . .	30 grains.
Water	a sufficiency.

Dissolve the citric acid in two ounces of the water, and having added the carbonate of magnesia, stir until it is dissolved. Filter the solution into a strong half-pint bottle, add the syrup and sufficient water to nearly fill the bottle, then introduce the bicarbonate of potash, and immediately close the bottle with a cork, which should be secured with string or wire; afterwards shake the bottle until the bicarbonate of potash is dissolved.

Dose.—5 to 10 oz.

(The U.S. formula modified. Fr. Limonade Purgatif.)

MAGNESIÆ SULPHAS.

SULPHATE OF MAGNESIA.

MgO,SO_3+7HO, eq. 123; or $MgSO_4\,7H_2O$, eq. 246.

In minute, colourless, transparent, rhombic prisms, possessing a bitter taste.

Solubility: in cold water, 10 in 13, and measures 18.

Test.—The aqueous solution, at ordinary temperatures, is not precipitated by Oxalate of Ammonia—indicating absence of Lime. The precipitate given by Carbonate of Soda, when obtained from a boiling solution of 100 grains of the salt, should, when well washed, dried, and heated to redness, weigh 16·26 grains.

(In all the Pharmacopœias.)

Contained in Mistura Sennæ Comp. 1 in 5.

Medicinal Properties.

A mild and safe cathartic, operating with little pain or nausea. Used in colic and obstinate constipation and in most cases where a cathartic is required which shall not cause debility or relaxation of the stomach.

Dose.—2 to 4 drms.

INCOMPATIBLES.—Alkaline Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver.

Sulphate of Magnesia should not be prescribed with Potassio-tartrate of Soda, for although the solutions of these two salts are transparent when first mixed, yet after a short time, Tartrate of Magnesia will precipitate. The following prescription will illustrate this :—

℞ Sodæ Potassio-tart. ʒj, Magnes. Sulph. ʒij, Aquæ ad ℥iss.

Nor with Bicarbonate of Soda in the place of the Potassio-tartrate, for when decomposition ensues, Sulphate of Soda is formed, and will crystallize on the sides of the vial.

Preparation.

ENEMA MAGNESIÆ SULPHATIS.

Sulphate of Magnesia, 1 oz.; Olive Oil, 1 oz.; Mucilage of Starch, 15 oz.: dissolve the sulphate of magnesia in the mucilage, then add the oil.

For one enema.

(Not in other Pharmacopœias.)

Not Official.

Liquor Magnesiæ Sulphatis (Dr. Henry, of Dublin).—Saturated Solution of Sulphate of Magnesiæ, 7 (equal to 4 of crystals); Diluted Sulphuric Acid, 1 : mix.

Magnesiæ Sulphis. Russ. Magnesia Sulphurosa.—*Dose* 20 to 30 grains.

Mistura Magnesiæ Sulphatis c. Rheo Infantium.—Sulphate of Magnesia, 1 drm.; Tincture of Rhubarb, 2 drms.; Syrup of Ginger, 1 drm.; Caraway Water to 1½ oz.—Dose, 1 to 2 drms.—*King's College Hospital.*

MANGANESII OXIDUM NIGRUM.

BLACK OXIDE OF MANGANESE.

MnO_2, eq. 43·5; or $\mathbf{MnO_2}$, eq. 87.

Used for producing Chlorine.

Not Official.

Manganesii Oxidum Præparatum.—Digest finely powdered commercial black oxide in diluted Hydrochloric Acid for twenty-four hours, frequently shaking the bottle containing them; then pour off the acid; wash the oxide thoroughly with water, pouring off the lighter portions each time for use, and rejecting the heavier and coarser particles; finally dry in a water bath.

An admirable remedy for gastrodynia, pyrosis, etc.

Dose.—10 to 30 grs.

(Ger. Manganum Hyperoxydatum.)

Sulphate of Manganese, Russ. and U.S.—A useful purgative in gouty affections, is, however, little used, being uncertain in its action, and apt to cause vomiting; its taste is disagreeably styptic.

Manganese has been associated with Iron in several recent pharmaceutical preparations, *e.g.* Syrupus Ferri Phosph. c. Manganesio.

MANNA.

MANNA.

A concrete exudation from the stem of the *Fraxinus Ornus* and *F. rotundifolia*, obtained by incision.

Cultivated for the purpose chiefly in Calabria and Sicily.

Consists chiefly of Mannite, $C_6H_7O_6$, or $C_3H_7O_3$; eq. 91; together with common Sugar and extractive matter.

Solubility: in Water, 1 in 5; in Rectified Spirit, 1 in 120.

Medicinal Properties.

Nutritious, particularly when recent. A mild laxative; does not excite inflammation; useful for children and delicate females.

Dose.—As a laxative, from ½ to 1 oz.

(In all the Pharmacopœias.)

A convenient way of having Manna in a state ready for dispensing is previously to dissolve a quantity in water, strain, and evaporate to the original weight of the Manna acted upon. It keeps good for a long time.

MARMOR ALBUM.

WHITE MARBLE.

CaO,CO_2, eq. 56; or $CaCO_3$, eq. 112.

Used in producing Carbonic Acid Gas.

MASTICHE.

MASTICH.

A resinous exudation by incision from the stem of the *Pistacia Lentiscus*, produced in the island of Scio.

Small irregular yellowish tears, semi-transparent.

Solubility: insoluble in Water; wholly soluble in Ether, Chloroform, and Oil of Turpentine; scarcely soluble in fixed Oils.

Sp. g. 1·074.

Medicinal Properties.

Stimulant. Chiefly prescribed in pills to divide active medicines, and especially with mercurials when the pills are to be silvered, to prevent the silver being acted on by the mercury.

Dose.—In powder, 20 to 40 grs.

(In all the Pharmacopœias.)

Cotton, saturated in a solution of 4 parts of Mastich with 1 of Ether, is a good stopping for decayed teeth.

(Fr. equal weights of Ether and Rectified Spirit, adding Mastich to saturation.)

MATICÆ FOLIA.

MATICO LEAVES.

The dried leaves of *Artanthe elongata*, imported from Peru.

Medicinal Properties.

An agreeable aromatic tonic and stimulant, influencing the urinary passages. Locally (in substance) as a styptic, on the supposition that its action is mechanical. Its styptic properties, however, may depend on the Terebinthinate Oil it contains.

Dose.—Of the powder, 30 to 120 grs. three times daily.

(U.S; not in others.)

Preparation.

INFUSUM MATICÆ.

Matico, cut small, 1; boiling Distilled Water, 20: infuse half an hour, and strain.

Dose.—1 to 2 oz.

(Same as Fr.; not in others.)

Not Official.

TINCTURA.—Matico leaves, in coarse powder, 1; Proof Spirit, 5: macerate fourteen days, strain, express and filter. =(1 in 5).

Astringent. Useful in catarrh of the bladder of the aged.

Dose.—1 to 2 drms.

MEL.

HONEY.

A saccharine secretion deposited by the Hive Bee in the honeycomb.

Test.—Boiled with Water for five minutes, and allowed to cool, it does not become blue with the Solution of Iodine—indicating absence of Flour.

(In all the Pharmacopœias.)

Medicinal Properties.

Demulcent and laxative, but apt to gripe and occasion flatulency when given in efficient doses; this is more particularly the case with old honey. It is more generally used as a vehicle for other medicines. A useful addition to gargles. An external application to foul ulcers. Equal parts honey and flour, an excellent poultice for boils.

Preparations.

MEL BORACIS. 1 in 8.—*See* BORAX.

MEL DEPURATUM. CLARIFIED HONEY. Light yellowish-brown.

Melt in a water bath, and strain while hot through flannel previously moistened with warm water.

(In all the Pharmacopœias.)

OXYMEL. Brown.

Clarified Honey, 8; Acetic Acid, 1; Distilled Water, 1: liquefy the honey by heat, and mix.

A pleasant addition to Gargles. Sometimes used as a vehicle to expectorant medicines, and to flavour fever drinks.

Dose.—1 to 2 drms.

(Austr. Honey 2, Common Vinegar 1; Fr. Honey 4, Vinegar 1; Belg. Honey 4, Sugar 4, Dil. Acet. Acid 3; Ger. Honey 40, dilute Acetic Acid 1; Russ. Honey 15, Acetic Acid (25 per cent.) 1; not in U.S.)

MENTHÆ PIPERITÆ OLEUM.

ENGLISH OIL OF PEPPERMINT.

The Oil distilled in Britain from fresh flowering Peppermint.

Sp. g. 0·920.

Contained in Pilula Rhei Composita.

Medicinal Properties.

A grateful aromatic, stimulant, and carminative. Allays nausea, relieves spasmodic pains in the stomach. Useful in the flatulent colic of children. Covers the taste of nauseous medicines, such as Rhubarb, and mitigates the griping effect of purgatives. Externally applied, relieves facial neuralgia.

The fresh herb, bruised, and applied to the epigastrium, often allays sickness, and is useful in cholera infantium.

Dose.—1 to 4 minims on sugar, or in emulsion.

(In all the Pharmacopœias.)

Preparations.

AQUA MENTHÆ PIPERITÆ.

English Oil of Peppermint, 1½ drm.; Water, 1½ gall.: distil 1 gall. =(Oil 1 in 853).

Dose.—1 to 2 oz.

(Russ. ½ the strength; U.S. stronger; Austr. Belg. Ger. and Fr. distilled from the leaves.)

ESSENTIA MENTHÆ PIPERITÆ. Straw-colour.

English Oil of Peppermint, 1; Rectified Spirit, 4: mix. =(1 in 5).

(Not in other Pharmacopœias.)

Dose.—10 to 20 minims.

SPIRITUS MENTHÆ PIPERITÆ. Colourless.

English Oil of Peppermint, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(Ger. 1 in 10; U.S. from the oil and leaves; Fr. Alcoölat de Menthe Poivrée; Austr. from dry herb; Russ. Oil 1 drm., Spirit 1½ lb., Water 4½ lb.; not in Belg.)

Dose.—30 to 60 minims, or for children under five years, 1 to 3 minims.

Note.—An agreeable syrup is made by adding 60 minims of the Spirit to 1 oz. of Syrup.

MENTHÆ VIRIDIS OLEUM.

ENGLISH OIL OF SPEARMINT.

The Oil distilled in Britain from fresh flowering Spearmint.

Medicinal Properties.

Similar to those of Oleum Menthæ Piperitæ.

Dose.—1 to 4 minims on sugar in emulsion, or made into pills with powder of Gentian.

(In all the Pharmacopœias.)

Preparation.

AQUA MENTHÆ VIRIDIS.

English Oil of Spearmint, 1½ drm.; Water, 1½ gall.: distil 1 gall.
=(Oil 1 in 853).

Dose.—1 to 2 oz.

(U.S. stronger; Russ. from Mentha Crispa; Belg. with Spirit and from dry herb; Ger. from fresh herb; not in others.)

MEZEREI CORTEX.

MEZEREON BARK.

The dried bark of the *Daphne Mezereum*, Mezereon; or *Daphne Laureola*, Spurge, or Wood Laurel.

Medicinal Properties.

A stimulant, acting on the kidneys. Rarely used alone. With Sarsaparilla it is employed as a sudorific and alterative in venereal, rheumatic, scrofulous, and chronic cutaneous diseases. Applied to the skin, it produces inflammation and vesication, though slow in action.

The bark soaked in hot vinegar-and-water is applied with a compress to produce a blister: ointment of the bark is used to keep issues or blisters open.

Contained in Decoctum Sarsæ Compositum.

(In all the Pharmacopœias; Fr. Mézéréon ou bois gentil.)

Preparation.

EXTRACTUM MEZEREI ÆTHEREUM. Intense green.

Mezereon Bark, cut small, 1 lb.; Rectified Spirit, 8 pints; Ether, 1 pint: macerate the mezereon in six pints of the spirit for three days with frequent agitation, strain and press. To the residue of the mezereon, add the remainder of the Spirit, and again macerate for three days, with frequent agitation, strain and press, mix and filter the strained liquors; recover the greater part of the Spirit by distillation, evaporate what remains to the consistence of a soft extract, put this into a stoppered bottle with the Ether, and macerate for twenty-four hours, shaking them frequently, decant the ethereal solution, recover part of the Ether by distillation, and evaporate what remains, to the consistence of a soft extract.

Used in preparing Linimentum Sinapis Compositum; 8 grs. are contained in 1 oz.

(Fr. Belg. Extrait Éthéré de Garou, Ger. and Russ. without Ether; U.S. fluidum 1 in 1; not in others.)

Not Official.

UNGUENTUM MEZEREI (Ger. and Russ.).—Ethereal Extract, 1 part; Wax Ointment, 7: mix.

MICA PANIS.

SOFT CRUMB OF BREAD.

Contained in Cataplasma Carbonis.

Not Official.

CATAPLASMA MICA PANIS.—Grated Crumb of Bread and boiling water *q.s.*

MISTURÆ.

MIXTURES.

The following are the mixtures of the British Pharmacopœia:—

Dose.		Proportions.
½ to 1 oz.	MISTURA AMMONIACI	1 in 32.
1 to 2 oz.	MISTURA AMYGDALÆ.	
1 to 2 oz.	MISTURA CREASOTI	1 minim to 1 oz., or 1 in 480.
1 to 2 oz.	MISTURA CRETÆ	14 grs. to 1 oz., or 1 in 34.
1 to 2 oz.	MISTURA FERRI AROMATICA.	
1 to 2 oz.	MISTURA FERRI COMPOSITA	1 in 128.
½ to 1 oz.	MISTURA GENTIANÆ (Scotch Infusion).	
½ to 2 oz.	MISTURA GUAIACI	11 grs. to 1 oz., or 1 in 42.
½ to 2 oz. for a child.	MISTURA SCAMMONII	2 grs. to 1 oz., or 1 in 240.
1 to 1½ oz.	MISTURA SENNÆ COMPOSITA	1 oz. Magn. Sulph. in 5 oz.
1 to 2 oz.	MISTURA SPIRITUS VINI GALLICI . . .	1 Brandy in 2½.

MORI SUCCUS.

MULBERRY JUICE.

The deep purple juice of the ripe fruit of the *Morus nigra.*

Medicinal Properties.

Refreshing and laxative; serves to prepare a grateful drink well adapted to febrile cases.

(Fr. Mûrier Noir.)

Preparation.

SYRUPUS MORI. Deep lake-colour.

Mulberry Juice, 20; Refined Sugar, 32; Rectified Spirit, $2\frac{1}{2}$: heat the juice to the boiling-point, and when it has cooled filter it; dissolve the Sugar in the filtered liquid by a gentle heat, and add the spirit; the product should weigh 54. Sp. g. 1·330.

Dose.—1 to 2 drms.

(Same as Austr. Belg. and Fr. Sirop de Mûres; not in others.)

An agreeable addition to a gargle for sore-throat. Used as a colouring matter for draughts, 1 drm. to 1 oz.

MORPHIÆ ACETAS.

ACETATE OF MORPHIA.

$C_{34}H_{19}NO_6$, $C_4H_3O_3 + HO$; or $C_{17}H_{19}NO_3.C_2H_4O_2$; eq. 345.

A white powder. Part of its Acetic Acid is often driven off in drying.

Solubility: in Water, 1 in 6; in Spirit, 1 in 100.

Dose.—$\frac{1}{8}$ to $\frac{1}{2}$ a grain.

(In all the Pharmacopœias except Fr.)

INJECTIO MORPHIÆ HYPODERMICA.

A solution of acetate of morphia containing one grain of the acetate in twelve minims of the injection.

Take of

Hydrochlorate of Morphia		88 grains.
Solution of Ammonia	}	
Acetic Acid	}	of each a sufficiency.
Distilled Water	}	

Dissolve the hydrochlorate of morphia in two ounces of distilled water, aiding the solution by a gentle heat; then add solution of ammonia so as to precipitate the morphia, and render the liquid slightly alkaline; allow it to cool; collect the precipitate on a filter, wash it with distilled water and allow it to drain; then transfer the morphia to a small porcelain dish with about an ounce of distilled water, apply a gentle heat, and carefully add acetic acid until the morphia is dissolved, and a very slightly acid solution is formed. Add now sufficient distilled water to make the solution measure exactly two fluid ounces. Filter and preserve the product in a stoppered bottle excluded from the light.

Characters and Tests.—A clear solution free from any solid particles. Very slightly acid to test paper. A fluid drachm of it rendered slightly alkaline by the addition of solution of ammonia, yields a precipitate of morphia which, after being washed and dried, should weigh 4·3 grains, corresponding to 5 grains of acetate of morphia.

Dose.—By subcutaneous injection 1 to 6 mins.

LIQUOR MORPHIÆ ACETATIS. Colourless.

Acetate of Morphia, 4 grs.; Diluted Acetic Acid, 8 minims; Rectified Spirit, 2 drms.; Distilled Water, 6 drms.: dissolve the Acetate in the mixed liquids. =(1 in 123).

Each fluid drm. contains ½ grain.

Dose.—10 to 60 minims.

Not Official.

SOLUTION OF ACETATE OF MORPHIA for Hypodermic injection, which has been long used, and is double the strength of the Pharmacopœia.

1 grain of the Acetate of Morphia in every 6 minims of the solution, which should be neutral.

3 minims = ½ gr. for each injection.

Combined with Sulphate of Atropia, it increases its calming effect, whilst it lessens its constipating effect.

Acetate of Morphia, 10 grs.; Sulphate of Atropia, ¼ gr.; Water 60 minims: dissolve.

3 minims for each injection = ½ a grain of Acetate of Morphia and $\frac{1}{80}$th of a grain of Sulphate of Atropia.

MORPHIÆ HYDROCHLORAS.

HYDROCHLORATE OF MORPHIA.

Syn. MURIATE OF MORPHIA, *Edin. Dub.*

$C_{34}H_{19}NO_6,HCl+6HO$; or $C_{17}H_{19}NO_3.HCl.3H_2O$; eq. 375·5.

Prepared from Opium.

In white, flexible, acicular prisms of a silky lustre.

Solubility: in Water, 1 in 20; in Spirit, 1 in 90.

Test.—Entirely destructible by heat, leaving no residue. 20 grains of the Salt, dissolved in half an ounce of warm water, with Ammonia added in the slightest possible excess, gives, on cooling, a crystalline precipitate, which, when washed with a little cold water and dried by exposure to the air, weighs 15·18 grains—pure Morphia.

As pure Morphia is insoluble in Water, it is rarely used in medicine; the Salts only are used.

Of these, the Pharmacopœia has selected the Acetate and the Hydrochlorate.

The following may be reckoned as therapeutical equivalents:—
1 gr. Hydrochl. Morph. = 8 grs. Opium = 7 grs. Powd. Opium = 4 grs. Ext. Opium = 93 minims Tinct. Opium.

(In all the Pharmacopœias; Fr. Chlorhydrate de Morphine.)

Medicinal Properties.

Hydrochlorate of Morphia possesses the anodyne and soporific powers of Opium, yet it acts more agreeably, being less likely to produce headache and nausea. It is also less exciting and stimulating than Opium.

Dose.—$\frac{1}{8}$ to ½ gr.

INCOMPATIBLES.—Alkalies and Alkaline Earths, astringent vegetable Infusions and Decoctions.

ANTIDOTES.—$\frac{1}{32}$ gr. Strychnia acts as an antidote to $\frac{1}{2}$ gr. of Morphia. *Lancet, Dec.* 9, 1871.

Preparations.

LIQUOR MORPHIÆ HYDROCHLORATIS. Colourless.

Hydrochlorate of Morphia, 4 grs.; Dilute Hydrochloric Acid, 8 minims; Rectified Spirit, 2 drms.; Distilled Water, 6 drms.: dissolve. =(1 in 123).

Each fluid drachm contains half a grain.

(Not in other Pharmacopœias.)

Dose.—10 to 60 minims.

A Solution of Hypodermic injection cannot be made (cold) stronger than 1 in 20. If a stronger Solution is used, it must be injected whilst warm; the solution of the Acetate therefore is most convenient.

SUPPOSITORIUM MORPHIÆ. Cream-colour.

Hydrochlorate of Morphia, 6 grs.; Oil of Theobroma, 90 grs.; Benzoated Lard, 64 grs.; White Wax, 20 grs.: melt the Wax and Oil of Theobroma with a gentle heat, then add the Hydrochlorate of Morphia and Benzoated Lard previously rubbed together in a mortar, and mix all the ingredients thoroughly; pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains, or the fluid mixture may be allowed to cool, and then be divided into twelve equal parts, each of which should be made into a conical form.

Each suppository contains $\frac{1}{2}$ grain of Hydrochlorate of Morphia.

(Not in other Pharmacopœias.)

SUPPOSITORIA MORPHIÆ CUM SAPONE.

Take of

Hydrochlorate of Morphia	6 grains
Glycerine of Starch	50 grains
Curd Soap, in powder	100 grains
Starch, in powder	a sufficiency.

Mix the hydrochlorate of morphia with the glycerine of starch and soap, and add sufficient starch to form a paste of suitable consistence. Divide the mass into twelve equal parts, each of which is to be made into a conical or other convenient form for a suppository.

Each suppository contains $\frac{1}{2}$ grain.

TROCHISCI MORPHIÆ. White.

Hydrochlorate of Morphia, 20 grs.; Tincture of Tolu, $\frac{1}{2}$ oz.; Refined Sugar, in powder, 24 oz.; Gum Arabic, in powder, 1 oz.; Mucilage of Gum Arabic, 2 oz., or a sufficiency; boiling Distilled Water, $\frac{1}{2}$ oz.: divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{360}$ gr. of Hydrochlorate of Morphia.

Dose.—One or two occasionally for cough.

TROCHISCI MORPHIÆ ET IPECACUANHÆ. Cream-colour.

Hydrochlorate of Morphia, 20 grs.; Ipecacuan, in fine powder, 60 grs.; Tincture of Tolu, $\frac{1}{2}$ oz.; Refined Sugar, in powder, 24 oz.; Gum Arabic, in powder, 1 oz.; Mucilage of Gum Arabic, 2 oz., or a sufficiency; Distilled Water, $\frac{1}{2}$ oz.; divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{30}$ gr. of Hydrochlorate of Morphia, and $\frac{1}{12}$ gr. of Ipecacuanha.

Dose.—One or two occasionally for cough.

For preparations of Morphia which are not official, see OPIUM.

Oleate of Morphia consists of 1 gr. of pure Morphia dissolved in 60 grs. of Oil.

MORRHUÆ OLEUM.

COD-LIVER OIL.

The Oil extracted from the fresh liver of the *Gadus morrhua* by a steam-heat or water bath not exceeding 180°. Yellow.

Sp. g. from 0·915 to 0·929.

(In all the Pharmacopœias; Austr. Belg. Fr. Huile de Foie de Morue, Ger. Ol. Jecoris Aselli.)

Solvent of pure Quinia. 1 oz. at 140° will dissolve 4 grains readily.

Medicinal Properties.

It has long been employed in the north of Europe in rheumatic and strumous diseases, and was first recommended to the profession generally by the German practitioners; but it was not till the appearance of Professor Bennet's treatise in 1841 that it came into general use in England.

Its value is thought to depend on the iodine contained in it, but iodine is rarely found in the best oil in greater proportion than ·05 per cent.

Demulcent and nutrient. Most efficient in scrofulous diseases, glandular swellings, diseases of the joints, tabes mesenterica, rickets and chronic rheumatism; and generally in all chronic cases of impaired digestion, assimilation, and nutrition. In pulmonary consumption it deservedly possesses a high reputation.

Dose.—1 to 4 drms., Brit. Ph. dose, 1 to 8 drms., on Orange Juice, water, or a mixture of Tincture of Orange with Nitric Acid and Syrup; or 2 drms. rubbed with either 30 grs. of Powdered Acacia or 20 grs. Tragacanth and 1½ drm. of Distilled Water till an emulsion is formed, and then gradually add, with constant trituration, 1 oz. of Peppermint Water, forms a nice emulsion.

It has lately been asserted that the water which oozes from the Livers possesses the properties of the Oil in an eminent degree, and the manner of evaporating and purifying the extract has been patented, 5 grains of the Extract is said to be equal in value to a tablespoonful of Cod-Liver Oil.

28 lb. Livers yield 12 lb. of Oil, and 1 lb. of Water; the water, when evaporated yields 2 oz. of Extract.

Pancreatized Cod Liver Oil is prescribed under the impression that it is more easily digested than Cod Liver Oil alone.

MOSCHUS.

MUSK.

The inspissated and dried secretion from the preputial follicles of the *Moschus moschiferus*, a native of Thibet and other parts of Central Asia; imported from China and India.

In grains or lumps concreted together, soft and unctuous to the touch, of a reddish-brown or ferruginous colour, having a strong and peculiar odour; contained in an oval sac or membrane about two inches in diameter.

Ether is a good solvent of Musk.

(In all the Pharmacopœias; Fr. Musc.)

Medicinal Properties.

Stimulant and antispasmodic, increasing the vigour of the circulation without materially affecting the cerebral functions. It may be given in almost all spasmodic diseases, particularly in cases of great prostration with intense nervous excitement.

Dose.—5 to 10 grs. in pill or mixture.

Not Official.

MISTURA.—Musk, 3; Acacia, 3; Sugar, 3; Rose Water, 160; triturate the Musk with the Sugar, then with the Acacia; add the Rose Water gradually.

Dose.—1 to 2 oz.

TINCTURA.—Musk, 1 drm.; Rectified Spirit, 10 oz.: digest seven days, and strain.

(Ger. and Russ. Musk 1, Proof Spirit 50.)

MUCILAGINES.

MUCILAGES.

Mucilages are employed more as vehicles than as remedies. Mucilage of Acacia is sometimes given to relieve irritating cough, but more generally to render Oils and solutions of Resins miscible with Water; *see* ACACIA. M. Amyli, for Enemas; M. Tragacanthæ, for Lozenges, and also for suspending heavy powders in mixtures, in preference to M. Acaciæ.

The Mucilages are:—

MUCILAGO ACACIÆ	1 in 2.
MUCILAGO AMYLI	1 in 40.
MUCILAGO TRAGACANTHÆ	1 in 80.

Not Official.

MUDAR.

THE BARK OF THE ROOT OF CALOTROPIS GIGANTEA.

Diaphoretic; it calms the mucous lining of the intestines, and is effective in dysentery.

Dose.—Of the Powder, 15 grains 3 or 4 times a day.

MYRISTICA.

NUTMEG.

The kernel of the seed of the *Myristica officinalis*, cultivated in the Banda Islands of the Malayan Archipelago, imported from Sumatra and the Molucca Islands.

Medicinal Properties.

Aromatic, stimulant, and carminative. Chiefly used to cover the taste of rhubarb and other medicines.

Dose.—5 to 15 grains.

(In all the Pharmacopœias; Austr. Belg. Nux Moschata; Fr. Muscadier cultivé; Ger. Semen Myristicæ.)

Contained in Pulvis Catechu Compositus, Pulvis Cretæ Aromaticus, Spiritus Armoraciæ Compositus, Tinctura Lavandulæ Composita.

Preparations.

OLEUM MYRISTICÆ. Colourless; very fragrant.

The oil distilled in Britain from Nutmegs. This injunction of the British Pharmacopœia is necessary, the foreign oil being very much inferior to that distilled in Britain.

Dose.—2 to 6 minims on sugar, or in emulsion.

(U.S.; Austr. Belg. Ger. Oleum Macidis Æthereum; not in others.)

Contained in Sp. Ammon. Aromat. and Pilula Aloes Socotrinæ.

OLEUM MYRISTICÆ EXPRESSUM. Concrete Oil of Nutmegs. *Syn.* Oil of Mace.

A concrete oil, of a firm consistence and orange-colour, obtained from Nutmegs by expression and heat.

(Austr. Belg. Ol. Nucis Moschatæ; Fr. Beurre de Muscade; Ger. Ol. Myristicæ; not in U.S.)

Contained in Emplastrum Calefaciens and Emplastrum Picis.

SPIRITUS MYRISTICÆ. Colourless.

Volatile Oil of Nutmeg, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

Dose.—30 to 60 minims.

(U.S. is very a weak preparation; not in others.)

MYRRHA.

MYRRH.

A gum-resinous exudation from the stem of the *Balsamodendron Myrrha*, collected in Arabia Felix and Abyssinia.

In irregular-shaped tears, of a reddish-yellow or reddish-brown colour.

Solubility: partially in Water, more soluble in Alcohol and Ether.

(In all the Pharmacopœias.)

Medicinal Properties.

A stimulant tonic. Useful in humid asthma and chronic catarrh; also in chlorosis and defective menstruation. Externally to aphthous sore-mouths and diseased gums.

Dose.—10 to 30 grs.

Contained in Decoctum Aloes Compositum, Mistura Ferri Composita, Pilula Aloes et Myrrhæ, Pil. Assafœtidæ Composita, Pilula Rhei Composita.

Preparation.

TINCTURA MYRRHÆ. Light reddish-brown.

Myrrh, in coarse powder, 1; Rectified Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop, pour on the remaining spirit, wash the marc, press, and make up to 8. =(1 in 8).

Dose.—½ to 1 drm. More frequently used mixed with water to form a gargle.

(U.S. 1 in 10; Austr. Belg. 1 in 5; Fr. 1 in 5; Ger. 1 in 6, by weight.)

Not Official.

GARGARSIMA MYRRHÆ.—Tincture of Myrrh, 1; Honey, 1; Infusion of Roses, 18: mix.

TINCTURE OF MYRRH AND BORAX.—*See* BORAX.

NECTANDRÆ CORTEX.

BEBEERU BARK.

The bark of the *Nectandra Rodiæi*, Greenheart Tree, imported from British Guiana.

The bark is intensely bitter, and contains an alkaloid, Beberia ($C_{38}H_{21}NO_6$), very soluble in Alcohol, less so in Ether, and very slightly in Water. The Sulphate is chiefly used.

(U.S.)

Medicinal Properties.

Tonic and antiperiodic. Used in remittent and intermittent fevers, though, not to be relied on as a substitute for the Sulphate of Quinia.

Preparation.

BEBERIÆ SULPHAS.—*See* BEBERIÆ SULPHAS.

Not Official.

NICKEL.

SULPHATE OF NICKEL.—Greenish-blue Crystals.

Given in Chlorosis.

Dose.—½ to 1 gr. two or three times a day; is best given on a full stomach, as on an empty one it is apt to produce nausea.

NUX VOMICA.

NUX VOMICA.

The seeds of the *Strychnos Nux-vomica*, imported from the East Indies.

Medicinal Properties.

In very small doses, tonic, and laxative by stimulating the muscular coat of the bowel. In larger doses it operates on the whole system through the spinal motor nerves, indicated by involuntary muscular contractions. Useful in palsy and all paralytic affections, and in cases of feeble contractile powers. It is recommended in chorea and atonic dropsy, and in debilitated conditions of the alimentary canal. The extract and tincture are the preparations generally prescribed.

Dose.—Of the powder, 1 to 3 grs.

(In all the Pharmacopœias; Fr. Noix Vomique; Ger. Semen Strychni.)

ANTIDOTES.—In case of poisoning by Nux Vomica, Tobacco seems to be the best antidote. Enema Tabaci should be administered. Infusion of Tobacco, ½ oz. to 20 oz. of boiling water, may be given till the spasms abate, and then discontinue its use. Nicotina, if at hand, in the dose of one drop, in some warm sherry and water.

Preparations.

STRYCHNIA.—*See* STRYCHNIA.

EXTRACTUM NUCIS VOMICÆ. Light brown.

Soften Nux Vomica by steam, dry rapidly, and reduce to fine powder; boil with Rectified Spirit until exhausted, strain, distil off the spirit, and evaporate to the consistence of a soft extract.

16 oz. nuts yield 1 oz. Alcoholic extract.

Dose.—⅓ to 1 gr.; Brit. Pharm. ½ to 2 grs. Often with Aloes and Ipecacuanha.

(Same as U. S. Austr. Belg. Fr.; Ger. has a spiritous extract reduced to powder, dose 1 gr., and an aqueous extract, also reduced to powder, dose 4 grs.—they are named Extractum Strychni Spirituosum and Aquosum respectively.)

TINCTURA NUCIS VOMICÆ. Straw-colour.

Nux Vomica, 1; Rectified Spirit, 10: soften the Nux Vomica by steam, dry rapidly, and reduce to fine powder. Macerate forty-eight hours in three-fourths of the spirit, agitating occasionally, pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop, press, filter, and make up to 10. =(1 in 10).

Dose.—10 to 30 minims.

(U. S. 1 in 3¾; (Austr. and Belg. 1 in 5; Fr. Teinture de Noix Vomique; Ger. Tinct. Strychni, 1 and 5 Tinct. Strychni Ether. 1 and 10, by weight), dose 12 minims; not in others.)

¼ oz. of Extract, dissolved in 40 oz. of Rectified Spirit, is equal in strength to the Tincture.

Not Official.

ST. IGNATIUS'S BEAN.—The seeds of the *Ignatia amara*, from the Philippine Islands. They contain the same constituents as Nux Vomica, and afford about 1·2 per cent. of Strychnia.

An alcoholic EXTRACT is made of this in the same manner as that of Nux Vomica.

Chiefly used in cases of debility of the digestive organs, and in all instances where Nux Vomica is employed.

Dose.—$\frac{1}{8}$ to 1 gr. in pill three times a day.

OLEA.

OILS.

The Oils ordered in the Pharmacopœia consist of expressed and distilled oils: viz. the expressed are those of the Almond and the Olive, which are chiefly used for ointments and liniments; Castor Oil used in Collodion Flexile, Linimentum Sinapis Compositum; and Pilula Hydrargyri Subchloridi; Croton Oil is used for Linimentum Crotonis; Linseed Oil not used for preparations; we have also the Expressed Oil from the Lemon-rind, and that of the Theobroma; also the expressed oil of Nutmegs, which is used in Emplastrum Calefaciens and Emplastrum Picis. All the other oils are obtained by distillation.

The following are the Oils of the British Pharmacopœia, and will be found under the names of the substances from which they are derived :—

100 parts of the material, according to Messrs. Herring, yield on an average—

OLEUM AMYGDALÆ. Expressed from the seed 42
OLEUM ANETHI. Distilled from the fruit.
OLEUM ANISI. Distilled from the fruit and imported 2
OLEUM ANTHEMIDIS. Distilled from the flowers . . . . . 0·75
OLEUM CAJUPUTI. Distilled from the leaves and imported.
OLEUM CARUI. Distilled from the fruit 5
OLEUM CARYOPHYLLI. Distilled from the flower-bud 16
OLEUM CINNAMOMI. Distilled from the bark.
OLEUM COPAIBÆ. Distilled from the oleo-resin . . . . . 35 to 45
OLEUM CORIANDRI. Distilled from the fruit . . . . . 0·6
OLEUM CROTONIS. Expressed from the seeds 25
OLEUM CUBEBÆ. Distilled from the unripe fruit 11
OLEUM JUNIPERI. Distilled from the unripe fruit . . . . . 0·8
OLEUM LAVANDULÆ. Distilled from the flowers . . . . . 1·5
OLEUM LIMONIS. Expressed or distilled from the fresh peel.
OLEUM LINI. Expressed from the seeds without heat.
OLEUM MENTHÆ PIPERITÆ. Distilled from the fresh herb.
OLEUM MENTHÆ VIRIDIS. Distilled from the fresh herb.
OLEUM MORRHUÆ. Extracted from the fresh liver by heat . . . 42
OLEUM MYRISTICÆ. Distilled from the seed kernel . . . . . 5·5
OLEUM MYRISTICÆ EXPRESSUM. Expressed from the seed with heat 13
OLEUM OLIVÆ. Expressed from the ripe fruit and imported.

OLEUM PHOSPHORI . . . . . 1 in 100
OLEUM PIMENTÆ. Distilled from the unripe berry 4
OLEUM RICINI. Expressed from the seeds and imported.
OLEUM ROSMARINI. Distilled from the flowering tops . . . . . 0·5
OLEUM RUTÆ. Distilled from the fresh leaves and fruit.
OLEUM SABINÆ. Distilled from fresh Savin.
OLEUM SINAPIS. Distilled with water from the seeds of Black Mustard after the expression of the fixed oil.
OLEUM TEREBINTHINÆ. Distilled from Turpentine and imported.
OLEUM THEOBROMÆ. Expressed with heat from seeds of *Theobroma Cacao* 25

Not Official.

OLEUM CALAMI AROMATICI 1
OLEUM CASCARILLÆ . . . . . 0·6
OLEUM CARDAMOMI 3
OLEUM CYMINI . . . . . 2·5
OLEUM SANTALIS FLAV. . . . . 2 to 4 sometimes 4½
OLEUM STAPHISAGRIÆ 16

OLIVÆ OLEUM.

OLIVE OIL.

The Oil expressed in the south of Europe from the ripe fruit of the *Olea Europæa*. Yellow.

Sp. g. 0·9153; congeals partially at about 36°.

Solubility: in Ether, 1 in 2; partially in Rectified Spirit.

(In all the Pharmacopœias.)

Medicinal Properties.

Nutritious and mildly laxative, demulcent, in the form of emulsion. Has also been successfully given for ascarides, followed by a purge. Used in laxative enemata. It is most extensively employed in pharmacy, in the preparation of liniments, ointments, and plasters.

Dose—½ to 1 oz.

Contained in Enema Magnesiæ Sulphatis, Linimentum Ammoniæ, Linimentum Calcis, Linimentum Camphoræ, Cataplasma Lini, Emplastra and Unguenta.

OPIUM.

OPIUM.

The juice inspissated by spontaneous evaporation, obtained by incision from the unripe capsules of the *Papaver somniferum*, grown in Asia Minor.

Opium is derived almost exclusively from the *Papaver somniferum*. This plant was cultivated by the early Greeks, and is at present grown for its Opium, in India, Persia, Egypt, and Asiatic Turkey. In France and Germany, it is cultivated more for the sake of its seed, and in England for its capsules. The process of wounding the capsules and collecting the Opium has continued the same for the last 1800 years.* Smyrna Opium, and also that of Constantinople, is employed in this country. Specimens of Persian Opium in fingers, of Patna in squares, of Benares in balls covered with skin and Egyptian in flat pieces like that of Constantinople, are to be found in several museums. Good Smyrna Opium yields, according to Mulder, from 9 to 11 per cent. of Morphia, together with Codeia, Narcotina, Papaverin, Paramorphia (Thebaica), Narcein, Meconin, Meconic Acid, Opianine, besides extractive and fatty matters.

MORPHIA.—Discovered by Sertuener. Crystallizes in nearly white flat, six-sided prisms, alkaline in reaction, soluble in alcohol, *soluble without decomposition, in solution of Potash, insoluble* in Water or Ether, forming crystallizable salts with acids. It is coloured red by Nitric Acid, and blue by Perchloride of Iron. Intensely bitter.

CODEIA.—Discovered by Robiquet, in 1832. It crystallizes in white octahedrons, alkaline in reaction. Soluble in Water, Ether, and Alcohol; *insoluble in solution of Potash.* It does not become blue with Persalts of Iron. It exists in Opium, combined with Meconic Acid, like Morphia, and in the preparation of the Muriate of Morphia is extracted with it. From the mixed solution, morphia is thrown down by Ammonia, when the Codeia is left in solution, and may be obtained by evaporation; it is redissolved in hot Ether, which on evaporation leaves the Codeia. It forms crystalline salts with acids. It has been said that its therapeutic action is like that of Morphia. Dr. Gregory took 3 grains without any effect, and he found that a larger dose did not procure sleep. It has been given diabetes with benefit (an entire abstinence of starchy food being strictly observed), in doses of 1 gr. three times a day, rising gradually to 2 grs.; larger doses than this should be given with great caution. For Syrupus Codeiæ, see p. 207.

NARCOTINA.—First noticed by Derosne, in 1803. In thin pearly tables. It is neutral. Insoluble in Water; soluble in Ether, in boiling Alcohol, in dilute acids; *insoluble in solution of Potash.* Forms a yellow solution with Nitric Acid. It has no narcotic properties, and has therefore been called Anarcotina; it has been given in 5-grain doses as a substitute for Quinia.

PAPAVERIN.—Discovered by Dr. Merck. In white crystalline needles. Insoluble in Water; sparingly soluble in Alcohol and Ether. Moistened with strong Sulphuric Acid, it becomes dark blue.

PARAMORPHIA (Thebaica).—Discovered by Pelletier. In white crystalline needles. Soluble in water, in Alcohol, 1 in 10, and in Ether. Unites with acids. Not reddened by Nitric Acid, nor rendered blue by Persalts of Iron. In doses of 1 grain it produces tetanic spasms.

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* An interesting account of this process is given by Mr. Maltass, in the 'Pharmaceutical Journal,' March, 1864.

NARCEIN.—Discovered by Pelletier, in 1832. In white, silky, acicular crystals: neutral, with a slightly bitter taste. Soluble in 375 parts of cold and in 220 of hot Water, also in Alcohol; insoluble in Ether. It forms a bluish colour with Iodine, which is destroyed by heat; but it is not reddened by Nitric Acid. The dilute mineral acids impart to this substance a fine light blue colour, which disappears on the further addition of water. It is supposed to be inert.

MECONIN was discovered by Couerbe. It forms white acicular crystals, is a neutral body, and dissolves in 265 parts of cold and in 18 of boiling Water. Very soluble in Ether, Alcohol, and the essential oils.

MECONIC ACID.—In white, crystalline, pearly scales. Soluble in 4 parts of boiling Water, also in cold Water and Alcohol. Persalts of iron render it blood-red. The Salts of Lead, Silver, and Barium give white precipitates, which are soluble in Nitric Acid. Therapeutically, Meconic Acid has of itself little or no action on the system, but combined with Morphia, it forms the natural salt of Opium, and has a more calming effect than any of the artificial salts of Morphia.

OPIANINE, or OPIANIC ACID.—Discovered by Dr. Hinterberger. Occurs in long, colourless, prismatic crystals. Insoluble in Water, and sparingly soluble in boiling Alcohol, from which it entirely separates on cooling. Strong Sulphuric Acid dissolves without changing it; Nitric Acid colours it yellow, and if added to its Sulphuric Acid solution, blood-red. It contains no Nitrogen.

CRYPTOPIA.—Discovered by T. and H. Smith, vol. viii. pp. 595, 716, Pharm. Journ. With strong Sulphuric Acid it produces a deep blue colour.

APOMORPHIA.—Lately introduced, but not much used. A prompt and active emetic.

Dose.—$\frac{1}{10}$th gr. taken into the stomach operates in twenty minutes, but $\frac{1}{20}$th gr. injected subcutaneously produces vomiting in ten minutes.

Spurious Opium has from time to time found its way into the market; and some very similar in external appearance to the best opium having been found on analysis to contain very little Morphia, the British Pharmacopœia has very properly given the following test:—

Test.—Take of Opium, 100 grains; Slaked Lime, 100 grains; Distilled Water, 4 ounces. Break down the Opium, and steep it in an ounce of the water for twenty-four hours, stirring the mixture frequently. Transfer it to a displacement apparatus and pour on the remainder of the water in successive portions, so as to exhaust the Opium by percolation. To the infusion thus obtained, placed in a flask, add the Lime; boil for ten minutes, place the undissolved matter on a filter, and wash it with an ounce of boiling water. Acidulate the filtered fluid slightly with dilute Hydrochloric Acid; evaporate it to the bulk of half an ounce, and let it cool. Neutralize cautiously with Solution of Ammonia, carefully avoiding an excess; remove by filtration the brown matter which separates, wash it with an ounce of hot water; mix the washings with the filtrate; concentrate the whole to the bulk of half an ounce, and add now solution of Ammonia in slight excess. After twenty-four hours collect the precipitated Morphia on a weighed filter, wash it with cold water and dry it at 212° F. It ought to weigh at least from 6 to 8 grains, and is pure Morphia.

Thus 1 grain of Opium yields $\frac{1}{12}$ grain of Morphia.

The French Pharmacopœia states that soft Smyrna Opium should contain 10 per cent., and hard, 11 or 12 per cent. of Morphia.

14 of good Smyrna fresh from the chest when dried weigh 12, and the extract from it weighs 7.

INCOMPATIBLES.—The Alkaline Carbonates, Lime Water, Salts of Lead, Iron, Copper, Mercury, and Zinc, Liquor Arsenicalis, and all astringent Vegetables.

ANTIDOTES.—In case of poisoning by Opium, the antidotes are an emetic of 10 grs. of Sulphate of Copper, the stomach pump, external stimulants, cold effusion, Ammonia to the nostrils, compelled exertion, and artificial respiration. Belladonna is also recommended.

Medicinal Properties.

Opium has three main physiological effects:—It diminishes pain (insensibility). It causes sleep. It arrests secretion, excepting that of the skin, which it promotes.

In small doses it excites the vascular and nervous systems, increasing the rapidity and fulness of the pulse; this is followed by sleep, accompanied with perspiration. It is apt to produce nausea, headache, thirst, and constipation. If the dose be large, the sleepiness becomes intense, and there is difficulty in waking the patient. By continued use, it impairs the appetite and digestion. It also acts on the respiratory system, diminishing the frequency of respirations, and thus impairing the oxidation of the blood.

Dose.—Of the powder, $\frac{1}{2}$ to 2 grs. = $\frac{1}{12}$ to $\frac{1}{4}$ gr. Hydrochlorate of Morphia.

When *small* pills of Opium are desired, 25 grains of powdered Opium with 1 minim of Syrup and 1 minim of water will form a nice pill-mass.

Preparations.

CONFECTIO OPII. Very dark olive-brown.

Compound Powder of Opium, 192 grs.; Syrup 1 oz.
=(1 of Powder of Opium in 40).

Dose.—5 to 20 grs.

Tablets of Confection of Opium are small hard cylinders, about one inch long, and weighing 20 grs. Are recommended to be taken for a "nightcap" in brandy and water.

EMPLASTRUM OPII. Brown.

Opium in very fine powder, 1; Resin Plaster, 9: melt the Resin Plaster by steam or water bath, add the Opium by degrees, and mix thoroughly.
=(1 in 10).

Anodyne, to relieve local pain.

(U. S. Extract, 1 in 16; Belg. and Ger. 1 in 20; not in others.)

ENEMA OPII.

Tincture of Opium, $\frac{1}{2}$ drm.; Mucilage of Starch, 2 oz.: mix for one enema.

(Not in other Pharmacopœias.)

EXTRACTUM OPII. Rich deep brown.

Opium in thin slices, 1 lb.; Distilled Water, 6 pints; macerate the Opium in 2 pints of the Water twenty-four hours, and express the liquor. Reduce the residue of the Opium to a uniform pulp, macerate it again in 2 pints of the Water for twenty-four hours, and express. Repeat the operation a third

time. Mix the liquors, strain through flannel, and evaporate by a water bath to a proper consistence for forming pills.

This is less stimulating than powdered Opium, and is preferred as a direct sedative.

100 of good Opium yields 50 of extract.

Dose.—½ to 1 gr. or more.

(In all the Pharmacopœias; Ger. reduced to powder, maximum dose 2 grs.)

EXTRACTUM OPII LIQUIDUM. Most intense brown.

Extract of Opium, 1; Distilled Water, 16; Rectified Spirit, 4: digest the Extract of Opium in the Water for an hour, stirring frequently; filter, and add the Spirit. The product should measure 20. =(1 oz. Ext. in 20 oz.).

22 minims=25 minims Tinct. Opii. (1 gr. in 22 minims.)

Dose.—10 to 30 minims.

(Same strength as the Wine, and about one-seventh part stronger than the Tincture.)

Produces the effects of Opium, but with less derangement of the nervous system.

LINIMENTUM OPII. Black. Deposits a good deal when kept.

Tincture of Opium, 1; Liniment of Soap, 1: mix. =(1 in 2).

The addition of the Opium to the Soap Liniment renders it more useful in many cases of rheumatism and local pains.

(Not in other Pharmacopœias.)

PILULA SAPONIS COMPOSITA. Light brown.

Opium in fine powder, 1; Hard Soap, 4; Distilled Water, a sufficiency: reduce the Soap to powder, triturate it with the Opium, and add Water sufficient to make a pill mass. =(1 Powder of Opium in 6, nearly).

Nearly 6 grains contain 1 grain of Powder of Opium.

Anodyne and soporific.

Dose.—3 to 6 grs.

(Same as U.S.; Belg. Pil. Comp. 1 in 100; not in others.)

PULVIS OPII COMPOSITUS. Light olive-brown.

Opium in powder, 3; Black Pepper, 4; Ginger, 10; Caraway, 12; Tragacanth, 1: mix. (The dry ingredients for making Confectio Opii.) =(1 of Powder of Opium in 10).

Dose.—2 to 5 grs.

TINCTURA OPII. Black. (Laudanum.)

Opium in coarse powder, 1½; Proof Spirit, 20: macerate seven days, strain, express, filter, and add spirit to make 20. =(1 oz. in 13⅓ oz.).

25 minims=22 minims Ext. Opii Liq., or 22 minims Vin. Opii. (1 gr. in 14⅔ minims.)

A valuable anodyne and soporific, preferred to solid Opium when a more immediate effect is required.

Dose.—10 to 30 minims.

(U.S. 1 in 12; (Austr. 1 in 6; Belg. and Fr. with Extract, 1 in 12; Ger. 1 in 10 by weight). Fr. has also the Brit. Ph. formula.)

TINCTURA OPII AMMONIATA. Intense reddish-brown. Deposits much when kept.

Opium in powder, 100 grs.; Saffron, cut small, 180 grs,; Benzoic Acid, 180 grs.; Oil of Anise, 60 minims; Strong Solution of Ammonia, 4 oz.;

Rectified Spirit, 16 oz.: macerate seven days in a closed vessel, with occasional agitation, strain, and add sufficient Rectified Spirit to make up 20 oz.
=(1 Powdered Opium in 96 minims).

Dose.—½ to 1 drm.

THE SCOTCH PAREGORIC.—The Caustic Ammonia keeps the Morphia of the Opium in solution; the Carbonate of Ammonia would precipitate it.

TROCHISCI OPII. Deep brown.

Extract of Opium, 72 grs.; Tincture of Tolu, ½ oz.; Refined Sugar in powder, 16 oz.; Gum Arabic in powder, 2 oz.; Extract of Liquorice, 6 oz.; Distilled Water, a sufficiency: divide the mass into 720 lozenges.

Each lozenge contains $\frac{1}{10}$th gr. of Extract of Opium.

Dose.—1 or 2 lozenges.

(U.S. Opium $\frac{1}{20}$th gr. in each; not in others.)

VINUM OPII. Deep brown. Deposits a good deal when kept.

Extract of Opium, 1 oz.; Cinnamon Bark, 75 grs.; Cloves, 75 grs.; Sherry Wine, 20 oz.: macerate for seven days and filter.
=(1 oz. Extract in 20 oz.).

22 minims=1 gr. Extract.

Dose.—10 to 40 minims.

This is ¼ stronger than Vinum Opii, Brit. 1864, and also of the Edin. and Dub., and is about ⅛ weaker than Vin. Opii, Lond.; is stronger than Tinct. Opii, but is of the same strength as Extractum Opii Liquidum. If the Committee could but have left this preparation alone, and have made the Extractum Opii Liquidum of the same strength as the Vinum was, we should have had the Liquid Extract, the Tincture, and the Wine all of one strength, and the latter without the Aromatics. We must now keep the Brit. 1864 for the use of oculists, who object strongly to the Aromatics. The formula of the Brit. 1864 is as follows:—

Opium in powder, 1½; Sherry, 20: macerate seven days, and filter.
=(1 powder in 13⅓).

Dose.—10 to 40 minims.

(Fr. and U.S. 1 in 7½ with aromatics; Belg. both with and without aromatics; not in others.)

Other preparations containing Opium.	Proportions of Opium in the mass.
PILULA IPECACUANHÆ CUM SCILLA	1 in 23.
PILULA PLUMBI CUM OPIO	1 in 8.
PILULA SAPONIS COMPOSITA	1 in 6, nearly.
PULVIS CRETÆ AROMATICUS CUM OPIO	1 in 40.
PULVIS IPECACUANHÆ COMPOSITUS	1 in 10.
PULVIS KINO COMPOSITUS	1 in 20.
SUPPOSITORIUM PLUMBI COMPOSITUM	1 gr. in each.
TINCTURA CAMPHORÆ COMPOSITA	¼ gr. in drm. or 1 in 240.
UNGUENTUM GALLÆ CUM OPIO	1 in 14⅔.

	Morphia in the mass.
MORPHIÆ ACETATIS LIQUOR	4 grs. in 1 oz. or 1 in 123.
MORPHIÆ ACETATIS INJECTIO HYPODERMICA	1 in 12.
MORPHIÆ HYDROCHLORATIS LIQUOR	4 grs. in 1 oz. or 1 in 123.

Other preparations containing Opium.	Proportions of Opium in the mass.
SUPPOSITORIUM MORPHIÆ	½ gr. in each.
SUPPOSITORIUM MORPHIÆ C. SAPONE	½ gr. in each.
TROCHISCI MORPHIÆ	$\frac{1}{30}$ gr. in each.
TROCHISCI MORPHIÆ ET IPECAC.	$\frac{1}{30}$, $\frac{1}{12}$ gr. in each.

AQUA OPII.—Dried Opium, 1; Water, 12: distil 6.

Employed in eye lotions where spirit is objectionable. Aq. Opii, 1; Aq. Sambuci, 7.

UNGUENTUM OPII.—Soft Extract of Opium, 1; simple Ointment, 9: mix. =(1 in 10).

SOLUTION OF BIMECONATE OF MORPHIA.—Same strength and same dose as of Tincture of Opium. This was introduced into medicine by the Author in 1839; possesses in an eminent degree the sedative powers of Morphia. Dr. Roots thus writes of it:—"I have taken it myself daily now very nearly four years, and during that period I have frequently prescribed it in my private practice. The result of my observations on its effects on myself and others amounts to this, namely, that it disturbs the head less, that it distresses the stomach less, and that it constipates the bowels less, than any other preparation of Opium. I have taken every other preparation of Opium, but from none of them have I obtained the same degree of quiet rest that I have enjoyed from this Bimeconate of Morphia."

The Author here records a case of a lady who has taken this preparation from 1841 to 1869, a period of twenty-eight years. The late Dr. Chambers and Mr. Benjamin Phillips attended her; they quite thought that she could not live three months, and they decided that full doses of this preparation should be tried. At length enormous doses were given, *a fluid ounce six times in the twenty-four hours*. The result of this was an entire cessation both of the hæmorrhage from the lungs and the night perspirations, and she began to gain flesh. After some years the dose was diminished gradually till it amounted to 6 drms. twice in the twenty-four hours, and to this she strictly adhered up to the time above mentioned.

For Hypodermic injection, it is evaporated to one-twentieth of its volume, and then 3 minims are equal in power to ½ grain of Acetate of Morphia.

LIQUOR SEDATIVUS (Battley) has enjoyed a reputation for a long time as an anodyne and sedative superior to Tincture of Opium, but it is somewhat stronger, say 50 per cent.; the dose is therefore 10 to 20 minims.

SYDENHAM'S LAUDANUM.—A vinous preparation of Opium (Ger. Tinct. Opii Crocata). 8 minims are equal to 1 grain of Opium.

Dose.—10 to 20 minims.

BLACK DROP.—Originally prepared by John Cook, of Manchester. 1 drop is equal to 4 drops of Tincture of Opium.

Dose.—4 to 8 minims.

JEREMIE'S LAUDANUM.—Prepared by Savory and Moore. The same dose as Battley's.

NEPENTHE.—Prepared by Ferris, of Bristol. Same dose as Tincture of Opium.

TINCTURA THEBAICA.—Extract of Opium, 4; Proof Spirit, 38 by weight: macerate and filter. In doses from 6 to 10 minims.

SYRUPUS CODEIÆ.—Codeia, 6 grs.; Water, ½ oz.; Syrup, 8 oz.: triturate the Codeia with the water, add the Syrup and heat until solution takes place.

Used for cough.

Dose.—1 to 2 teaspoonfuls.

Syrupus Morphiæ.—Liquoris Morphiæ Hydrochloratis, 1 oz.; Syrup. Simplicis, 17 oz.

Each fluid ounce contains ¼ gr. of the Salt.

Dose.—1 to 2 drms.

OS USTUM.

BONE ASH.

The residue of bones which have been burned to a white ash in contact with air.

Used to prepare Calcis Phosphas and Sodæ Phosphas.

OVI VITELLUS.

YOLK OF EGG.

The yolk of the egg of *Gallus Banckiva.*

Contained in Mistura Spiritus Vini Gallici.

OXYMEL.—*See* MEL.

OXYMEL SCILLÆ.—*See* SCILLA.

Not Official.

PANCREATINE.

Baron Lucien Corvisart made some careful and elaborate experiments with this substance, and published them in 1857. He showed that when Pancreatine and Pepsine were digested together, the properties of both were destroyed.

If Corvisart's conclusions are correct, to introduce Pancreatine into the stomach would doubtless do harm to the digestive power of the stomach.

Pancreatine is not prescribed alone for the reasons stated, but is combined with fat or oils, and when thus taken into the stomach does not interfere with the action of the gastric juice, but passes on to the Pancreas and relieves that organ from a portion of its work; besides that, Pancreate of fat, or Pancreatized Cod Liver Oil, is thus rendered more fit for assimilation; in short, Pancreatized fat or oil does for the duodenum what Pepsine does for the stomach; each have their own properties. Pepsine will not digest fat; Pancreatine will not digest albumenoid substances or meat.

Dr. Dobell contends that the natural state of the Pancreatic Juice may be either *acid* or alkaline in its fresh state although always acid soon after removal from the body, but that its acidity or alkalinity has nothing to do with its property of emulsifying fat.

PANCREATIC EMULSION.

The process for making Purified Pancreatic Emulsion is divided into three parts. (See 'Proceedings of the Royal Society,' 1867.)

1. Make Crude Emulsion.
2. Convert the Crude Emulsion into Pancreatized Fat.
3. Make the Purified Emulsion out of the Pancreatized Fat.

1. To make CRUDE EMULSION:—
Fresh Pancreas of the pig freed from fat and all extraneous matter, 25 lb.; Lard, 20 lb.; Water, 3 gallons: bruise the Pancreas in a marble mortar, then add the lard, beat and mix well together, adding the water little by little as it becomes absorbed till 3 gallons are used. Strain by squeezing through muslin.

2. To make PANCREATIZED FAT:—
Treat the Crude Emulsion with Ether, in the proportion of three parts of Ether to one of Emulsion. Mix well, and allow the mixture to stand till two strata are formed, —(*a*) an ethereal solution of pancreatized fat at the top, (*b*) a watery stratum at the bottom. Decant the ethereal stratum and filter, put it into a proper still and recover the ether by distillation. The result is Pancreatized Fat.

3. To make PURIFIED PANCREATIC EMULSION:—
Pancreatized Fat, 2; Rectified Spirit, 1; Distilled Water, 3; Oil of Cloves, a sufficiency: mix gradually in a marble mortar, adding the spirit and water little by little, and enough oil of Cloves to give a slight flavour.

Tests.—The "Pancreatized Fat" when made into Lead Plaster by oxide of lead should yield glycerine.
The "Watery Stratum" left after decanting the ethereal stratum of pancreatized fat (No. 2) should yield no glycerine.
The "Purified Pancreatic Emulsion" should be permanent, and should have an acid reaction.

Dose.—From 1 to 4 drms. mixed in milk or water, from once to four times in twenty-four hours.

PAPAVERIS CAPSULÆ.

POPPY CAPSULES.

The nearly ripe capsules of the White Poppy, *Papaver somniferum*, dried and deprived of the seeds; cultivated in Britain.

Medicinal Properties.

Similar to Opium, but weaker and of uncertain strength.

(In all the Pharmacopœias; Fr. Pavot.)

Preparations.

DECOCTUM PAPAVERIS.
Poppy Capsules, freed from seeds and bruised, 1; Boiling Distilled Water, 15: boil ten minutes and strain; product should be 10. =(1 in 10).

Belg. 1 in 20; not in Austr. and Ger.

An external soothing application, applied warm.

EXTRACTUM PAPAVERIS. Intense brown.
Capsules, freed from seeds, coarsely powdered, 16; Rectified Spirit, 2; boiling Distilled Water, a sufficiency: mix the Poppy Capsules with 40 of the water, stirring them frequently during twenty-four hours, then pack in a percolator and pass water slowly through them until about 160 have passed through. Evaporate the liquor by a water-bath to 20; when cold, add the spirit. After twenty-four hours, filter the liquor and evaporate to a pilular consistence.

Dose.—2 to 5 grs.

SYRUPUS PAPAVERIS. Intense brown.

Poppy Capsules, coarsely powdered, freed from seeds, 36; Rectified Spirit, 16; Refined Sugar, 64; boiling Distilled Water, a sufficiency: macerate the Poppy Capsules in 80 of the water. Infuse for twenty-four hours, then pack in a percolator, and adding more of the water, allow the liquor slowly to pass until 320 have been collected or the Poppies are exhausted, evaporate the liquor by a water-bath until it is reduced to 60; when quite cold, add the spirit, let the mixture stand for twelve hours and filter. Distil off the spirit, evaporate the remaining liquor to 40, and then add the sugar; the product should weigh 104, and measure $78\frac{3}{4}$, and should have the sp. g. 1·320.

$=(1$ in nearly $2\frac{1}{4})$.

Dose.—1 drm.; 10 to 20 minims for children, increasing cautiously in consequence of their susceptibility to the influence of Opium.

Ger. with carobs and liquorice, 1 of capsules in 16 by weight; Austr. with infusion and weaker; Belg. with alcoholic *extract* and simple syrup, 1 in 100; Fr. Sirop Diacode, 1 of extract of Opium in 2000; not in others.)

In this process the spirit is added to the cooled decoction, and thus coagulates the gummy matters; the filtered liquor, now being made into a syrup with the sugar, will be preserved from fermentation even in hot weather.

Not Official.

EXTRACTUM LIQUIDUM.—The liquid obtained by the process for making the syrup (previous to adding the Sugar), 3; Rectified Spirit, 1: mix.

Dose.—30 to 60 minims.

Decoctum Concentratum is the liquid extract without the spirit.

PAREIRÆ RADIX.

PAREIRA ROOT.

The dried root of the *Cissampelos Pareira*, from Brazil.

Several species of *Cissampelos* are imported; a good deal of the stem, which closely resembles the root, is also imported, and is said to be much less efficacious. The root itself has frequently filiform rootlets attached to it.

(U.S. Fr.; not in others.)

Medicinal Properties.

Tonic, aperient, and diuretic. In calculous affections, chronic inflammation, and ulceration of the kidneys and bladder: strongly recommended by the late Sir B. Brodie for its action on the mucous membrane of the bladder.

Dose.—Of the powder, 30 to 60 grs.

Best prescribed with Opium.

Preparations.

DECOCTUM PAREIRÆ.

Pareira, sliced, $1\frac{1}{2}$; Distilled Water, 20: boil fifteen minutes and strain; add water to measure 20. $=(1$ in $13\frac{1}{3})$.

(Not in other Pharmacopœias.)

Dose.—1 to 2 oz. three or four times a day.

EXTRACTUM PAREIRÆ. Intense brown.

Pareira Root, in coarse powder, 1; boiling Distilled Water, 10 or a sufficiency: digest the Pareira with 1½ of water for twenty-four hours, then pack in a percolator, and add water, till, by slow percolation, 10 has passed through. Evaporate by a water-bath to a pilular consistence.

Dose.—10 to 20 grs.

The *solid* extract is sixteen times stronger than the liquid extract. It is ordered with the decoction, to increase its power.

EXTRACTUM PAREIRÆ LIQUIDUM. Intense brown.

Pareira, in coarse powder, 16; boiling Distilled Water, 160, or a sufficiency; Rectified Spirit, 3: macerate in 20 of water for twenty-four hours, pack in a percolator, adding more of the water, allow the liquor slowly to pass, until 160 has been collected, or the Pareira is exhausted, evaporate to 13, and when cold add the spirit, filter, and make up to 16. =(1 in 1).

(U.S. 1 in 1 with Glycerine.)

Dose.—½ to 2 drms.

INCOMPATIBLES.—The persalts of Iron, Salts of Lead, Tinct. of Iodine.

Not Official.

PARIETARIA.

PELLITORY OF THE WALL.

A tablespoonful of the preserved Juice, or 10 grs. of the Extract, three times a day most efficacious in dropsy.

PEPSIN.

PEPSIN.

A preparation of the mucuous lining of a fresh and healthy stomach of the pig, sheep, or calf.

The stomach of one of these animals recently killed having been cut open and laid on a board with the inner surface upwards, any adhering portions of food, dirt, or other impurity, are to be removed and the exposed surface slightly washed with cold water; the cleansed mucous membrane is then to be scraped with a blunt knife or other suitable instrument, and the viscid pulp thus obtained is to be immediately spread over the surface of glass or glazed earthenware and quickly dried at a temperature not exceeding 100°. The dried residue is to be reduced to powder and preserved in a stoppered bottle.

Characters and Tests.—A light yellowish brown powder, having a faint but not disagreeable odour, and a slightly saline taste, without any indication of putrescence. Very little soluble in water or spirit. Two grains of it with an ounce of distilled water, to which five minims of hydrochloric acid have been added, form a mixture in which 100 grains of hard-boiled white of egg, in thin shavings, will dissolve on their being digested together for about four hours at a temperature of 98°.

Dose.—2 to 5 grains.

A few more minims of Hydrochloric Acid would not have been amiss, and ten degrees of temperature might have been added with advantage.—Ed.

The process is that called Beale's process, which has long been employed for making the Pepsine Porci, the great objection to it is, that the epithelium which is scraped off the stomach is dried with the Pepsine. This exposed to a damp atmosphere becomes putrid more or less, and acquires a most repulsive odour.

M. Hottot-Boudault has, however, discovered a means of getting rid of the epithelium, and has produced a Pepsine which contains neither starch nor sugar of milk, and which does not undergo decomposition. It is precisely the strength ordered in the British Pharmacopœia, and answers to all the tests. The author has undertaken the agency of this preparation, and for the sake of distinction as well as a guarantee that this preparation should be always supplied when prescribed, it should be written Pepsine Squire. Dose, 2 to 5 grains in powder or in pill made with glycerin.

The importance of Pepsine in aiding digestion has been justly valued by the the profession for a very long period; before the method of preserving it was discovered, the scrapings of calves' stomachs were employed when gastric juice was found to be deficient.

When Sir James Clark went to the French Exhibition in 1855 with her Majesty, he brought some of the preparation of M. Boudault over with him, which enabled the medical men of this country to give it a trial; it has been therefore an established remedy for nearly twenty years.

It is very remarkable that when you macerate meat with water and Hydrochloric Acid, that it becomes putrid in a very short time, but when sufficient Pepsine has been added to digest the meat, it remains perfectly sweet for a long time. May we not conclude from this, that properly digested food produces no inconvenience, whilst the undigested food decomposes in its passage, giving rise to noxious gases.

PHOSPHORUS.

P, eq. 31.

A NON-METALLIC ELEMENT OBTAINED FROM BONES.

A semi-transparent colourless wax-like solid, which emits white vapours when exposed to the air.

Sp. g. 1·770. Melts at 110°, and ignites in the air.

Solubility: in Ether, in Olive Oil, and boiling Oil of Turpentine; insoluble in water.

(Ger. and Russ.)

Used for making Acidum Phosphoricum Dilutum.

Phosphorus with Cod-liver Oil, or some oily or fatty matter, is employed in many cases where an indication of treatment is to improve nerve tone or repair nerve tissue. Phosphorus and fat are important ingredients in nerve tissue, and are given in the cases which have been indicated for the same reason as that which would lead to the use of Iron in many cases of anæmia. At first the Phosphorated Oil of the Prussian Pharmacopœia, or the Phosphorated Ether of the French Codex was used, but lately in pills made by melting Phosphorus in prepared suet in a closed vessel, and coating them with Tolu dissolved in Ether, the amount of Phosphorus in each three-grain pill being $\frac{1}{30}$ of a grain. The Hypophosphites, of Soda especially, are elegant and effectual means of giving Phosphorus; and a reason for supposing that the Phosphorus of these preparations may be readily got at in the system, is the fact that this element is so loosely combined as to ignite at once when the Hypophosphite is brought near a flame, a result which does not happen when a phosphate is so treated.

Preparations.

OLEUM PHOSPHORATUM.

Phosphorus 12 grs.; Olive Oil, previously heated to 300° for 15 minutes and allowed to cool, and filtered, 4 oz.

Put them into a bottle holding 4½ oz., and heat them in a water-bath to 180°, frequently shaking until dissolved. =(1 in 160).

Dose.—5 to 10 mins.

PILULA PHOSPHORI.

Phosphorus, 2 grs.; Balsam of Tolu, 120 grs.; Yellow Wax, 60 grs.

Put the Phosphorus and Balsam of Tolu into a Wedgewood mortar, previously half filled with hot water; when they are melted, rub together beneath the surface of the water until no particles of Phosphorus are visible, the temperature being maintained at or near 140°. Add the Wax, and when it softens blend the whole together. Should be kept immersed in water. =(1 in 90).

Dose.—3 to 6 grs. = $\frac{1}{30}$ to $\frac{1}{15}$th of a grain.

Those made with suet are preferred.

Not Official.

PHYSALIS ALKAKENGI.

WINTER CHERRY.

Diuretic, febrifuge, dose of the tincture. 1 to 2 drs.

PHYSOSTIGMATIS FABA.

CALABAR BEAN.

The seed of *Physostigma venenosum*, Western Africa, about twice the size of a horse-bean, with a very firm, hard, brittle, shining integument, of a brownish-red colour, irregularly kidney-shaped.

It yields its virtues to Alcohol, and imperfectly to water.

Dose.—In powder, 1 to 4 grs.

(Ger. U.S.)

45 grs. yield 1 gr. of Extract.

Medicinal Properties.

An interesting account of *Traumatic Tetanus* being cured by Calabar Bean, ⅛ gr. of the Extract given every hour, increasing the dose according to symptoms.—*Vide* 'Lancet,' April 4th, 1868.

EXTRACTUM. Deep brown.

Calabar Bean, in coarse powder, 1; Rectified Spirit, 5: macerate the bean for forty-eight hours in one-fourth of the spirit in a closed vessel, agitating occasionally, then transfer to a percolator, and when the fluid ceases to pass, add the remainder of the spirit, so that it may slowly percolate through the powder, subject the residue of the bean to pressure, adding the pressed

liquid to the product of the percolation, distil off most of the spirit, and evaporate what is left in the retort by a water-bath, to the consistence of a soft extract.

Dose.—$\frac{1}{10}$ to $\frac{1}{4}$ gr., three times daily.

Subcutaneous injection. $\frac{1}{3}$ gr. in 10 mins. of water for tetanus.

(Same as U.S.; Ger. with Proof Spirit, Ext. Fabæ Calabaricæ; Russ. with Spirit, Water, and Acetic Acid.)

Not Official.

TINCTURA.—Bean in coarse powder, 1; Rectified Spirit, 4; digest fourteen days.

Dose.—10 minims, gradually increasing.

Books of Calabar paper and of gelatine, with divided squares, are used by oculists to contract the pupil of the eye (after the use of Belladonna), in order to bring back the vision to the normal state.

PILULÆ.

PILLS.

This class of medicines, so convenient and portable, was introduced in the earliest Pharmacopœias, and some of them remain unchanged to the present day. We may mention the Pilula Rufi, which has for at least two hundred years maintained the same proportions, and is now called Pil. Aloes et Myrrhæ. Pills have been rolled in flour, starch, magnesia, liquorice powder, and on the Continent in lycopodium; also, enveloped in silver leaf, and more recently coated with egg-albumen and Ethereal Solution of Tolu for the purpose of preventing them from becoming dry and hard, as well as to shield them from the palate, and so prevent their being tasted. When pills are intended to pass through the stomach, as in the case of Aloes, so as to act entirely on the lower bowels, they are made up with Alcohol, and varnished with an ethereal solution of Tolu.

The following are contained in the British Pharmacopœia, the formulas for which will be found under the names of the substances from which they are prepared.

	Proportion of active ingredients in the mass.
PILULA ALOES BARBADENSIS	1 in 2.
PILULA ALOES ET ASSAFŒTIDÆ	Aloes 1, Ass. 1 in 4.
PILULA ALOES ET FERRI	Aloes 1, Iron $\frac{3}{4}$ in 5$\frac{1}{4}$.
PILULA ALOES ET MYRRHÆ	Aloes 1, Myrrh $\frac{1}{2}$ in 3.
PILULA ALOES SOCOTRINÆ	1 in 2.
PILULA ASSAFŒTIDÆ COMPOSITA	Ass. 1, Galb. 1 in 3$\frac{1}{2}$.
PILULA CAMBOGIÆ COMPOSITA	about 1 in 6.
PILULA COLOCYNTHIDIS COMPOSITA	Col. 1, Aloes 2, Scam. 2 in 6.
PILULA COLOCYNTHIDIS ET HYOSCYAMI	Pil. Col. Co. 2, Ext. Hyos. 1 } in 3.
PILULA CONII COMPOSITA	Ext. 2$\frac{1}{2}$, Ipec. $\frac{1}{2}$ in 3.
PILULA FERRI CARBONATIS	Saccharo-Carbonate 1 in 1$\frac{1}{4}$.

	Proportion of active ingredients in the mass.
PILULA FERRI IODIDI	Iodide of Iron 1 in 3.
PILULA HYDRARGYRI	Mercury, 1 in 3.
PILULA HYDRARG. SUBCHLORIDI COMPOSITA	1 Calomel in 5.
PILULA IPECACUANHÆ CUM SCILLA	3 Dover's Powder in 7.
PILULA PHOSPHORI	1 in 90.
PILULA PLUMBI CUM OPIO	Acet. Lead 6, Opium 1 in 8.
PILULA QUINIÆ	3 Quinine in 4.
PILULA RHEI COMPOSITA	Rhubarb 1, Aloes ¾ in 4½.
PILULA SAPONIS COMPOSITA	1 Opium in 5.
PILULA SCAMMONII COMPOSITA	Scam. 1, Resin Jalap 1 in 5.
PILULA SCILLÆ COMPOSITA	Squills 1 in 5.

N.B.—The dose of all pills should be from 4 or 5 grains to 10 grains, unless otherwise directed.

PIMENTA.

PIMENTO

The dried unripe berries of the Allspice-tree, *Eugenia Pimenta*, from the West Indies.

Medicinal Properties.

A warm aromatic stimulant, like Cloves; used as an adjuvant to tonics and purgatives.

Dose.—10 to 30 grs. in powder.

(U.S. Belg. Fr. Piment de la Jamaïque; not in others.)

Contained in Syrupus Rhamni.

Preparations.

AQUA PIMENTÆ.

Pimento, bruised, 1; Water, 23 nearly: distil one-half. =(1 in 11½).

Dose.—1 to 2 oz.

(Belg. made with essence; not in others.)

OLEUM PIMENTÆ. Colourless at first. Becomes more or less brownish-red by keeping.

The Oil distilled in Britain from Pimento. Sp. g. 1·021.

Dose.—1 to 3 minims, on Sugar, in pill, or emulsion.

(Belg. U.S.; not in others.)

PIPER.

BLACK PEPPER.

The dried unripe berries of the *Piper nigrum*, chiefly from the East Indies.

Medicinal Properties.

A warm carminative stimulant, producing general arterial excitement. Chiefly used to excite the languid stomach and correct flatulence. Acts on the mucous membrane of the rectum, whence it is useful in hæmorrhoids; also on the membrane of the urethra, similarly to Cubebs. In intermittents, it may be used as an adjuvant to more powerful febrifuges, when the stomach is not acted upon by Quinia, as with drunkards.

Dose.—5 to 20 grs. in powder.

(In all the Pharmacopœias except Ger.; Fr. Poivre Noir.)

Contained in Confectio Opii and Pulvis Opii Compositus.

Preparation.

CONFECTIO PIPERIS. Very dark olive brown.

Black Pepper, in fine powder, 2; Caraway, in fine powder, 3; Clarified Honey, 15; triturate. =(1 in 10).

Dose.—60 to 120 grs.

(Not in other Pharmacopœias.)

PIX BURGUNDICA.

BURGUNDY PITCH.

A resinous exudation from the stem of the Spruce fir, *Abies excelsa*, melted and strained; imported from Switzerland.

(U.S.; Belg. Pix Alba; Fr. Poix de Bourgogne; Ger. Resina Pini; not in others.)

It is the Thus or Frankincense of Lond. and Dub. which exudes from the spruce fir, and when melted and strained is called Burgundy Pitch, but much of that found in the shops is made up of resin and palm oil.

Preparations.

EMPLASTRUM PICIS. Yellow.

Burgundy Pitch, 26; Common Frankincense (Thus Americanum*), 13; Resin, $4\frac{1}{2}$; Yellow Wax, $4\frac{1}{2}$; Expressed Oil of Nutmegs, 1; Olive Oil, 2; Water, 2: add the Oil and the Water to the other ingredients, previously melted together; stir, and evaporate to a proper consistence.

Applied to the chest in chronic pulmonary complaints, to the loins in lumbago, to the joints in chronic articular affections, and to other parts to relieve local pains of a rheumatic character. It acts as a counter-irritant.

(U.S. Wax 1, Pitch 12; Belg. Oil 1, Wax 3, Pitch 16; Fr. and Russ. Wax 1, Pitch, 3; not in others.)

PIX LIQUIDA.

TAR.

A bituminous liquid obtained from the wood of *Pinus sylvestris*, or Scotch Pine and other Pines by destructive distillation.

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* From the *Pinus palustris*, Lambert; *Pinus Tæda*, Lindley.

Soluble in its own bulk of Rectified Spirit, and separates on the addition of water.

Medicinal Properties.

Similar to Turpentine. May be used internally in chronic catarrhal affections, and complaints of the urinary passages; also for some chronic skin diseases. Inhaled, the vapour is useful in chronic bronchitis. Also as an external application in cases of lepra, etc.

Dose.—20 to 60 minims, in pills with flour.

(In all the Pharmacopœias; Fr. Goudron Végétal, obtained from *Pinus maritimi.*)

Preparations.

UNGUENTUM PICIS. Black.

Tar, 5; Yellow Wax, 2: melt together and stir till cold. Applied in cases of psoriasis, lepra, and scald-head.

(Fr. Pommade de Goudron, 1 in 4.)

Used to remove tetter and in tinea capitis.

Not Official.

AQUA (TAR WATER).—Stir a pint of Tar with half a gallon of Water for fifteen minutes, and decant.

Dose.—From 1 to 2 pints daily, or may be used as a wash.

(Fr. Eau de Goudron, Tar, 1; Water, 30: digest eight or ten days; Russ. Birch Tar. 1; Water, 40.)

PILULÆ PICIS.—Tar, 2; Liquorice Powder, 1; made into five-grain pills.

Dose.—2 or 3 pills thrice daily (Dr. Seymour).

They are sometimes made of Black pitch, and taken to relieve hæmorrhoids.

TAR CAPSULES.

Dose.—2 capsules, 3 or four times a day, as a stimulant and diuretic.

LAIRITZ'S FIR WOOL OIL.—Oleum Pini Sylvestris; colourless. Sold in bottles with the fir wool for rheumatism.

PLUMBUM.

LEAD.

Pb, eq. 103·5; or **Pb**, eq. 207.

Sp. g. 11·3; fuses at 617° F. Lead occurs in nature as an oxide, and as a sulphuret called *galena*, also in saline combination, forming the native sulphate, phosphate, carbonate, chromate, molybdate, tungstate, and arseniate of lead. The native oxide is rare, but galena, the ore from which nearly all the lead of commerce is extracted, is exceedingly abundant.

INCOMPATIBLES. } Are given after Plumbi Subacetatis Liquor.
ANTIDOTES. }

PLUMBI ACETAS.

ACETATE OF LEAD.

Syn. SUGAR OF LEAD.

$PbO,C_4H_3O_3+3HO$, eq. 1895; or $Pb(C_2H_3O_2)_2.3H_2O$, eq. 379.

In white masses of interlaced acicular crystals, slightly efflorescent, having an acetous odour, and a sweet astringent taste.

Solubility: in Water, 10 in 25.

Litharge, in fine powder, 24; Acetic Acid, 40; Distilled Water, 20: mix the Acetic Acid and the water, add the Litharge, and dissolve with the aid of a gentle heat; filter, evaporate till a pellicle forms, and set aside to crystallize, adding a little Acetic Acid should the fluid not have a distinct acid reaction; drain and dry the crystals on filtering-paper, without heat.

Test.—Its solution in Distilled Water is clear, or is only slightly turbid, and becomes clear on the addition of Acetic Acid. 38 grains dissolved in water, require for complete precipitation 200 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

In small doses, it is sedative and astringent, lessening morbid mucous discharges and hæmorrhages, and even diminishing natural secretions; whence it is useful in chronic diarrhœa and dysentery. Used in phthisis to check expectoration; in bronchitis to abate profuse secretion. Its use requires caution. It is often followed with a small dose of Acetic Acid, because excess of Acid makes it less injurious to the system. Externally, it is sedative, desiccant, and astringent, diminishing profuse discharges of ulcers; also for injection in gonorrhœa.

Dose.—1 or 2 to 8 grs. in pill; but in solution with excess of Acetic Acid, may be cautiously increased to 10 grs. or more three times a day.

(In all the Pharmacopœias; U.S.; Austr. Ger. and Russ. Plumbum Aceticum; Belg. Acetas Plumbi Depuratus; Fr. Acétate de Plomb.)

INCOMPATIBLES.—Sulphuric and Tannic Acids, and their salts.

Preparations.

PILULA PLUMBI CUM OPIO. Intense brown.

Acetate of Lead, in fine powder, 6; Opium, in fine powder, 1; Confection of Roses, 1; mix.

A four-grain pill contains 3 grs. of Plumbi Acet. and ½ gr. Pulvis Opii.

Dose.—1 four-grain pill every three or four hours for hæmorrhage.

(Fr.; not in others.)

SUPPOSITORIA PLUMBI COMPOSITA.

Powder of Acetate of Lead, 36; Opium in Powder, 12; Benzoated Lard, 42; White Wax, 10; Oil of Theobroma, 80: melt the Wax and Oil of Theobroma with a gentle heat, then add the other ingredients previously rubbed together in a mortar, and having mixed them thoroughly, pour the mixture while it is fluid into suitable moulds of the capacity of 15 grains.

The above makes 12 suppositories.

Each suppository contains 3 grs. Acetate of Lead and 1 gr. Opium.

UNGUENTUM PLUMBI ACETATIS. White; sweet at first; becomes rancid by keeping.

Acetate of Lead in fine powder, 12 grs.; Benzoated Lard, 1 oz.: mix. =(1 in 37½).

(Russ. Ceratum, Yellow Wax 12, Olive Oil 12, Acetate of Lead, levigated, 1.

Not Official.

LOTIO PLUMBI ACETATIS.—2 grains to an ounce (Ophthalmic Hospital).

PESSARIES.—Acetate of Lead 7½, Oil of Theobroma sufficient for one pessary.

Acetate of Lead 5 grs., Opium in powder 2 grs., Oil of Theobroma or Stearine sufficient for one pessary.

PLUMBI CARBONAS.

CARBONATE OF LEAD.

$2(PbO,CO_2)+HO,PbO$; eq. 387·5.

A soft, heavy, white powder.

Solubility: insoluble in water; soluble, with effervescence, in diluted Nitric Acid.

Test.—Dissolves in Acetic Acid without leaving any residue, and the solution, when treated with excess of Sulphuretted Hydrogen, boiled and filtered (all the Sulphuret of Lead separated), gives no precipitate with Oxalate of Ammonia—indicating absence of Lime.

Medicinal Properties.

Employed externally as an astringent and sedative, or as an ointment for ulcers and inflamed and excoriated surfaces.

(Same as U.S.; Austr. Plumbum Carbonicum; Belg. Carbonas Plumbi Venale; Russ. Plumbi Carbonicum Basicum; Ger. Cerussa; Fr. Carbonate de Plomb.)

Preparation.

UNGUENTUM PLUMBI CARBONATIS. Cream-colour and inodorous.

Carbonate of Lead, in fine powder, 1; Simple Ointment, 7: mix thoroughly. =(1 in 8).

(Belg. 1 in 6⅔; U.S. 1 in 7; Ger. 1 in 3; not in others.)

PLUMBI IODIDUM.

IODIDE OF LEAD.

PbI, eq. 230·5; or PbI_2, eq. 461·0.

Nitrate of Lead, 4; Iodide of Potassium, 4; Distilled Water, a sufficiency: dissolve, with heat, the Nitrate of Lead in 30 of water, and the Iodide of Potassium in 10 of water; mix the solutions, collect the precipitate on a filter, wash it with Distilled Water, and dry it with a gentle heat.

(Ger. and Russ. Plumbum Iodatum.)

Medicinal Properties.

Used externally as an alterative and discutient.

EMPLASTRUM PLUMBI IODIDI. Pale orange.

Iodide of Lead, 1; Soap Plaster, 4; Resin Plaster, 4: add the Iodide of Lead in fine powder to the plasters previously melted, and mix them intimately.

UNGUENTUM PLUMBI IODIDI. Bright orange.

Iodide of Lead in fine powder, 62 grs.; Simple Ointment, 1 oz.: mix thoroughly. =(1 in 8).

Not Official.

PESSARY.—Iodide of Lead 5 grs., Oil of Theobroma sufficient for one pessary.

PLUMBI NITRAS.

NITRATE OF LEAD.

PbO,NO_5, eq. 165·5; or $Pb(NO_3)_2$, eq. 331.

Used to produce Plumbi Iodidum.

(Russ.)

PLUMBI OXIDUM.

Syn. LITHARGYRUM, 1864.

PbO, eq. 111·5; or **PbO**, eq. 223.

In heavy scales of a pale brick-red colour.

Soluble in diluted Nitric Acid and in Acetic Acid without effervescence. Its solution in diluted Nitric Acid when supersaturated with Ammonia and cleared by filtration does not exhibit a blue colour—indicating absence of Copper.

Absence of Iron is also important; it sometimes contains Iron, and will not then make a white plaster.

Medicinal Properties.

For external application only, to abate inflammation.

(In all the Pharmacopœias.)

Preparation.

EMPLASTRUM PLUMBI. Pale yellow.

Oxide of Lead in very fine powder, 1; Olive Oil, $2\frac{1}{2}$; Water, 1: boil all the ingredients together gently by the heat of a steam-bath and keep them simmering for 4 or 5 hours, stirring constantly until the product acquires the proper consistence for plaster, adding more water during the process if necessary.

Contained in Emp. Ferri, Emp. Galbani, Emp. Hydrarg., Emp. Resinæ, Emp. Saponis.

This plaster of former Pharmacopœias wanted adhesiveness. The British Pharmacopœia directs long boiling, which secures sufficient tenacity, and it now resembles the famous strapping-plaster of Dr. Scott, of Bromley. Care, however, must be taken to use Italian Oil; Gallipoli and Spanish oils will not make an adhesive plaster.

(Same as Austr. Empl. Diachylon Simplex, Litharge 1, Lard 2—Compositum with wax and Resins; Belg. Litharge 2, Oil 4, Water 1—also with Wax and Resins; Ger. Emplastrum Cerussa, Litharge 10, Olive Oil, 25: boil till dissolved and add Litharge 18, boil again, adding water to prevent decomposition; U.S. Empl. Plumbi, Litharge 15, Oil 28, Water *q.s.*)

Equal weight of Lead Plaster and Soap Plaster melted together is an excellent plaster for corns.

Not Official.

Ung. Diachylon. Hebræ., Ger.—Simple Lead Plaster 1, Linseed Oil 1: melt with heat.

PLUMBI SUBACETATIS LIQUOR.

SOLUTION OF SUBACETATE OF LEAD.

Syn. Liquor Plumbi Diacetatis.

Subacetate of Lead, $2PbO,C_4H_3O_3$, eq. 274; or $PbC_2H_3O_2$, eq. 548; dissolved in water.

A dense, clear, colourless liquid, with alkaline reaction and sweet astringent taste.

Acetate of Lead, 5; Litharge, in powder, 3½; Distilled Water, 20: boil half an hour, constantly stirring; filter, and make up 20.

Test.—Sp. g. 1·260. 6 drachms (413·3 grains by weight) require for perfect precipitation 810 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

When largely diluted, it is used externally as an astringent and sedative for inflammation arising from sprains, bruises, etc.; applied by means of cloths kept wet. As an astringent gargle (½ drm. to 6 oz. Rose Water).

(In all the Pharmacopœias; U. S.; rather stronger than Ger.; Austr. Plumbum Acetum Solutum; Belg. Subacetas Plumbi Liquidus; Fr. Sous-Acétat de Plomb Liquide; Ger. Plumbum Hydrico-Aceticum Solutum; Russ. Plumbum Aceticum Basicum Dilutum, sp. gr. 1240.)

Incompatibles.—Hard Water, Mineral Acids, and Salts, Vegetable Acids, Alkalies, Lime Water, Iodide of Potassium, all astringents, preparations of Opium, Albuminous Liquids.

Antidotes.—In case of poisoning with Acetate of Lead, the antidotes are—Sulphate or Phosphate of Soda, Epsom Salts, succeeded by emetics and active purgatives, and afterwards by Opium and liberal libations of Milk.

It is said that men who work in the lead mines, living chiefly on milk, are not subject to lead poisoning.

Preparations.

LIQUOR PLUMBI SUBACETATIS DILUTUS. Slightly opaque, with a deposit.

Solution of Subacetate of Lead, 1; Rectified Spirit, 1: Distilled Water, 78: mix and filter. =(1 in 80).

(Same as U.S. 1 in 42; Austr. 1 in 50; Ger. and Russ. Aq. Plumbi; Fr. Lotion avec l'Acétate de Plomb, 1 in 50; not in others.)

UNGUENTUM PLUMBI SUBACETATIS COMPOSITUM. Sweet at first; becomes rancid if exposed to the air.

Solution of Subacetate of Lead, 6; Camphor, $\frac{1}{8}$; White Wax, 8; Almond Oil, 20: melt the wax with 16 of the oil, on a steam- or water-bath; remove the vessel, and, as soon as the mixture begins to thicken, gradually add the solution of subacetate of lead, and stir the mixture constantly until it cools; then add the camphor, dissolved in the rest of the oil, and mix thoroughly. =(1 in $5\frac{3}{4}$).

(Same as Belg. Unguent. Subacetatis Plumbi; Fr. Cérat Saturné 1 in 10; Ger. Unguentum Plumbi 1 in 10; Russ. 1 in 12; not in others.)

Not Official.

Cremor Lithargyri (Dr. Kirkland).—Solution of Diacetate of Lead, 1; Cream, 8: mix.

Gargarisma Plumbi.—Solution of Diacetate of Lead, 1; Barley Water, 30: mix.

Glycerole of Lead.—Glycerine, $13\frac{1}{2}$ oz.; Solution of Subacetate of Lead, $2\frac{1}{2}$ oz.; Camphor, 1 drm. Triturate the Camphor with a few drops of Rectified Spirit, and add the Glycerine, dissolve by heat, and when cooled add the Solution of Lead. A substitute for Goulard's ointment, and not so liable to change.

Lotio Plumbi Diacetatis.—From 3 minims to 7 minims to an ounce of water.

PODOPHYLLI RADIX.

PODOPHYLLUM ROOT.

The dried rhizome of the *Podophyllum peltatum;* imported from North America.

Medicinal Properties.

An active and certain cathartic. Applicable to cases where brisk purging is required; combined generally with Henbane. Used in the place of Calomel as a cholagogue.

Dose.—10 to 20 grs. in powder, but rarely used in England, the resin being generally meant, when prescribed.

Preparation.

RESINA PODOPHYLLI. A greenish-yellow Powder.

Podophyllum, in coarse powder, 1; Rectified Spirit, $3\frac{3}{4}$, or a sufficiency; Distilled Water and Hydrochloric Acid, of each a sufficiency: exhaust the podophyllum by percolation with the spirit; distil over the spirit; slowly pour the liquid remaining after the distillation of the tincture into three times its volume of water acidulated with one-twenty-fourth part of its weight of

hydrochloric acid, constantly stirring; let it stand twenty-four hours; collect the resin which falls, wash on a filter with distilled water, and dry in a stove.

Solubility: totally in Rectified Spirit, and Ammonia, and almost entirely in pure Ether.

Cholagogue, purgative; used as a substitute for Calomel.

Given in pills with Soap and Hyoscyamus, Rhubarb or aloes.

Dose.—$\frac{1}{6}$ to $\frac{1}{2}$ or even 2 grs. have been given in obstinate cases, but it is best to begin with $\frac{1}{8}$, and may be prescribed with Aloes and Soap.

(U.S.; not in other Pharmacopœias.)

Not Official.

SUPPOSITORIUM.—Podophyllin 1 gr., Oil of Theobroma or Stearine sufficient to make one suppository.

POTASSIUM.

POTASSIUM.

K, or **K**; eq. 39.

Sp. g. 0·86. Potassium was discovered by Sir Humphry Davy in 1807. It is a soft metal (sp. g. 0·865), cutting like wax, of a silver-white colour, but tarnishes the instant it is cut, and assumes a leaden colour. It has so great an affinity for Oxygen, that when thrown on water it combines with it, evolving heat enough to set the Hydrogen on fire, and a Solution of Potash is the result.

Of the preparations of Potassium only the Bromide and the Iodide are admitted into the British Pharmacopœia.

POTASSII BROMIDUM.

BROMIDE OF POTASSIUM.

KBr, or **KBr**; eq. 119.

In white, transparent, cubical crystals, odourless, of a pungent saline taste.

Solubility: in Water, 1 in 2; less soluble in Rectified Spirit.

Test.—10 grains require for complete decomposition 840 grain-measures of the volumetric solution of Nitrate of Silver. A solution of this salt, mixed with the mucilage of Starch, and a drop of aqueous solution of Bromine or Chlorine, does not exhibit any blue colour—indicating absence of Iodide.

When its solution in water is mixed with a little Chlorine, Chloroform agitated with it, on falling to the bottom exhibits a red colour.

Medicinal Properties.

Introduced for chronic enlargements of the liver. It is employed in enlargement of the spleen, and in bronchocele and scrofula. It exerts a power-

ful influence on the generative organs, lowering their functions in a marked degree. Useful in mania and nymphomania. All writers on epilepsy agree that the bromides are most valuable in that malady; their efficacy is, therefore, well attested. Relieves spasmodic asthma, both in children and adults. Useful in overworked brain; also in low state of typhus, in combination with $\frac{1}{3}$ gr. Sulphate of Morphia every three hours. This salt, as well as the Bromide of Ammonium, is used to produce anæsthesia of the larynx.

No permanent ill-effects have resulted from its continuous use.

Dose.—20 to 60 grs. in the twenty-four hours.

(U.S. and Fr.; Ger. and Russ. Kalium Bromatum.)

After long experience of its use, there remains no doubt that its efficacy in keeping off attacks of epilepsy for years is beyond dispute.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts.

Not Official.

PESSARY.—Bromide of Potassium 10 grs., Oil of Theobroma sufficient to make one pessary.

Not Official.

POTASSII CYANIDUM PURUM.

Occasionally employed to produce Hydrocyanic Acid.

Dissolve 20 grains of the Cyanide in 6 drachms of Distilled Water. Dissolve 50 grains Crystallized Tartaric Acid in 3 drachms of Rectified Spirit: mix the solutions.

Bitartrate of Potash is precipitated, and the solution contains 1 grain of Hydrocyanic Acid in every fluid drachm.

It is useful to remove black stains on the skin by Nitrate of Siver.

Entomologists use it with gypsum to make poison bottles for killing insects without injuring the plumage or delicate structure; for this purpose 1 of the Cyanide, 2 of Plaster of Paris, and $1\frac{1}{2}$ Water, stirred together and poured whilst liquid into a wide-mouthed bottle, forms a hard floor, which is constantly giving off vapour.

Not Official.

POTASSII FERROCYANIDUM.

Dose.—2 grains three times a day.

Useful in nervous and atonic digestion, sick headache, irregular bowels, and want of firmness of flesh.

POTASSII IODIDUM.

IODIDE OF POTASSIUM.

KI, or **KI**; eq. 166.

In colourless, generally opaque, cubical crystals.

Solubility: in Water, 4 in 3; Spirit, 1 in 6.

Test.—The addition of Tartaric Acid and Mucilage of Starch to its watery solution does not develope a blue colour—indicating absence of Iodate.

Solution of Nitrate of Silver added in excess forms a yellow-white precipitate (Iodide of Silver), which, when agitated with Ammonia, yields by subsidence a clear liquid, in which excess of Nitric Acid causes no turbidity—indicating absence of Chlorine. Its aqueous solution is only faintly precipitated by the addition of Lime—indicating absence of Carbonates.

Medicinal Properties.

It is useful in cases where Iodine is indicated, and being less irritant is much preferred for internal administration. Useful in internal metritus and leucorrhœa. For secondary symptoms 1 drm. in solution may be given in the twenty-four hours.

Dose.—2 to 10 grs.; increasing the dose. 20 grs. have been given three times a day.

(In all the Pharmacopœias; Ger. and Russ. Kalium Iodatum.)

INCOMPATIBLES.—Sweet Spirits of Nitre, Subnitrate of Bismuth, Decoction of Liquorice, any vegetable preparation containing Starch; any acid preparations.

It is sometimes prescribed with Tincture of Bark, an ounce of which dissolves half a drachm.

Contained in Linimentum Iodi, Tinctura Iodi.

Preparations.

LINIMENTUM POTASSII IODIDI CUM SAPONE.

Hard Soap,* cut small, 1½; Iodide of Potassium, 1½; Glycerine, 1; Oil of Lemon, ½; Water, 10: dissolve the Soap in 7 of the water by heat of a water-bath; dissolve the iodide of potassium and glycerine in the remainder of the water, and mix the two solutions together; when the mixture is cold add the oil of lemon, and mix the whole thoroughly.

"Put the Glycerine, Iodide, and 3 oz. Water into a clean 20-oz. wide-mouth bottle; then dissolve the soap (finely shaved) in the 7 oz. of Water in a jar by the heat of a water-bath; strain the solution whilst hot through muslin into the bottle containing the Iodide, etc.; allow to stand for two or three minutes, until the bottom of the soap solution is a little opaque, then mix by agitation; lastly add the Ess. Limonis, shaking briskly, and, after agitating at intervals for two hours or more, a liniment in the form of a soft white jelly will result, and remain so; if it should not, a small addition of water (½ oz.) will generally perfect it."

The advantages of this liniment are that it does not stain, nor does it irritate when rubbed on the skin; it is employed in enlargement of the joints, indurated glands, especially the cervical glands.

The Addendum says that this Liniment may with advantage (?) be made with curd soap.—It makes a much stiffer liniment, and looks very opaque; patients will hardly believe it is the same liniment.

UNGUENTUM POTASSII IODIDI. White.

Iodide of Potassium, 64 grs.; Carbonate of Potash, 4 grs.; Distilled Water, 1 drm.; Prepared Lard, 1 oz.: dissolve the Carbonate and the Iodide in the Water, and mix thoroughly with the Lard. =(1 in 8¾).

(Same as Belg. U. S. and Russ.; Fr. 1 in 8; Ger. 1 in 10 with Subsulphurated Soda.)

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* The Castile Soap branded "Émile Vincent" and "Honore Arvenon" are those which answer the purpose best.

Note.—The Carbonate is introduced in order to prevent the ointment turning yellow.

Not Official.

UNG. KALI IODATI, Ger. —Iodide of Potassium 20, Hyposulphite of Soda 1, Water 15, Lard 165, makes a white ointment.

PESSARY.—Iodide of Potassium 10 grs., Oil of Theobroma sufficient to make one pessary.

POTASSA CAUSTICA.

CAUSTIC POTASH.

Hydrate of Potash, KO,HO, or **KHO**; eq. 56.

In hard white pencils, very deliquescent, powerfully alkaline and corrosive.

Solubility: in Water, 2 in 1.

Test.—56 grains dissolved in Water leave only a trace of sediment, and require for neutralization at least 900 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A powerful escharotic. Chiefly employed for making caustic issues. Has been much used for the destruction of tumours and the surface of malignant ulcers.

(In all the Pharmacopœias; Ger. and Russ. Kalium Causticum.)

Preparation.

LIQUOR POTASSÆ. SOLUTION OF POTASH. Colourless.

Carbonate of Potash, 2; Slaked Lime, $1\frac{1}{2}$; Distilled Water, 20: dissolve the carbonate of potash in the water, and having heated the solution to the boiling-point in a clean iron vessel, gradually mix with the slaked lime, and continue the ebullition for ten minutes with constant stirring; decant the clear liquid.

U. S. 1·065, containing 5·8 per cent. of Hydrate of Potash.

(Austr. Belg. 1·330; Ger. and Russ. Liquor Kali Caustica 1·335, containing 33 per cent. of Potash; not in Fr.)

Test.—1 fluid ounce (462·9 grains by weight) requires for neutralization 482 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of dilute Hydrochloric Acid, nor give a precipitate with Lime or Oxalate of Ammonia—indicating absence of Carbonic Acid and Lime. When it is treated with an excess of dilute Nitric Acid and evaporated to dryness, the residue forms, with water, a nearly clear solution, which is only slightly precipitated with Chloride of Barium (indicating a trace of sulphates), and Nitrate of Silver (indicating a trace of chlorides), and is rendered very slightly turbid by Ammonia—indicating a trace of Alumina.

1 fluid drachm contains $3\frac{1}{2}$ grains of anhydrous Potassa, and has about the same saturating power as Liquor Sodæ.

Medicinal Properties.

Antacid, diuretic, and antilithic. As an antacid in dyspepsia. Useful in many skin diseases dependent upon a morbid condition of the stomach; given as an alterative in inflammation of the serous membrane attended with fibrinous depositions, as in pleuritis, pericarditis, and periostitis; also in scrofula, syphilis, and chronic rheumatism. Externally as a wash in chronic skin-diseases, as a stimulant lotion, and as an escharotic against the bite of rabid or venomous animals.

During a course of this, the urine does not become alkaline, which is the case when Carbonate of Potash is taken.

Dose.—15 to 60 minims three times a day in Beer, Milk, or Mistura Amygdalæ.

It acts powerfully on all organic matter, converting flannel into a kind of soft jelly after immersion for five or six hours.

INCOMPATIBLES.—Acids, Acidulous Salts, Metallic Salts, the preparations of Ammonia, Belladonna, Henbane, and Stramonium.

ANTIDOTES.—Dilute Acetic Acid, Citric Acid, Lemon Juice, or any vegetable acids fixed oils, demulcents.

Not Official.

BRANDISH'S ALKALINE SOLUTION.—American Pearl ashes 6 lb., freshly prepared Quicklime 2 lb., Wood ashes 2 lb., Boiling Water 6 gallons; or 6, 2, 2, and 60 parts: add first the Lime, then the Pearl ashes, and lastly the Wood ashes to the boiling water, stir well together, let it stand twenty-four hours, and decant the clear liquor.

Dose.—½ to 2 drms. in beer or milk. Given for scrofulous tumours.

POTASSA CUM CALCE (Vienna Paste).—Caustic Potash, 5 drms.; Slaked Lime, 6; drms.; Rectified Spirit, sufficient to make a mass. The paste is spread on the part to be cauterized, and is allowed to remain for ten or fifteen minutes, while the surrounding skin is protected by adhesive plaster.

Potassa cum Calce in cylinders of three different sizes, consisting of 2 parts of Potassa and 1 of Lime, were introduced by Dr. Henry Bennet and are a suitable form for the use of obstetricians.

PASTA CAUSTICA, Russ.—Potassa 3, Lime 1.

POTASSA SULPHURATA.

SULPHURATED POTASH.

Tersulphuret of Potassium, KS_3, with Sulphate of Potash.

Solid greenish masses, liver-brown when recently broken, alkaline and acrid to the taste.

Carbonate of Potash, 10; Sublimed Sulphur, 5: mix them in a warm mortar, and heat them in a Cornish or Hessian crucible, at first gradually, until effervescence has ceased, and finally to dull redness, so as to produce perfect fusion; pour out the product on a clean slab, and cover quickly with an inverted basin till solid, then break into fragments which must be bottled immediately.

Test.—About three-fourths of its weight are dissolved by Rectified Spirit.

Medicinal Properties.

Irritant, narcotic, and antiseptic. A good remedy, both internally and externally, for scabies; used also for other chronic eruptions, especially lepra and psoriasis.

(In all the Pharmacopœias; U. S. Hepar Sulphuris; Ger. and Russ. Kalium Sulphuratum; Fr. Foie de Soufre.)

Dose.—3 to 8 grs.

Preparation.

UNGUENTUM POTASSÆ SULPHURATÆ. Greenish.

Sulphurated Potash, 30 grs., triturate, and add Prepared Lard, 1 oz.: mix. =(1 in $15\frac{1}{2}$).

This Ointment quickly changes, and should therefore be prepared at the time it is required.

Not Official.

BALNEUM SULPHURETUM.—Sulphurated Potash, 4 oz.; Water, 30 gall.: dissolve.

This is not quite so agreeable as the Baréges waters, which may be made artificially as follows: Sulphuret of Sodium, Subcarbonate of Soda, and Muriate of Soda, of each 20 grains to one gallon. But a much stronger solution is often used.

POTASSÆ ACETAS.

ACETATE OF POTASH.

$KO,C_4H_3O_3$, or $\mathbf{KC_2H_3O_2}$; eq. 98.

White, foliaceous, satiny masses, very deliquescent.

Solubility: in Water, 100 in 35; in Proof Spirit, 1 in 2.

Test.—Neutral to test paper. Entirely soluble in Rectified Spirit. Its solution is unaffected by Hydrosulphuret of Ammonia (Sulphide of Ammonium).

Medicinal Properties.

Advantageously used as a purgative and diuretic in dropsy. It allays sickness in pregnancy, and quiets irritation of the gastric and mucous membrane. It has been used with great success in acute rheumatism.

Best administered in simple solution, with a little Sugar if desired.

Dose.—10 to 20 grs. as a diuretic; 120 to 180 grs. as a laxative.

(In all the Pharmacopœias except Aust., which contains a *solution*, sp. g. 1·200; Russ. 1·180.)

POTASSÆ ARSENITIS LIQUOR.

(*Vide* ACIDUM ARSENIOSUM.)

POTASSÆ BICARBONAS.

BICARBONATE OF POTASH.

Syn. POTASSÆ CARBONAS.

$KO,HO,2CO_2$, or $KHCO_3$; eq. 100.

In colourless, right rhombic prisms, not deliquescent, of a saline, feebly alkaline taste. Its solution does not give a coloured precipitate with Perchloride of Mercury.

Solubility: in Water, 1 in 3. Insoluble in Rectified Spirit.

Test.—50 grains exposed to a low red-heat, leave 34½ grains of a white residue (Carbonate of Potash), which requires for exact saturation 500 grain-measures of the volumetric solution of Oxalic Acid.

15 grains of Citric Acid neutralize 20 grains of this salt.

Medicinal Properties.

Antacid, antilithic, and diuretic. A powerful alterative, from its rendering the blood and urine strongly alkaline. Used in dyspepsia as an antacid, and in urinary affections where there is a deposition of Uric Acid. Highly useful in acute rheumatism in large and frequent doses.

Closely resembles the carbonate, but without its irritant qualities.

Administered in aerated water or plain bitter infusion.

Brockendon's compressed pills of Bicarbonate of Potash are convenient.

Dose.—10 to 20 grs. as an antacid or antilithic; 60 grs. as a diuretic. In acute rheumatism, 30 to 40 grs. every four hours, freely diluted.

(Same as U. S. Ger. and Russ. Kali Bicarbonicum Purum, and Fr.; not in others.)

LIQUOR POTASSÆ EFFERVESCENS. *Syn.* POTASH WATER. Colourless.

Bicarbonate of Potash, 30 grs.; Water, 20 oz.: dissolve, and filter the solution, then pass into it as much Carbonic Acid gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced by the pressure of seven atmospheres, bottle it and secure the corks with wires.

Dose.—5 to 10 oz.

POTASSÆ BICHROMAS.

BICHROMATE OF POTASH.

K_2O,CrO_3, or $K_2Cr_2O_7$; eq. 295.

Used to produce the Valerianate of Soda.

POTASSÆ CARBONAS.

CARBONATE OF POTASH.

Syn. SUBCARBONATE OF POTASH, SALT OF TARTAR, SALT OF WORMWOOD.

Carbonate of Potash, KO,CO_2, eq. 69; or K_2CO_3, eq. 138 (with about 16 per cent. of Water of Crystallization).

A white crystalline powder, alkaline and caustic, very deliquescent.

Solubility: in Water, 100 in 75. Insoluble in Spirit.

Test.—Loses about 16 per cent. of its weight when exposed to a red-heat. When supersaturated with Nitric Acid and evaporated to dryness, the residue is almost entirely soluble in Water, only a little Silica remaining undissolved. This solution is precipitated only faintly by Chloride of Barium and Nitrate of Silver. 83 grains require for neutralization at least 980 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Antacid, antilithic, and diuretic. It is less corrosive than Caustic Potash. Like the bicarbonate, it is diuretic, but inferior to the other salts of Potash —the nitrate, acetate, and bitartrate. As an antilithic it is preferable to the bicarbonate, and if the tendency to lithic discharge be great, about 35 grains, in divided doses, may be given daily. Sometimes a solution is used as an antilithic injection.

Dose.—5 to 12 grs.; Brit. Ph. dose 10 to 30 grs.

(In all the Pharmacopœias; Ger. and Russ. Kali Carbonicum Depuratum.)

Contained in Decoctum Aloes Compositum, Enema Aloes, Liquor Arsenicalis, Mistura Ferri Composita.

POTASSÆ CHLORAS.

CHLORATE OF POTASH.

KO,ClO_5, or $KClO_3$; eq. 122·5.

In colourless, inodorous, rhomboidal, crystalline plates, with a cool saline taste. This Salt has sometimes a disagreeable odour of Chlorine.

Solubility: in cold Water, 1 in 12; in boiling Water, 1 in 2.

Test.—Its solution is not affected by Nitrate of Silver or Oxalate of Ammonia—indicating absence of Chlorides and Lime. By heat it fuses and gives off an abundance of oxygen gas. Explodes when rubbed in a mortar with Sulphur.

Medicinal Properties.

Stimulant and diuretic, and appears to undergo no change in passing to the kidneys. Useful when the powers of the system require to be roused, as in the low stage of typhus fever, and particularly, for the same purpose, in smallpox and scarlatina. A strong solution, made with hot water, is the best wash for the mouth when the gums are spongy and irritable; it relieves the tenderness and induces a firmness of the gums, it is also an excellent gargle in Diphtheria. A solution of ½ drm. in 4 oz. water, injected into the bladder daily, is a remedy for vesical catarrh. The powder applied frequently to aphtha in the mouth at once relieves.

(In all the Pharmacopœias; Ger. Kali Chloricum.)

Dose.—10 to 20 grs. in water three or four times daily.

TROCHISCI POTASSÆ CHLORATIS. White, inodorous; pure saline taste.

Chlorate of Potash, in powder, 3600 grs.; Refined Sugar, in powder, 25 oz.; Gum Acacia, in powder, 1 oz.; Mucilage, 2 oz.; Distilled Water, 1 oz., or a sufficiency: mix the powders, and add the mucilage and water to form a proper mass, divide into 720 lozenges.

Each lozenge contains 5 grains of Chlorate of Potash.

Dose.—1 to 6 lozenges.

Lozenges are also made with fruit paste.

(Fr. Tablettes, containing $1\frac{1}{2}$ grain in each lozenge.)

Not Official.

GARGARISMA.—Chlorate of Potash, 1 drm.; Honey, $\frac{1}{2}$ oz.; water to 8 oz.

POTASSÆ CITRAS.

CITRATE OF POTASH.

$3KO,C_{12}H_5O_{11}$, or $\mathbf{K_3C_6H_5O_7}$; eq. 306.

A white powder, of saline, feebly acid taste, and deliquescent.

Solubility: in Water, 10 in 6. Insoluble in Proof Spirit.

Test.—102 grains heated to redness till gas ceases to be evolved, leaves an alkaline residue (Carbonate), which requires for exact saturation 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A refrigerant diaphoretic and mild alkaline laxative. Useful in gout and rheumatism. It is a valuable saline febrifuge, increasing the secretion of the kidneys, and is thus eliminated in the urine, rendering it neutral or alkaline. Given in cases of uric acid gravel; also as a drink in scurvy.

(U. S.; not in others.)

Dose.—20 to 60 grs. in water.

POTASSÆ NITRAS.

NITRATE OF POTASH.

Syn. NITRE, SALTPETRE.

KO,NO_5, or $\mathbf{KNO_3}$; eq. 101.

In white opaque masses or fragments of opaque, striated, six-sided prisms, colourless, of a peculiar cool saline taste.

Solubility: in cold water, 1 in 4; in boiling water, 1 in $2\frac{1}{2}$.

Test.—Its solution is not affected by Chloride of Barium or Nitrate of Silver.

Medicinal Properties.

Refrigerant, diuretic, and diaphoretic. Reduces the pulse, and is peculiarly depressing. Much used in acute inflammatory diseases. With Tartar Emetic and Calomel it promotes the secretions of the liver and skin, and lessens febrile excitement. Useful as a gargle in inflammatory sore-throat.

(In all the Pharmacopœias; Ger. and Russ. Kali Nitricum.)

Dose.—5 to 20 grs. as a refrigerant and diuretic; 20 to 30 grs. as a vascular sedative.

Not Official.

CHARTA NITRATA, Ger.—Soak porous paper in a solution of Nitre, 1 part in 4 of water, dry it, roll it up, and burn in a candlestick. Used in asthma.

GARGARISMA.—Nitre, ¼ oz.; Oxymel, 1 oz.; Barley Water, 7 oz.

POTASSÆ PERMANGANAS.

PERMANGANATE OF POTASH.

KO,Mn_2O_7, or $KMnO_4$; eq. 158.

In dark purple, slender, prismatic crystals, inodorous, with a sweet astringent taste.

Solubility: in Water, 1 in 16.

Test.—Entirely soluble in cold Water, producing a rich purple colour. 5 grains dissolved in Water requre, for complete discoloration, a solution of 44 grains of granulated Sulphate of Iron acidulated with 2 drachms of dilute Sulphuric Acid.

Medicinal Properties.

A powerful antiseptic. Given also in diabetes. Externally, as a caustic and deodorizer, to foul ulcers and cancers. Corrects offensive evacuations. Useful in ozæna; it corrected fœtid expectorations when carbolic acid failed.

Dose.—1 to 2 grs. three times daily in water, gradually increasing.

(Ger. U. S. Fr. and Russ. Kali Hypermanganicum; not in others.)

Preparation.

LIQUOR POTASSÆ PERMANGANATIS. Intense purple.

Permanganate of Potash, 4 grs.; Distilled Water, 1 oz.: dissolve.
=(1 in 120).

(Half the strength of Condy's Fluid.)

INCOMPATIBLES.—Ought never to be put in corked bottles, as it soon becomes decomposed when in contact with any organic substance, animal or vegetable.

Diluted with 40 parts water, it is useful as a gargle or as a cleansing wash for diseased surfaces.

Dose.—2 to 4 drms.

POTASSÆ PRUSSIAS FLAVA.

YELLOW PRUSSIATE OF POTASH.

Syn.—FERROCYANIDE OF POTASSIUM.

$K_2F_2C_6N_3+3HO$, eq. 211; or $\mathbf{K_4FeC_6N_6, 3H_2O}$, eq. 422.

Used to prepare Acidum Hydrocyanicum Dilutum.

POTASSÆ SULPHAS.

SULPHATE OF POTASH.

KO,SO_3, eq. 87; or $\mathbf{K_2SO_4}$, eq. 174.

In colourless, hard, six-sided prisms, terminating by six-sided pyramids.

Solubility; in cold Water, 1 in 10; boiling Water, 1 in 4. Insoluble in Rectified Spirit.

Test.—Its solution is neutral to test paper; is not affected by Oxalate of Ammonia—indicating absence of Lime.

Medicinal Properties.

Mildly cathartic, usually operating without irritation. Generally given in combination with Rhubarb. A useful purgative in jaundice and dyspeptic affections.

Dose.—10 to 20 grs. as an alterative; 60 grs. as a purgative.

(In all the Pharmacopœias; Fr. Sulfate de Potasse; Ger. and Rus. Kali Sulphuricum.

Contained in Pilula Colocynthidis Composita and Pulvis Ipecacuanhæ Compositus.

Sulphate of Potash was long known as Sal Polychrestum, and the Bisulphate (the residue from making Nitric Acid) is called Sal Enixum.

Not Official.

POTASSÆ SULPHIS.—A Salt obtained by saturating a solution of Carbonate of Potash with Sulphurous Acid Gas and crystallizing it. Solubility in water, 1 in 3 Dose: 10 grs. in Pyemia.

POTASSÆ TARTRAS.

TARTRATE OF POTASH.

Syn. SOLUBLE TARTAR.

$2KO,C_8H_4O_{10}$; or $\mathbf{K_2C_4H_4O_6}$, eq. 226.

In small, colourless, four- or six-sided prisms.

Solubility: in Water, 10 in 8. Insoluble in Rectified Spirit.

Test.—Entirely dissolved by its own weight of Water. 113 grains heated to redness till gases cease to be evolved, leave an alkaline residue (Carbonate), which requires for exact saturation 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A mild, cooling purgative, operating, like most of the neutral salts, without much pain, and producing watery stools. In smaller doses, diuretic and alterative.

Dose.—As a diuretic and alterative, 20 to 60 grs.; as a purgative, 120 to 200 grs.

(In all the Pharmacopœias; U.S.; Austr. Kali Tartaricum Neutrum; Fr. Tartrate Neutre de Potasse; Belg. Russ. and Ger. Kali Tartaricum.)

POTASSÆ TARTRAS ACIDA.

ACID TARTRATE OF POTASH.

Syn. POTASSÆ BITARTRAS; CREAM OF TARTAR.

$KO,HO,C_8H_4O_{10}$; or $KHC_4H_4O_6$, eq. 188.

A finely gritty white powder, or fragments of cakes crystallized on one surface, of a pleasant acid taste.

Solubility: in cold Water, 1 in 200; in boiling Water, 1 in 18. Insoluble in Rectified Spirit.

Test.—188 grains, heated to redness till gas ceases to be evolved, leave an alkaline residue (Carbonate), which requires for exact saturation 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Cathartic, diuretic, and refrigerant. Much used in febrile and dropsical affections.

Dose.—As a refrigerant or diuretic, 20 to 60 grs.; as an aperient, 60 to 120 grs.; as a hydragogue cathartic, ½ to 1 oz.

(In all the Pharmacopœias; Fr. Tartrate Acide de Potasse; Ger. and Russ. Kali Bitartaricum Purum.)

Contained in Confectio Sulphuris, Pulvis Jalapæ Compositus.

Not Official.

POTASSÆ BORO-TARTRAS (Fr. and Russ.), Soluble Cream of Tartar.—Acid Tartrate of Potash, 4; Boracic Acid, 1; Water, 32: evaporate in a water bath, and afterwards dry in a stove.

PRUNUM.

PRUNE.

The dried drupe of the plum, *Prunus domestica*, from trees cultivated in Southern Europe.

Medicinal Properties.

Nutritious and refrigerant. Rarely prescribed, though often used in domestic medicine as a laxative.

(In all the Pharmacopœias except Ger.)

Contained in Confectio Sennæ.

Not Official.

PRUNI VIRGINIANÆ CORTEX.—Wild Cherry Bark.

SYRUPUS.—Bark, 5; Cold Water, 16; infuse four hours, strain, and add Sugar, 22.

Tonic and calming, highly useful in debility of stomach with local irritation.

Dose.—2 to 4 drms.

PTEROCARPI LIGNUM.

RED SANDAL-WOOD.

The wood of the *Pterocarpus santalinus*, from Ceylon, in chips.

Used solely as a colouring agent.

(In all the Pharmacopœias except U.S. Ger.; Fr. Santal Rouge.)

Contained in Tinctura Lavandulæ Comp.

The Essential Oil (Ol. Santalis Flav.) has lately been prescribed for Gonorrhœa. Dose: 30 minims rubbed down with ʒj Mucilage, adding ʒj Syrup and ʒss Tincture of orange three times a day.

10 or 12 drops on sugar good for leucorrhœa three times a day.

PULVERES.

POWDERS.

The following Powders are contained in the British Pharmacopœia, the formulas of which will be found under the names of the substances from which they are prepared:—

	Proportions of active ingredients to the whole.
PULVIS AMYGDALÆ COMPOSITUS	8 in 13.
PULVIS ANTIMONIALIS	Oxide 1 in 3.
PULVIS CATECHU COMPOSITUS	1 in 2½.
PULVIS CINNAMOMI COMPOSITUS	1 in 3.
PULVIS CRETÆ AROMATICUS	1 in 4.
PULVIS CRETÆ AROMATICUS CUM OPIO	Opium 1 in 40.
PULVIS GLYCYRRHIZÆ COMPOSITUS.	
PULVIS IPECACUANHÆ COMPOSITUS	Opium 1 in 10.
PULVIS JALAPÆ COMPOSITUS	1 in 3.
PULVIS KINO COMPOSITUS	Opium 1 in 20.
PULVIS OPII COMPOSITUS	Opium 1 in 10.

	Proportions of active ingredients to the whole.
PULVIS RHEI COMPOSITUS	1 in 4½.
PULVIS SCAMMONII COMPOSITUS	1 in 2.
PULVIS TRAGACANTHÆ COMPOSITUS.	

PYRETHRI RADIX.

PELLITORY ROOT. PELLITORY OF SPAIN.

The root of *Anacyclus Pyrethrum*, imported from the Levant.

Medicinal Properties.

Is powerfully stimulant to the salivary glands, causes a copious flow of saliva, and, on that account, is so effective in relieving toothache, and has been useful in paralysis of the tongue.

(Austr. Belg. Fr.)

Preparation.

TINCTURA PYRETHRI. Light brown.

Pellitory Root, in coarse powder, 4; Rectified Spirit, 20: macerate for forty-eight hours with fifteen of the spirit, agitating occasionally, then pack in a percolator, let it drain, and pour on the remaining spirit; when it ceases to drop, press, filter, and make up to 20. =(1 in 5).

Chiefly used alone or in mixture for relieving toothache.

(Austr. Belg. Fr. 1 in 5, Russ. 1 and 6, by weight; not in others.)

Not Official.

PYRETHRUM ROSEUM.—The powder of the flower-heads, called "Insect Powder." Keeps away fleas; it also drives away ants if placed in their track.

PYROXYLIN.

GUN COTTON.

Cotton, 1; Sulphuric Acid, 5; Nitric Acid, 5: mix the Acids, immerse the Cotton, and stir with a glass rod for three minutes, or until it is thoroughly wetted, then remove it, and thoroughly wash out the acid, so that the washings cease to precipitate Chloride of Barium. Drain on filtering paper, and dry in a water bath.

Test.—Readily soluble in a mixture of Ether and Rectified Spirit. Leaves no residue when exploded by heat.

PREPARATIONS.—Collodium, Collodium Flexile.

The proportions employed by both the U.S. and German Pharmacopœias are, Cotton 1, Sulphuric Acid 8, Nitric Acid (sp. g. 1·420) 7: all by weight. The acids are mixed gradually and allowed to cool to 80° or 90° F. The cotton is then

immersed and thoroughly imbued with the acid by aid of a glass rod and allowed to macerate for 15 hours; it is first washed with cold water, to remove the acid, and then with boiling water, it is then (pressed Ger.; drained U.S.) and dried on bibulous paper in a water-bath.

QUASSIÆ LIGNUM.

QUASSIA WOOD.

The wood of the *Picræna excelsa*, from Jamaica, in raspings and chips.

Medicinal Properties.

Possesses in a high degree the properties of the simple bitters, without astringency. Tonic. Particularly adapted to dyspepsia and in the debility which succeeds acute disease, also as a tonic in intermittents.

(In all the Pharmacopœias.)

Preparations.

EXTRACTUM QUASSIÆ. Black.

Quassia, rasped, 1 lb.; Distilled Water, a sufficiency: macerate the Quassia in 8 oz. of water for twelve hours, pack in a percolator, add water till the Quassia is exhausted, evaporate, filter before it becomes thick, again evaporate by a water bath to a proper consistence for forming pills.

48 oz. of wood yield 1 ounce of extract.

Dose.—3 to 5 grs.

(In all the Pharmacopœias. Russ. with Wood and Bark.)

INFUSUM QUASSIÆ.

Quassia, in chips, 60 grs.; cold Distilled Water, 10 oz.: infuse half an hour and strain. (=1 in 80).

Dose.—1 to 2 oz.

(U.S. 1 in 64; Fr. 1 in 200; not in Aust. Belg. and Ger.)

A good vehicle for iron preparations.

TINCTURA QUASSIÆ. Straw-colour.

Quassia in chips, ¾; Proof Spirit, 20: digest seven days, filter, and make up 20. =(1 in 27).

Dose.—1 to 2 drms.

(U.S. 1 in 15; Belg. 1 in 5; Fr. 1 and 5, Russ. 1 and 6, by weight; not in others.)

QUERCUS CORTEX.

OAK BARK.

The dried bark of the small branches and young stems of the *Quercus pedunculata*, collected in spring from trees growing in Britain.

Medicinal Properties.

A valuable astringent, whether administered internally or applied externally. May be used either generally or topically, in all cases requiring astringents, such as tenderness of the gums; in leucorrhœa, prolapsus, etc.

Dose.—Of the powder, 30 to 120 grs.

(U.S. Ger. Russ. and Belg.; Fr. Écorce de Chêne; not in others.)

Preparation.

DECOCTUM QUERCUS.

Oak Bark, bruised, 1¼; Distilled Water, 20: boil ten minutes in a covered vessel and strain; wash the marc with water to make up 20. =(1 in 16).

Dose.—1 to 2 oz. two or three times daily.

(Belg. and U.S. 1 in 20; not in others.)

INCOMPATIBLES.—Mineral Acids, Alkalies, Metallic Salts, Gelatine, Alkaloids.

Not Official.

QUILLAYA SAPONARIA.

The inner bark of the tree, and called Soap Bark; it imparts a soapy character to cold water when macerated in it, and is much valued as a wash to cleanse the hair.

QUINIÆ SULPHAS.

SULPHATE OF QUINIA.

$C_{40}H_{24}N_2O_4,HO,SO_3+7HO$, eq. 436; or $(C_{20}H_{24}N_2O_2)_2H_2SO_4,7H_2O$, eq. 872.

The sulphate of an alkaloid prepared from Yellow Cinchona Bark and from the bark of *Cinchona lancifolia*.

(Quinia was discovered by Pelletier and Caventou in 1820.)

100 parts consist of 75 Quinia, 9 Sulphuric Acid, and 16 Water.

Yellow Cinchona Bark, in coarse powder, 16; Hydrochloric Acid, 3; Distilled Water, a sufficiency; Solution of Soda, 80; dilute Sulphuric Acid, a sufficiency. Proceed as directed in the Pharmacopœia.

Solubility: in Water, 1 in 1000; also in Rectified Spirit, 1 in 200.

60 grs. require 60 minims of diluted Sulphuric Acid or diluted Phosphoric Acid for solution in 2 oz. of distilled water.

66 grs. require 60 minims of diluted Nitric Acid for solution in 2 oz. of water.

Test.—Dissolved in pure Sulphuric Acid, has a feeble yellowish tint, and undergoes no further change of colour when gently warmed. 10 grains, with 10 minims of diluted Sulphuric Acid and half a fluid ounce of Water, form a perfect solution, from which Ammonia throws down a white precipitate. This re-dissolves on agitating the whole with half a fluid ounce of pure Ether, without the production of any crystalline matter floating on the lower of the two strata into which the agitated fluid separates on rest—indicating absence of Quinidia and Cinchonia. The upper stratum of fluid, if entirely removed by a pipette and evaporated, leaves a white residue, which, when dried in the air without heat, weighs 8·6 grains, and is pure Quinia.

Sulphate of Quinia is prepared with profit only on a large scale. The test given for its purity is a sufficient safeguard to the purchaser.

12 grs. possess the power of 1 ounce of good bark.

25 grs. of Sulphate of Quinia should lose 3·6 grs. of water by drying at 212°.

If 15 grs. are prescribed with 30 grs. Carb. Ammon. in 6 oz. of water, it solidifies.

Contained in Ferri et Quiniæ Citras.

INCOMPATIBLES.—All Alkalies and their Carbonates; astringent Infusions throw down a Tannate of Quinia, which Sulphuric Acid, instead of dissolving, helps in precipitating. Tinctures do not readily dissolve Quinia; it should be always prescribed in mixtures with a little Nitric Acid, or, if preferred in drops, can be made as already directed with either of the Acids, as mentioned above on opposite page.

Medicinal Properties.

Sulphate of Quinia may be substituted in all cases where Cinchona is applicable, and in the treatment of intermittent fevers and agues has almost superseded the bark. Useful in many chronic diseases in which intermissions do not occur, as in chronic and pulmonary catarrh kept up by weakened habit, chronic diarrhœa, scrofulous condition of the system, and every case of direct debility. In neuralgia and in acute lumbago, 2 grains three times a day. 20 grains taken when a fit of epilepsy is coming on will frequently prevent it. For subcutaneous injection, 1 grain neutral Sulphate in 12 minims of water.

When a large dose (say 10 grains) is given, it is best suspended in water; the bitterness is not then so intense as when in solution; prescribed in pill, syrup, confection, or Glycerine is best. When in mixture, Tincture of Orange and sometimes Spirit of Ether is added to prevent it causing headache. The Infusion of Roses of the Pharmacopœia is a favourite vehicle, but it is always turbid and unsightly; in the Infusion of Roses with Nitric Acid (*vide* Rosa Gallica) it is bright and attractive in appearance. But if Sulphuric Acid, or even Sulphate of Magnesia, is prescribed with Quinia in this Infusion, it becomes at once turbid.

Dose.—1 to 5 grs. three times daily as a tonic, or in larger doses as an antiperiodic.

(In all the Pharmacopœias; Ger. and Russ. Chininum Sulphuricum.)

Preparations.

PILULA QUINIÆ.

Sulphate of Quinia, 60 grs.; Confection of Hips, 20 grs.: mix. =(1 in 1⅓).

Dose.—2 to 10 grs.

TINCTURA QUINIÆ. Light brown.

Sulphate of Quinia, 1; Tincture of Orange Peel, 60: dissolve with a gentle heat, digest for three days with occasional agitation, and strain. =(1 in 60).

Dose.—1 to 1½ drm.

A good preparation, and a very convenient form to be used by travellers under a course of Quinia.

NOTE.—Some chemists, I am told, add 1 minim of diluted Sulphuric Acid to each f℥j of Tincture in order to dissolve all the Quinia; this is a mistake, for as the Tinct. of Orange dissolves nearly the whole of the Quinia, it is not needed, nor does the acid diminish the precipitation of the Tannate of Quinia.

TINCTURA QUINIÆ AMMONIATA.

Sulphate of Quinia, 160 grs.; Solution of Ammonia, 2½ fl. oz.; Proof Spirit, 17½ oz.: dissolve the Quinia in the Spirit with a gentle heat and add the Solution ofAmmonia. =(1 in 60.)

Dose.—1 to 2 drms.

VINUM QUINIÆ. Light brown.

Sulphate of Quinia, 20 grs.; Citric Acid, 30 grs.; Orange Wine, 20 oz.; dissolve first the Citric Acid and then the Sulphate of Quinia in the wine: digest three days and filter. =(1 in 480).

Dose.—½ to 1 oz.

Not Official.

QUINIÆ ARSENIAS.—Dose one-tenth gr.

QUINIÆ CARBOLAS.—Dose, 2 grs. for diarrhœa.

QUINIÆ CITRAS.—Solubility in water, 1 in 1000; not soluble in lemon juice.

QUINIÆ VALERIANAS.—Made by decomposing Muriate of Quinia with Valerianate of Soda. Solubility: 1 in 110 Cold Water, 1 in 40 boiling; 1 in 6 in Cold Rect. Sp.; 1 in 1 boiling: also soluble in Ether.

Dose.— 1 to 3 grs.

SYRUP OF DIKINATE OF QUINIA.—Introduced by Dr. Donovan of Dublin. 1 drm. contains 2 grs. of Dikinate of Quinia, which is equal to 3¾ oz. of Decoction of Bark or 96 grs. of Powdered Bark.

Dose.—½ to 1 drm.

SYRUPUS QUINIÆ HYDRIODATIS. 1 grain in each drachm.

An excellent remedy in cases of chronic rheumatism.

Dose.—A teaspoonful three times a day.

RESINA.

RESIN.

The residue of the distillation of the Turpentines from various species of *Pinus* and *Abies*.

Medicinal Properties.

Important as an ingredient of ointments, but never used internally.

(In all the Pharmacopœias; Austr. Terebinthina Cocta; Belg. Resina Alba; Ger. Resina Pini.)

Contained in Charta Epispastica, Emplastra, and Unguentum Terebinthinæ.

Preparations.

EMPLASTRUM RESINÆ. Pale Yellow.

Resin, in powder, 2; Litharge Plaster, 16; Hard Soap, 1: melt the Plaster with a gentle heat, add the Resin and Soap, first liquefied, and mix. =(1 in 9½).

(Belg.; U.S. Resin 2, Lead Plaster 12; Ger. and Russ. with Colophony; not in others.)

Used chiefly for strapping wounds and ulcers.

UNGUENTUM RESINÆ. Dusky yellowish-brown.

Resin, in coarse powder, 2; Yellow Wax, 1; Simple Ointment, 4: melt with a gentle heat, strain while hot through flannel, and stir till cool. =(1 in 3½).

(Fr. Onguent Basilicum ; Ger. and Russ. Ung. Basilicum is different; not in others.)

A stimulant dressing for indolent ulcers.

RHAMNI SUCCUS.

BUCKTHORN JUICE.

The recently expressed juice of the ripe berry of Common Buckthorn *Rhamnus catharticus*.

Medicinal Properties.

A powerful cathartic, producing many watery evacuations and sometimes severe tormina. Given in dropsy, but, on account of its severity of operation, is not much used.

Preparation.

SYRUPUS RHAMNI. Deep red; crystallizes on keeping.

Buckthorn juice, 97 ; Ginger, sliced, 1 ; Pimento, bruised, 1 ; Refined Sugar, 97 ; Rectified Spirit, 8 oz. : evaporate the juice to nearly half ($\frac{5}{8}$), add the Ginger and Pimento, digest at a gentle heat for four hours, and strain; when cold add the spirit, let the mixture stand for two days, then decant off the clear liquor, and in this dissolve the sugar with a gentle heat.

Sp. g. 1·320.

Dose.—1 drm.

(Ger. and Russ. Clarified Juice 5, Sugar 9 ; not in others.)

RHATANIA.—*See* KRAMERIA.

RHEI RADIX.

RHUBARB ROOT.

From the dried root deprived of its bark, one or more undefined species of *Rheum*, from China, Chinese Tartary, and Thibet. Imported from Shanghai and Canton.

Test.—Free from decay, not worm-eaten, Boracic Acid does not turn the yellow exterior brown. In the powder, adulterations are detected with difficulty.

Medicinal Properties.

Cathartic and astringent, the latter property not interfering with the former, as the purgative effect precedes the astringent. Used in dyspepsia attended with constipation; in diarrhœa when purging is indicated; in the second stage of cholera infantium; in chronic dysentery, and in typhous diseases when cathartic medicine is necessary. It is non-irritant, and increases the effect of other cathartics.

4 grains of Powdered Rhubarb and 1 minim of Glycerine make a nice pill.

Dose.—As a stomachic, 1 to 5 grs. of the powder : as a purgative, 10 to 20 grs.

(In all the Pharmacopœias.)

The *Rheum Ponticum* is grown at Banbury, in Oxfordshire. In four or five years the roots attain the size of a man's arm; in drying it loses 75 per cent., and yields a fine yellow powder. A good deal is exported, and perhaps a little is used here.

Bicarbonate of Soda in equal weight with powdered Rhubarb takes off the astringency, and covers the taste; the addition of Peppermint Water still further hides it; or 1 drop of Oil of Peppermint, 30 grains Sugar, will disguise the taste of 15 grains of powdered Rhubarb. 1 drop Oil Nutmeg, 30 grains Sugar, and 10 grains of powdered Rhubarb, make a pleasant draught.

Preparations.

EXTRACTUM RHEI. Intense reddish-brown, with powerful Rhubarb odour.

Rhubarb, sliced or bruised, 8; Rectified Spirit, 5; Distilled Water, 50: mix and macerate four days, decant, press, and allow to settle; pour off the clear liquor, filter the remainder, mix, and evaporate, by a water bath, at 160° F., to a proper consistence for forming pills.

Good Rhubarb yields 39 per cent. of Extract.

Dose.—3 to 6 grs. Brit. Ph. dose 5 to 20 grs.

(In all the Pharmacopœias; Fr. soft aqueous extract; U.S. with Alcohol; Russ. with water only.)

INFUSUM RHEI.

Rhubarb, in thin slices, 1; boiling Distilled Water, 40: infuse one hour and strain. =(1 in 40).

Dose.—1 to 2 oz.

(U.S. 1 to 32; Belg. 1 to 15, cold; Fr. cold, 1 in 200; not in others.)

PILULA RHEI COMPOSITA. Intense brown.

Rhubarb, in fine powder, 3 oz.; Socotrine Aloes, in fine powder,* 2¼ oz.; Myrrh, in fine powder, 1½ oz.; Hard Soap, 1½ oz.; English Oil of Peppermint, 1½ drm.; Treacle, by weight, 4 oz.: reduce the Soap to fine powder and triturate it with the Rhubarb, Aloes, and Myrrh, add the Treacle and Oil, and beat into a mass.

Dose.—5 to 10 grs.

(Same as Fr.; U.S. contains neither Soap nor Treacle; not in others.)

PULVIS RHEI COMPOSITUS. Yellowish cream-colour.

Rhubarb, in powder, 2; Light Magnesia, 6; Ginger, in powder, 1: mix. =(1 in 4½).

The original Dr. Gregory's Powder.

Dose.—30 to 60 grs. 5 to 10 grs. for children.

(U.S.; Ger. and Russ. Pulvis Magnesiæ cum Rheo, pro infantibus Carb. Magnes. 60, Sacch. 40, Rhei 15, Ol. Fœnic 1; not in others.)

SYRUPUS RHEI. Intense brown.

Rhubarb, in coarse powder, 2; Coriander Fruit, in powder, 2; Refined Sugar, 24; Rectified Spirit, 8; Distilled Water, 24: mix the Rhubarb and Coriander, pack them in a percolator, pass the spirit and water previously

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* Some physicians prefer the aqueous extract.

mixed, slowly through them, evaporate the liquid that has thus passed until i is reduced to 13, and in this, after it has been filtered, dissolve the Sugar with a gentle heat.

Dose.—1 to 4 drms.

(Fr. Sirop de Rhubarbe Composé ; Belg. Syr. Rhei. and Syr. Rhei Compositus ; U.S. Syr. Rhei and Syr. Rhei Aromaticus ; Ger. and Russ. with Cinnam. and Carb. Potash.

TINCTURA RHEI. Intense brown ; deposits slightly when kept.

Rhubarb, bruised, 2 ; Cardamom Seeds, bruised, ¼ ; Coriander, bruised, ¼ ; Saffron, ¼ ; Proof Spirit, 20 : macerate for forty-eight hours with 15 of the spirit, agitating occasionally, pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press and wash the marc, and add spirit to make up 20. =(1 in 10).

Dose.—As a stomachic, 1 to 2 drms.; as a purgative, ½ to 1 oz.

(U.S.; Fr. and Belg. Rhubarb only, 1 in 5 by weight; Austr. Ger. Tinct. Vinosa, 1 to 12 ; Fr. has also the formula of the Brit. Ph.)

VINUM RHEI. Deep maroon; deposits very much when kept.

Rhubarb in coarse powder, 1½ ; Canella Bark, ⅛ ; Sherry, 20 : macerate seven days, filter and make up 20. =(1 in 14).

Dose.—1 to 2 drms.

(Belg. 1 in 7 ; Fr. 1 in 16 ; Ger. Tinct. Rhei Vinosa with Orange Peel and Cardamoms ; not in others.)

Extractum Rhei Comp., Russ.—Ext. Aloes, 1 ; Ext. Rhei., 3 ; Jalapini Saponis, 1 ; Water, 4 ; Spt., 4 : misce secundum artem.

RHŒADOS PETALA.

RED POPPY PETALS.

The fresh petals of the *Papaver Rhœas ;* from indigenous plants.

Medicinal Properties.

Of feeble opiate powers ; chiefly used on account of its colouring property.

(In all the Pharmacopœias ; Fr. Coquelicot.)

Preparation.

SYRUPUS RHŒADOS. Deep red ; crystallizes when kept.

Fresh Red Poppy Petals, 13 ; Refined Sugar, 36 ; Distilled Water, 20 or a sufficiency ; Rectified Spirit, 2½ : add the petals gradually to the water, heated in a water bath, frequently stirring, remove the vessel, and macerate twelve hours, press out the liquor, strain, add the Sugar, and dissolve by heat ; when nearly cold, add the spirit, and Distilled Water to weigh 58, and measure 43½ ; sp. g. 1·330. =(1 in 3½).

Dose.—1 to 2 drms.

(Austr. Ger. and Russ. fresh Petals 1, Sugar 3 ; Belg. Syr. Papav. Rheados ; not in others.)

RICINI OLEUM.

CASTOR OIL.

Sp. g. 0·969.

The Oil expressed in England from the seeds of the *Ricinus communis*, or imported from America and the East Indies, chiefly from Calcutta. Pale straw.

It is also obtained by decoction, and by the agency of Alcohol.

Test.—Entirely soluble in one volume of absolute Alcohol, and in two volumes of Rectified Spirit; in all proportions with Oil of Turpentine.

Medicinal Properties.

A mild and speedy cathartic. Particularly applicable to constipation from indurated fæces, or after swallowing acrid substances, or on the accumulation of acrid secretions. Used in diseases attended with irritation or inflammation of the bowels, as colic, diarrhœa, dysentery, and enteritis. The safest cathartic for infants, to whom a larger relative dose than to adults may be given, probably from their digesting more of the Oil. An enema may be made of 2 or 3 ounces, with some mucilaginous fluid.

Dose.—½ to 1 oz. for adults, 1 to 3 drms. for infants.

(In all the Pharmacopœias.)

May be administered floating on some aromatic water, or mixed in a cup of hot sweetened coffee; or, for a delicate stomach, as an emulsion with mucilage or yolk of egg, loaf sugar, and peppermint water or in milk.

The yolk of an egg = f ℥ss is sufficient for f ℥j Castor Oil.

A nice mixture for children is, Castor Oil, 2 drms.; Liquor of Potassa, 20 mins. Syrup, 5 drms.; Water, to 2 oz. Dose, 2 teaspoonfuls.

Contained in Collodium Flexile, Linimentum Sinapis Comp., Pil. Hydrarg. Subchloridi.

Not Official.

The decoction of the leaves of *Ricinus* applied to the breasts is said to produce an abundant supply of milk.

ROSÆ CANINÆ FRUCTUS.

FRUIT OF THE DOG ROSE. HIPS.

The ripe fruit of the *Rosa canina*, deprived of the hairy seeds; indigenous.

Medicinal Properties.

Slightly refrigerant and astringent. Chiefly used in confection, also as a pill basis, and for making electuaries and linctuses.

(Fr. Cynorrhodons; not in others.)

Preparation.

CONFECTIO ROSÆ CANINÆ. Yellowish-Brown.

Hips, 1; Refined Sugar, 2: beat the hips to a pulp in a stone mortar, rub the pulp through a sieve, add the sugar, and mix thoroughly. =(1 in 3).

Dose.—60 grs. or more.

(Belg. and Fr. Conserva Cynorrhodi; not in others.)

Used for Pilula Quiniæ.

ROSÆ CENTIFOLIÆ PETALA.

CABBAGE-ROSE PETALS.

The fresh petals, fully expanded, of the *Rosa centifolia;* from plants cultivated in Britain.

Medicinal Properties.

Slightly laxative, and sometimes given as a syrup combined with cathartics, but chiefly used in the preparation of rose-water.

(In all the Pharmacopœias; Fr. Rose Pâle; Ger. Flores Rosæ.)

Preparation.

AQUA ROSÆ.

Fresh Petals, 1; Water, 2; distil 1. =(1 in 1).

An agreeable vehicle for medicines; employed in making lotions.

Dose.—1 to 2 oz.

(Same as Fr.; Austr. 1 in 3; Ger. 1 in 5; Russ. with Otto; U.S. and Belg. 1 in 2½.)

An equivalent quantity of petals preserved whilst fresh with common salt, may be used.

ROSÆ GALLICÆ PETALA.

RED ROSE PETALS.

The unexpanded petals of the *Rosa Gallica*, fresh and dried; cultivated in Britain.

Medicinal Properties.

Astringent. Often used on account of their colouring matter.

(In all the Pharmacopœias except Ger.)

Preparations.

CONFECTIO ROSÆ GALLICÆ. Violet.

Fresh Red Rose Petals, 1; Refined Sugar, 3: beat the petals to a pulp in a stone mortar, add the Sugar, and beat well together. =(1 in 4).

Used as a pill basis. Applied to aphthous conditions of the mouth as a linctus.

Dose.—30 to 60 grs., or more.

(In all the Pharmacopœias, except Ger.; Fr. and Austr. with powdered Petals, Sugar, and Rose Water; U.S. with Honey.)

INFUSUM ROSÆ ACIDUM.

Red Rose Petals broken up, 1; Diluted Sulphuric Acid, ½; boiling Distilled Water, 40; infuse for half an hour with the acid and water: strain. =(1 in 40).

Astringent. An excellent vehicle for more powerful medicines. An agreeable gargle; but Borax and Alkalies change the colour to green.

Dose.—1 to 2 oz.

(U.S. made with Sugar; Fr. 1 in 100, without acid; not in others.)

SYRUPUS ROSÆ. Red.

Dried Rose Petals, 1; Refined Sugar, 15; boiling Distilled Water, 10: infuse the Petals in the Water two hours, squeeze through calico, heat the liquor to the boiling-point, and filter; add the Sugar and dissolve with heat. The product should weigh 23, and measure 17¼. Sp. g. 1·335. =(1 in 17¼).

Mildly astringent. Used to add to mixtures on account of its colour.

Dose.—1 to 2 drms.

(Russ. 3 times stronger; Fr. Sirop de Roses pâles; Belg. 1 in 10; U.S. with Spirit and percolation; not in others.)

Not Official.

INFUSUM ROSÆ CUM ACIDO NITRICO.—Rose Petals, broken small, 2; Dilute Nitric Acid, ½; cold Distilled Water, 40: infuse two hours, frequently stirring, strain and add Powdered Sugar, 1. Used for Quinine draughts.

Neither Sulphuric Acid nor a neutral Sulphate may be prescribed with Quinine in this infusion, for with either it will become turbid.

ROSMARINI OLEUM.

OIL OF ROSEMARY.

The Oil distilled from the flowering tops of *Rosmarinus officinalis*. Pale straw. That distilled in Britain is superior to the imported.

Sp. g. 0·911, reduced to 0·886 by rectification.

Soluble in Alcohol (sp. g. 0·887), 1 in 40.

Contained in Linimentum Saponis, Tinctura Lavandulæ Composita.

Medicinal Properties.

A powerful stimulant. Used in hysteria and nervous headaches; externally as a rubefacient, and for its odour.

Dose.—2 to 5 minims, in pill, sugar, or emulsion.

(In all the Pharmacopœias; Austr. Oleum Anthos.; Fr. Huile Volatile de Romarin.)

Preparation.

SPIRITUS ROSMARINI. Colourless.

Oil of Rosemary, 1; Rectified Spirit, 49: dissolve. =(1 in 50).

(Austr. Fr. and Ger. from flowering tops; Dub. Essentia Rosmarini; Russ. 1 in 64; not in others.)

Dose.—12 to 30 minims.

RUTÆ OLEUM.

OIL OF RUE.

The Oil distilled from the fresh herb of *Ruta graveolens*. Pale straw.

Medicinal Properties.

Stimulant and antispasmodic. Given in hysteria, convulsions, and amenorrhœa. A powerful topical stimulant and rubefacient.

Dose.—2 to 6 minims in emulsion.

(Fr. Austr. U.S. and Belg.; not in others.)

Not Official.

SYRUPUS RUTÆ.—1 minim oil to each ounce of Syrup. *Dose.*—½ to 1 drm. for a child.

CONFECTIO.—1 drm. in an Enema, for flatulent colic.

SABADILLA.

CEVADILLA.

The dried fruit of the *Asagræa officinalis*, imported from Vera Cruz and Mexico.

Medicinal Properties.

An acrid, drastic emeto-cathartic, operating occasionally with great violence; used as an anthelmintic in tænia, but Male Fern and other remedies are safer and equally effective. May be used cautiously for pediculi.

Chiefly introduced into the Pharmacopœia for the purpose of making Veratria.

Dose.—In powder, 4 to 6 grs.

(Belg. Fr. Austr. Ger. and U.S.; not in others.)

SABINÆ CACUMINA.

SAVIN TOPS.

The fresh and dried tops of the *Juniperus Sabina*, collected in spring from plants cultivated in Britain.

Medicinal Properties.

A powerful local and general stimulant, diaphoretic, emmenagogue, and anthelmintic; used occasionally in gout and chronic rheumatism. The dried leaves, or powder, externally as a local stimulant or escharotic, applied to warts, flabby ulcers, etc. The expressed juice diluted, or an infusion, as a lotion for gangrenous sores, scabies, and tinea capitis.

Dose.—In powder, 5 to 10 grs. two or three times daily; the powder and tincture are convenient forms of administration.

(In all the Pharmacopœias, except Austr.)

Preparations.

OLEUM SABINÆ. Pale straw.

The Oil distilled in Britain from fresh Savin, sp. g. 0·915.

Dose.—1 to 5 minims.

(U.S. Belg. and Ger.; not in others.)

TINCTURA SABINÆ. Deep greenish-brown.

Savin, recently dried and coarsely powdered, 1; Proof Spirit, 8: macerate forty-eight hours, with 6 of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit, press and filter, and add spirit to make 8. =(1 in 8).

Dose.—15 to 30 minims.

(Belg. 1 in 6; Russ. 1 and 6 by weight.)

UNGUENTUM SABINÆ. Pea-green.

Fresh Savin, bruised, 8; White Wax, 3; Prepared Lard, 16: melt the lard and the wax together, add the Savin, digest twenty minutes, strain and press. =(1 in $3\frac{3}{8}$).

Should be freshly prepared, as it does not keep.

To keep up suppuration from a blister or issue by preventing it from healing, and for application to indolent ulcers.

(Belg.; with powder; Ger. from Extr.; Russ. Extract 1, Spirit 1, Lard 15; not in others.)

ANTIDOTES.—In case of poisoning by Savin, emetics should first be given, and afterwards opiates and demulcents.

SACCHARUM PURIFICATUM.

REFINED SUGAR.

$C_{24}H_{22}O_{22}$, or $C_{12}H_{22}O_{11}$; eq. 342.

The crystallized refined juice of the stem of the *Saccharum officinarum;* cultivated in the West Indies and other tropical countries. White.

Solubility: in Water, 100 in 45, measures 113; in Rectified Spirit, 1 in 100.

Medicinal Properties.

Demulcent, used in catarrhal affections in the form of candy, syrup, etc. Employed in pharmacy to render oils miscible with water. Enters into the composition of several mixtures and pills, and all the confections, syrups, and lozenges.

Preparation.

SYRUPUS. Colourless.

Refined Sugar, 6; Distilled Water, 3: dissolve the sugar in the water with the aid of heat, and when cool add water to weigh 9, and measure very nearly 7. Sp. g. 1·330. =(1 in $1\frac{1}{6}$).

(In all the Pharmacopœias.)

It is convenient to remember that 7 measures of Syrup contain 6 of Sugar.

SACCHARUM LACTIS.

SUGAR OF MILK.

$C_{24}H_{24}O_{24}$, or $C_{12}H_{24}O_{12}$; eq. 360.

Crystallized Sugar obtained from the Whey of Cows' Milk by evaporation; manufactured largely in Switzerland. White.

Solubility: in Cold Water, 1 in 5; Boiling Water, 1 in 3; slightly soluble in Rectified Spirit.

Sp. g. 1·540.

Medicinal Properties.

As a non-nitrogenous article of diet in consumption and other pulmonary diseases, and in cases of extreme irritability of the stomach, following profuse loss of blood. Used to mix with the food of children; dissolved in water, and mixed with cows' milk, it forms a good substitute for that of the mother. Useful for rubbing with strong medicinal powders, in order to divide them.

Dose.—60 to 120 grs. or more, in water.

(In all the Pharmacopœias.)

Not Official.

SALICINUM.

SALICIN.

$C_{42}H_{20}O_{22}$; eq. 448.

A neutral substance obtained from the bark of the *Salix alba*.

In silky acicular crystals and laminæ, bitter, inodorous, white. Strong Sulphuric Acid reddens it.

Solubility: in Water, 1 in 28.

Medicinal Properties.—Tonic, analogous to those of the Sulphate of Quinia, and less liable to irritate the stomach; employed in dyspepsia and intermittent diseases.

Dose.—5 to 10 grs.

SAMBUCI FLORES.

ELDER FLOWERS.

The fresh flowers of the *Sambucus nigra*, from indigenous plants.

Medicinal Properties.

Mildly stimulant. Externally, as a discutient, in the form of poultice, fomentation, or ointment. Essence or strong water as a cosmetic.

Preparations.

AQUA SAMBUCI.

Fresh Elder-flowers, separated from the stalks, 1; Water, 2: distil 1.

Or an equivalent quantity of flowers preserved whilst fresh with common Salt. =(1 in 1.)

(Belg. ⅓ the strength; Austr. and Fr., with dried flowers, 1 in 4; Ger. also Concentr.; not in others.)

Chiefly used as a perfume; it is, however, a pleasant vehicle for medicines, and may be used for lotions.

There is always a large quantity of vegetable matter in this water, which causes it to grow acid and impairs its odour. In practice it is better to distil it, of double strength and dilute it when required.

Not Official.

UNGUENTUM.—Elder Flowers, fresh, and Lard, equal parts: melt the Lard, add the Flowers, continue the heat, stir for ten minutes, and strain.

(Not in other Pharmacopœias.)

A cool, soothing application to irritable sores.

UNGUENTUM VIRIDE.—*St. George's.* Ointment of Elder Leaves, 1 drm.; Elemi Ointment, 1 oz.; Copaiba, 1½ drm.

Excellent for sloughing sores.

SANTONICA.

The unexpanded flower-heads of an undetermined species of *Artemisia*, imported from Russia.

Dose.—10 to 60 grs.

(Used to prepare Santoninum.)

SANTONINUM.

SANTONIN.

$C_{30}H_{18}O_6$, or $C_{15}H_{18}O_3$; eq. 246.

A crystalline neutral principle, obtained from the *Artemisia Santonica* or *Semen contra.**

In colourless, flat, rhombic prisms, feebly bitter.

Solubility: in Rectified Spirit, 1 in 50. Sparingly soluble in Water.

Test.—Not dissolved by diluted mineral acids. Entirely destructible by a red heat with free access of air.

(Austr. Belg. Ger. U. S. and Russ.; not in others.)

Medicinal Properties.

Anthelmintic. Tasteless whilst in a crystalline form, and thus given, it is a pleasant vermifuge for children. Useful both against tape-worm and threadworms. Said to have been used with success in intermittents.

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* *Semen contra* is not a seed, but the unexpanded flower-heads of a species of *Artemisia*, Floris Cina, imported from Russia, and is the only so-called worm-seed which yields Santonin in quantity worth extracting.

Dose.—2 to 6 grs. for children.

About three doses are sufficient; one every other night followed by a brisk cathartic the morning after each dose.

It frequently affects the vision, causing all objects to appear green.

SAPO.

SOAP.

Soaps embrace all those compounds which result from the reaction of salifiable bases with fats and oils.

SAPO ANIMALIS.

CURD SOAP.

A Soda Soap made with purified animal fat consisting principally of stearin.

A more definite description would have been a Soda Soap made with tallow, as melted from the fat of sheep and oxen, containing about 60 per cent. of stearin, quite white, inodorous, or having a sweet odour. Soluble in water or spirit, hot or cold, slightly alkaline, not greasy. The basis of all toilet soaps.—ED.

This soap (so says the Addendum) may with advantage be substituted for the hard soap in preparing the Linimentum Potassii Iodidi cum Sapone.

The Author thinks this a mistake, because the Liniment made with Curd Soap, differs widely from that made from Oil Soap, and may cause complaints from patients.

SAPO DURUS.

HARD OR WHITE CASTILE SOAP.

Soap made with Olive Oil and Soda.

Test.—Soluble in Rectified Spirit. Brit. Ph.

The Author finds that of 30 grains of White Castile Soap digested for four days in 1 ounce of cold Rectified Spirit, only 24 grains are dissolved; when heated it all dissolves.

The Sapo Durus of the Pharmacopœia refers, without doubt, to the White Castile Soap; Curd Soap cannot be substituted for this, for it is not simply a combination of Olive Oil and Soda, but is a compound of Mutton-fat with Soda, and if used in any preparations of the Pharmacopœia, produces a result widely different to that of White Castile Soap. There are different makers of White Castile Soap in Marseilles; those soaps branded "Émile Vincent" or "Honore Arvanon" answer for making Lin. Pot. Iod. c. Sapone.

Medicinal Properties.

Laxative, antacid, and antilithic. Combined with Rhubarb, it is administered in dyspepsia attended with constipation and torpor of the liver. Large and frequent doses, wrapped in wafer paper, most effective in removing gall-stones.

Dose.—5 to 15 grs.

(In all the Pharmacopœias; Fr. Savon Blanc de Marseilles, Sapo Hispanicus Albus.)

Preparations.

EMPLASTRUM CERATI SAPONIS. Dusky-brown.

Hard Soap, 10; Beeswax, 12½; Oxide of Lead (in powder), 15; Olive Oil, 20; Vinegar, 160: boil the Vinegar with the Oxide over a slow fire, or by a steam bath, constantly stirring them until they unite; then add the soap, and boil again in a similar manner until all the moisture is evaporated; lastly, mix with the wax previously dissolved in the oil, and continue the process till the product takes the consistence of a plaster.

EMPLASTRUM SAPONIS. Dusky-white.

Hard Soap in powder, 6; Lead Plaster, 36; Resin, in powder, 1: to the lead plaster, previously melted, add the soap and the resin, first liquefied, then, constantly stirring, evaporate to a proper consistence.

=(1 of soap in 7⅙).

(U. S. 1 in 10; Belg. 1 in 16; Ger. and Russ. 1 in 15 with Camphor; Austr. Empl. Saponatum, 1 in 12⅓ with Camphor; Fr. 1 in 22.

Equal weights of Emplastrum Plumbi and Emplastrum Saponis spread on Amadou is useful to shield any part of the foot from pressure of the shoe.

LINIMENTUM SAPONIS. Faint straw-colour.

Hard Soap, cut small, 2½ oz.; Camphor, 1¼ oz.; Oil of Rosemary, 3 drms.; Rectified Spirit, 18 oz.; Distilled Water, 2 oz.: mix the water with the spirit, add the other ingredients, digest at a temperature not exceeding 70° F., agitating occasionally for seven days, and filter. There remains on the filter about one-fifth of the soap employed. =(1 in 10 nearly).

The temperature 70° was introduced in Brit. Ph. 1864, because it was found that when this temperature was exceeded, the liniment was always more or less gelatinous in cold weather, and could not be rendered bright again by warmth.

(U. S.; Austr. 1 in 5; Belg. 1 in 8; Ger. Lin. Saponatum Ammon., 1 in 56 with Ammonia; Fr. Lin Savonneux, 1 in 7, also Brit. Ph. formula; Russ. Linimentum Saponat. Camph. Liquidum.

Contained in Linimentum Opii.

PILULA SAPONIS COMPOSITA.—*See* OPIUM.

1 gr. Opium powder in 6 nearly.

Not Official.

GLYCERINE SOAP, introduced by Carl Sarg, of Vienna, contains the largest amount of Glycerine, and is by far the purest and most transparent, as well as the most pleasant-scented of any in use. JUNIPER TAR SOAP, BRECKNELL'S PURE YELLOW SOAP, OXIDE OF ZINC SOAP, CARBOLIC ACID SOAP, are occasionally prescribed for skin diseases.

STEER'S OPODELDOC is solid, and made as directed for Arnica Opodeldoc, substituting Sp. Rosemary for Tinct. Arnica.—*See* ARNICA, page 51.

SAPO MOLLIS.

SOFT SOAP.

Soap made with Olive Oil and Potash.

A transparent soft-solid of a greenish-yellow colour.

Test.—Soluble in Rectified Spirit; not imparting an oily stain to paper.

(Fr. Savon de Potasse; not in others.)

Contained in Linimentum Terebinthinæ.

SARSÆ RADIX.

JAMAICA SARSAPARILLA ROOT.

The dried root of the *Smilax officinalis*, native of Central America imported from Jamaica. Brought into Europe about 1630.

Medicinal Properties.

Alterative and tonic. It is of especial service in secondary syphilis, alone or in combination with other remedies. Also in chronic rheumatism, with sudorifics and anodynes, and in cachectic diseases, chronic abscesses attended with profuse discharge, and many maladies connected with a depraved state of the system.

The virtues of Sarsaparilla have been much disputed, on account of the difficulty of explaining its action; but good Jamaica Sarsaparilla doubtless possesses the qualities described above.

(In all the Pharmacopœias.)

INCOMPATIBLES.—Alkalies which accelerate its decomposition.

Preparations.

DECOCTUM SARSÆ.

Jamaica Sarsaparilla, cut transversely, not split, 1; boiling Distilled Water, 12: digest for an hour, boil ten minutes, cool, strain, and add water to make up 8. The product should measure 8. =(1 in 8).

Dose.—½ to 1 pint daily, in divided doses.

(Belg.; not in others.)

DECOCTUM SARSÆ COMPOSITUM.

Jamaica Sarsaparilla, not split, 20; Sassafras, in chips, 2; Guaiac Wood turnings, 2; fresh Liquorice Root, 2; Mezereon, 1; boiled Distilled Water, 240: digest for one hour, boil ten minutes, cool, and strain. The produce should measure 160. =(1 in 8).

Dose.—½ to 1 pint daily, in divided doses.

(Fr. and U. S.; not in others.)

EXTRACTUM SARSÆ LIQUIDUM. Intense reddish-brown.

Jamaica Sarsaparilla, cut transversely, 16; Distilled Water (temp. 160° F.), 280; Rectified Spirit, 1: macerate in half the water for six hours and decant the liquor; digest the residue in the remainder of the water for six hours more, mix the liquors, express and filter, evaporate by a water bath to 7 or until it has a sp. g. 1·130, when cold add the spirit. Sp. g. should be about 1·095. =(2 root in 1.)

A fluid oz., which is equal to 16 oz. decoction, when evaporated produces ½ oz. of solid extract.

Dose.—1 to 4 drms.

(U. S. with Glycerine, 1 in 1; not in others.)

Russ. has a hard extract.

Not Official.

EXTRACTUM SARSÆ COMPOSITUM LIQUIDUM, Liquid Compound Extract of Sarsaparilla.—Jamaica Sarsaparilla, cut transversely, 16 oz.; Sassafras, sliced, 2 oz.; Guaiacum Wood, rasped, 2 oz.; Liquorice Root, bruised, 2 oz.; Mezereon, cut, 1 oz.; Rectified Spirit, 1 oz.; Distilled Water, 6 pints; macerate the first five ingredients in one half of the water, at a temperature not exceeding 160° F., for six hours, and decant the liquor; digest the residue in the remainder of the water for the same time, and express; filter the mixed liquors, and evaporate by a water bath to 7 fluid ounces, when cold add the spirit. =(2 in 1).

Dose.—1 to 4 drms.

(Double the strength of U. S.; Ger. (fortius and mixture) differing widely from ours in composition.)

SASSAFRAS RADIX.

SASSAFRAS ROOT.

The dried root of the *Sassafras officinale*, from North America.

Medicinal Properties.

Stimulant and diaphoretic. Used as an adjuvant to other medicines, the flavour of which it improves, while it renders them more cordial to the stomach. Used in chronic rheumatism, cutaneous eruptions, scorbutic and syphilitic affections.

The bark of the root, which is stronger, is now an article of commerce.

(Fr. and Belg. the Root; U. S. the Root-bark; not in others.)

Contained in Decoctum Sarsæ Compositum.

SCAMMONIUM.

SCAMMONY.

A Gum Resin obtained by incision from the living root of *Convolvulus Scammonia*, chiefly from Smyrna, in Asia Minor; the juice, collected in shells, is suffered to concrete. The purest is known in commerce as Virgin Scammony.

Solubility: almost entirely dissolved in boiling diluted Rectified Spirit.

Test.—It does not effervesce with Hydrochloric Acid. Boiling Water, agitated with the powder, cooled and filtered, does not strike a blue colour with tincture of Iodine—indicating absence of Starch. Ether removes from 80 to 90 per cent. of Resin; and what remains is chiefly soluble Gum with a little moisture.

Medicinal Properties.

A powerful drastic cathartic, apt to occasion griping. Usually given with Calomel, and its action is corrected by the Sulphate of Potash. May be used in all cases of torpid bowels, and for removing scybala; also as a vermifuge for children.

Dose.—5 to 10 grs. of pure Scammony or of the Resin.

(In all the Pharmacopœias, except Ger.)

Contained in Extractum Colocynthidis Compositum, Pilula Colocynthidis Composita, Pilula Colocynthidis et Hyoscyami.

Preparations.

CONFECTIO SCAMMONII. Light olive-brown.

Scammony, in fine powder, 24; Ginger, in fine powder, 12; Oil of Caraway, 1; Oil of Cloves, ½; Syrup, 24; Clarified Honey, 12: rub the powders with the Syrup and the Honey into a uniform mass, then add the Oils, and mix. =(1 in 3).

(Not in other Pharmacopœias.)

Dose.—10 to 30 grs.

MISTURA SCAMMONII.

Resin of Scammony, 4 grs.; Fresh Milk, 2 oz.: triturate and form an emulsion. =(1 in 240).

(Fr. Émulsion purgative avec la Scammonée, 1 in 200; not in others.)

Virgin Scammony makes the best emulsion.

Dose.—The quantity of the formula for an adult, half for a child.

PILULA SCAMMONIÆ COMPOSITA.

Resin of Scammony, 1; Resin of Jalap, 1; Curd Soap, 1; Strong Tincture of Ginger, 1; Rectified Spirit, 2: dissolve with a gentle heat and evaporate to a pill consistence. Product, 3¼ oz.

Dose.—5 to 15 grs.

PULVIS SCAMMONII COMPOSITUS. Light olive-brown.

Scammony, 4; Jalap, 3; Ginger, 1: mix and reduce to fine powder. =(1 in 2).

(Fr.; not in others.)

Dose.—10 to 20 grs.

SCAMMONIÆ RADIX.

The dried root of *Convolvulus Scammonia*, from Syria and Asia Minor.

Medicinal Properties.

An energetic cathartic. May be used when brisk action is needed, but on account of its griping properties it is rarely used alone. In combination, it promotes the action of other medicines, whilst its own harshness is mitigated.

(Ger.)

SCAMMONIÆ RESINA.

RESIN OF SCAMMONY.

Made by a patented process, and said to be equal to Virgin Scammony. A formula for its preparation is given in the British Pharmacopœia.

16 oz. Root produces 1⅛ oz. Resin.

It is soluble in Ether.—The Author finds that that which is obtained from the makers is not always so.

(Ger.)

Dose.—4 to 8 grs. in powder, or in emulsion with 3 or 4 oz. of milk.

Contained in Mistura Scammoniæ, and makes a bad emulsion.

SCILLA.

SQUILL.

The bulb of the *Urginea Scilla*, from the Mediterranean coasts, sliced and dried.

Medicinal Properties.

A stimulant expectorant and diuretic. It increases the secretion of the bronchial mucous membrane and aids the expectoration of mucus. As an expectorant, it is used with Ipecacuanha and Ammoniacum; as a diuretic generally given with Mercury.

Dose.—1 to 2 grs. of the powder.

(In all the Pharmacopœias; Ger. and Russ. Bulbus Scillæ.)

Preparations.

ACETUM SCILLÆ. Pale straw.

Dried Squill bruised, $2\frac{1}{2}$; diluted Acetic Acid, 20; Proof Spirit, $1\frac{1}{2}$: macerate the Squills in the Acid for seven days, then strain with expression and add the spirit and filter. =(1 in 8 nearly).

Dose.—15 to 40 minims.

(In all the Pharmacopœias.)

OXYMEL SCILLÆ. Brown.

Vinegar of Squill, 5; Clarified Honey, 8: mix and evaporate till the sp. g. is 1·32.

Dose.—$\frac{1}{2}$ to 1 drm.

(In all the Pharmacopœias except. Ger. and Russ. Vinegar Squill, 1; Honey 2; U.S.)

PILULA SCILLÆ COMPOSITA. Brown.

Squill, in fine powder, $1\frac{1}{4}$; Ginger, in fine powder, 1; Ammoniacum in powder, 1; Hard Soap in powder, 1; Treacle, by weight, 2 or a sufficiency: mix the powders, add the Treacle, and beat into a mass. =(1 in 5).

Dose.—5 to 10 grs.

(Same as Fr.; U.S. 1 in 9; Belg. 1 in 7; not in others.)

SYRUPUS SCILLÆ. Yellow.

Vinegar of Squill, 20; Refined Sugar, 40: dissolve with the aid of heat.

Dose.—$\frac{1}{2}$ to 1 drm.

(Nearly as Belg. Austr. U.S.; Russ. half the strength and without Vinegar; not in others.)

TINCTURA SCILLÆ. Straw.

Dried Squill, bruised, 1; Proof Spirit, 8: macerate for forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, let it drain, and pour on the remaining spirit; when it ceases to drop, press, filter, and make up to 8. =(1 in 8).

Dose.—15 to 30 minims.

(Same as Fr.; U.S. 1 in 7½; Belg. and Fr. and Ger. 1 and 5, Russ. 1 and 6, by weight; not in Austr.)

SCOPARII CACUMINA.

BROOM TOPS.

The fresh and dried tops of the *Sarothamnus scoparius*, from indigenous plants.

Medicinal Properties.

Diuretic and cathartic. Employed in dropsical complaints.

(U.S. Fr. Genêt; not in others.)

Preparations.

DECOCTUM SCOPARII.

Broom Tops, dried, 1; Distilled Water, 20: boil ten minutes and strain. The product should measure 20. =(1 in 20).

Dose.—2 to 4 oz.

(Not in other Pharmacopœias.)

SUCCUS SCOPARII. Dark brown.

Bruise fresh Broom Tops in a stone mortar, express the juice, and to every 3 add 1 of Rectified Spirit; set aside seven days and filter. Keep it in a cool place.

Dose.—1 to 2 drms.

SENEGÆ RADIX.

SENEGA ROOT.

The dried root of the *Polygala Senega*, from North America.

(In all the Pharmacopœias except Belg. and Fr.)

Medicinal Properties.

A stimulating expectorant and diuretic, and, in large doses, emetic and cathartic. Used in asthenic and chronic bronchitis, and in dysmenorrhœa and albuminuria.

Dose.—In powder, 15 to 20 grs.

Preparations.

INFUSUM SENEGÆ.

Senega, bruised, 1; boiling Distilled Water, 20: infuse one hour and strain. =(1 in 20).

Dose,—1 to 2 oz.

(U.S. Decoctum; Fr. Tisane de Polygala, 1 in 100; not in others.)

TINCTURA SENEGÆ. Reddish-brown.

Senega, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally, pack in a percolator, and let it drain, pour on the remaining spirit; when the fluid ceases to drop, press, filter, and make up 8. =(1 in 8).

Dose.—½ to 2 drms.

Not Official.

SYRUPUS, U.S.—Percolate 4 oz. Senega Root with 32 oz. proof Spirit, evaporate at 160° to 8 oz. and add 15 oz. of Sugar.

SENNA.

SENNA.

The leaves of various species of *Cassia*. The British Pharmacopœia recognizes two kinds: the Alexandrian Senna (*Senna Alexandrina*), imported from Alexandria, being the leaves of the *C. lanceolata* and *C. obovata* carefully freed from the flowers, pods, and leaf-stalks; and the Tinnivelly Senna (*Senna Indica*), the leaves of the *C. elongata* from plants cultivated in southern India. The Alexandrian Senna must be free from admixture of leaves, flowers, and fruit of the Argel (*Solenostemma Argel*). The unequally oblique base and freedom from bitterness distinguish the Senna from Argel leaves, the latter are also thicker, greyer, and more wrinkled.

Medicinal Properties.

A general and efficient laxative in cases of occasional or habitual constipation. Given in large doses, it occasions griping and nausea; it is therefore best administered with aromatics. Used in dyspepsia, and in febrile and inflammatory diseases; but as it is somewhat drastic, it must be avoided when the alimentary canal is much affected.

The different kinds of Senna, freed from stalks, are of nearly equal medicinal value.

Dose.—Of powder, 10 to 30 grs.

(In all the Pharmacopœias.)

Preparations.

CONFECTIO SENNÆ. Almost black.

Senna, in fine powder, 7; Coriander, in fine powder, 3; Figs, 12; Tamarinds, 9; Cassia Pulp, 9; Prunes, 6; Extract of Liquorice, ¾; Refined Sugar, 30; Distilled Water, 24. Boil the Figs gently in the water four hours: express and strain; add water to make up 24: to this add the Prunes, boil four hours, then add the Tamarinds and Cassia; macerate a short time, and press the pulp through a hair sieve; dissolve the Sugar and Liquorice in the mixture with a gentle heat, add the Senna and Coriander. The result should, according to Brit. Ph. 1864, weigh 60 = 1 in 8½, according to Brit. Ph. 1867, 75, which will make it 1 in 11 nearly.

Dose.—60 to 120 grs.

(Belg. Electuarium Sennæ Comp.; Fr. Electuaire Lénitif, more complex; Ger. Electuarium Sennæ; not in others.)

INFUSUM SENNÆ.

Senna, 1 oz.; Ginger, sliced, 30 grs.; boiling Distilled Water, 10 oz.: infuse one hour and strain. =(1 in 10).

Dose.—1 to 2 oz.

(Belg. and Fr. Brit. Ph. formula; Austr. Inf. Laxativum with Manna, 1 in 8; Ger. Composita, 1 in 8, with Manna and Rochelle Salt; U.S. with Coriander, 1 in 16; not in others.)

As this infusion quickly spoils by keeping in warm weather, the addition of 1 gr. of Nitre to each ounce will be found to impart great conservative power. From 20 oz. of Infusion only 14 oz. drain out.

MISTURA SENNÆ COMPOSITA.

Infusion of Senna, 14; Sulphate of Magnesia, 4; Extract of Liquorice, ½; Tincture of Senna, 2½; Compound Tincture of Cardamoms, 1¼: dissolve and mix. =(1 Sulphate of Magnesia in 5).

Dose.—1 to 1½ oz.

SYRUPUS SENNÆ. Intense red.

Senna, broken small, 8 oz.; Oil of Coriander, 1½ minims; Refined Sugar, 12 oz.; Distilled Water, 50 oz., or a sufficiency; Rectified Spirit, 1 oz.: digest the Senna in three-fourths of the water twenty-four hours at a temperature of 120°, press, and strain; digest the marc in the remainder of the water six hours, press, and strain; evaporate the mixed liquors to 5 oz.; when cold, add the Rectified Spirit, containing the Oil of Coriander. Filter, and wash the filter with water to make up 8 oz.; add the Sugar, and dissolve with gentle heat. Should weigh 21 oz., and measure 16 oz. Sp. g. 1·310. =(1 in 2).

Dose.—1 to 2 drms. Brit. Ph. dose, 1 to 4 drms.; for children, ½ to 1 drm.

(Belg. and Ger. with Fennel and Manna; Austr. with Aniseed and Manna; not in others.)

An excellent purgative, and pleasant to take; it does not gripe in moderate doses.

TINCTURA SENNÆ. Black.

Senna, broken small, 5; Raisins, freed from seeds, 4; Caraway, bruised, 1; Coriander, bruised, 1; Proof Spirit, 40: macerate the ingredients forty-eight hours in three-fourths of the spirit, agitating occasionally; pack in a percolator, and when it ceases to drop, pour on the remaining spirit; press, filter, and make up 40. =(1 in 8).

Dose.—2 to 8 drms.

(Same as Fr.; Belg. 1 in 5½; not in others.)

SERPENTARIÆ RADIX.

SERPENTARY ROOT.

The dried rhizome of the *Aristolochia Serpentaria*, from the southern part of North America.

Medicinal Properties.

Stimulant, tonic, and diaphoretic. A valuable remedy in the low stage of typhus, combined with Carbonate of Ammonia, given when the tongue is dry and brown or black, and the pulse low. Used in dyspepsia and chronic rheumatism.

Dose.—Of the powder 10 to 15 grs.

(In all the Pharmacopœias.)

Preparations.

INFUSUM SERPENTARIÆ.

Serpentary, bruised, 1; boiling Distilled Water, 40: infuse two hours, and strain. =(1 in 40).

Dose.—1 to 2 oz.

(U.S. 1 in 32; not in others.

TINCTURA SERPENTARIÆ. Reddish-brown.

Serpentary, bruised, 1; Proof Spirit, 8: macerate forty-eight hours, with 6 of the spirit, agitating occasionally, pack in a percolator and let it drain; pour on the remaining spirit, and when it ceases to drop, press and wash the marc to make up 8. =(1 in 8).

Dose.—½ to 2 drms.

(U.S. 1 in 7½; Belg. 1 in 5½; not in others.)

SEVUM PRÆPARATUM.

PREPARED SUET.

The internal fat of the abdomen of the sheep, purified by melting and straining.

Soluble in boiling Alcohol; a portion of it separates on cooling.

Contained in Emplastrum Cantharidis, Unguentum Hydrargyri.

(In all the Pharmacopœias except Austr. and Ger.; Fr. Suif de Mouton.)

Not Official.

SIMARUBA.

BITTER SIMARUBA, OR MOUNTAIN DAMSON.

The root bark of the *Simaruba officinalis*, from the West Indies.

Medicinal Properties.—A bitter tonic. In large doses causes nausea; is diaphoretic and diuretic. Principally used in the asthenic and chronic form of dysentery; may be combined with opium in epidemic dysentery, and in the advanced stages of diarrhœa.

Dose.—15 to 30 grs.

Preparation.

INFUSUM.

Simaruba, bruised, 3 drms.; boiling Water, 1 pint: infuse two hours and strain. =(1 in 53).

(Fr. 1 in 32; not in others.)

Dose.—1 to 2 oz.

This infusion does not tinge the preparations of Iron.

SIMABA CEDRON Seeds possess this bitter in an eminent degree, and well deserve a therapeutic trial. Dose of the powder: 1 to 3 grs.

SINAPIS.

MUSTARD.

The seeds of the *Sinapis nigra* and *S. alba* reduced to powder, mixed.

Test.—A decoction cooled is not made blue by Tincture of Iodine—indicating absence of Starch.

Medicinal Properties.

Powerfully stimulant; swallowed whole as a laxative. The powder as an emetic, or as a rubefacient.

(In all the Pharmacopœias.)

Preparations.

CATAPLASMA SINAPIS.

Mustard, in powder, $2\frac{1}{2}$; Linseed Meal, $2\frac{1}{2}$; boiling Water, 10: mix the Linseed Meal with the water, and add the Mustard, constantly stirring.

Used as a counter-irritant in inflammation, neuralgic pains; also in spasms.

(Fr. Cataplasme Rubifiant, with Mustard only; not in others.)

CHARTA SINAPIS.

Black Mustard seeds, in powder	1 oz.
Solution of Gutta-percha	2 oz. or a sufficiency.

Mix the mustard with the gutta-percha solution so as to form a semifluid mixture, and having poured this into a shallow flat-bottomed vessel, such as a dinner-plate, pass strips of cartridge-paper over its surface so that one side of the paper shall receive a thin coating of the mixture. Then lay the paper on a table with the coated side upwards and let it remain exposed to the air until the coating has hardened.

Before being applied to the skin, let the mustard paper be immersed for a few seconds in tepid water.

The United States formula, from which this was taken, was published in the ninth edition of 'Companion,' and is repeated in the Not Officials of the tenth, because it is more definite than ours.

LINIMENTUM SINAPIS COMPOSITUM. Intense green.

Oil of Mustard, 1 drm.; Ethereal Extract of Mezereon, 40 grs.; Camphor, 120 grs.; Castor Oil, 5 drms.; Rectified Spirit, 32 drms.: dissolve. =(1 in 40).

A stimulating liniment.

OLEUM SINAPIS. Yellow, having a pungent odour.

The Oil distilled with water from the seeds of Black Mustard. Sp. g. 1·015.

Solubility in water, 1 in 50, readily in Rectified Spirit and Ether; applied to the skin it produces almost instant vesication.

Contained in Linimentum Compositum.

(In Ger. ; not in others.)

Not Official.

The so-called SINAPINE PAPER owes its efficacy chiefly to Capsicine.

INFUSION (2 drms. to 4 oz. boiling Water) cures hiccough.

CHARTA SINAPIS. U.S.

Black Mustard, in powder, 90 grs. Solution of Gutta Percha as much as will give it a semi-liquid consistence, and let it be spread with a suitable brush on one side of a stiff piece of paper 4 inches square, and allow it to dry.

Before applying it to the skin, it should be dipped in warm water for 15 seconds.

The Solution of Gutta Percha is made thus :—Steep thin Gutta Percha, 1½ oz. in 12 oz. by weight of Chloroform until dissolved; mix 2 oz. Carbonate of Lead in fine powder with 5 oz. by weight of Chloroform, add this to the solution and shake frequently, and let it stand for 10 days or until the precipitate subsides, then pour off the clear liquid for use.

SODIUM.

SODIUM.

Na; eq. 23.

Sp. g. 0·97. The metal of the alkali Soda, discovered by Sir Humphrey Davy in 1807, is a soft, malleable, sectile solid, of a silver-white colour, possessing a high degree of metallic lustre, which quickly tarnishes on exposure to the air. Like Potassium, it has a strong affinity for Oxygen: when thrown on cold water, it instantly fuses to a globule, without combustion, and traverses the surface in all directious ; on hot water it inflames.

There are no direct official preparations of Sodium ; its oxide alone is salifiable, from which are derived the preparations of the Pharmacopœia. The Chloride of Sodium is obtained by dissolving Rock Salt in water, and recrystallizing it ; some, however, absolutely pure and perfectly white, is found imbedded in the common brown Rock Salt.

From the Chloride of Sodium the Carbonate of Soda is now prepared, from the latter of which all the other preparations are made.

The following are the preparations of Soda given in the British Pharmacopœia :—

SODA CAUSTICA.

SODA TARTARATA . . . . . Dose, 1 to 4 drms.

SODÆ ACETAS.

SODÆ ARSENIAS	„	$\frac{1}{16}$ to $\frac{1}{8}$ gr.
SODÆ ARSENIATIS LIQUOR	„	5 to 10 minims.
SODÆ BIBORAS.—*See* BORAX.		
SODÆ BICARBONAS	„	10 to 30 grs.
SODÆ CARBONAS.		
SODÆ CARBONAS EXSICCATA	„	3 to 10 grs.
SODÆ CHLORATÆ LIQUOR	„	10 to 20 minims.
SODÆ CITRO-TARTRAS EFFERVESCENS	„	1 to 2 drms.
SODÆ EFFERVESCENS LIQUOR . . .	„	4 to 8 oz.
SODÆ HYPOPHOSPHIS	„	5 to 10 grs.
SODÆ LIQUOR.—*See* SODA CAUSTICA . .	„	$\frac{1}{2}$ to 1 drm.
SODÆ NITRAS.		
SODÆ PHOSPHAS	„	$\frac{1}{4}$ to 1 oz.
SODÆ SULPHAS	„	$\frac{1}{2}$ to 1 oz.
SODÆ VALERIANAS	„	1 to 5 grs.
SODII CHLORIDUM	„	10 to 60 grs.

Preparations of Soda not official are to be found in the Index.

SODA CAUSTICA.

CAUSTIC SODA.

Hydrate of Soda, NaO,HO; or **NaHO**, eq. 40.

In hard, greyish-white fragments of cakes, very alkaline and corrosive.

Procured by boiling down solution of Soda rapidly in a silver or clean iron vessel, until there remains a fluid of oily consistence, a drop of which, when removed on a warmed glass rod, solidifies on cooling. Pour the fluid on a clean silver or iron plate, and as soon as it has solidified break it in pieces.

Solubility: in water, 1 in 1.

Test.—40 grains dissolved in water leave scarcely any sediment, and require for neutralization about 900 grain-measures of the volumetric solution of Oxalic Acid.

(Not in other Pharmacopœias.)

Preparation.

LIQUOR SODÆ. Colourless.

Carbonate of Soda, 7; Slaked Lime, 3; Distilled Water, 40; dissolve the carbonate in the water, boil in a clean iron vessel, gradually mixing the lime and stirring constantly for ten minutes; decant into a green glass bottle, with air-tight stopper.

Test.—Sp. g. 1·047. 1 fluid ounce (458 grains by weight) requires for neutralization 470 grain-measures of the volumetric solution of Oxalic Acid. It does not effervesce when added to an excess of dilute Hydrochloric Acid, nor give a precipitate with Lime or Oxalate of Ammonia—indicating absence of Carbonic Acid and Lime. When it is heated with an excess of dilute Nitric Acid, and evaporated to dryness, the residue forms with water a clear

solution, which is rendered turbid by Chloride of Barium and by Nitrate of Silver, but not by Ammonia—indicating absence of Magnesia.

100 grs. contain 4 grains Hydrate of Soda = 18·8 grs. to the 1 oz. of Solution.

Medicinal Properties.

Antacid, used in preference to Potash in some stomach diseases.

Dose.—½ to 1 drm.

(Fr. Soude Caustique Liquide, sp. g. 1·330; Belg. and Ger. Natrum Hydricum Solutum, 1·330 to 1·334, containing 24 per cent.; U.S. 1·071, and contains 5·7 per cent. of Hydrate of Soda; not in Austr.)

ANTIDOTES.—Same as Liquor Potassæ, p. 227.

SODA TARTARATA.

TARTRATE OF SODA AND POTASH.

Syn. ROCHELLE SALT.

$NaO,KO,C_8H_4O_{10}+8HO$; or $\mathbf{NaKC_4H_4O_6,4H_2O}$; eq. 282.

In colourless transparent prisms, or halves of prisms of the right-rhombic order, generally eight-sided; tasting like common salt.

Solubility: in water, 1 in 2; insoluble in Rectified Spirit.

Test.—Entirely soluble in cold water. 141 grains heated to redness till gases cease to be evolved leave an alkaline residue (carbonates), which requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

A mild, cooling purgative, well suited to delicate and irritable stomachs. It is not aperient in small doses, its action being to render the urine alkaline.

Dose.—2 to 4 drms.

(In all the Pharmacopœias; Ger. Natro-Kali Tart. vel Sal Polychristum Seignetti.)

Not Official.

SEIDLITZ POWDER.—Rochelle Salt, 2 drms.; Bicarbonate of Soda, 40 grs.: mix.

In a separate powder, 37 grains of Tartaric Acid.

SODÆ ACETAS.

ACETATE OF SODA.

$NaO,C_4H_3O_3+6HO$; or $\mathbf{Na_3C_2H_3O_2,3H_2O}$, eq. 182. Colourless.

Used to prepare Ferri Arsenias, Ferri Phosphas, Syrupus Ferri Phosphatis.

SODÆ ARSENIAS.

ARSENIATE OF SODA.

$2NaO,HO,AsO_5+14HO$; or $Na_2HAsO_4,7H_2O$, eq. 312.

In colourless transparent prisms.

Arsenious Acid, 10; Nitrate of Soda, 8½; dried Carbonate of Soda, 5½; boiling Distilled Water, 35. Reduce the dry ingredients separately to fine powder, and mix them thoroughly in a porcelain mortar; put the mixture into a crucible, and cover it with a lid; expose it to a full red-heat till all effervescence has ceased and complete fusion has taken place; pour out the fused salt on a clean flagstone, and, as soon as it has solidified, and while it is still warm, put it into the boiling water, stirring diligently. When the salt is dissolved filter the solution, and set aside to crystallize; drain and dry the crystals, and enclose in stoppered bottles.

Solubility: in water, 1 in 2.

Test.—Heated to 300°, it loses 40·38 per cent. of its weight. A watery solution of 10 grains of the residue, heated with 53 grain-measures of the volumetric solution of Soda, continues to give a precipitate with the volumetric solution of Nitrate of Silver until 1613 grain-measures of the latter have been added. This precipitate is Arseniate of Silver, and proves that the proper quantity of Arsenic Acid is present.

6·6 grs. of the crystals yield 4 grains of Anhydrous Salt.

Dose.—$\frac{1}{16}$ to $\frac{1}{8}$ grain.

(Belg. dried Salt; Fr. crystallized; not in others.)

Medicinal Properties.

Similar to those of the Arsenite of Potash, or Fowler's Solution. Used in skin and nervous diseases. It cures eczema more speedily than Liquor Arsenicalis, producing less gastric disturbance and less irritability of the conjunctiva.

Preparation.

LIQUOR SODÆ ARSENIATIS. Colourless.

Arseniate of Soda (rendered anhydrous by a heat not exceeding 300° F.), 4 grs.; Distilled Water, 1 oz.: dissolve. =(1 in 120).

Differs in strength from Pearson's Solution.

It is of about the same strength as Liquor Arsenicalis.

Dose.—5 to 10 minims, carefully increased.

(Belg. dried salt 1 in 600; and Fr. crystallized 1 in 600. The latter is Pearson's Solution; dose, 5 to 10 minims. Fr. has also the Br. Ph. formula.)

ANTIDOTES.—*See* ACIDUM ARSENIOSUM, page 5.

SODÆ BICARBONAS.

BICARBONATE OF SODA.

Syn. SODÆ SESQUICARBONAS, Ph. L., 1836.

$NaO,HO,2CO_2$; or, $NaHCO_3$, eq. 84.

A white powder, or small opaque irregular scales, of a saline not unpleasant taste.

Solubility: in Water, 1 in 10.

Test.—When supersaturated with Nitric Acid, its solution scarcely precipitates with Chloride of Barium or Nitrate of Silver—indicating a mere trace of sulphate and chloride. 84 grains, exposed to a red heat, leave 53 grains of alkaline residue (carbonate), which requires for neutralization 1000 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Analogous to those of the Bicarbonate of Potash; it is less caustic and irritating than Carbonate of Soda. Employed as an antacid in dyspepsia. Useful in calculus with excess of Uric Acid: the Bicarbonate of Potash, however, is preferable, as it forms soluble salts with Uric Acid. It is a resolvent or alterative in some forms of inflammations, glandular affection, syphilis, and scrofula, and a diuretic in dropsy. Moistened with water, is an excellent application to the sting of wasps and gnats.

Dose.—10 to 30 grains.

(In all the Pharmacopœias; Fr. Bicarbonate de Soude; Austr. et Ger. Natrum Bicarbonicum; Belg. Natrum Bicarbonicum Acidulum.)

TROCHISCI SODÆ BICARBONATIS. White.

Bicarbonate of Soda, in powder, 3600 grs. = 8¼ oz.; Refined Sugar, 25 oz.; Gum Acacia, in powder, 1 oz.; Mucilage, 2 oz.; Distilled Water, 1 oz.: mix, and form into 720 lozenges.

Each lozenge contains 5 grains of Bicarbonate of Soda.

Dose.—1 to 6 lozenges.

Not Official.

Pulvis Salinus Anticholericus (Dr. Stevens).—Bicarbonate of Soda, 30 grs.; Chloride of Sodium, 20 grs.; Chlorate of Potash, 7 grs.: for one dose.

Given frequently in a small tumbler of cold water, to arrest the pain and purging.

Pessary (Antacid).—Bicarbonate of Soda, 15 grs.; Oil of Theobroma, sufficient for one pessary.

Brockendon's compressed pellets taken for heartburn.

LIQUOR SODÆ EFFERVESCENS.

Syn. Soda Water. Colourless.

Bicarbonate of Soda, 30 grs.; Water, 20 oz.: dissolve and filter, and pass through it as much Carbonic Acid Gas (obtained by the action of Sulphuric Acid on Chalk) as can be introduced by the pressure of seven atmospheres; bottle, and secure the corks with wire.

Each half-pint bottle contains 15 grains.

SODÆ CARBONAS.

CARBONATE OF SODA.

NaO,CO_2+10HO, eq. 143; or $Na_2CO_3,10H_2O$, eq. 286.

In transparent, colourless, laminar crystals of a rhombic shape, containing 63 per cent. of water of crystallization, efflorescent, with a harsh alkaline taste, and strong alkaline reaction.

Solubility: in Water, 1 in 2. Insoluble in Rectified Spirit.

(In all the Pharmacopœias; Fr. Carbonate de Soude crystallisé.)

Native Carbonate of Soda is found chiefly in Hungary, Egypt, and South America, existing either in the earth or in small lakes, whence it is procured by evaporation.

Soda has been largely procured from the combustion of marine vegetables, which furnishes the impure alkalies kelp and barilla, whence it is extracted by the process of lixiviation and crystallization.

It is, however, chiefly procured from sea-salt, by converting the salt by Sulphuric Acid into Sulphate of Soda, then by decomposing the sulphate by Carbonate of Lime and Charcoal at a high temperature. This process was discovered in 1784 by Leblanc.

Test.—When supersaturated with Nitric Acid it precipitates only slightly or not at all with Chloride of Barium or Nitrate of Silver—indicating a trace of Sulphate and Chloride. 143 grains require for neutralization at least 960 grain-measures of the volumetric solution of Oxalic Acid.

Medicinal Properties.

Antacid, antilithic, and resolvent. Given principally in diseases attended with acidity of the stomach, as gout and dyspepsia.

Dose.—10 to 30 grs. in bitter infusion.

Preparation.

SODÆ CARBONAS EXSICCATA. NaO,CO_2, eq. 53; or Na_2CO_3, eq. 106. White.

Expose the Carbonate of Soda in a porcelain capsule to a rather strong sand-heat, until the liquor first formed becomes a dry cake. Reduce to powder.

53 grains are equal to 143 grains of crystallized salt.

Dose.—3 to 10 grains three times daily in pill, with soap and aromatics.

(In all the Pharmacopœias except Fr.)

BALNEUM ALKALINUM.—Crystals of Carbonate of Soda, 8 or 10 oz. to 60 gallons of Water.

Used in skin diseases as a more effective means of cleansing than by soap.

SODÆ CHLORATÆ LIQUOR.

SOLUTION OF CHLORINATED SODA.

A mixed solution of Hypochlorite of Soda, Chloride of Sodium, and Bicarbonate of Soda. Colourless.

Carbonate of Soda, 12; Black Oxide of Manganese, in powder, 4; Hy-

drochloric Acid, 15; Distilled Water, 40: dissolve the powdered Carbonate of Soda in 36 parts of the water in a glass vessel. Mix the Oxide of Manganese and Hydrochloric Acid, and place them in a retort, or glass flask with a bent tube attached by means of a cork to its mouth. Heat the mixture gradually, and pass the evolved Chlorine through a wash-bottle containing 4 of the water, and afterwards into the solution of Carbonate of Soda. When the disengagement of Chlorine has ceased, transfer the solution to a stoppered bottle, and keep it in a cool and dark place.

Test.—Sp. g. 1·103. 1 drachm (70 grains by weight) added to a solution of 20 grains of Iodide of Potassium in 4 ounces of water, and acidulated with 2 drachms of Hydrochloric Acid, requires for the discharge of the brown colour which the mixture assumes 500 grain-measures of the volumetric solution of Hyposulphite of Soda. It is not precipitated by Oxalate of Ammonia—indicating absence of Lime.

Test explained under Calx Chlorata, page 69.

Medicinal Properties.

Stimulant, antiseptic, and resolvent. Used internally in typhus, scarlatina, etc., indicated by great prostration of strength, fœtid evacuations, dry and furred tongue; in dysentery, dyspepsia; also in glandular enlargements, and chronic mucous discharges. Locally, in all affections attended with fœtor, and may be applied, diluted, as a wash, poultice, or by lint; 4 to 6 drms. in 12 oz. of water for a gargle. An excellent application to sore nipples. It is also a powerful disinfecting agent, used in preference to Chloride of Lime, because, when the Chlorine has escaped, the lime is left in a caustic condition, and acts corrosively on carpets, etc.

Dose.—10 to 20 minims.

(U.S. Belg. Fr. (Hypochlorite de Soude liquide), having 12 Chlorinated Lime, 24 Carbonate of Soda, but a variable quantity of Water; not in others.)

Preparation.

CATAPLASMA SODÆ CHLORATÆ.

Solution of Chlorinated Soda, 1; Linseed Meal, 2; boiling Water, 4: add the Linseed Meal gradually to the water, stirring constantly, then mix the solution of Chlorinated Soda.

(Not in other Pharmacopœias.)

SODÆ CITRO-TARTRAS EFFERVESCENS.

EFFERVESCENT CITRO-TARTRATE OF SODA.

Bicarbonate of Soda, in powder, 17; Tartaric Acid, in powder, 8; Citric Acid, in powder, 6: mix the powders thoroughly, place them in a dish or pan of a suitable form heated to between 200° and 220°, and when the particles of the powder begin to aggregate, turn them assiduously until they assume a granular form, then by means of a suitable sieve separate the granules of uniform and most convenient size, and preserve them in well-stoppered bottles. White, and in grains.

Dose.—60 to 120 grs.

(Fr. Limonade sèche au Citrate de Magnésie.)

SODÆ HYPOPHOSPHIS.

$NaO,PO,2HO$; or $\mathbf{NaPH_2O_2}$.

Obtained by adding carbonate of soda to solution of hypophosphite of lime as a precipitate of carbonate of lime is formed, then filtering the solution and evaporating it to dryness by the heat of a steam-bath, keeping it constantly stirred when the salt begins to solidify.

Characters and Tests.—A white granular salt, having a bitter nauseous taste. It is deliquescent, very soluble in water and in spirit, but insoluble in ether. At a red heat it ignites, emitting spontaneously inflammable phosphuretted hydrogen.

Dose.—5 to 10 grains as a nervine tonic.

Sodæ Hypophosphitis Solutio.—Swan's Solution is 3 grs. to the drachm.

SODÆ NITRAS.

NITRATE OF SODA.

NaO,NO_5, or $\mathbf{NaNO_3}$; eq. 85.

A native Salt, purified by crystallization from water. Colourless.

Used only to prepare Sodæ Arsenias.

SODÆ ET POTASSÆ TARTRAS. *See* Soda Tartarata, page 264.

SODÆ PHOSPHAS.

PHOSPHATE OF SODA.

$2NaO,HO,PO_5+24HO$; or $\mathbf{Na_2HPO_4,12H_2O}$, eq. 358.

In transparent, colourless, rhombic prisms, terminating by four converging planes, efflorescent, tasting like common salt.

Solubility: in water, 1 in 5.

Test.—Heated to dull redness it loses 63 per cent. of its weight, leaving a residue, which, when dissolved in water, gives, with Chloride of Barium, a precipitate entirely soluble in dilute Nitric Acid: Phosphate of Barium.

Medicinal Properties.

A mild purgative; from its pure saline taste it is called tasteless Aperient Salt; it is well suited to children and persons of delicate stomach. Diuretic in small doses.

Dose.—½ to 1 oz.

(In all the Pharmacopœias; Ger. Natrum Phosphoricum; Fr. Phosphate de Soude.)

Best given in gruel or weak broth.

SODÆ SULPHAS.

SULPHATE OF SODA, GLAUBER SALT.

NaO,SO_3+10HO, eq. 161; or $Na_2SO_4,10H_2O$, eq. 322.

In colourless transparent oblique rhombic prisms, has a cool saline and bitter taste, effloresces on exposure to air.

Solubility: in water 1 in 3, and measures $3\frac{1}{2}$.

Medicinal Properties.

An excellent cooling aperient.

Dose.—$\frac{1}{2}$ to 1 oz.

100 Sulphate of Soda exposed to heat in a crucible lose 55·9 per cent. of water.

Not Official.

SODÆ SULPHIS.—Prepared by saturating a solution of Carbonate of Soda with pure Sulphurous Acid.

It crystallizes in white transparent prisms which effloresce when exposed to the air.

Solubility: in water, 1 in 4.

Given with success for sarcina ventriculi.

Dose.—10 to 60 grs.

SODÆ HYPOSULPHIS.—Prepared by digesting a solution of sulphite of Soda with sulphur, or by passing Sulphurous Acid gas through a solution of Sulphide of Sodium.

It crystallizes in prisms, which have a bitter saline taste, inodorous.

Solubility: in water freely, but not in alcohol.

It is given for sarcina ventriculi, also in scrofulous, syphilitic, and rheumatic affections, sometimes used as a lotion for parasitic skin diseases (1 oz. to a gallon of water).

Dose.—10 to 60 grs.

5 lb. of the salt dissolved in 100 gallons of water was recommended for the ordinary drink for cattle as a preventive to Cattle Plague.

DEPILATORY.—Sulphuret of Sodium, 3; Quicklime in powder, 10; Starch, 10: mix.

SODÆ VALERIANAS.

VALERIANATE OF SODA.

$NaO,C_{10}H_9O_3$; or $NaC_5H_9O_2$, eq. 124.

In dry white masses without alkaline reaction.

Solubility: entirely in Alcohol.

Dose.—1 to 5 grs.

Used chiefly to prepare Valerianate of Zinc.

SODII CHLORIDUM.

SALT.

Syn. SODÆ MURIAS.

NaCl, or **NaCl**; eq. 58·5.

In small, white, crystalline grains, or transparent cubic crystals.

Solubility of pure Rock Salt in water, 1 in $2\frac{3}{4}$.

Test.—Free from moisture. The solution is not rendered hazy by Chloride of Barium nor by Phosphate of Soda after the addition of a mixed solution of Ammonia and Hydrochlorate of Ammonia. The addition of Solution of Ammonia and Hydrochlorate of Ammonia is to produce with Magnesia, if it be present, Ammonio-phosphate of Magnesia.

Medicinal Properties.

In small doses, stimulant, tonic, and anthelmintic; in larger doses, purgative and emetic. It is also antiperiodic in doses of 8 or 12 drachms during the intervals. Locally, as a fomentation to sprains and bruises. As a saltwater-bath (1 pound to 4 gallons), a tonic and excitant of the system, especially in children. A saturated solution forced up the nostrils with a syringe is most effective in removing the fœtid odour from diseased frontal sinuses. A recent cold is greatly relieved by washing the nostrils and gargling the throat with a weak solution of Salt. In case of a leech being swallowed drink a strong solution of Salt.

Its value as a condiment is well known; animals as well as ourselves require it. Soldiers are supplied with it; our army ·5 (=$\frac{1}{2}$ oz.) daily; the French, ·5; Prussian, ·87; Russian, 1·86; but for a long time the Russian army had salt-money given, and it was only when scurvy attacked them that the money was stopped and the salt given.

The American travellers carry a bag of salt and a knife, and when bitten by snakes, the wound is scraped, salt applied, and the traveller proceeds.

Its antiseptic properties are proverbial; it is used as a dentifrice on that account. Given with Carbonate of Soda by Dr. Stevens in all stages of Cholera, and is most effectual in common Diarrhœa.

Dose.—10 to 60 grs. as a tonic; 120 to 240 grs. as a cathartic.

(In all the Pharmacopœias except Ger.; Fr. Chlorure de Sodium.)

Not Official.

SODII IODIDUM.

Given in the same doses and for similar purposes as the Iodide of Potassium.

SPIRITUS.

SPIRIT.

All substances which have undergone the vinous fermentation, and in which it is not completely over, contain Alcohol ready formed, which is separated

by distillation. The various kinds are distinguished by varieties of flavour and colour. The redistillation of these produces Rectified Spirit.

When spirit is distilled with aromatic vegetables containing volatile oil, the oil rises for the most part with the spirituous vapour and condenses along with it in a state of solution.

The Spirits of the British Pharmacopœia are as follows: the formulas will be found under the names of the drugs from which they are prepared:—

Dose.		Proportion of active ingredients to the whole.
30 min.	SPIRITUS ÆTHERIS	1 in 3.
½ drm.	SPIRITUS ÆTHERIS NITROSI.	
20 min.	SPIRITUS AMMONIÆ AROMATICUS.	
½ drm.	SPIRITUS AMMONIÆ FŒTIDUS.	
1 drm.	SPIRITUS ARMORACIÆ COMP. . .	1 in 8.
30 min.	SPIRITUS CAJUPUTI . . . . (Oil)	1 in 50.
10 min.	SPIRITUS CAMPHORÆ	1 in 10.
10 min.	SPIRITUS CHLOROFORMI	1 in 20.
30 min.	SPIRITUS JUNIPERI . . . . (Oil)	1 in 50.
30 min.	SPIRITUS LAVANDULÆ . . . „	1 in 50.
30 min.	SPIRITUS MENTHÆ PIPERITÆ „	1 in 50.
30 min.	SPIRITUS MYRISTICÆ . . . „	1 in 50.
	SPIRITUS RECTIFICATUS (16 per cent. of water).	Sp. g. 838.
10 min.	SPIRITUS ROSMARINI. . . . (Oil)	1 in 50.
	SPIRITUS TENUIOR (Rect. Sp. 5, Water 3).	Sp. g. 920.
	SPIRITUS VINI GALLICI (containing 48 to 50 per cent. of Alcohol).	

Alcohol is placed in the Appendix, and Alcohol Amylicum will be found in the Index.

SPIRITUS ÆTHERIS NITROSI.

SPIRIT OF NITROUS ÆTHER.

Syn. SPIRITUS ÆTHERIS NITRICI, *Lond. Edin.*

A spirituous solution containing Nitrous Ether, C_4H_5O,NO_3, or $\mathbf{C_2H_5NO_2}$; eq. 75.

Nitric Acid (sp. g. 1·420), 3; Sulphuric Acid, 2; Copper, in fine wire (No. 25), 2; Rectified Spirit, a sufficiency: to 20 of the spirit add gradually the sulphuric acid, stirring them together; then add to this, also gradually, 2½ of the nitric acid. Put the mixture into a retort or other suitable apparatus, into which the copper wire has been introduced, and to which a thermometer is fitted. Attach now an efficient condenser, and applying a gentle heat, let the spirit distil at a temperature commencing at 170° and rising to 175°, but not exceeding 180°, until 12 have passed over and been collected in a bottle kept cool, if necessary, with ice-cold water; then withdraw the heat, and having allowed the contents of the retort to cool, introduce the remaining ½ of nitric acid, and resume the distillation as before, until the distilled product has been increased to 15. Mix this with 40 of the Rectified Spirit, or as much as will make the product correspond to the

tests of specific gravity and percentage of Ether separated by Chloride of Calcium. Preserve it in well-closed vessels.

Characters and Tests.—Transparent and nearly colourless, with a very slight tinge of yellow, mobile, inflammable, of a peculiar penetrating apple-like odour, and sweetish, cooling, sharp taste. It effervesces feebly or not at all when shaken with a little Bicarbonate of Soda. When agitated with solution of Sulphate of Iron and a few drops of Sulphuric Acid, it becomes deep olive-brown or black. If it be agitated with twice its volume of saturated solution of Chloride of Calcium in a closed tube, two per cent. of its original volume will separate in the form of Nitrous Ether, and rise to the surface of the mixture.

Sp. g. 0·845.

Medicinal Properties.

Stimulant, diaphoretic, and diuretic. Useful in dropsy and catarrh.

Dose.—½ to 2 fluid drms.

(Austr. sp. g. ·830; Fr. Esprit de Nitre Dulcifié, a mixture of Nitric Acid 1, Alcohol 3, both by weight; Belg. Æther Nitricus Alcoholicus, sp. g. ·850; U.S. sp. g. ·837; not in Ger.)

Incompatibles.—Iodide of Potassium, Sulphate of Iron, alkaline and earthy carbonates, Tincture of Guaiacum. Emulsions are curdled by its addition.

SPIRITUS RECTIFICATUS.

RECTIFIED SPIRIT.

Alcohol, C_4H_5O,HO, with 16 per cent. of water; obtained by the distillation of the fermented saccharine fluids, and by the rectification of the product, if it be not of proper density.

Rectified Spirit dissolves Ammonia, Camphor, Balsams, Castor Oil, Iodine, Lithia, Mannite, Phosphorus, Potash (but not the Carbonate), Soda, Sulphur, Sugar, Tannic and Gallic Acids, and deliquescent salts.

When 18 measures of Rectified Spirit are mixed with 18 of water, the mixture condenses into 34 measures.

Test.—Sp. g. 0·838. Remains clear when diluted with Distilled Water. Odour and taste purely alcoholic. 4 ounces with 30 grain-measures of the volumetric solution of Nitrate of Silver, exposed for twenty-four hours to bright light and then decanted from the black powder which has formed, undergoes no further change when again exposed to light with more of the test.

These tests are intended to discover the presence of Fusel Oil, and the quantity of it.

Medicinal Properties.

Internally a powerful diffusible stimulant. Used in some states of acute disease characterized by excessive debility. Externally applied, diluted to produce cold by evaporation; when evaporation is repressed, it acts as a stimulant. Diluted, it forms a lotion for erysipelas, erythema, burns and scalds while the cuticle is entire, and for sprains and recent bruises.

(In all the Pharmacopœias.)

Preparations.

SPIRITUS TENUIOR. Proof Spirit.* Colourless.

Rectified Spirit, 5 ; Distilled Water, 3 : mix.

Sp. g. 0·920.

(In all the Pharmacopœias. U. S. 0·941 ; Belg. 0·878 ; Austr. 0·913 ; Fr. 0·923 ; Ger. 0·890 to 0·894, containing 69 per cent. by measure.)

SPIRITUS VINI GALLICI. Pale brown.

French Brandy. Sp. g. ·941. 100 parts contain 48 to 56 parts of Alcohol.

MISTURA SPIRITUS VINI GALLICI.

Brandy, 4 oz. ; Cinnamon Water, 4 oz. ; the yolks of 2 Eggs ; Sugar, ½ oz. : mix.

A delicious dose in cases of prostration or last stages of fever.

Dose.—½ to 1½ oz.

Stimulant, restorative.

The Spirits of the Pharmacopœias are as follow :—

	Sp. gr.		Percentage of Absolute Alcohol by Measure.
British	·838	Spiritus Rectificatus	84†
British	·920	5 Spirit, 3 Water „ Tenuior.	
Austrian	·833	Sp. Vini Rectificatissimus	90
„	·863	„ Rectificatus	80
„	·913	„ Rectificatus dilutus	60
Belgian	·813	Alcohol at 33° contains	96
„	·837	„ 28° „	89
„	·878	„ 20° „	75‡
French	·835	„ 90° „	90
„	·864	„ 80° „	80
„	·914	„ 60° „	60
German	·833	Sp. Vini Rectificatissimus	90
„	·894	„ Rectificatus. { 5 Spirit (sp. g. ·833) by Weight, and 2 Water }	69
U. S.	·817	Alcohol Fortius.	
„	·835	Alcohol.	
„	·941	3 Spirit, 3 Water. Alcohol Dilutum.	
„		Sp. Vini Gallici	48 to 56
Russian		„ Alcoholizatus	95
„	·833	„ Rectificatissimus	90
„		„ Rectificatus	70
„		„ Dilutus	38

* When the sp. g. is ·920 it is called proof ; if lighter than this, it is called above proof; if heavier than this, under proof ; and the percentage of water, or of Rectified Spirit, by measure, sp. g. ·825, necessary to be added to any sample of spirit to bring it to the standard of proof spirit, indicates the number of degrees the given sample is above or below proof. Thus, if 100 volumes of a spirit require 10 volumes of water to reduce it to proof, it is said to be "10 over proof ;" on the other hand, if 100 volumes of spirit require 10 volumes of spirit to raise it to proof, the sample is said to be "10 under proof."

† This strength is sometimes called "Trois-six" (⅜ths), because it requires ⅜ths or half its volume of water to reduce it to Eau de Vie at 56°.

‡ Eau de Vie double.

Table of the Amount of absolute Alcohol by weight, or Proof-spirit (Brandy) by volume, in the following Wines, etc., from Dr. Christison's Experiments in 1838.

	Alc. by weight in 100 parts.	Proof-sp. by vol.
Port, weakest	14.97	30·56
„ mn. of 7 wines .	16·20	33·91
„ strongest . . .	17·10	37·27
White Port	14·97	31·31
Sherry, weakest . . .	13·98	30·84
„ mn. of 13 wines not long in cask	15·37	33·59
„ strongest . .	16·17	35·12
„ mean of 9 long in cask in E. Indies . . .	14·72	32·30
„ Madre da Xeres	16·90	37·06
Madeira, long in cask in the East Indies . .	14·09	30·80
„ strongest . .	16·90	37·00
Teneriffe, long in cask at Calcutta	13·84	30·21
Sercial	15·45	33·65
Dry Lisbon	16·14	34·71
Shiraz	12·95	28·30
Amontillado	12·63	27·60
Claret, 1st growth 1811	7·72	16·95
Château-Latour, Do. 1825	7·78	17·06
Rosan, 2d growth, 1825	7·61	16·74
Vin Ordinaire, Bordx.	8·99	18·96
Rives Altes	9·31	22·35
Malmsey	12·86	28·37
Rudesheimer, first quality .	8·40	18·44
„ inferior .	6·90	15·19
Hambacher, 1st qual.	7·35	16·15
Edinb. ale, unbottled	5·70	12·60
„ 2 yrs. bot.	6·06	13·40
London porter, four months in bottle .	5·36	11·91

The alcohol of most true wines is derived solely from the fermentation of the sugar, or alteration of the acids contained in the grape-juice from which they are produced. In others the proportion is increased by adding starch-sugar before or during fermentation. In others, again, it is added directly in the form of brandy, partly to please the palate of consumers, partly because it is thought necessary to make the wine keep well. The strong wines commonly used in Britain, such as Port, Sherry, and the like, are almost all strengthened in this manner, and frequently also the inferior sorts of Bordeaux wine.

Not Official.

STAPHISAGRIA.

The seeds have been used in Ointments for many years, but it is only recently that it has been discovered that the activity rests in an oil which they contain in rather large quantity. Mr. Balmanno Squire experimented with this Oil, and also with the seeds from which the Oil had been withdrawn by Ether, and found the latter inert; he gives the following for an ointment which he has found very successful in treating that troublesome skin complaint called Prurigo Senilis :—Oil of the seeds, 1; Lard 7 : mix.

STRAMONII FOLIA ET SEMINA.

STRAMONIUM LEAVES AND SEEDS.

The *Datura Stramonium* cultivated in Britain. The leaves collected when the plants are in flower, dried; and the ripe seeds.

Medicinal Properties.

Influences especially the respiratory organs. Much used in asthma; the leaf chiefly by smoking in the shape of cigarettes. The extract and the tincture made of the seeds are used in convulsive coughs as antispasmodics, and as anodynes in gastrodynia and other painful affections. The extract given with success for hay asthma. Like Belladonna, it causes dilatation of the pupil.

Dose.—Of the leaves powdered, 1 gr. and upwards.

(In all the Pharmacopœias.)

An Ointment of the fresh leaves, relieves painful cancer.

Preparations.

EXTRACTUM STRAMONII. Black.

Pack Stramonium Seeds, coarsely powdered, in a percolator, and pass about their own weight of Washed Ether slowly through them, remove the Ether and set aside; now pour over them Proof Spirit until the seeds are exhausted. Distil off the spirit, and evaporate the residue by a water bath to a proper consistence for forming pills.

Dose.—$\frac{1}{4}$ gr., gradually increasing.

(U.S. Belg. and Fr. from fresh leaves, also Alcoholic from dried leaves; not in others.)

TINCTURA STRAMONII. Light brown.

Stramonium Seeds, bruised, 1; Proof Spirit, 8: macerate forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, and pour on the remaining spirit. When it ceases to drop, press, filter, and add spirit to make 8. =(1 in 8).

Dose.—10 to 20 minims.

(U.S. (Austr. seeds; Belg. Fr. from leaves, also Alcoolature with fresh leaves and Spirit equal parts) 1 in 5 by weight; Belg. also Ethereal; not in others.)

INCOMPATIBLES.—The Mineral Acids, Caustic Alkalies, Metallic Salts.

ANTIDOTES.—Same as for poisoning with Belladonna, page 59.

STRYCHNIA.

STRYCHNIA.

An Alkaloid $C_{42}H_{22}N_2O_4$; or $C_{21}H_{22}N_2O_2$ eq. 334; obtained from Nux Vomica. Discovered by Pelletier and Caventon in 1818.

In right square octahedrons or prisms, colourless and inodorous.

Solubility in Water, 1 in 5760; also in boiling Alcohol: insoluble in cold Alcohol and Ether.

Test.—Not coloured by Nitric or Sulphuric Acid—indicating absence of Brucia. Leaves no ash when burned with free access of air.

Dose.—$\frac{1}{30}$ to gr., gradually and slowly increasing.

Divide by trituration with Sugar of Milk before making into pills.

Medicinal Properties.

Similar to those of Nux Vomica; its chief use however being in the treatment of paralysis, especially in cases of lead-poisoning. Small doses have been given with advantage in epilepsy, connected with the catamenial period.

(In all the Pharmacopœias; Ger. has Nitrate only.)

Preparation.

LIQUOR STRYCHNIÆ. Colourless.

Strychnia in crystals, 4 grs.; dilute Hydrochloric Acid, 6 minims; Rectified Spirit, 2 drms.; Distilled Water, 6 drms.: mix the hydrochloric acid with 4 drachms of the water, and dissolve the strychnia in it by means of heat; then add the spirit and the remainder of the water. = (1 in 120).

2 drachms contain 1 grain of Strychnia.

Dose.—4 to 10 minims = $\frac{1}{30}$ or $\frac{1}{12}$ gr. of Strychnia.

(Belg. 1 in 200; not in others.)

2 minims subcutaneously injected for paralysis.

ANTIDOTES.—Chloroform, Belladonna, Tinct. Aconite, Morphia, Tobacco, Hydrate of Chloral in 1 drachm doses.

A case of recovery after taking 3 grains Strychnia. *Vide* 'Lancet,' July 13, 1867.

8 grains of Morphia said to be an antidote for 1 gr. of Strychnia.

STYRAX PRÆPARATUS.

PREPARED STORAX.

A balsam prepared from the bark of the *Liquidambar orientale* in Asia Minor, purified by means of Rectified Spirit and straining. Intense brown.

(In all the Pharmacopœias except Ger.)

Medicinal Properties.

Stimulant and expectorant. Similar in action to the Balsams of Peru and Tolu. Recommended also in gonorrhœa and leucorrhœa; said to be equal to Copaiba, and less disagreeable.

Dose.—10 to 20 grs. twice a day, gradually increasing.

Contained in Tinctura Benzoini Comp.

SUCCI.

JUICES.

Juices expressed from fresh medicinal plants, and preserved by the addition of Spirit, were introduced by the Author in 1835 (Pharm. Journ. vol. i.). By thus preserving the juice of the plant, its properties are not impaired by the action of air during the time necessary to dry the leaf for Tincture, nor by the action of both air and heat during the time necessary to evaporate the juice to the consistence of an Extract.

They were found in practice superior to the Tinctures, and have been since employed, especially by medical men in private practice, to the present time. Physicians will doubtless satisfy themselves of the value of these medicines now they have found a place in the British Pharmacopœia.

The following have been introduced into the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared :—

SUCCUS BELLADONNÆ . .	Dose, 5 to 15 mins.
SUCCUS HYOSCYAMI. . . .	„ ½ to 1 drm.
SUCCUS CONII	„ ½ to 1 drm.
SUCCUS SCOPARII	„ 1 to 2 drms.
SUCCUS TARAXACI	„ 2 to 4 drms.

These consist of 3 parts of Juice and 1 of Rectified Spirit.

Juices which are not official are enumerated in the Index.

The Alcoolatures of the Fr. are made by digesting equal weights of fresh plant and Rectified Spirit together for 10 days; press and filter. Aconite, Belladonna, Conium (Ciguë), Digitalis, Henbane (Jusquiame), Lettuce, Stramonium Leaves, Flowers of Colchicum, and Bulb of Colchicum, are so prepared.

Not Official.

SUCCINI OLEUM.

Oil of Amber, 1; Spirit of Camphor, 1; spirit of Hartshorn, 1: mix. A domestic embrocation for Hooping Cough; said to resemble Roach's.

TINCT. SUCCINI.—Amber in fine powder, 1. Rectified Spirit, 16. Digest 7 days.

Dose.—25 minims in water for headache.

SULPHUR.

SULPHUR.

S; eq. 16.

Sulphur occurs native, and is found in masses or in the powdery form mixed with various impurities. It is abundant in volcanic countries, as in Sicily, Naples, and the Roman States. It exists largely in this country in combination with Iron and Lead. It readily sublimes, and when washed is called washed or sublimed Sulphur.

SULPHUR SUBLIMATUM.

SUBLIMED SULPHUR.

A slightly gritty powder of a fine greenish yellow-colour; without taste and without odour until heated.

Test.—Entirely volatilized by heat, does not redden litmus paper—indicating absence of sulphurous and sulphuric acids. Solution of Ammonia, agitated with it and filtered, does not on evaporation leave any residue.

Insoluble in water. Soluble in Oils and Turpentine with heat.

Medicinal Properties.

Laxative, diaphoretic, and resolvent; evidently passes off by the pores of the skin. It is chiefly employed in hæmorrhoidal affections, chronic rheumatism; externally for skin diseases, especially scabies. Sometimes used as a dentifrice.

Dose.—As a stimulant, from 10 grains upwards; as a laxative, in treacle or milk 20 to 60 grs. or more.

(In all the Pharmacopœias; Fr. Soufre Lavé.)

Preparations.

CONFECTIO SULPHURIS. Yellow.

Sublimed Sulphur, 4; Acid Tartrate of Potash, 1; Syrup of Orange Peel, 4: triturate. =(1 in $2\frac{1}{4}$).

Dose.—60 to 120 grs.

(Not in other Pharmacopœias.)

UNGUENTUM SULPHURIS. Yellow.

Sublimed Sulphur, 1; Benzoated Lard, 4: mix. =(1 in 5).

(Same as Belg.; U. S. 1 in 3; Fr. Pommade $1\frac{1}{2}$ in $5\frac{1}{2}$, Cérat 1 in $6\frac{1}{2}$, Austr. Ung. Sulphuratum, Sulphur and Sulphate of Zinc, of each 1, Lard 8—mix: not in others.)

Precipitated Sulphur makes a more active Ointment, and Essence of Lemon covers the odour.

Not Official.

CHELSEA PENSIONER.—Sulphur, 6; Mustard, 6; Powdered Guaiacum, 3; Rhubarb, $1\frac{1}{2}$; Nitre, $1\frac{1}{2}$: mix. Honey or treacle sufficient to make it into an Electuary.

Dose.—A teaspoonful every alternate evening for rheumatism; it is also taken in the morning as an aperient to regulate the bowels.

SULPHUR PRÆCIPITATUM.

PRECIPITATED SULPHUR.

A greyish-yellow soft powder, free from grittiness, and with no smell of Sulphuretted Hydrogen.

Test.—Entirely volatilized by heat: under the microscope it is seen to consist of opaque globules without any admixture of crystalline matter; otherwise corresponds with Sublimed Sulphur.

Medicinal Properties.

Similar to those of Sulphur Sublimatum, only more active.

Dose.—20 to 60 grs.

(In all the Pharmacopœias; Fr. Soufré Précipitaté.)

Precipitated Sulphur, 2; Subcarb. Potash, 1; Lard, 8: mix.

Excellent for Scabies.

LAC SULPHURIS of former Pharmacopœias contained a large amount of Sulphate of Lime.

SULPHURIS IODIDUM.

IODIDE OF SULPHUR.

S_2I, or **SI**; eq. 159.

Iodine, 4; Sublimed Sulphur, 1: rub together in a dry mortar, transfer to a flask and liquefy by a gentle heat, allow it to cool and solidify. Black.

The Iodine should be the dry sublimed Iodine, and the Sulphur should be dried before mixing it with the Iodine.

Solubility in Glycerine, 1 in 60. Insoluble in water.

Preparation.

UNGUENTUM SULPHURIS IODIDI. Black.

Iodide of Sulphur, 1; Lard, 16: mix. An excellent remedy for acne punctata and other eruptions of the skin. =(1 in 17).

(Fr. Pommade, 1 in 20; not in others.)

SUMBUL RADIX.

SUMBUL ROOT.

Musk Root, reported to be the roots of the *Euryangium Sumbul*. Imported from Russia and India.

In slices of two to four inches in diameter, possessing the odour of musk, which it long retains.

Medicinal Properties.

A nervous stimulant in low typhoid fevers, and in asthenic cases of dysentery, diarrhœa, and malignant cholera. Valuable in delirium tremens.

Preparation.

TINCTURA SUMBUL. Reddish-brown.

Sumbul, bruised fine, 1; Proof Spirit, 8; digest seven days and filter.

Dose.—15 to 30 minims.

SUPPOSITORIA.

Suppositories are prepared by the following general formula:—

Mix the Medicinal portion with a small quantity of the Oil of Theobroma, by rubbing them together, and add the mixture to the remainder of

the Oil of Theobroma, previously melted and cooled to 95°. Then mix thoroughly without applying more heat, and immediately pour the mixture into suitable moulds. The moulds, previously made cold, must be be kept so by immersion in iced water.

All difficulty in removing the suppositories from the moulds may be obviated by having the moulds previously dusted with Lycopodium.

	Each contains
SUPPOSITORIUM ACIDI TANNICI.	3 grs. Tannic Acid.
SUPPOSITORIA ACIDI TANNICI c. SAPONE.	3 grs.
SUPPOSITORIA CARBOLICI c. SAPONE.	½ gr.
SUPPOSITORIUM HYDRARGYRI.	5 grs. Mercurial Ointment.
SUPPOSITORIUM MORPHIÆ.	½ gr. Hydrochlorate of Morphia.
SUPPOSITORIA MORPHIÆ c. SAPONE.	½ gr.
SUPPOSITORIUM PLUMBI COMPOSITUM.	3 grs. Acetate of Lead, 1 gr. Powdered Opium.

Suppositories, not official, are enumerated in the Index.

Not Official.

SYMPHYTUM.

COMMON COMFREY.

Syn. CONSOUDE, *Fr.*

The root is black without and white within. Flowers yellow, common in ditches near rivers.

Medicinal Properties.—Astringent, mucilaginous, glutinous; useful to form cases for injured limbs. The black rind is scraped off, and the mucilaginous root is then scraped carefully into a nice even pulp; this spread of the thickness of a crown-piece upon cambric or old muslin, is wrapped round the limb and bandaged over; it shortly stiffens, and forms a casing superior to starch, giving support and strength to the part. The Author knew a bone-setter who practised more than fifty years ago, and rendered himself famous for setting compound fractures with this root, which he kept secret, and he never removed the bandage after the first dressing, until the limb was well.

SYRUPI.

SYRUPS.

Syrups are apt to ferment or mould when made with too little sugar, and to crystallize when too concentrated; to avoid these inconveniences which have arisen from former instructions for the preparation of this class of medicines, the British Pharmacopœia directs that the product of each syrup shall be made up to one constant weight, thereby ensuring uniformity of consistence, which is perhaps as good a practical guide as taking the specific gravity, when cooled to 60° F. The Dublin Pharmacopœia directed that in the case of simple syrup the specific gravity should be given, namely, 1·330, and this gravity is a very proper one for ordinary temperatures, but it must be understood that if the syrup be exposed to a very low temperature,

say 40° F., it may crystallize. It keeps perfectly well, however, at a range of temperature from 50° upwards. Of course the more refined the sugar, the cleaner and lighter in colour will be the syrup, but even with the best sugar a little scum will form on the surface, which must be removed; when straining is required, it must be done whilst the syrup is hot, and through flannel, returning the first runnings, if not quite bright, into the bag. Syrups keep best in full bottles; when a bottle has remained half empty a short time, although of the right density at first, it is very apt to crystallize; and when kept in large jars, say of from 8 to 10 gallons, with loose covers, the sides are generally studded with crystals, and the syrup is thus frequently rendered too weak to keep when sent out. To prevent fermentation, for instance, in the Syrup of Poppies, several additions have been proposed to be made, but they have not succeeded, because in our former processes for preparing the syrup, the matter which is the cause of the fermentation was not removed; in the new process Rectified Spirit is employed for that purpose, and the result is that Syrup of Poppies, which in the summer frequently fermented so much that it rushed out of the bottles, now remains unaltered. It is, however, necessary that no more spirit be added than is ordered, for a larger quantity is very apt to cause deposition of crystals.

In making simple syrup from any sugar requiring white of egg to render it perfectly bright, the egg should be beaten into a froth, and not added till the syrup has become hot enough to coagulate it; it should then be poured quickly in, and well stirred up with the syrup; the air enclosed in the froth causes the coagulated albumen to rise to the surface, so that it may be effectually removed by skimming, whereas, if it is mixed with the syrup before it is heated, the air escapes as it warms up, and a good part of the albumen does not rise; still, by straining the syrup, it may be made bright.

Syrup of Lemon Juice, if kept long, deposits grape sugar, and should therefore be made in smaller quantity, and more frequently than the other syrups. The Syrups of Orange and Ginger are now made from their tinctures, which give just as good a flavour, and produce much brighter syrups, besides the advantage of avoiding the starch and other matters which were contained in the former syrups. The Syrup of Rose is now made with the red roses. The Syrup of Senna, which was previously the exception of the syrups, being prepared with treacle, is now made with refined sugar like the rest, and being treated like the Poppies, no longer ferments; it is very palatable and sufficiently active. The Syrup of Tolu is made by the London process. Syrup of Violets and others of little medicinal value have not been admitted into the British Pharmacopœia.

A good and expeditious method of making Syrup of Iodide of Iron is introduced; still the Iodide is not entirely protected by the sugar from change.

The only way in which this can be effectually done is by a solution in water having a coil of iron-wire reaching throughout the whole length of the column, as originally proposed by the Author.

The following are the syrups of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

Dose.		
	SYRUPUS.—*See* SACCHARUM	Sugar 1 in 1⅛.
1 drm. .	SYRUPUS AURANTII	Tinct. 1 in 8.
1 drm. .	SYRUPUS AURANTII FLORIS	1 in 6¾.
	SYRUPUS AURANTII RECENTIS.	
	SYRUPUS CHLORALIS.	1 in 6.
½ drm. .	SYRUPUS FERRI IODIDI, 4⅓ grains in each drachm.	1 in 14.
1 drm. .	SYRUPUS FERRI PHOSPHATIS, 1 grain in each drachm.	
1 drm. .	SYRUPUS HEMIDESMI	1 in 8.
1 drm. .	SYRUPUS LIMONIS	Juice 1 in 2.
1 drm. .	SYRUPUS MORI	Juice 1 in 2.
1 drm. .	SYRUPUS PAPAVERIS	Capsules 1 in 2¼
1 drm. .	SYRUPUS RHAMNI.	
1 drm. .	SYRUPUS RHEI	Root 1 in 14.
1 drm. .	SYRUPUS RHŒADOS	Petals 1in 3½.
1 drm. .	SYRUPUS ROSÆ GALLICÆ	Petals 1 in 17¼.
½ drm. .	SYRUPUS SCILLÆ	1 in 17.
1 drm. .	SYRUPUS SENNÆ	1 in 2.
1 drm. .	SYRUPUS TOLUTANUS.—*See* BALS. TOLU.	
1 drm. .	SYRUPUS ZINGIBERIS	Strong Tinct. 1 in 26.

Syrups that are not official are enumerated in the Index.

TABACI FOLIA.

LEAF TOBACCO.

The dried leaves of the Virginian Tobacco, *Nicotiana Tabacum*, cultivated in America.

In large, mottled brown, ovate or lanceolate, acuminate leaves, bearing numerous short glandular hairs, having a peculiar heavy odour and nauseous-bitter acrid taste.

Test.—Not in a manufactured state.

From the leaf of the plant are derived :—

NICOTIN, a nearly colourless fluid, sp. g. 1·048, of an acrid burning taste, inflammable, miscible with water, ether, alcohol, and the fixed oils ; capable of being formed into crystalline salts ; its formula is $N_2C_{20}H_{14}$, eq. 162. To this alkaloid Tobacco owes its activity. Nicotin is a powerful poison.

NICOTIANIN, a fatty substance, having the smell of tobacco smoke, with an aromatic and somewhat bitter taste.

Medicinal Properties.

A powerful sedative, especially affecting the heart, frequently causing great depression. Narcotic and emetic. Smoked, it is sedative and expecto-

rant in various cases of asthma. Occasionally used as snuff for affections of the head. It is dangerous on account of its poisonous properties, but useful as an antidote to the poison of Strychnia (*see* NUX VOMICA).

(U. S. Ger. Nicotiana, and Fr. Tabac; not in others.)

ANTIDOTES.—In case Tobacco has been swallowed, an emetic; in any case stimulants internal and external. Professor Haughton, of Dublin, relies on Strychnia as an antidote for Tobacco, and on Tobacco for Strychnia.

Preparation.

ENEMA TABACI.

Leaf Tobacco, 20 grs.; boiling Water, 8 oz.: infuse half an hour, and strain.

For one enema.

(Not in other Pharmacopœias.)

Used in strangulated hernia, obstinate constipation, and retention of urine.

TAMARINDUS.

TAMARIND.

The preserved pulp of the fruit of the *Tamarindus Indica*, imported from the West Indies.

Test.—A piece of bright iron left in contact with the pulp for an hour does not exhibit any deposit of copper—the Tamarind acid would take up Copper if such vessels have been used.

Medicinal Properties.

Refrigerant and slightly laxative. Infused with water, forms a cooling drink in febrile affections.

Dose.—¼ oz. and upwards.

(In all the Pharmacopœias, except Austr. and Ger.)

Contained in Confectio Sennæ.

TARAXACI RADIX.

DANDELION ROOT.

The fresh roots of the *Taraxacum Dens-Leonis*, gathered between September and February from meadows and pastures in Britain.

Much difference of opinion exists as to the proper time of taking up the root. Some think that the winter, when it yields the thick albuminous juice, is the best; others prefer the thin and bitter juice yielded by the root in the early summer. The Author inclines to the former opinion, and has so expressed himself in an article furnished to Mr. Brande, and inserted by him in his 'Materia Medica.' Observations made throughout the year are there given. Juice taken from roots dug up in November, before any frost appeared, had a specific gravity 1·080; 28 pounds of root yielded 7 pounds of juice,

from which, when heated to 212° F., besides 4 ounces of insoluble matter, it left on evaporation 28 ounces of extract. This is not a correct average, for when in the highest perfection—

100 of root yield 30 of juice = 8 of extract. 100 of root, when dried, weigh 25.

Medicinal Properties.

A mild laxative, acting specially on the liver. In dropsy, arising from obstruction of the liver, it is given in combination with purgatives.

(In all the Pharmacopœias; Fr. Pissenlit.)

Preparations.

DECOCTUM TARAXACI.

Dried Dandelion Root, sliced and bruised, 1; Distilled Water, 20: boil ten minutes and strain. The produce should be made up to 20. =(1 in 20).

Dose.—2 to 4 oz.

(Belg. have provided for the varying condition of the root at different seasons by ordering the whole plant in a fresh state to be used; not in others.)

EXTRACTUM TARAXACI. Light brown; deepens with age.

Crush fresh Dandelion Root, press out the juice, and allow it to deposit; heat the clear liquor to 212° F., and maintain the temperature for ten minutes; then strain and evaporate by a water-bath at a temperature not exceeding 160° to a proper consistence.

100 pounds of fresh root yield 30 pounds of juice = 8 pounds of extract.

Dose.—5 to 15 grs.

(U. S. from fresh root; Fr. Juice of leaves; Austr. Belg. and Ger. whole plant; not in others.)

SUCCUS TARAXACI. Deep brown.

Bruise Dandelion Root in a stone mortar, press out the juice, and to every 3 measures of juice add 1 of Rectified Spirit: set aside seven days and filter.

Dose.—2 to 4 drms.

(U.S. Juice 5, Alcohol 1; Belg. the juice is merely coagulated and strained; no spirit is used.)

TEREBINTHINA CANADENSIS.

CANADA BALSAM.

The Turpentine obtained from the stem of the *Abies balsamea* by incision, in Canada. Pale straw.

Dose.—5 grains in a pill with half its weight of calcined Magnesia.

(U. S.; not in others.)

Contained in Charta Epispastica, Collodion Flexile.

TEREBINTHINÆ OLEUM.

OIL OF TURPENTINE.

The oil distilled from the Turpentine which exudes from the *Pinus palustris* or *P. Pinaster*, and *P. Tæda*, imported from America and France. Colourless.

Oil of Turpentine dissolves Wax, Iodine, Sulphur, Phosphorus, fixed oils, and resins forming varnish.

Remains transparent with Chloroform in all proportions; will not mix with Rectified Spirit.

Medicinal Properties.

Stimulant, diuretic, occasionally diaphoretic, anthelmintic; 5 mins. three times a day for hæmorrhage from the lungs; in large doses purgative, sometimes causing nausea, vomiting, and intoxication. It especially affects the kidneys, and the mucous membrane of the genito-urinary organs. Antispasmodic in hysterical affections. Externally rubefacient; employed as a liniment in chronic inflammation. A good liniment for rheumatism is made thus: Turpentine, 1; Chloroform of Belladonna, ½; Soap Liniment, 2½: mix. Flies and gnats are kept away by the odour of Turpentine.

Dose.—10 to 30 minims; as an anthelmintic, 2 to 4 drms. May be given in Mistura Amygdalæ.

(In all the Pharmacopœias.)

1 drm. of Mucilage, with diligent trituration, renders ½ drm. of Oil of Turpentine emulsive, with 1 oz. of Distilled Water.

30 grs. Powder of Acacia rubbed first with 1 drm. of Oil of Turpentine, then with 1 drm. of Water, and lastly triturating whilst adding gradually 1 oz. Distilled Water, makes a good emulsion.

Preparations.

CONFECTIO TEREBINTHINÆ. Light olive-brown.

Oil of Turpentine, 1; Liquorice Powder, 1; Clarified Honey, 2: mix. =(1 in 4).

Rub the first two together, and add the Honey; but if the Turpentine separates pour it off, and re-add it gradually with constant trituration, and it will unite.

Dose.—60 to 240 grs. daily; for Tænia, 2 to 4 oz.

(Not in other Pharmacopœias.)

It is much used in Dublin as a diffusible stimulant in chronic bronchitis, and is the most palatable of all the turpentine preparations.

ENEMA TEREBINTHINÆ.

Oil of Turpentine, 1 oz.; Mucilage of Starch, 15 oz.: mix for 1 enema.

(Not in other Pharmacopœias.)

LINIMENTUM TEREBINTHINÆ. Fawn-coloured emulsion.

Oil of Turpentine, 16; Camphor, 1; Soft Soap, 2: dissolve the camphor, in the turpentine, then add the soap; rub till thoroughly mixed. =(1 in 1⅕).

(U. S. Resin Cerate, 3; Ol. Turpentine, 2; Belg. 9½ in 10: not in others.)

LINIMENTUM TEREBINTHINÆ ACETICUM. Separates as soon as shaking has ceased.

Oil of Turpentine, 1; Acetic Acid, 1; Liniment of Camphor, 1: mix. = (1 in 3).

St. John Long's celebrated Liniment.

UNGUENTUM TEREBINTHINÆ. Yellowish-brown.

Oil of Turpentine, 1; Resin, in powder, $\frac{1}{8}$; Yellow Wax, $\frac{1}{2}$; Prepared Lard, $\frac{1}{2}$: mix with heat. =(1 in $2\frac{1}{8}$).

(Austr. and Ger. differ from this in composition: not in others.)

THEOBROMÆ OLEUM.

Syn. CACAO BUTTER.

A concrete oil, obtained by expression and heat from the ground seeds of *Theobroma Cacao*.

(Belg. Ger.; Butyrum Cacao, U. S., Fr.; not in others.

Occurs in cakes of a yellowish colour of a pleasant cacao odour. Does not become rancid from exposure to air.

Contained in all the suppositories.

Not Official.

The following form good bases for suppositories:—

Theobroma Oil, when melted, begins to solidify at				. . .	72° F.
Stearine of Cocoa-nut Oil	„	„	„	. . .	75° F.
4 of Stearine and 2 Mutton Fat	„	„	„	. . .	77° F.
4 of Stearine and 1 Spermaceti	„	„	„	. . .	80° F.

Stearine alone is perhaps a better substance than Cacao Butter for making suppositories. It begins to solidify at 78° F., but there is Stearine that solidifies at 120° F.; this will not answer for suppositories.

THERIACA.

TREACLE.

Syn. SACCHARI FÆX, *Lond.*

The uncrystallized residue of the refining of Sugar. Golden Syrup of commerce. Intense brown.

Sp. g. 1·40.

Test.—Nearly free from empyreumatic odour or flavour.

Medicinal Properties.

Demulcent, nutrient, and slightly laxative. A favourite condiment in pharmacy, chiefly employed to make pills, for which, on account of its retentiveness of moisture, it is well adapted.

(Not in other Pharmacopœias.)

Contained in Pil. Assafœt. Comp., Pil. Rhei Comp., Pil. Scillæ Comp.

THUS AMERICANUM.

COMMON FRANKINCENSE.

The concrete Turpentine of the Frankincense Pine, *Pinus Tæda*, and the Swamp Pine, *P. palustris*, from the Southern States of North America.

A softish bright yellow opaque solid, resinous but tough, having the odour of American turpentine.

The true Thus is *Pix Burgundica*, from the Spruce Fir, *Abies excelsa*. *See* PIX BURGUNDICA, page 216.

(Fr. only.)

Medicinal Properties.

Used externally as a stimulant.

Contained in Emplastrum Picis.

TINCTURÆ.

TINCTURES.

Many of these have been directed by the British Pharmacopœia to be made by percolation, and as this operation imposes several conditions to be complied with in order that it may be efficiently performed, directions on the subject will be found immediately after the group of Tinctures.

The following are the Tinctures of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared; all are made with Proof Spirit unless otherwise stated.

Dose.		Proportion of active ingredients in the mass.	
10 min.	TINCTURA ACONITI	1 in 8	Rect. Sp.
1 drm.	TINCTURA ALOES	1 in 40.	
1 drm.	TINCTURA ARNICÆ	1 in 20	Rect. Sp.
½ drm.	TINCTURA ASSAFŒTIDÆ	1 in 8	Rect. Sp.
1 drm.	TINCTURA AURANTII	1 in 10.	
1 to 2 drm.	TINCTURA AURANTII RECENTIS		Rect. Sp.
5 min.	TINCTURA BELLADONNÆ	1 in 20.	
½ drm.	TINCTURA BENZOINI COMP.	1 in 10	Rect. Sp.
1 drm.	TINCTURA BUCHU	1 in 8.	
½ drm.	TINCTURA CALUMBÆ	1 in 8.	
15 min.	TINCTURA CAMPHORÆ COMPOSITA. Opium 1, Benzoic Acid 1, Camphor ¾, in 240.		
5 min.	TINCTURA CANNABIS INDICÆ (Extract)	1 in 20	Rect. Sp.
5 min.	TINCTURA CANTHARIDIS	1 in 80.	
10 min.	TINCTURA CAPSICI	1 in 27	Rect. Sp.
½ drm.	TINCTURA CARDAMOMI COMP.	1 in 80.	

Dose.		Proportion of active ingredients in the mass.	
½ drm.	TINCTURA CASCARILLÆ	1 in 8.	
½ drm.	TINCTURA CASTOREI	1 in 20	Rect. Sp.
1 drm.	TINCTURA CATECHU	1 in 8.	
15 min.	TINCTURA CHIRATÆ	1 in 8.	
20 min.	TINCTURA CHLOROFORMI COMP.	1 in 10	Rect. Sp.
½ drm.	TINCTURA CINCHONÆ COMP.	1 in 10.	
1 drm.	TINCTURA CINCHONÆ FLAVÆ	1 in 5.	
½ drm.	TINCTURA CINNAMOMI	1 in 8.	
30 min.	TINCTURA COCCI	1 in 8.	
15 min.	TINCTURA COLCHICI SEMINUM	1 in 8.	
½ drm.	TINCTURA CONII (FRUCTUS)	1 in 8.	
½ drm.	TINCTURA CROCI	1 in 20.	
½ drm.	TINCTURA CUBEBÆ	1 in 8.	Rect. Sp.
10 min.	TINCTURA DIGITALIS	1 in 8.	
15 min.	TINCTURA ERGOTÆ	1 in 4.	
5 min.	TINCTURA FERRI ACETATIS		Rect. Sp.
10 min.	TINCT. FERRI PERCHLORIDI (Liquor)	1 in 4	Rect. Sp.
½ drm.	TINCTURA GALLÆ	1 in 8.	
1 drm.	TINCTURA GENTIANÆ COMP.	1 in 13⅓.	
½ drm.	TINCTURA GUAIACI AMMONIATA	1 in 5.	Arom. Sp. Ammon.
15 min.	TINCTURA HYOSCYAMI	1 in 8.	
5 min.	TINCTURA IODI . Iodine 1, Iodide Potass.	½ in 40	Rect. Sp.
½ drm.	TINCTURA JALAPÆ	1 in 8.	
½ drm.	TINCTURA KINO	1 in 10	Rect. Sp.
1 drm.	TINCTURA KRAMERIÆ	1 in 8.	
20 min.	TINCTURA LARICIS	1 in 8.	
½ drm.	TINCTURA LAVANDULÆ COMP. (Oil)	1 in 213	Rect. Sp.
½ drm.	TINCTURA LIMONIS	1 in 8.	
10 min.	TINCTURA LOBELIÆ	1 in 8.	
10 min.	TINCTURA LOBELIÆ ÆTHEREA	1 in 8	Sp. Ether.
½ drm.	TINCTURA LUPULI	1 in 8.	
½ drm.	TINCTURA MYRRHÆ	1 in 8	Rect. Sp.
10 min.	TINCTURA NUCIS VOMICÆ	1 in 10	Rect. Sp.
10 min.	TINCTURA OPII	1 in 13⅓.	
½ drm.	TINCTURA OPII AMMONIATA	1 in 96	Rect. Sp.
	TINCTURA PYRETHRI	1 in 5	Rect. Sp.
1 drm.	TINCTURA QUASSIÆ	1 in 27.	
1 drm.	TINCTURA QUINIÆ	1 in 60	Tr. Orange.
1 drm.	TINCTURA QUINIÆ AMMONIATA	1 in 60.	
1 drm.	TINCTURA RHEI	1 in 10.	
15 min.	TINCTURA SABINÆ	1 in 8.	
15 min.	TINCTURA SCILLÆ	1 in 8.	

Dose.		Proportion of active ingredients in the mass.	
½ drm.	TINCTURA SENEGÆ	1 in 8.	
2 drms.	TINCTURA SENNÆ.	1 in 8.	
½ drm.	TINCTURA SERPENTARIÆ	1 in 8.	
10 min.	TINCTURA STRAMONII	1 in 8.	
10 min.	TINCTURA SUMBUL	1 in 8.	
15 min.	TINCTURA TOLUTANA.—*See* BALSAM . .	1 in 8	Rect. Sp.
1 drm.	TINCTURA VALERIANÆ	1 in 8.	
½ drm.	TINCTURA VALERIANÆ AMMONIATA	1 in 8	Arom. Sp. Ammon.
5 min.	TINCTURA VERATRI VIRIDIS	1 in 5	Rect. Sp.
15 min.	TINCTURA ZINGIBERIS.	1 in 8	Rect. Sp.
5 min.	TINCTURA ZINGIBERIS FORTIOR . .	1 in 2	Rect. Sp.

Tinctures that are not official are enumerated in the Index.

DIRECTIONS FOR PERCOLATING TINCTURES.

After the materials have been macerated for forty-eight hours in three-fourths of the menstruum ordered, percolation will be most efficiently performed by decanting the liquid, pressing the ingredients in the hand, and carefully packing them, in small portions at a time, in a conical percolator, so that the mass shall be uniformly tight throughout. The decanted liquid may then be poured upon the ingredients and suffered to percolate; the remainder of the menstruum being afterwards poured upon them in order to chase the strong tincture out. As soon as the liquid ceases to drop, the ingredients are to be removed and pressed. Any deficiency in the product may be made up by adding more of the menstruum and repeating the pressure.

The author prefers Burton's process, combined with the abstraction of air from the ingredients; thus tie up the ingredients and suspend them *submerged* in the upper part of the liquid, fit an elastic cap connected with an exhausting syringe to the neck of the vessel. When the air has been thus abstracted from the structure of the materials, and the atmosphere readmitted, its pressure drives the liquid into every part the air had preoccupied, and complete digestion begins, the impregnated liquid constantly falling by its gravity, allows the fresh liquid to penetrate and continue the exhausting process until finished.

TRAGACANTHA.

TRAGACANTH.

A gummy exudation from the stem of the *Astragalus verus*, collected in Asia Minor. Nearly white.

Sparingly soluble in cold water.

Test.—After maceration in cold water, the fluid portion is not precipitated by the addition of Rectified Spirit—indicating absence of Acacia Gum; and the gelatinous mass, when boiled and cooled, is not turned deep blue by Tincture of Iodine—indicating absence of Starch.

Medicinal Properties.

Demulcent. Used for the suspension of heavy insoluble powders in liquids; the compound powder equal to the weight of the powder itself may be used.

Dose.—Of the powder, 20 grs. upwards.

(In all the Pharmacopœias.)

Preparations.

MUCILAGO TRAGACANTHÆ. Should be made as required.

Tragacanth in powder, 60 grs.; Distilled Water, 10 oz. To the water contained in a pint bottle add the Tragacanth, agitate briskly for a few minutes, and again at short intervals, until the Tragacanth is perfectly diffused and finally has formed a mucilage. =(1 in 80).

Dose.—1 oz. upwards.

(Austr. and Belg. 1 in 84; Austr. M. Spissa 1 in 120; Fr. Mucilage de Gomme Adragante 1 in 8; U.S. 1 in 16; not in others.)

One part of Tragacanth gives more viscosity to water than 25 parts of Gum Arabic.

PULVIS TRAGACANTHÆ COMPOSITUS. White.

Tragacanth in powder, 1; Gum Arabic in powder, 1; Starch in powder, 1; Refined Sugar in powder, 3: rub well together. =(1 in 6).

Dose.—10 to 60 grs.

(Not in other Pharmacopœias.)

Not Official.

TRIFOLIUM.

CLOVER.

Syrupus.—A teaspoonful 3 or 4 times a day for Whooping Cough.

Not Official.

TRITICUM REPENS.

CREEPING COUCH GRASS.

DECOCTUM TRITICI.

Root, 1 oz.; Water, 20 oz.: boil ten minutes, and strain when cold.

Dose.—4 oz. to 8 oz. three times a day for mucous discharge from the bladder.

(Fr. Chien-dent.)

TROCHISCI.

LOZENGES.

The following are the Trochisci of the British Pharmacopœia :—

	Quantity of the active ingredient contained in each lozenge.
TROCHISCI ACIDI TANNICI	½ grain.
TROCHISCI BISMUTHI	2 grains.
TROCHISCI CATECHU	1 grain.

	Quantity of the active ingredient contained in each lozenge.
TROCHISCI FERRI REDACTI	1 grain.
TROCHISCI IPECACUANHÆ	¼ grain.
TROCHISCI MORPHIÆ . (Hydrochlorate)	1/30 grain.
TROCHISCI MORPHIÆ ET IPECAC. „	1/30 and 1/12 gr. Ipecac.
TROCHISCI OPII . . . . . (Extract)	1/10 grain.
TROCHISCI POTASSÆ CHLORATIS . .	5 grains.
TROCHISCI SODÆ BICARBONATIS . .	5 grains.

Lozenges that are not official are enumerated in the Index.

Black currant paste is a most convenient substance for making Lozenges of any special drug.

ULMI CORTEX.

ELM BARK.

The dried inner bark of the *Ulmus campestris*, deprived of its outer layer; from trees indigenous to and cultivated in Britain.

Medicinal Properties.

Bitter demulcent, slightly tonic, astringent, and diuretic. Used in herpetic eruptions.

(U.S. Ulmus Fulva.; Fr. Orme Champêtre; not in others.)

Incompatibles.—Sulphate of Iron, Acetate of Lead, Nitrate of Silver, and Gelatine.

Preparation.

DECOCTUM ULMI.

Elm Bark, cut in small pieces, 1; Distilled Water, 16: boil down to 8 and strain. =(1 in 8).

Dose.—2 to 4 oz. three or four times daily.

(Not in other Pharmacopœias.)

UNGUENTA.

OINTMENTS.

The following are the Ointments of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

	Proportion of active ingredients in the mass.
UNGUENTUM ACONITLÆ	1 in 60.
UNGUENTUM ANTIMONII TARTARATI	1 in 5.
UNGUENTUM ATROPIÆ	1 in 60.

	Proportion of active ingredients in the mass.
UNGUENTUM BELLADONNÆ . . . . (Extract)	1 in 6½.
UNGUENTUM CADMII IODIDI	1 in 8.
UNGUENTUM CANTHARIDIS	1 in 8.
UNGUENTUM CETACEI	1 in 5.
UNGUENTUM CREASOTI	1 in 9.
UNGUENTUM ELEMI	1 in 5.
UNGUENTUM GALLÆ	1 in 6½.
UNGUENTUM GALLÆ CUM OPIO . . . (Opium)	1 in 15.
UNGUENTUM HYDRARGYRI . . . . . (Mercury)	1 in 2.
UNGUENTUM HYDRARGYRI AMMONIATI . . .	1 in 8.
UNGUENTUM HYDRARGYRI COMPOSITUM	1 Mercury in 4½.
UNGUENTUM HYDRARGYRI IODIDI RUBRI . .	1 in 28.
UNGUENTUM HYDRARGYRI NITRATIS (Mercury)	1 in 15½.
UNGUENTUM HYDRARGYRI OXIDI RUBRI . . .	1 in 8.
UNGUENTUM HYDRARGYRI SUBCHLORIDI . .	1 in 6½.
UNGUENTUM IODI . . . . . (Iodine)	1 in 31.
UNGUENTUM PICIS LIQUIDÆ	5 in 7.
UNGUENTUM PLUMBI ACETATIS	1 in 37½.
UNGUENTUM PLUMBI CARBONATIS	1 in 8.
UNGUENTUM PLUMBI IODIDI	1 in 8.
UNGUENTUM PLUMBI SUBACETATIS COMPOSITUM (Solution of Subacetate of Lead)	1 in 5½.
UNGUENTUM POTASSÆ SULPHURATÆ	1 in 15½.
UNGUENTUM POTASSII IODIDI	nearly 1 in 8¾.
UNGUENTUM RESINÆ	1 in 3½.
UNGUENTUM SABINÆ	nearly 1 in 3⅜.
UNGUENTUM SIMPLEX.	
UNGUENTUM SULPHURIS	1 in 5.
UNGUENTUM SULPHURIS IODIDI	1 in 17.
UNGUENTUM TEREBINTHINÆ . . . . . (Oil)	1 in 2⅛.
UNGUENTUM VERATRIÆ	1 in 60.
UNGUENTUM ZINCI	1 in 6½.

Ointments which are not official are enumerated in the Index.

UNGUENTUM SIMPLEX.

White Wax, 2; Almond Oil, 3; Lard, 3: melt together, and stir till cold.

UVÆ URSI FOLIA.

BEARBERRY LEAVES.

The dried leaves of the *Arctostaphylos Uva-ursi*, from indigenous plants.

Test.—Leaves not dotted beneath, nor toothed on the margin.

(U.S. Belg.; Fr. Busserole; not in others.)

Medicinal Properties.

Astringent and tonic, with a direct influence on the kidneys and urinary organs. Used in menorrhagia and diabetes, also in chronic dysentery.

Dose.—Of the powdered leaf, 10 to 30 grs.

INCOMPATIBLES.—Iron Salts, Lead Salts, Nitrate of Silver, Vegetable Alkaloids, Gelatine.

Preparation.

INFUSUM UVÆ URSI.

Bearberry Leaves, 1; boiling Distilled Water, 20: infuse two hours, and strain. =(1 in 20).

Dose.—1 to 2 oz.

(U.S., Decoctum; not in others.)

UVÆ.

RAISINS.

The ripe fruit of the Grape Vine, *Vitis vinifera*, dried in the sun or with artificial heat. Imported from Spain.

Medicinal Properties.

Nutritious and demulcent. Principally used as a flavouring agent.

(In all the Pharmacopœias, except Austr. and Ger.)

Contained in Tinct. Cardam. Comp., Tinct. Sennæ.

VALERIANÆ RADIX.

VALERIAN ROOT.

The root of the *Valeriana officinalis*, indigenous and cultivated in Britain, collected in autumn and dried; that from wild plants growing on dry soil preferred.

Medicinal Properties.

It is a nervous stimulant and antispasmodic. Useful in hysteria and nervous diseases; also in chorea and epilepsy; and as an adjunct to tonics.

Dose.—10 to 30 grs. of the powder.

(In all the Pharmacopœias.)

Preparations.

INFUSUM VALERIANÆ.

Valerian, bruised, 120 grs.; boiling Distilled Water, 10 oz.: infuse one hour, and strain. =(1 in 40).

Dose.—1 to 2 oz.

(U.S. 1 in 30; F. Tisane; 1 in 100, not in others.

TINCTURA VALERIANÆ. Intense reddish-brown.

Valerian, bruised, 1; Proof Spirit, 8: macerate the Valerian forty-eight hours with 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remainder of the spirit; when it ceases to drop, press and filter, washing the marc with spirit to make up 8. =(1 in 8).

Dose.—1 to 2 drms.

(U.S. 1 in 7½; Austr. Belg. Fr. and Ger. 1 in 5 by weight.)

TINCTURA VALERIANÆ AMMONIATA. Intense reddish-brown.

Valerian, bruised, 1; Aromatic Spirit of Ammonia, 8: macerate the Valerian seven days, press, filter, and add spirit to make up 8. =(1 in 8).

Dose.—½ to 1 drm.

(Belg. with liquid Ammonia and Alcohol, 1 and 5½ by weight;) U.S. 1 in 7; not in others.)

Not Official.

TINCT. VALER. ETHEREA, Ger.—Bruised Valerian 1, Spirit of Ether 5, by weight: macerate eight days.

VAPORES.

INHALATIONS.

VAPOR ACIDI HYDROCYANICI, 10 to 15 minims, and1 drm. cold Water.

VAPOR CHLORI, Chlorinated Lime, 2 oz.; cold Water, a sufficiency.

VAPOR CONIÆ, Extract of Hemlock, 60 grs.; Solution of Potash, 1 drm.; Water, 10 drms.: use 20 minims, and hot Water.

VAPOR CREASOTI, 12 minims, in 8 oz. boiling Water.

VAPOR IODI, Tincture of Iodine, 1 drm.; Water, 1 oz.: apply a gentle heat.

Several kinds of Inhalers are in use; the Author has invented one made of Tin, having a mouthpiece which, at the same time that it allows the vapour to pass freely by the mouth, closes firmly the nostrils. Dr. Nelson's and Messrs. Maw's are made of Earthenware. Dr. Morel Mackenzie has invented one of a more elaborate description, which he calls Eclectic, fitted with a thermometer specially adapted for diseases of the throat.

VERATRIA.

VERATRIA.

An alkaloid, $C_{64}H_{52}N_2O_{16}$, obtained from Cevadilla, not quite pure; eq. 592.

Pale grey, amorphous, pulverulent masses, powerfully irritating the nostrils, strongly and persistently bitter, and highly acrid and poisonous. Concentrated Sulphuric Acid changes it first to yellow, then blood-red, and lastly violet.

Solubility: scarcely soluble in cold water; in boiling water, 1 in 1000; in Rectified Spirit, 1 in 11; in Ether, 1 in 6; and readily in diluted acids.

Medicinal Properties.

A powerful emetic and drastic purgative. Rarely given internally. Used externally in neuralgia, in chronic swellings, stiffening or induration of the joints. It should be cautiously used where the skin is broken.

(In all the Pharmacopœias; Austr. Veratrinum; Ger. Veratrium.)

Preparation.

UNGUENTUM VERATRIÆ. Light fawn.

Veratria, 8 grs.; Prepared Lard, 1 oz.; Olive Oil, ½ drm.: rub the Veratria and the Oil together, then mix thoroughly with the Lard. =(1 in 60).

(U.S. 20 grs. to 1 oz., or 1 in 25; Belg. 1 in 100; not in others.)

VERATRI VIRIDIS RADIX.

GREEN HELLEBORE ROOT.

The dried rhizome of *Veratrum viride*, from U. S. and Canada.

Medicinal Properties.

Emetic. It increases most of the secretions; diminishes the frequency of the pulse, and reduces the respirations; when freely taken, powerfully influences the nervous system, occasioning faintness and loss of power, with dilatation of the pupils. Best adapted to gout, rheumatism, and neuralgic affections; should be cautiously prescribed.

Dose.—4 to 6 grs. of the powder.

TINCTURA VERATRI VIRIDIS. Deep brown.

Green Hellebore root, in coarse powder, 4; Rectified Spirit, 20: macerate the powder with 15 of the spirit forty-eight hours, agitating occasionally, pack it in a percolator, let it drain, pour on the remainder of the spirit, when it ceases to drop, press, filter, wash the marc with spirit to make up 20. =(1 in 8).

Dose.—5 to 20 minims.

VINA.

WINES.

Medicated Wines are of very ancient date, and were admitted into our earliest Pharmacopœias. Two only remain as representatives of the old Pharmacopœias—Vinum Antimonii and V. Ferri; the former was prepared by digesting 4 ounces of the Regulus of Antimony in powder with 3 pounds of "White" Wine (Pharmacopœia Londinensis, 1655). The latter (Vinum Chalybeatum) was made with Rhenish Wine and iron filings.

The following are the Wines of the British Pharmacopœia, the formulas for which will be found under the names of the drugs from which they are prepared:—

Dose.		Proportion of active ingredients in the whole.
1 drm.	VINUM ALOES	1 in 26½.
15 min.	VINUM ANTIMONIALE	2 grs. to 1 oz., or 1 in 240.
	VINUM AURANTII	British Orange Wine.
20 min.	VINUM COLCHICI	(Corm) 1 in 5.
1 drm.	VINUM FERRI	made with Iron Wire.
1 drm.	VINUM FERRI CITRATIS	8 grs. to 1 oz., or 1 in 60.
5 min.	VINUM IPECACUANHÆ	1 in 20.
15 min.	VINUM OPII	Ext. Opium 1 in 20.
½ oz.	VINUM QUINLÆ	1 gr. to 1 oz., or 1 in 480.
1 drm.	VINUM RHEI	33 grs. to 1 oz., or 1 in 15½.
	VINUM XERICUM.	

VINUM XERICUM.

SHERRY.

A pale brown Spanish Wine, containing about seventeen or eighteen per cent. of Alcohol. Unless good sound Sherry is used, the preparations are apt to spoil in keeping.

All Medicinal Wines are made with Sherry, except Vin. Ferri Citratis and Vinum Quiniæ, which are made with British orange-wine.

For the amount of Alcohol in the several wines most commonly drunk in England, *see* "Spiritus."

Not Official.

VINCA MAJOR.

GREAT PERIWINKLE.

An infusion made of 2 oz. of dried herb to 20 oz. boiling water, and strained when cold, is powerfully astringent.

Dose.—A wineglassful, drunk as frequently as required, will arrest Menorrhagia when other remedies have failed.

Ext. Vincæ Majoris Liquidum, made from the expressed juice of the plant of such strength that 1½ drm. is equal to 2 oz. of the infusion.

Dose.—1 to 2 drms. in water.

The latter preparation keeps well, and is the best to prescribe.

ZINCUM.

ZINC.

Zn, eq. 32·5; or **Zn**, eq. 65.

Sp. g. 7·1; fuses at 773° F. A bluish-white metal, of peculiar taste and of a perceptible smell when rubbed; laminated, and with a crystalline fracture.

It occurs native, as a Sulphuret or as a Carbonate, and is separated from impurities by sublimation.

ZINCUM GRANULATUM.

GRANULATED ZINC.

Fuse Zinc of Commerce in an earthen crucible, heated to a sufficient degree to melt the Zinc, but not to produce combustion, pour it in a very thin stream into a bucket of cold water, afterwards dry the Zinc.

Used to prepare Liquor Zinci Chloridi, Zinci Chloridum, Zinci Sulphas.

The British Pharmacopœia has continued the preparations of Zinc that were in former Pharmacopœias, viz.:—

ZINCI ACETAS.
ZINCI CARBONAS.
ZINCI CHLORIDUM.
ZINCI OXIDUM.
ZINCI SULPHAS.
ZINCI VALERIANAS.

INCOMPATIBLES of Zinc salts are,—Alkalies and their Carbonates, Lime Water, Acetate of Lead, Nitrate of Silver, Astringent Vegetable Infusions or Decoctions, and Milk.

ANTIDOTES.—In case of poisoning with the salts of Zinc, warm demulcent drinks, such as linseed tea, barley water, emetics; if inflammatory symptoms follow, antiphlogistic means must be taken.

ZINCI ACETAS.

ACETATE OF ZINC.

$ZnO,C_4H_3O_3+2HO$, eq. 109·5; or $\mathbf{Zn(C_2H_3O_2)_2.2H_2O}$, eq. 219.

Thin, translucent, and colourless crystalline plates, of pearly lustre.

Solubility: in water, 10 in 25.

Test.—A dilute watery solution is not affected by Chloride of Barium nor Nitrate of Silver; and when slightly acidulated with Hydrochloric Acid, is not precipitated by Sulphuretted Hydrogen—indicating absence of Lead. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate (Oxide of Zinc), entirely soluble without colour in an excess of the reagent.

Medicinal Properties.

Astringent. Similar to the Sulphate.

Dose.—1 to 2 grs. as a tonic, 10 to 20 grs. as an emetic.

(U.S. Belg. Fr. and Ger.; not in others.)

Not Official.

LOTIO.—Acetate of Zinc, 1 to 2 grs.; Water, 1 oz.: mix.

An astringent collyrium in ophthalmia, or as an injection in gonorrhœa after the acute stage has passed.

Tincture or Wine of Opium causes no precipitate with this Lotion.

ZINCI CARBONAS.

CARBONATE OF ZINC.

$ZnO,CO_2+2ZnO+3HO$, eq. 170·5; or $ZnCO_3(ZnO)_2.3H_2O$, eq. 341.

A white, tasteless, inodorous powder.

Insoluble in water.

Test.—Its solution in dilute Nitric Acid is not precipitated by Chloride of Barium (indicating absence of sulphate), or Nitrate of Silver (absence of chloride), and gives with Carbonate of Ammonia a white precipitate (Carbonate of Zinc), entirely soluble without colour in an excess of the reagent.

Medicinal Properties.

Same as those of the Oxide of Zinc.

Dose.—2 to 10 grs.

(U.S.; not in others.)

Not Official.

CALAMINE.—Impure Carbonate of Zinc, used for Lotions and for making Turner's Cerate.

ZINCI CHLORIDUM.

CHLORIDE OF ZINC.

ZnCl, eq. 68; or $ZnCl_2$, eq. 136.

In colourless opaque rods or tablets, very deliquescent and caustic.

Solubility in water, 10 in 4; freely in Rectified Spirit and in Ether.

Test.—Its watery solution is not affected by Chloride of Barium (indicating absence of Sulphuric Acid), or Oxalate of Ammonia (absence of Lime), and is not tinged blue by the Ferrocyanide or Ferridcyanide of Potassium (absence of Iron). Ammonia throws down a white precipitate (Oxide of Zinc), entirely soluble in an excess of the reagent.

Medicinal Properties.

Internally, a weak solution is alterative and tonic; externally, applied as a caustic to malignant sores, bleeding cancer, either mixed with an equal proportion of flour or alone, and as it liquefies, sprinkle with plaster of Paris to prevent its spreading, care being taken that it does not come in contact with the edges of the skin. 5 grs. to 1 oz. of water as a wash for the mouth.

Solution for Griffe's galvanic apparatus, 1 drm. Chloride of Zinc to ℥ij of distilled water, and filtered.

Dose.—½ to 1 or 2 grs.

(In all the Pharmacopœias; Austr. and Ger. Z. Chloratum; Belg. Z. Chloruretum; Fr. Chlorure de Zinc.)

Preparation.

LIQUOR ZINCI CHLORIDI. Colourless.

Granulated Zinc, 8; Hydrochloric Acid, 22; Solution of Chlorine, q. s.; Carbonate of Zinc, ¼; Distilled Water, 10. Mix the acid and water in a porcelain dish, add the Zinc, and apply a gentle heat to promote the action until gas is no longer evolved; boil for half an hour, supplying the water lost by evaporation, and allow the product to cool. Filter it into a bottle and add solution of Chlorine by degrees, with frequent agitation, until the fluid acquires a permanent odour of Chlorine. Add the Carbonate of Zinc, in small quantities at a time, and with renewed agitation, until a brown sediment appears. Filter the liquid into a porcelain basin, and evaporate until it is reduced to the bulk of 20.

(Not in other Pharmacopœias.)

ANTIDOTES.—In case of poisoning with Chloride of Zinc, Carbonate of Soda, emetics, warm demulcent drinks.

(Sir W. Burnett's Disinfecting Solution, sp. g. 2·000.

Oxide of Zinc, mixed with an equal weight of Chloride of Zinc, will preserve the latter dry enough to blow through a tube into any cavity required, and may be so kept in a bottle for a long time.

CHLORIDE OF ZINC POINTS.—Chloride of Zinc, 1; Oxide of Zinc, 1; Wheat Flour, 2; Water to make a stiff paste, which is formed into caustic points for cancer.

ZINCI OXIDUM.

OXIDE OF ZINC.

ZnO, eq. 40·5; or **Zn O**, eq. 81.

A soft, white, tasteless, and inodorous powder.

Insoluble in water.

Test.—Dissolves without effervescence in diluted Nitric Acid, forming a solution which is not affected by Chloride of Barium (absence of sulphates), nor Nitrate of Silver (absence of chlorides), and gives, with Carbonate of Ammonia, a white precipitate which dissolves entirely without colour in any excess of the reagents.

Medicinal Properties.

Internally as a tonic, especially in spasmodic affections. Astringent and absorbent, employed externally in the form of powder or ointment, to slight excoriations and ulcerations.

Dose.—2 to 10 grs.

(In all the Pharmacopœias; Austr. and Ger. Z. Oxydatum; Fr. by the dry as well as the humid process.)

Makes into pills with Conf. Rosæ Caninæ.

Preparation.

UNGUENTUM ZINCI. Cream.

Oxide of Zinc in very fine powder, 1; Benzoated Lard, $5\frac{1}{2}$: mix. Add the Oxide to the melted Lard and stir till cold. =(1 in $6\frac{1}{2}$).

(U.S. 1 in 7; Fr. Pommade, Belg. and Ger. 1 in 10; not in others.)

Applied to the feet once in twenty-four hours prevents the unpleasant odour of perspiration.

Not Official.

LAPIS TUTIÆ.—Tutty, an impure Oxide of Zinc used for eye lotions.

ZINCI SULPHAS.

SULPHATE OF ZINC.

ZnO,SO_3+7HO, eq. 143·5; or $\mathbf{ZnSO_4,7H_2O}$, eq. 287.

In colourless, transparent, prismatic crystals, with a strong metallic styptic taste.

Soluble in water, 10 in 7. Insoluble in Rectified Spirit.

Test.—In watery solution is not tinged purple by Tincture of Galls—indicating absence of Iron; and when acidulated with Sulphuric or Hydrochloric Acid, gives no precipitate with Sulphuretted Hydrogen—indicating absence of Lead and Copper. After it has been boiled for a few minutes with a little Nitric Acid, it yields with Ammonia a white precipitate (Oxide of Zinc), which is entirely soluble without colour in an excess of the reagent.

Medicinal Properties.

In small doses tonic and astringent; chiefly employed in spasmodic diseases, as epilepsy, chorea, tussis, etc.; in large doses a prompt emetic, if the head be kept cold. As an astringent, chiefly externally, as an injection in fluor albus and in the advanced stages of gonorrhœa; and as a collyrium in ophthalmia, or a wash for indolent ulcers. It is also used as a styptic.

Dose.—As a tonic or astringent, 1 to 2 grs.; emetic, 10 to 30 grs.; an injection may be made with 1 to 3 grs. to an ounce of water.

(In all the Pharmacopœias; Austr. and Ger. Z. Sulphuricum; Fr. Sulfate de Zinc.)

Tincture of Wine of Opium causes no precipitate with Solutions of Zinc.

Not Official.

STICKS OF FUSED SULPHATE OF ZINC.—Astringent, applied to suppurating surfaces.

ZINCI VALERIANAS.

VALERIANATE OF ZINC.

$ZnO,C_{10}H_9O_3$, eq. 133·5; or $\mathbf{Zn(C_5H_9O_2)_2}$, eq. 267.

In bright white, pearly, tabular crystals, with a feeble odour of Valerianic Acid and a metallic taste.

Solubility in water, 1 in 120; in Rectified Spirit, 1 in 60; Ether, 1 in 500.

Test.—Its solution in hot water is not precipitated by Chloride of Barium. It gives, when heated with dilute Sulphuric Acid, a distillate (Valerianic Acid), which, when mixed with the solution of Acetate of Copper, does not immediately affect the transparency of the fluid, but forms after a little time oily drops, which gradually pass into a bluish-white crystalline deposit—Valerianate of Copper.

Medicinal Properties.

Antispasmodic, chiefly used in chorea, epilepsy, and in various neuralgic and hysterical affections. As a topical astringent in chronic conjunctivitis, as a collyrium, 1 or 2 grains to 1 ounce water.

Dose.—1 to 6 grs. or more, either in pill or solution.

(U.S. Austr. Belg. Fr. and Ger.; not in others.)

INCOMPATIBLES.—All acids, soluble carbonates, most metallic Salts, vegetable astringents.

ZINGIBER.

GINGER.

The scraped and dried rhizome of *Zingiber officinale;* from plants cultivated in the West Indies, India, and other countries.

Medicinal Properties.

Aromatic, stimulant, and carminative. It is given in dyspepsia, flatulency, and as an adjunct to purgative medicines. Used as a gargle in cases of relaxed uvula and tonsils.

Dose.—In powder, 10 to 20 grs.

(In all the Pharmacopæias; Fr. Gingembre.)

Contained in Conf. Opii, Conf. Scammonii, Inf. Sennæ, Pil. Scillæ Comp., Pulv. Cinnam. Comp., Pulv. Jalapæ Comp., Pulv. Opii Comp., Pulv. Rhei Comp., Pulv. Scammonii Comp., Syrupus Rhamni, Vin. Aloes.

Preparations.

SYRUPUS ZINGIBERIS. Straw-colour; opaque; crystallizes much on keeping.
Strong Tincture of Ginger, 1; Syrup, 25: mix. = (1 in 26.)

Dose.—1 to 4 drms.

(U.S. with Fluid Extract; Belg. with root, 1 in 20; not in others.)

TINCTURA ZINGIBERIS. Pale reddish-brown.
Ginger bruised, 1; Rectified Spirit, 8: macerate the Ginger forty-eight hours in 6 of the spirit, agitating occasionally; pack in a percolator, let it drain, pour on the remaining spirit, and when it ceases to drop press, filter, and add spirit to make 8. = (1 in 8).

Dose.—10 to 30 min.

(U.S.1 in 3¾; (Ger. Belg. and Fr. 1 in 5 by weight;) not in others.)

TINCTURA ZINGIBERIS FORTIOR. Reddish-brown. *Syn.* ESSENTIA ZINGIBERIS.
Ginger, in powder, 10; Rectified Spirit, sufficient to percolate 20. Pack

the Ginger tightly in a percolator, and pour over it carefully half of the Spirit, and after two hours add the remainder and as much more as is required to percolate 20. =(1 in 2).

Dose.—5 to 20 minims.

Contained in Syrup of Ginger, = (1 in 26).

Not Official.

OLEORESINA ZINGIBERIS. U.S.

Ginger in fine powder, 12; Stronger Ether, 12; Alcohol q. s. Press the ginger firmly in a percolator, pour on the Ether, and when that has been absorbed, add Alcohol until 12 ounces have slowly passed. Recover the Ether by distillation and expose the residue until the Volatile part has evaporated.

APPENDIX.

I. ARTICLES EMPLOYED IN CHEMICAL TESTING.

ALCOHOL. Absolute Alcohol.

($C_4H_6O_2$, or C_2H_6O.)

Take of Rectified Spirit, 1 pint; Carbonate of Potash, 1½ oz.; Slaked Lime, 10 oz.: put the Carbonate of Potash and Spirit into a stoppered bottle, and allow them to remain in contact for two days, frequently shaking the bottle. Expose the Slaked Lime to a red heat in a covered crucible for half an hour, then remove it from the fire, and, when it has cooled, immediately put the Lime into a flask or retort, and add to it the Spirit from which the denser aqueous solution of Carbonate of Potash, which will have formed a distinct stratum at the bottom of the bottle, has been carefully and completely separated. Attach a condenser to the apparatus, and allow it to remain without any external application of heat for twenty-four hours; then applying a gentle heat, let the Spirit distil until that which has passed over shall measure 1½ fl. oz.; reject this, and continue the distillation into a fresh receiver until nothing more passes at a temperature of 200°.

Characters and Tests.—Colourless and free from empyreumatic odour. Specific gravity 0·795. It is entirely volatile by heat, is not rendered turbid when mixed with water, and does not cause anhydrous Sulphate of Copper to assume a blue colour when left in contact with it.

BENZOL.

($C_{12}H_6$, or C_6H_6.)

A colourless volatile liquid, obtained from coal tar. Specific gravity 0·85.

BORACIC ACID.

(BO_3. 3HO, or H_3BO_3.)

Tests.—Soluble in Alcohol. The solution burns with a green flame.

CHLORIDE OF BARIUM.

(BaCl. 2HO, or $BaCl_2$. $2HO_2$.)

COPPER FOIL.

Pure Metallic Copper, thin and bright.

GOLD, FINE.

Gold, free from metallic impurities.

HYPOSULPHITE OF SODA.

($NaO.S_2O_2+5HO$, or $Na_2H_2S_2O_4.4H_2O$.)

Test.—24·8 grains decolorize 100 grain measures of the volumetric solution of Iodine.

INDIGO.

($C_{16}H_5NO_2$, or C_8H_5NO.)

A blue pigment prepared from various species of *Indigofera*, Linn.

ISINGLASS.

The swimming-bladder or sound of various species of *Acipenser*, Linn., prepared and cut into fine shreds.

LITMUS.

A blue pigment prepared from various species of *Roccella*, DC.

LITMUS PAPER, BLUE.

Unsized white paper steeped in Tincture of Litmus, and dried by exposure to the air.

LITMUS PAPER, RED.

Unsized white paper steeped in Tincture of Litmus which has been previously reddened by the addition of a very minute quantity of Sulphuric Acid, and dried by exposure to the air.

LITMUS TINCTURE.

Take of Litmus in powder, 1 oz.; Proof Spirit, 10 fl. oz.: macerate for two days in a closed vessel, and filter.

OXALIC ACID OF COMMERCE.

OXALIC ACID, PURIFIED.

($2HO.C_4O_6+4HO$, or $H_2C_2O_4.2H_2O$.)

Take of Oxalic Acid of Commerce, 1 pound; boiling Distilled Water, 30 fl. oz.: dissolve, filter the solution, and set it aside to crystallize. Pour off the liquor, and dry the crystals by exposure to the air on filtering-paper placed on porous bricks.

Test.—It is entirely dissipated by a heat below 350°

OXALATE OF AMMONIA.

($2NH_4O.C_4O_6+2HO$, or $(NH_4)_2.C_2O_4.H_2O$.)

Take of Purified Oxalic Acid, 1 oz.; boiling Distilled Water 8 fl. oz.; Carbonate of Ammonia, a sufficiency: dissolve the Oxalic Acid in the water, neutralize the solution at a boiling temperature, filter it while still hot, and and set it by that crystals may form as it cools.

PLASTER OF PARIS.

Native Sulphate of Lime, $CaO,SO_3.+2HO$, or $CaSO_4.2H_2O$, deprived of water by heat.

PLATINUM BLACK.

Platinum in a state of minute division obtained by adding excess of Carbonate of Soda and some Sugar to solution of Perchloride of Platinum, and boiling till a black precipitate is formed, which is washed and dried.

PLATINUM FOIL.

RED PRUSSIATE OF POTASH.

($K_3Fe_2C_{12}N_6$, or $K_6Fe_2C_{12}N_{12}$.)

Test.—Its solution in water gives no precipitate with Persulphate of Iron.

SUBACETATE OF COPPER OF COMMERCE.

Verdigris.

SULPHATE OF COPPER, ANHYDROUS.

(CuO,SO_3, or $CuSO_4$.)

Sulphate of Copper deprived of its water by a heat of 400°.

Characters. — A yellowish-white powder, which becomes blue when moistened with water.

SULPHIDE OF IRON.

(FeS, or FeS.)

Produced by applying the end of a rod of iron, heated to a white heat at a blacksmith's forge, to the end of a roll of Sulphur, and allowing the Sulphide of Iron, as it is formed, to run into a vessel of water.

SULPHURETTED HYDROGEN.

(HS, or H_2S.)

Take of Sulphide of Iron, ½ oz.; Water 4 fl. oz.; Sulphuric Acid, a sufficiency: place the Sulphide of Iron and the Water in a gas-bottle closed with a cork perforated by two holes, through one of which passes air-tight a funnel tube of sufficient length to dip into the water, and through the other a tube for giving exit to the gas. Through the former pour from time to time a little of the Acid, so as to develope the Sulphuretted Hydrogen as it may be required.

TIN, GRANULATED.

Grain tin, reduced to small fragments by fusing and pouring it into cold water.

TURMERIC.

The Rhizome of *Curcuma longa*, Linn.

TURMERIC PAPER.

Unsized white paper steeped in Tincture of Turmeric and dried by exposure to the air.

TURMERIC TINCTURE.

Take of Turmeric, bruised, 1 oz.; Rectified Spirit, 6 fl. oz.: macerate for seven days in a closed vessel, and filter.

II. TEST SOLUTIONS.

SOLUTION OF ACETATE OF COPPER.

Take of Subacetate of Copper of Commerce, in fine powder, ½ oz.; Acetic Acid 1 fl. oz.; Distilled Water, a sufficiency: dilute the Acid with ½ fl. oz. of the Water: digest the Subacetate of Copper in the mixture, at a temperature not exceeding 212°, with repeated stirring, and continue the heat until a dry residue is obtained. Digest this in 4 oz. of boiling Distilled Water, and by the addition of more of the Water make up the solution to 5 fl. oz. Filter it.

SOLUTION OF ACETATE OF POTASH.

Take of Acetate of Potash, ½ oz.: Distilled Water, 5 fl. oz: dissolve and filter.

SOLUTION OF ACETATE OF SODA.

Take of Acetate of Soda, ¼ oz,; Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF ALBUMEN.

Take of the White of one Egg; Distilled Water, 4 fl. oz.: mix by trituration in a mortar, and filter through clean tow first moistened with distilled water. This solution must be recently prepared.

SOLUTION OF AMMONIO-NITRATE OF SILVER.

Take of Nitrate of Silver, in crystals, ¼ oz.; Solution of Ammonia, ½ fl. oz., or a sufficiency; Distilled Water, a sufficiency: dissolve the Nitrate of Silver in 8 fl. oz. of Water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. oz.

SOLUTION OF AMMONIO-SULPHATE OF COPPER.

Take of Sulphate of Copper, in crystals, ½ oz.; Solution of Ammonia a sufficiency; Distilled Water, a sufficiency: dissolve the Sulphate of Copper in 8 fl. oz. of the water, and to the solution add the Ammonia until the precipitate first formed is nearly dissolved. Clear the solution by filtration, and then add Distilled Water, so that the bulk may be 10 fl. oz.

SOLUTION OF AMMONIO-SULPHATE OF MAGNESIA.

Take of Sulphate of Magnesia, 1 oz.; Chloride of Ammonium, ½ oz.; Solution of Ammonia, ½ fl. oz.; Distilled Water, a sufficiency: dissolve the Sulphate of Magnesia and Chloride of Ammonium in 8 fl. oz. of the water, and to the solution add the Ammonia, and as much Distilled water as will make up the bulk to 10 fl. oz. Filter it.

SOLUTION OF BORACIC ACID.

Take of Boracic Acid, 50 grs.; Rectified Spirit, 1 fl. oz.: dissolve and filter.

SOLUTION OF BROMINE.

Take of Bromine, 10 minims; Distilled Water, 5 fl. oz.: place the Bromine in a bottle furnished with a well-fitting stopper, pour on the water, and shake several times. Keep it excluded from the light.

SOLUTION OF CARBONATE OF AMMONIA.

Take of Carbonate of Ammonia, in small pieces, ½ oz.; Distilled Water 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF AMMONIUM.

Take of Chloride of Ammonium, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF BARIUM.

Take of Chloride of Barium, in crystals. 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION (SATURATED) OF CHLORIDE OF CALCIUM.

Take of Chloride of Calcium, 4 oz.; Distilled Water, 5 fl oz.: dissolve and filter.

SOLUTION OF CHLORIDE OF GOLD.

Take of Fine Gold, reduced by a rolling machine to a thin lamina, 60 grs.; Nitric Acid, 1½ fl. oz.; Hydrochloric Acid, 7 fl. oz.; Distilled Water, a sufficiency: place the Gold in a flask with the Nitric Acid and 6 fl. oz. of the Hydrochloric Acid, first mixed with 4 fl. oz. of the water, and digest until it is dissolved. Add to the solution the additional fluidounce of Hydrochloric acid, evaporate at a heat not exceeding 212° until acid vapours cease to be given off, and dissolve the Chloride of Gold thus obtained in 5 fl. oz. of Distilled Water. The solution should be kept in a stoppered bottle.

SOLUTION OF CHLORIDE OF TIN.

Take of Granulated Tin, 1 oz.; Hydrochloric Acid, 3 fl. oz.; Distilled Water, a sufficiency: dilute the Acid in a flask with 1 fl. oz. of the water, and, having added the Tin, apply a moderate heat until gas ceases to be evolved. Add as much of the water as will make up the bulk to 5 fl. oz., and transfer the solution, together with the undissolved Tin, to a bottle with an accurately ground stopper.

SOLUTION OF GELATINE.

Take of Isinglass, in shreds, 50 grs.; Warm Distilled Water, 5 fl. oz.: mix and digest for half an hour on a water-bath with repeated shaking, and filter through clean tow moistened with distilled water.

SOLUTION OF IODATE OF POTASH.

Take of Iodine, 50 grs.; Chlorate of Potash, 50 grs.; Nitric Acid, 8 minims; Distilled Water, 10½ fl. oz.: rub the Iodine and Chlorate of Potash together to a fine powder; place the mixture in a Florence flask, and, having poured upon it half an ounce of the water acidulated with the Nitric Acid, digest at a gentle heat until the colour of the Iodine disappears. Boil for one minute; then transfer the contents of the flask to a capsule, and evaporate to perfect dryness at 212°. Finally dissolve the residue in the remaining 10 oz. of Distilled Water; filter the solution, and keep it in a stoppered bottle.

SOLUTION OF IODIDE OF POTASSIUM.

Take of Iodide of Potassium, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF OXALATE OF AMMONIA.

Take of Oxalate of Ammonia, ½ oz.; Warm Distilled Water, 20 fl. oz.: dissolve and filter.

SOLUTION OF PERCHLORIDE OF PLATINUM.

Take of Thin Platinum Foil, ¼ oz.; Nitric Acid, a sufficiency; Hydrochloric Acid, a sufficiency; Distilled Water, 7 fl. oz.: mix a fl. oz. of the Nitric Acid with 4 fl. oz. of the Hydrochloric Acid, and 2 fl. oz. of the water; pour the mixture into a small flask containing the Platinum, and digest at a gentle heat, adding more of the acids mixed in the same proportion, should this be necessary, until the metal is dissolved, Transfer the solution to a porcelain dish, add to it a fl. drm. of Hydrochloric Acid, and evaporate on a water bath until acid vapours cease to be given off. Let the residue be dissolved in the remaining 5 oz. of Distilled Water. Filter, and preserve it in a stoppered bottle.

SOLUTION OF PHOSPHATE OF SODA.

Take of Phosphate of Soda, in crystals, 1 oz.; Distilled Water, 10 fl. oz.: dissolve and filter.

SOLUTION OF RED PRUSSIATE OF POTASH.

Take of Red Prussiate of Potash, in crystals, ¼ oz.: Distilled Water, 5 fl. oz.: dissolve and filter.

SOLUTION OF SULPHATE OF INDIGO.

Take of Indigo, dry, and in fine powder, 5 grs.; Sulphuric Acid, 10 fl. oz.; mix the indigo in a fl. drm. of the Sulphuric Acid in a small test tube, and apply the heat of a water bath for an hour. Pour the blue liquid into the remainder of the acid, agitate the mixture, and, when the undissolved Indigo has subsided, decant the clear liquid into a stoppered bottle.

SOLUTION OF SULPHATE OF IRON.

Take of Granulated Sulphate of Iron, 10 grs.; Boiling Distilled Water, 1 fl. oz.: dissolve and filter. The solution should be recently prepared.

SOLUTION OF SULPHATE OF LIME.

Take of Plaster of Paris, ¼ oz; Distilled Water, 1 pint: rub the Plaster of Paris in a porcelain mortar, for a few minutes, with 2 oz. of the Water, introduce the mixture thus obtained into a pint bottle containing the rest of the Water; shake well several times, and allow the undissolved Sulphate to subside. When this has occurred, filter.

SOLUTION OF SULPHIDE OF AMMONIUM.

Take of Solution of Ammonia, 5 fl. oz.: put 3 fl. oz. of the Ammonia into a bottle, and conduct into this a stream of Sulphuretted Hydrogen so long as the gas continues to be absorbed; then add the remainder of the Ammonia, and transfer the solution to a green-glass bottle furnished with a well-ground stopper.

SOLUTION OF TARTARIC ACID.

Take of Tartaric Acid, in crystals, 1 oz.; Distilled Water, 8 fl. oz.; Rectified Spirit, 2 fl. oz.: dissolve the Tartaric Acid in the Water, add the Rectified Spirit, and preserve the Solution in a stoppered bottle.

SOLUTION OF YELLOW PRUSSIATE OF POTASH.

Take of Yellow Prussiate of Potash, in crystals, ¼ oz.; Distilled Water, 5 fl. oz.: dissolve and filter

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III. TEST SOLUTIONS FOR VOLUMETRIC ESTIMATIONS.

The processes for volumetric estimations may be performed either with British or with metrical weights and measures, and the solutions are so arranged that they will be of the same strength, and the same indications will be obtained in using them, whichever system is employed, without the *necessity* of altering any of the figures by which the quantities of the substances tested or of the test solutions required in the process, are expressed.

According to the British system, the quantities of the substances to be tested are expressed in grains by weight, whilst the quantities of the test solutions employed in testing are expressed in grain-measures,—the grain measure being the volume of a grain of Distilled water.

According to the metrical system, the quantities of the substances to be tested are expressed in grammes by weight, whilst the quantities of the test solutions

employed in testing are expressed in cubic centimetres,—the cubic centimetre being the volume of a gramme of Distilled Water.

As the cubic centimetre bears the same relation to the gramme that the grain-measure bears to the grain, the one system may be substituted for the other with no difference in the results, excepting that, by the metrical system, all the quantities will be expressed in relation to a weight (the gramme) which is fifteen times greater than the British grain.

In practice it will be found convenient in substituting metrical for British weights and measures, to reduce the values of all the numbers to one-tenth, by moving the decimal points, and this has been done in the tables appended to the descriptions of the volumetric solutions. The quantities indicated in the Pharmacopœia, which in grains and grain-measures can be conveniently used, would be found inconveniently large if the same numbers of grammes and cubic centimetres were employed.

The following apparatus is required in the preparation and use of these solutions.

For British weights and measures :—

1. A flask, which when filled to a mark on the neck, contains exactly 10,000 grains of Distilled Water at 60°. The capacity of the flask is therefore 10,000 grain-measures.

2. A graduated cylindrical jar, which, when filled to 0, holds 10,000 grains of DistilledWater, and is divided into 100 equal parts.

3. A burette. A graduated glass tube which, when filled to 0, holds 1000 grains of Distilled Water, and is divided into 100 equal parts. Each part therefore corresponds to 10 grain-measures.

For metrical weights and measures :—

1. A glass-flask which, when filled to a mark on the neck, contains one litre or 1000 cubic centimetres.

2. A graduated cylindrical jar which, when filled to 0, contains one litre (1000 cubic centimetres), and is divided into 100 equal parts.

3. A burette. A graduated tube which, when filled to 0, holds one litre (100 cubic centimetres), and is divided into 100 equal parts.

(One cubic centimetre is the volume of one gramme of Distilled Water at 4° C=39·28° Fahr.* 1000 cubic centimetres equal one litre.)

Volumetric solutions, before being used, should be shaken, in order that they may be throughout of uniform strength. They should also be preserved in stoppered bottles. All measurements should be made at 60° Fahr.

VOLUMETRIC SOLUTION OF BICHROMATE OF POTASH.

(Bichromate of Potash, $KO,2CrO_3$=147·5, or $K_2Cr_2O_7$=295.)

Take of Bichromate of Potash, 147·5 grs.; Distilled Water, a sufficiency: put the Bichromate of Potash into the 10,000 grain flask and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water, until it has the exact bulk of 10,000 grain-measures. 1000 grain measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (=14·75 grains) of Bichromate of Potash and, when added to a solution of Protosalt of Iron acidulated with Hydrochloric Acid, are capable of converting $\frac{1}{10}$th of six equivalents of Iron (=16·8 grains) from the state of protosalt to that of persalt.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. Thus 14·75 grammes of Bichromate of Potash should be made to form 1000 cubic

* It is customary to make the measurements with metrical apparatus at 60° Fahr.

centimetres of solution. 100 cubic centimetres of this solution contain $\frac{1}{100}$th of an equivalent in grammes of the Bichromate of Potash (=1·475 grammes) and are capable of converting $\frac{1}{100}$th of six equivalents of iron (1·68 grammes) from the state of protosalt to that of persalt.

This solution is used for determining the proportion of Protoxide of Iron in the following preparations. It is known that the whole of the protosalt has been converted into a persalt when a minute drop of the liquid, placed in contact with a drop of the solution of Red Prussiate of Potash on a white plate, ceases to strike with it a blue colour.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Ferri Arsenias. . . .	20	=	170	or	2·0	=	17·0
„ Carb. Sacch. . .	20	=	330	or	2·0	=	33·0
„ Oxid. Magn. . .	20	=	83·0	or	2·0	=	83·0
„ Phosphas	20	=	250	or	2·0	=	25·0

VOLUMETRIC SOLUTION OF HYPOSULPHITE OF SODA.

(Hyposulphite of Soda Crystallized, $NaO,S_2O_2+5HO=124$, or $Na_2H_2S_2O_4.4H_2O=248$.)

Take of Hyposulphite of Soda, in crystals, 280 grs.; Distilled Water, a sufficiency: dissolve the Hyposulphite of Soda in 10,000 grain-measures of water. Fill a burette with this solution and drop it cautiously into 1000 grain-measures of the Volumetric Solution of Iodine, until the brown colour is just discharged. Note the number of grain-measures (n) required to produce this effect; then put 8000 grain-measures of the same solution into a graduated jar, and augment this quantity by the addition of Distilled Water, until it amounts to $\frac{8000\times1000}{n}$ grain-measures. If, for example, $n=950$, the 8000 grain-measures of solution should be diluted to the bulk of $\frac{8000\times1000}{950}=8421$ grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of two equivalents in grains (=24·8 grains) of the Hyposulphite, and therefore correspond to $\frac{1}{10}$th of an equivalent in grains (=12·7 grains) of Iodine.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres of this solution contain $\frac{1}{100}$th of two equivalents of Hyposulphite in grammes (=2·48 grammes), and therefore correspond to $\frac{1}{100}$th of an equivalent in grammes (1·27 grammes) of Iodine.

The solution is used for testing the following substances. In each case, excepting that of Iodine, a solution of Iodide of Potassium and Hydrochloric Acid are added to the substance, and the amount of Iodine so liberated is indicated by this solution.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Calx Chlorata . .	10·0	=	850	or	1·00	=	85·0
Iodum	12·7	=	1000	or	1·27	=	100·0
Liq. Calc. Chloratæ .	60·0	=	500	or	6·00	=	50·0
„ Chlori	439.0	=	750	or	43·90	=	75.0
„ Sodæ Chloratæ .	70·0	=	500	or	7·00	=	50·0

VOLUMETRIC SOLUTION OF IODINE.

(Iodine, I = 127 or **I** = 127.)

Take of Iodine, 127 grains; Iodide of Potassium, 180 grains; Distilled Water, a sufficiency: put the Iodide of Potassium and the Iodine into the 10,000 grain flask, fill the flask to about two-thirds its bulk with Distilled Water, gently agitate until solution is complete, and then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (12·7 grains) of Iodine, and therefore correspond to 1·7 grains of Sulphuretted Hydrogen, 3·2 grains of Sulphurous, and 4·95 grains of Arsenious Acid.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain 1·27 grammes of Iodine, and correspond to 0·17 gramme of Sulphuretted Hydrogen, 0·32 gramme of Sulphurous, and 0·495 gramme of Arsenious Acid.

This solution is used for testing the following substances. It is dropped from the burette into the liquid to be tested until free Iodine begins to appear in the solution.

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acid. Arseniosum . . .	4·0	=	808	or	0·40	=	80·8
„ Sulphurosum . .	34·7	=	1000	or	3·47	=	100·0
Liquor Arsenicalis . .	441·5	=	808	or	44·15	=	80·8
„ Arsenici Hydrochloricus . .	441·5	=	810	or	44·15	=	81·0

VOLUMETRIC SOLUTION OF NITRATE OF SILVER.

(Nitrate of Silver, $AgO,NO_5 = 170$, or $AgNO_3 = 170$.)

Take of Nitrate of Silver, 170 grs.; Distilled Water, a sufficiency: put the Nitrate of Silver into the 10,000 grain flask, and, having half filled the flask with water, allow the salt to dissolve; then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. The solution should be kept in an opaque stoppered bottle. 1000 grain-measures of this solution contain $\frac{1}{10}$th of an equivalent in grains (17 grains) of Nitrate of Silver.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{100}$th of an equivalent in grammes (1·7 grammes) of Nitrate of Silver.

It is used in testing the following substances :—

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acid. Hydrocyan. . . .	270	=	1000	or	27·0	=	100·0
Potass. Bromid.	10	=	840	or	1·0	=	84·0
Sodæ Arsenias (dry) . .	10	=	1613	or	1·0	=	161·3

VOLUMETRIC SOLUTION OF OXALIC ACID.

(Crystallized Oxalic Acid, $2HO.C_4O_6.4HO = 126$, or $H_2C_2O_4.2H_2O = 126$.)

Take of Purified Oxalic Acid, in crystals, quite dry, but not effloresced,

630 grs.; Distilled Water, a sufficiency: put the Oxalic Acid into the 10,000 grain flask, fill the flask to about two-thirds of its bulk with water, allow the acid to dissolve, and then dilute the solution with more water until it has the exact bulk of 10,000 grain-measures. 1000 grain measures of this solution contain half an equivalent in grains (=63 grains) of Oxalic Acid, and are therefore capable of neutralizing one equivalent in grains of any alkali or alkaline carbonate.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{20}$th of an equivalent in grammes (=6·3 grammes) of Oxalic Acid, and will neutralize $\frac{1}{10}$th of an equivalent in grammes of an alkali.

The following substances are tested with this solution :—

	British Weights and Measures.				Metrical Weights and Measures.		
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Ammoniæ Carb. . .	59·0	=	1000	or	5·90	=	100·0
Borax	191·0	=	1000	or	19·10	=	100·0
Liq. Ammon. . . .	85·0	=	500	or	8·50	=	50·0
„ „ Fort. .	52·3	=	1000	or	5·23	=	100·0
„ Calcis	4380·0	=	200	or	438·00	=	20·0
„ „ Sacchar. .	460·2	=	254	or	46·02	=	25·4
„ Plumbi Subacet. .	413·3	=	810	or	41·33	=	81·0
„ Potassæ . . .	462·9	=	482	or	46·29	=	48·2
„ „ Efferves..	4380·0	=	150	or	438·0	=	15·0
„ Sodæ . . .	458·0	=	470	or	45·80	=	47·0
„ „ Efferves..	4380·0	=	178	or	438·0	=	17·8
Plumbi Acetas . . .	38·0	=	200	or	3·80	=	20·0
Potassa Caustica . .	56·0	=	900	or	5·60	=	90·0
Potassæ Bicarb. . .	50·0	=	500	or	5·00	=	50·0
„ Carb. . . .	83·0	=	980	or	8·30	=	98·0
„ Citras . . .	102·0	=	1000	or	10·20	=	100·0
„ Tartras . .	113·0	=	1000	or	11·30	=	100·0
„ „ Acida	188·0	=	1000	or	18·80	=	100·0
Soda Caustica . . .	40·0	=	900	or	4·00	=	90·0
„ Tartarata . . .	141·0	=	1000	or	14·1	=	100·0
Sodæ Bicarb. . . .	84·0	=	1000	or	8·40	=	100·0
„ Carb.	143·0	=	960	or	14·30	=	96·0

VOLUMETRIC SOLUTION OF SODA.

(Hydrate of Soda, NaOHO=40, or NaHO=40.)

Take of Solution of Soda, a sufficiency; Distilled Water, a sufficiency: fill a burette with the Solution of Soda, and cautiously drop this into 63 grs. of Purified Oxalic Acid dissolved in about 2 oz. of water, until the acid is exactly neutralized as indicated by litmus. Note the number of grain-measures (n) of the solution used, and having then introduced 9000 grain-measures of the Solution of Soda into a graduated jar, augment this quantity by the addition of water, until it becomes $\frac{9000\times1000}{n}$ grain-measures. If, for example $n=930$, the 9000 grain-measures should be augmented to $\frac{9000\times1000}{930}=9677$

grain-measures. 1000 grain-measures of this solution contain one equivalent in grains (40 grains) of Hydrate of Soda, and will therefore neutralize one equivalent in grains of any monobasic acid.

Grammes and cubic centimetres may be employed instead of grains and grain-measures, but for convenience $\frac{1}{10}$th of the numbers should be taken. 100 cubic centimetres contain $\frac{1}{10}$th equivalent in grammes (4 grammes) of Hydrate of Soda, and will neutralize $\frac{1}{10}$th of an equivalent in grammes of an acid.

This solution is used for testing the following substances :—

	British Weights and Measures.				Metrical Weights and Measures.			
	Grains weight of Substance.	=	Grain-measures of Vol. Sol.	or	Grammes weight of Substance.	=	C. C. of Vol. Sol.
Acetum	445·4	=	402	or	44·54	=	40·2
Acid. Acet. . . .	182·0	=	1000	or	18·20	=	100·0
„ „ Dil. . .	440·0	=	313	or	44·00	=	31·3
„ „ Glac. . .	60·0	=	990	or	6·00	=	99·0
„ Citric . . .	70·0	=	1000	or	7·00	=	100·0
„ Hydrochl. . .	114·8	=	1000	or	11·48	=	100·0
„ „ Dil.	345·0	=	1000	or	34·50	=	100·0
„ Nitric . . .	90·0	=	1000	or	9·00	=	100·0
„ „ Dil. . .	361·3	=	1000	or	36·13	=	100·0
„ Nit. Hydrochl.Dil.	352·4	=	920	or	35·24	=	92·0
„ Sulph. . . .	50·6	=	1000	or	5·06	=	100·0
„ „ Arom. .	304·2	=	830	or	30·42	=	83·0
„ „ Dil. .	359·0	=	1000	or	35·90	=	100·0
„ Tartaricum .	75·0	=	1000	or	7·50	=	100·0

SYMBOLS AND EQUIVALENT WEIGHTS OF THE ELEMENTARY BODIES MENTIONED IN THE BRITISH PHARMACOPŒIA.

Elementary Bodies.	Symbols and Equivalents.	
	Old System.	New System.
Aluminium	Al = 13·75	Al = 27·5
Antimony (Stibium)	Sb = 122	Sb = 122
Arsenic	As = 75	As = 75
Barium	Ba = 68·5	Ba = 137
Bismuth	Bi = 210	Bi = 210
Boron	B = 11	B = 11
Bromine	Br = 80	Br = 80
Cadmium	Cd = 56	Cd = 112
Calcium	Ca = 20	Ca = 40
Carbon	C = 6	C = 12
Cerium	Ce = 46	Ce = 92
Chlorine	Cl = 35·5	Cl = 35·5
Chromium	Cr = 26·25	Cr = 52·5
Copper (Cuprum)	Cu = 31·75	Cu = 63·5
Gold (Aurum)	Au = 196·5	Au = 196·5
Hydrogen	H = 1	H = 1
Iodine	I = 127	I = 127
Iron (Ferrum)	Fe = 28	Fe = 56
Lead (Plumbum)	Pb = 103·5	Pb = 207
Lithium	L = 7	L = 7
Magnesium	Mg = 12	Mg = 24
Manganese	Mn = 27·5	Mn = 55
Mercury (Hydrargyrum)	Hg = 100	Hg = 200
Nitrogen	N = 14	N = 14
Oxygen	O = 8	O = 16
Phosphorus	P = 31	P = 31
Platinum	Pt = 98·5	Pt = 197
Potassium (Kalium)	K = 39	K = 39
Silver (Argentum)	Ag = 108	Ag = 108
Sodium (Natrium)	Na = 23	Na = 23
Sulphur	S = 16	S = 32
Tin (Stannum)	Sn = 59	Sn = 118
Zinc	Zn = 32·5	Zn = 65

"RECENT PREPARATIONS."

Not Official.

GRANULATED PREPARATIONS,

MADE IN THE MANNER DIRECTED IN THE BRITISH PHARMACOPŒIA FOR PREPARING SODÆ CITRO-TARTRAS EFFERVESCENS.

The following is the quantity usually contained in 60 grains=an ordinary teaspoonful; which is considered a commencing dose.

Bromide of Ammonium, 2 grs.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Carbonate of Bismuth, 2 grs.
„ „ Iron, 2 grs.
„ „ Lithia, 2 grs.
Citrate of Iron, 3 grs.
„ „ „ and Quinine, 3 grs.
„ „ Cinchonine, 2 grs.
Citrate of Quinine, 1 gr.
Hypophosphite of Lime, 2 grs.
Iodide of Iron, 1 gr.
„ „ Potassium, 2 grs.
„ „ Sodium, 2 grs.
Nitrate of Cerium, 1 gr.
„ „ Potash, 5 grs.
Phosphate of Iron, 1 gr.

The several imitations in a granular effervescent form of the following Mineral Waters; the dose being a large teaspoonful:—

Carlsbad.
Cheltenham.
Fachingen.
Kissingen.
Marienbad.
Pullna.
Selters.
Vichy.

Also for Gingerade and Lemonade.

SUPPOSITORIA.

SUPPOSITORIES.

Official.

ACIDI TANNICI.
Tannic Acid, 3 grs. in each.

HYDRARGYRI.
Mercurial Ointment, 5 grs. in each.

MORPHIÆ.
Hydrochlorate of Morphia, ½ gr. in each.

PLUMBI COMPOSITA.
Acetate of Lead, 3 grs.; Opium, 1 gr. in each.

Not Official.

Anthelmintic.

Santonine, 5 grs.

Antiseptic.

Carbolic Acid, 1 gr.

Astringent.

Acetate of Lead, 3 grs.
Sulphate of Copper, 2 grs.
Iron Alum, 3 grs.
Galls, in powder, 5 grs.

Astringent and Sedative.

Galls, in powder, 5 grs. } mixed.
Opium, in Powder, 1 gr. }

Caustic.

Dried Sulphate of Zinc, 10 grs.

Cicatrizing and Emollient.

Oxide of Bismuth, 10 grs.
Borax, in Powder, 5 grs.
Oxide of Zinc, 10 grs.

Purgative.

Purified Aloes, 5 grs.
Aloin, 1 gr. } mixed.
Soap, 5 grs. }
Elaterium, ½ gr.
Gamboge, 3 grs.
Podophyllin, 1 gr.

Sedative.

Belladonna Extract, 2 grs.
Hyoscyamus Extract, 5 grs.
Opium, in powder, 2 grs.
Sulphate of Morphia, ½ gr.
Extract of Opium, 1gr.

PESSARIES, OR VAGINAL SUPPOSITORIES.

Not Official.

(NO PESSARIES ARE ORDERED IN THE BRITISH PHARMACOPŒIA.)

Antacid.

Bicarbonate of Soda, 15 grs.

Alterative and Resolvent.

Iodide of Lead, 5 grs.
Iodide of Lead, 5 grs. } mixed.
Atropine, $\frac{1}{20}$ gr. }
Iodide of Potassium, 10 grs.
Bromide of Potassium, 10 grs.
Mercurial Ointment, 30 grs.

Astringent.

Alum, in powder, 15 grs.
Alum, 15 grs. } mixed.
Catechu, 15 grs. }
Iron Alum, 10 grs.
Acetate of Lead, 7 grs.
Acetate of Lead, 5 grs. } mixed.
Opium Powder, 2 grs. }
Matico, in powder, 10 grs.
Sulphate of Iron, dried, 10 grs.
Gallic Acid, 10 grs.
Tannic Acid, 10 grs.

Hæmostatic.

Perchloride of Iron crystals, 5 grs.
Persulphate of Iron, solid, 15 grs.

Caustic.

Red Oxide, Mercury, 2 grs.
Sulphate of Zinc, dried, 10 grs.

Cicatrizing and Emollient.

Oxide of Bismuth, 15 grs.
Borax, in powder, 15 grs.
Oxide of Zinc, 15 grs.

Deodorant.

Carbolate of Lime, 15 grs.
Carbolic Acid, 2 grs.

Sedative.

Atropine, $\frac{1}{20}$ gr.
Belladonna Extract, 3 grs.
Hemlock Extract, 5 grs.
Morphia, Hydrochlorate, $\frac{1}{2}$ gr.
Opium, in powder, 2 grs.

URETHRAL SUPPOSITORIES, OR MEDICATED BOUGIES.

(Cylinders about $2\frac{1}{2}$ inches long; diameter of a No. 9 bougie.)

Acetate of Lead, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$ gr.
Nitrate of Silver, $\frac{1}{4}$ gr.
Tannic Acid, 1 gr.
Ext. Belladonna, 2 grs.
Ext. Opium, 2 grs.

White Bismuth, 10 grs.
White Bismuth, 10 grs. } mix.
Acetate of Lead, $\frac{1}{2}$ gr. }
Perchloride of Iron, $\frac{1}{2}$, $\frac{3}{4}$, and 1 gr.

Theobroma Oil is the usual substance employed for forming these agents, but Stearine and mixtures of Fats and Wax may be employed. The temperature at which these solidify will be found at page 287.

MEDICATED PLEDGETS OF COTTON.

The following (weighing 30 grs. each) and containing severally the quantities of ingredients as follows, have been introduced for the local treatment of Uterine affections:—

Bromide of Potassium, 4 grs.
Iodide of Potassium, 4 grs.
Iodine, 2 grs.
Matico, ʒss Tincture.

Hydrochlorate of Morphia, $\frac{3}{4}$ gr.
Persulphate of Iron, 3 grs.
Tannic Acid, $2\frac{1}{2}$ grs.

AMERICAN ECLECTIC REMEDIES.

ALTERATIVE AND APERIENT.

Baptisin (*Wild Indigo*). Purgative and emetic, 1 to 5 grains; given in typhus and gangrene.

Corydalin (*Turkey Pea Root*). Anti-syphilitic, alterative, tonic, ½ to 5 grs., and given with hydrastin.

Euonymin (*Wahoo Bark*). Mild aperient, 1 to 2 grs.; expectorant, diuretic, ¼ to 1 gr.

Iridin (*Blue Flag*). Renal alterative, ⅛ to ¼ gr.; purgative, diuretic, emetic, 1 to 5 grs.

Leptandrin (*Veronica Virginica*). Hepatic alterative, ¼ to ½ gr.; purgative, 2 to 4 grs.

Phytolaccin (*Poke Root*). Scorbutic alterative, ⅛ to ¼ gr.; purgative, slow emetic, ¼ to 1 gr., employed in chronic rheumatism.

Podophyllin (*May Apple*). Alterative, ⅛ to ¼ gr., given in the place of mercury; purgative, ¼ to 1 gr., acting after six hours.

Rumicin (*Yellow Dock*). Astringent, antiscorbutic, alterative, 2 to 5 grs.

Sanguinarin (*Blood Root*). Hepatic alterative, ¼ to 1 gr.; somewhat narcotic.

TONIC, ETC.

Asclepedin (*Pleurisy Root*). Expectorant and diaphoretic, 1 to 4 grs.

Caulophyllin (*Blue Cohosh*). Uterine and diuretic tonic, ¼ to 1 gr.; parturient, 2 to 4 grs.

Cimicifugin (*Actæa racemosa*). Nervous sedative tonic, 1 to 6 grs., in nervous affections, attended with chorea, and much employed in rheumatism.

Cornin (*Dogwood*). Stimulant astringent tonic, 1 to 10 grs.; increasing the pulse in force and frequency.

Cypripedin (*Ladies' Slipper*). Nervous stimulant, 1 to 3 grs.; in hypochondria.

Gelsemin (*Yellow Jessamin*). Nervous sedative, ½ to 2 grs., antispasmodic anodyne.

Geranin (*Cranesbill*). Astringent tonic, 1 to 5 grs., and given with hydrastin in dysentery and diarrhœa.

Hydrastin (*Golden Seal*). Dyspeptic tonic and febrifuge, 1 to 5 grs. Is said to be identical with Muriate of Beeberine.

Menispermin (*Yellow Parilla*). Dyspeptic tonic, 1 to 2 grs.; aperient, 5 grs.

Scutellarin (*Skullcap*). Nervous non-exciting tonic, 2 to 6 grs.; given in neuralgia.

Senecionin (*Life Root*). Diuretic and emmenagogue, 3 to 5 grs.; given in strangury.

SPAS OF EUROPE.

IN BRITAIN.

The solid contents of a pint are indicated by "grains in 20 ounces."

AIRTHREY (Bridge of Allan). Saline Aperient; 90 grs. in 20 oz., chiefly Magnesian Salts.

ALDFIELD (Yorkshire). A soft water; slightly Sulphureous.

ASKERNE (Yorkshire). A soft water; weak Saline Aperient and Sulphureous Old Manor, 30 grs. in 20 oz., chiefly Magnesia and Lime.

ASHBY-DE-LA-ZOUCH. Salt Brine, used only for baths.

BATH (Somersetshire). Altitude 16′. Saline; 17 grs. in 20 oz., chiefly Sulphate of Lime. Swimming Bath, 88°; King's, 110°; Queen's, 112°; Hot, 118°. Baths for chronic rheumatism.

BOSCOMBE (Bournemouth, Hampshire). Chalybeate; contains 2¾ grs., which includes ½ gr. Iron in 20 oz., with Carbonic Acid.

BRIGHTON (Sussex). A cold Chalybeate; contains 11½ grs., which includes 1 gr. Iron in 20 oz., with Carbonic Acid.

BRISTOL. Hot Wells, 80° F. Contains 7 grs. in 20 oz., chiefly Sulphates of Lime and Soda, with 4½ c. in. of Carbonic Acid.

BUTTERBY (Durham). Sulphureous. Not important.

BUXTON (Derbyshire). Altitude 900′ Bracing air; pure water, temp., 82° F.; contains only 2¼ grs. in 20 oz., with ½ c. in. Carbonic Acid, and 60 c. in. Nitrogen. Good in chronic gout and rheumatism.

CHELTENHAM (Gloucestershire). Of the *Montpelier Spas*, No. 1 is Saline Aperient; No. 2, Iodureted and Sulphureted Chalybeate; 4, pure Saline; 4*a*, strongly Iodureted Saline; 5, Iodureted Magnesian Saline. Of the *Royal Old Wells*, one is Chalybeate, and the rest Saline Aperient; the whole with more or less Carbonic Acid. Season, from July to October.

CLIFTON (Gloucestershire). Air mild, elastic. Hot Well, 74° F. Feebly Saline; contains 5½ grs. in 20 oz. A resort for pulmonary patients.

CROFT (Yorkshire). Water, 51° F. Saline, strongly Sulphureous; contains 19½ grs. in 20 oz., chiefly Sulphate of Magnesia. Useful in skin diseases.

DINSDALE (Northamptonshire). Water 52° F. Strongly Sulphureous; contains 27 grs. in 20 oz., chiefly Sulphate of Lime. Acting on the skin and kidneys, and useful in dyspepsia.

DORTON (Buckinghamshire). Chalybeate, with Carbonic Acid; contains 12 grs. of Sulphate of Iron in 20 oz.; needs much dilution for internal use.

DROITWICH (Worcestershire). Brine pits; when diluted, used for salt-baths only.

DUMBLANE (Perthshire). Saline; contains 46 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.

FILEY (Yorkshire). Saline Aperient; contains 49 grs. in 20 oz., chiefly Chloride of Sodium, of Magnesium and Calcium, and Sulphate of Magnesia.

GAINSBOROUGH (Lincolnshire). Weak Saline, Chalybeate; not important.

GILSLAND (Cumberland). Air bracing and very healthy. Two springs; one strongly Chalybeate, and one strongly Sulphureous, useful in skin diseases and dyspepsia.

GLOUCESTER SPA. Contains 70 grs. in 20 oz., chiefly Chloride of Sodium and Sulphate of Soda; not important.

HARROGATE (Yorkshire). The old Sulphur spring contains 137 grs. in 20 oz., chiefly Chlorides, with 3·12 c. in. Carbonic Acid Gas, and 1·4 Sulphuretted and Carburetted Hydrogen. There are two principal Chalybeate springs. The new spring contains 62 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, Potassium, and Sodium, with protochloride of Iron, together with Carbonic Acid and Nitrogen.

HASTINGS (Sussex). Air mild. Chalybeate; contains 2¾ grs. in 20 oz., chiefly Sulphates of Iron, Magnesia, Lime, and Soda, with 2¼ c. in. Carbonic Acid Gas.

HOCKLEY (near Southend, Essex). Saline, and very mild Aperient.

HORLEY GREEN (Yorkshire). Aluminous, and strongly Chalybeate; contains large quantities of Sulphate of Iron. Not much used.

HOVINGDON (Northumberland). Feebly Alkaline and Sulphureous; 6 grs. in 20 oz., chiefly Carbonate of Soda and Chloride of Sodium.

INVERLEITHEN (Peeblesshire). Air pure, and scenery good. Saline; 28 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium.

KINGSWOOD (Gloucestershire). Cherry rock bitter water; 56 grs. in 20 oz., chiefly Sulphates of Magnesia and Soda, with 4 c. in. Carbonic Acid.

LEAMINGTON (Warwickshire). Old Well, 48° F., contains 104 grs. in 20 oz., chiefly Chlorides of Calcium and Sodium, and Sulphate of Soda with Carbonic Acid. The Saline Chalybeate contains 132 grs. in 20 oz., chiefly Chlorides of Calcium, Magnesium, and Sodium, and Sulphate of Soda with .2 c. in. of Carbonic Acid. There are also other springs useful in stomach and liver complaints.

LONDON, Bagnigge Wells, 1 Cathartic, 1 Chalybeate; Chad's Well, near Battle Bridge, and St. Pancras Wells, both Cathartic; Hampstead, Sadler's Wells, and Kensington Gardens, Chalybeate; Beulah, Kilburn, Epsom, and Streatham, are all aperient; chiefly Sulphate of Magnesia.

MALTON (Yorkshire). A strong Saline Chalybeate, similar to Scarborough.

MALVERN (Worcestershire). Air mild, highly salubrious. Holywell, St. Anne, cold and pure, highly useful in painful affections of the kidneys and bladder.

MATLOCK (Derbyshire). Climate mild and humid. Calcareous, slightly Chalybeate, with Carbonic Acid.

MELKSHAM (Wiltshire). Two springs, one Saline and one Chalybeate. These waters are charged with Carbonic Acid artificially and sent away.

MOFFAT (Dumfriesshire). Hartfell spring, Aluminous and strongly Chalybeate; 12 grs. in 20 oz. A resort for pulmonary patients. Sulphur Wells, contains 4½ grs. in 20 oz., chiefly Chloride of Sodium, 1 c. in. Sulphuretted Hydrogen.

PITKEATHLY (Perthshire). Saline; contains 38 grs. in 20 oz., chiefly Chloride of Calcium and Chloride of Sodium, and 1 c. in. Carbonic Acid.

PURTON (Wiltshire). Iodide of Sodium and Bromide of Magnesium, with Sulphates of Magnesia and Soda; 43½ grs. in 20 oz., and 6 c. in Carbonic Acid Gas.

SANDROCK (I. of Wight). Aluminous Chalybeate, with Carbonic Acid; contains 41½ grs. of Sulphate of Iron, and 31½ grs. of Sulphate of Alumina in 20 oz. Used for baths, but much diluted when taken internally.

SCARBOROUGH (Yorkshire). Altitude 174′, two Saline Chalybeates. North Well, 45¾ grs. in 20 oz. South Well, 66 grs. in 20 oz. Both Wells are similarly constituted, containing Sulphate of Lime and Sulphate of Magnesia, with a small amount of Nitrogen Gas.

SHAP (Westmoreland). Saline; contains 48 grs. to 20 oz., of which 26 are Chloride of Calcium; also traces of Sulphuretted Hydrogen. Tonic and diuretic; chiefly good in scrofula.

SHOTLEY (Northumberland). Saline, Chalybeate; contains 20 grs. in 20 oz. chiefly Chloride of Sodium, with 1 gr. Oxide of Iron, and 4½ grs. Chloride of Calcium. Not much frequented.

STRATHPEFFER (Ross-shire). Two springs; the Upper contains 18 grs. in 20 oz., chiefly Sulphates of Soda and Lime, with 3¼ c. in. of Sulphuretted Hydrogen; the lower contains 13½ grs. in 20 oz. of same Salts, but with only 1⅔ c. in. of Sulphuretted Hydrogen. The upper containing the largest quantity of Sulphuretted Hydrogen of any spring in Britain. Much resorted to for gout, rheumatism, scrofula, and skin diseases.

TUNBRIDGE (Kent). Altitude 289′. Chalybeate; temp. 50° F.; contains only 1 gr. in 20 oz., including ⅛th of a grain of Iron with Carbonic Acid.

TYNEMOUTH (Northumberland). Scenery picturesque. Chalybeates which may be drunk as an auxiliary to the sea-bathing, as at Scarborough.

VICTORIA (Stratford, Essex). Saline Aperient; contains 81 grs. in 20 oz., chiefly Sulphate of Soda, and ½ c. in. Sulphuretted Hydrogen. Useful in stomach and liver diseases.

WHITBY (Yorkshire). Bagdale, Chalybeate; nearly 3 grs. in 20 oz., and ⅓th gr. of Carbonate of Iron.

WINFRED at Holywell (Flintshire). Pure water, and flows at the rate of 21 tons a minute.

WOODHALL (Lincolnshire). 55° F. Iodine and Bromine, with Chlorides of Calcium, Magnesium, Potassium, more than ½ gr. Bromide of Sodium, and ¼ gr. Iodide of Sodium: 190 grs. in 20 oz.; strongly impregnated with Carbonic Acid. Useful in chronic rheumatism, scrofula, tertiary syphilis, etc.

Purton and Woodhall are sold in bottles.

FOREIGN.

The dose is from a wineglassful to a tumblerful, and at the spas the gas is often allowed to escape.

ACHSELMANNSTEIN (Bavaria), altitude 1407′. Saline, aperient, and slightly chalybeate. Climate mild and equable. Season May to September.

Baths and Vapour Baths, for incipient tuberculosis, cutaneous diseases, and derangements of the uterine system.

Buchner's Analysis of 16 oz. of the Edelquelle brine spring:—

			1757·69
Chloride of Sodium . .	1723·10	Sulphate of Lime . . .	31·98
Chloride of Ammonium .	·19	Carbonate of Lime . . .	·07
Chloride of Magnesium .	13·84	Carbonate of Magnesia .	traces.
Bromide of Magnesium .	·23	Peroxide of Iron and Alumina	·06
Sulphate of Soda . . .	15·63		
Sulphate of Potash . .	4·70	Silica	·08
	1757·69		1789·88 grs.

Gas.—Carbonic Acid.

ADELHEIDSQUELLE (Heilbrunn, a healthy town in Bavaria), altitude 2000′. Saline, with Iodine and Bromine. Temp. of spring, 50° F. Season May to Sept. Powerfully alterative and tonic. Useful in scrofulous complaints, strumous affections of the skin, rheumatism, and gout, and for complaints peculiar to females.

Pettenkofer's Analysis of 16 oz.—Contains 47 grs. of solid matter, viz.:—

			45·48
Chloride of Sodium . . .	38.06	Carbonate of Magnesia . .	·14
Iodide of Sodium . . .	·21	Alumina	·14
Bromide of Sodium . . .	·36	Carbonate of Iron	·07
Carbonate of Soda . . .	6·21	Silica	·14
Chloride of Potassium . .	·02	Phosphate of Lime . . .	traces
Sulphate of Soda . .	·04	Organic matter	·16
Carbonate of Lime . . .	·58		
	45·48		46·13 grs.

		Cub. Inch.
Gases.	Carbonic Acid	13·18
	Carburetted Hydrogen . . .	8·02
	Nitrogen	6·54
	Oxygen	1·38
Imported.		29·12

AIX-LA-CHAPELLE (Rhenish Prussia), altitude 450′. Situated in a flat valley. Climate mild. Mean temperature in June, July, and August, 63° F. Saline, sulphureous.

Used for drinking, bathing, and douching; in cutaneous diseases, stiffness of joints, paralysis, obstruction of the liver, and syphilis.

Liebig's Analysis of 16 oz.	Kaiser-quelle.	Cornelius-quelle.	Rosen-quelle.	Quirinus-quelle.	
Temperature, Fahr.	131°	113·6°	116·6°	121·3°	
Chloride of Sodium . .	20·271	18·934	19·552	19·937	grains.
Bromide of Sodium . .	·028	·028	·028	·028	,,
Iodide of Sodium . . .	·004	·004	·004	·004	,,
Sulphuret of Sodium . .	·073	·042	·057	·018	,,
Carbonate of Soda . . .	4·995	3·817	4·065	4·244	,,
Sulphate of Soda . . .	2·171	2·201	2·176	2·243	,,
Sulphate of Potash . .	1·186	1·204	1·183	1·164	,,
Carbonate of Lime . . .	1·217	1·012	1·413	1·330	,,
Carbonate of Magnesia .	·395	·192	·204	·257	,,
Carbonate of Strontia .	·002	·002	·002	·002	,,
Carbonate of Lithia . .	.002	·002	·002	·002	,,
Carbonate of Protoxide of Iron	·073	·046	·046	·040	,,
Silica	·508	·459	·455	·476	,,
Organic Matter	·577	·713	·703	·751	,,
	31·502	28·654	29·888	30·496	grains.
Gases.					
Nitrogen	9·00	7·79	9·14	6·41	per cent.
Carbonic Acid	89·40	92·91	90·31	93·25	,,
Carburetted Hydrogen .	·37	traces	·55	·26	,,
Oxygen	1·23	traces	0	·08	,,

AIX-LES-BAINS (Savoy), altitude 768′. Climate mild. For drinking and for douching.

Recommended for rheumatism, eczema, gout, and sciatica.

Bonjean's Analysis of 16 oz.	Sulphur Spring.	Alum Spring.	
Temperature, Fahr.	108·25°—111°	108·25°—116·34°	
Sulphate of Soda	·7374	·3256	grains.
Sulphate of Magnesia	·2709	·2380	,,
Sulphate of Lime	·1229	·1152	,,
Sulphate of Alumina	·4209	·4761	,,
Sulphate of Iron	traces	traces	
Chloride of Sodium	·0613	·1075	,,
Chloride of Magnesium	·1322	·1690	,,
Fluoride of Calcium . . . . . } Phosphate of Lime and Alumina . }	·0191	·0200	,,
Iodide of Potassium	traces	traces	
Carbonate of Lime	1·1405	1·3901	,,
Carbonate of Strontia	traces	traces	
Carbonate of Protoxide of Iron . .	·0680	·0719	,,
Silica	.0384	·0330	,,
	3·0116	2·9464	grains.

Gases.		
Nitrogen	·03204	·08010 volumes.
Carbonic Acid	·02578	·01334 „
Sulphuretted Hydrogen	·04140	0 „
Oxygen	0	·01840 „
	·09922	·11184 volumes.

ALET (Aude, France). A ferruginous water. Tonic, and useful in cases of debility, dyspepsia. Imported.

ALEXANDERSBAD (Bavaria), altitude 1754′. Climate rough, and unsuited for delicate lungs. Scenery good. Water chalybeate, very exciting.

There is a hydropathic establishment, and pine-foliage baths for rheumatism.

Contains 2½ grains of solid constituents in 16 oz.,
about ¼ grain Carbonate of Iron,
and 28 cubic inches of Carbonic Acid.

ALEXISBAD (Germany, two miles W. of Harzgerode). In the romantic Selke valley.

SELKEBRUNNEN, a pure chalybeate.

Contains 3¾ grains of solids in 16 oz., among which are:—

Chloride of Iron	·97 grains.
Sulphate of Iron	·31 „
Sulphate of Manganese	·37 „

ALEXISBRUNNEN. Same locality.

Contains in 16 oz.,
½ grain Carbonate of Iron,
traces of Carbonate of Manganese,
some Sulphates,
and about 8 cubic inches of Carbonic Acid Gas.

ALTWASSER (Prussian Silesia, 35 miles S.W. of Breslau). Altitude 1255′. Lies in a charming valley. Climate mild and bracing. Water alkaline, chalybeate, tonic, restorative, for drinking and for baths.

Fischer's Analysis of 16 oz.:

	Georgen-brunnen.	Ober-brunnen.
Temperature, Fahr.	70°	70°
Carbonate of Iron	·37	·306 grains.
Carbonate of Manganese	0	·13 „
Chloride of Potassium	·09	·09 „
Sulphate of Potash	0	·086 „
Sulphate of Soda	·89	·40 „
Sulphate of Magnesia	0	·25 „
Carbonate of Magnesia	·72	·308 „
Carbonate of Lime	2·88	·860 „
Sulphate of Lime	0	·100 „
Carbonate of Soda	1·21	0 „
Silica	·08	·52 „
	6·54	3·18
Carbonic Acid	106 in 100	50 in 100 volumes.

APOLLINARIS SPRING is given under Neuenahr.

ARNSTADT (Germany, 10 miles W. of Erfurt). Altitude 926′. Climate healthy. Season, June to September. Its brine spring, when diluted, used for baths.

and for poultices with bran or malt; for scrofula. Contains 1825 grains of solids in 16 oz., viz.

Chloride of Sodium	1723	grains.
Chloride of Calcium	49·5	„
Chloride of Magnesium	39	„
Sulphate of Lime	13	„
Bromide of Magnesium	0·39	„

AUTEUIL (Seine, France). A ferruginous water having properties similar to that of Alet.

BADEN (near Vienna). Altitude 638′. Air bracing, temperature changeable. Sulphureous and saline.

Chiefly used for bathing, in which both sexes promenade. The mineralized mud is employed for cataplasms in rheumatism.

Keller's Analysis of 16 oz.:

	Römer-quelle. Temperature 92°–97° Fahr.	Leopolds-quelle. 91·70° Fahr.	
Sulphuret of Magnesium	0·1250	·1180	grains.
Sulphate of Lime	5·6563	5·5473	„
Sulphate of Potash	·4892	·5560	„
Sulphate of Soda	2·1281	2·5766	„
Chloride of Sodium	1·9906	2·2659	„
Carbonate of Lime	1·3056	1·5936	„
Carbonate of Soda	·5329	·0530	„
Chloride of Magnesium	1·6156	1·5145	„
Silica	·1850	·2166	„
Organic Matter	·0431	0	„
	14·0714	14·4415	grains.
Gases.			
Carbonic Acid	1·433	3·2256	cubic inches.
Sulphuretted Hydrogen	·082	·6720	„
Nitrogen	·465	7·8711	„
Oxygen	·052	·9033	„
	2·032	12·6780	cubic inches.

BADEN-BADEN. Altitude 616′. Air pure and mild. Mean annual temperature 48° F. Season, May to October.

Baths for rheumatism and paralysis.

Bunsen's Analysis of 16 oz.:

	Hauptquelle. Temperature 155·7° F.	
Chloride of Sodium	16·520	grains.
Bicarbonate of Lime	1·273	„
Bicarbonate of Magnesia	·042	„
Bicarbonate of Protoxide of Iron	·037	„
Bicarbonate of Protoxide of Manganese	traces	
Bicarbonate of Ammonia	·051	„
Sulphate of Lime	1·556	„
Sulphate of Potash	·017	„
Phosphate of Lime	·021	„
Arseniate of Iron	traces	
Chloride of Magnesium	·097	„
Chloride of Potassium	1·258	„
Bromide of Sodium	traces	
Silica	·914	„
Alumina	·008	„
Nitrates	traces	
	22·093	grains.
Free Carbonic Acid	·299	grains.

The Lithia waters for gout and lithiasis.

	Mur-quelle.	Fett-quelle.
Chloride of Sodium	15.5534	16·9767
Chloride of Lithium	2·3694	·2315
Chloride of Potassium	1·7985	·8137
Chloride of Magnesium	·8022	·4406
Chloride of Calcium	·5127	
Chloride of Copper		trace
Bicarbonate of Lime	·9748	1·4760
Bicarbonate of Magnesia	·2673	·0112
Bicarbonate of Protoxide of Iron	·0029	·0112
Bicarbonate of Protoxide of Manganese	trace	trace
Sulphate of Lime	1·8524	1·3390
Sulphate of Potash		·3344
Sulphate of Strontia	·0052	
Sulphate of Baryta		trace
Ammonia	trace	trace
Arseniate of Iron	trace	·0038
Silica	·3200	·4477
	24·4588	22·0858

BAGNÈRES-DE-LUCHON (South of France). Altitude 2000′. Season, May to October.

Contains about 2 grains to 20 oz. of Sulphurets of Iron, Manganese, Sodium. The springs range in temperature from 60° F. to 154° F.; water is clear; has a sulphureous odour; is good in lymphatic and cutaneous affections.

BARÉGES (Hautes Pyrénées, France). Altitude, 4000′. There are nine sulphureous springs. Temperature 86° to 111° F. Season, May to September.

Useful in inveterate chronic rheumatism and skin diseases.

Analysis of 16 oz. of Le Tambour.

Sulphuret of Sodium	·360 grains.
Sulphate of Soda	·384 „
Chloride of Sodium	·307 „
Silica	·519 „
Lime	·022 „
Magnesia	·026 „
Soda	·039 „
	1·657 grains.

Gases.

Nitrogen	·004 c. in.

Imported.

BERKA (Duchy of Saxe-Weimar).

The sulphureous spring contains 13½ grains of solids in 16 oz.:

For chronic rheumatism, anæmia, and great debility.

Sulphate of Lime	5·5 grains.
Carbonate of Lime	4·33 „
Sulphate of Soda	1 „
Sulphate of Magnesia	2 „
Chloride of Calcium	0·7 „

Gases.

Carbonic Acid	3·4 c. in.
Sulphuretted Hydrogen with Nitrogen	6·4 „

The chalybeate spring contains 22 grains of solids in 16 oz., viz. :—

Sulphate of Lime	13·5 grains.
Carbonate of Lime	3·5 „
Chloride of Calcium	0·5 „
Chloride of Magnesium	0·5 „
Carbonate of Magnesium	0·4 „
Sulphate of Magnesia	3·0 „
Carbonate of Iron	0·3 „

BIRMENSTORFF (Switzerland). Bitter water. Imported.

BOCKLET (near Kissingen). Altitude 620′. Pleasant residence.

Tonic, useful in diseases peculiar to females. Carbonic Acid Baths.

Temperature 50° F. *Analysis* of 16 oz. :—	Ludwig's-quelle. (Ludwigs Spring.)	Schwefel-quelle. (Sulphur) Spring.)	Stahl-quelle. (Steel Spring.)
Sulphate of Soda	6·25	·25	2·54
Sulphate of Magnesia	0	0	3·23
Sulphate of Lime	·50	0	0
Chloride of Sodium	27·50	·25	6·55
Chloride of Magnesium	0·75	0	4·43
Carbonate of Soda	0	·50	0
Carbonate of Magnesia	1·25	·50	3·36
Carbonate of Lime	7·25	2·50	6·54
Carbonate of Iron	·65	·40	·61
Silica	·50	·10	·22
	44·65	4·90	27·48
Gases.			
Carbonic Acid	31	21·5	39·3
Sulphuretted Hydrogen	0	0·2	0

BONNES (Basses-Pyrénées, France). Altitude 2000′. Air cold and penetrating. A sulphureous and saline water, less exciting than Baréges. Imported. Contain, in 16 oz., 5⅓ grains of solids.

BORCETTE or BURTSCHEID (near Aix-la-Chapelle).
There are two kinds of springs,—the warmer one, Mühlenbadquelle, 171° F., is free from Sulphuretted Hydrogen ; the cooler, from 110° to 140°, contains Sulphuretted Hydrogen. Both kinds are used for baths.

BUSSANG (France). Drunk at meals. Highly gaseous, with traces of iron and arsenic. Imported.

CARLSBAD (Bohemia). Altitude 1200′. Season, June to September.
Drunk for obstinate constipation, affections of liver, gout, rheumatism, and diabetes.

Göttl's Analysis of 16 oz. :—	Sprudel, 162° F.	Schloss-brunnen. 122° F.	Wolf's Analysis. Markt-brunnen. 119·3° F.
Sulphate of Soda	19·9606	10·145	17·9919
Carbonate of Soda	9·0624	8·555	9·4553
Chloride of Sodium	8·7245	8·463	8·3298
Sulphate of Potash	·3696	11·558	1·9603
Carbonate of Lime	2·0198	2·419	2·1418
Carbonate of Magnesia	·3994	·299	1·8987
Carbonate of Iron	·0307	·023	·0890
Phosphate of Alumina	·2150	·031	0
Silica	1·0520	·43	1·3271
Carbonate of Lithia	0	0	·0100
Carbonate of Strontia	0	0	·0377
Carbonate of Manganese	0	0	·0185
Iodide of Sodium	0	0	·0209
Bromide of Sodium	0	0	·0133
Phosphate of Soda	0	0	·0160
Fluoride of Sodium and Silicium	0	0	1·4288
Alumina and Peroxide of Iron	0	0	·0251
	41·8340	41·922	44·7642 grs.

Gases.			
Carbonic Acid	7·8033	0	11·7602
Nitrogen	·0318	0	·0530

Imported.

CAUTERET (Hautes Pyrénées). Altitude 3000′. Climate mild and sheltered. Temperature of Sulphur baths 98° to 131° F. Season, June to September. Rich in Iodine, and more exciting than Baréges. Imported.

CHALLES (Savoy). Sulphureous, milder than Baréges. Imported.

CHARLOTTENBRUNNEN (Silesia). Altitude 1437′. Sheltered. Climate mild and bracing.

Excellent arrangements for whey-cure. Is resorted to for chronic pulmonary catarrh, and atonic dyspepsia.

Charlottenquelle (a mild chalybeate) contains 5½ grains of solids in 16 oz. Among them

Carbonate of Iron	0·2 grains.
Carbonate of Soda	1·5 „
Carbonate of Lime	2·3 „
Carbonate of Magnesia	0·5 „
Carbonic Acid	18 c. in.

Elisenquelle (acidulous spring) contains 4 grains of solids in 16 oz. Amongst them—

Iron	traces.
Carbonic Acid	17¼ c. in.

CHATELDON (France). Imported.
CONDILLAC (France). Imported.
} Are gaseous drinking-waters.

CONTREXVILLE (France). Climate severe. Temperature of water 53° F. Contains 25 grains in 16 oz., chiefly Bicarbonates of Lime and Magnesia. (Season, 20th May to 15th September. Resorted to for affections of the urinary organs.) Imported.

DRIBURG (Westphalia). Altitude 583′. Mean temperature 48·5° F. Rather strong chalybeate. Temperature 51° F. Contains 40 grains in 16 oz., chiefly Bicarbonate of Lime, Sulphate of Lime, Magnesia and Soda, and 17 grains of Carbonic Acid, the quantity of iron not stated.

EILSEN (Northern Germany). Altitude 250′. Sulphureous springs. Useful in gout, rheumatism, and paralysis.

Dumesnil's Analysis in 16 oz.:—

Temperature 59° F.	Georgen-brunnen.	Julianen-quelle.
Sulphate of Soda	5·8233	5·0873 grains.
Sulphate of Lime	15·2840	17·1933 „
Sulphate of Magnesia	5·0120	4·4933 „
Carbonate of Lime	2·3333	1·5413 „
Carbonate of Magnesia	·1620	·1866 „
Chloride of Magnesium	1·2940	2·0500 „
Phosphate of Lime	·0067	·0080 „
Peroxide of Iron	·0066	·0080 „
Silica	traces	·0746 „
	30·0051	30·6424 grains.
Gases.		
Sulphuretted Hydrogen	1·5740	2·096 c. in.
Carbonic Acid	1·4480	2·151 „
Nitrogen	·3166	·374 „
Carburetted Hydrogen	·0833	·110 „
Oxygen	·0786	·080 „
	3·5005	4·811 c. in.

EMS. On the Lahn, Germany. Altitude 291′. Air soft and balmy. Temperature steady.

Most useful in diseases of mucous membranes and uterine derangements, especially in barrenness, sluggish liver, and irritative dyspepsia.

Fresenius's Analysis of 16 oz.:—

	Kränchen.	Kessel-brunnen.	Fürsten-brunnen.	Neue-quelle.	
Temperature	85° F.	115° F.	95° F.	117° F.	
Bicarbonate of Soda . .	14·8376	15·1974	15·6031	15·93	grs.
Chloride of Sodium . .	7·0841	7·7705	7·5509	7·27	„
Sulphate of Soda . . .	·1377	·0061	·1550	·10	„
Sulphate of Potash . . .	·3286	·3937	·3014	·43	„
Bicarbonate of Lime . .	1·7246	1·8129	1·7760	1·78	„
Bicarbonate of Magnesia .	1·5051	1·4360	1·5357	1·54	„
Bicarbonate of Iron . .	·0166	·0278	·0203	·03	„
Bicarbonate of Manganese	·0072	·0047	·0060	·01	„
Bicarbonate of Baryta. } Bicarbonate of Strontia. }	·0011	·0036	·0021	·002	„
Phosphate of Alumina .	·0032	·0096	·0033	·009	„
Silica	·3797	·3648	·3777	·37	„
Total .	26·0259	27·0272	27·3322	27·67	grs.
Carbonic Acid	8·3249	6·7886	6·9275	6·52	c. in.
		Imported.			

ENGHIEN (Paris). Altitude 52′. A valuable sulphureous Water. Has five principal sources, Cotte, Deyeux, Péligot, Boulard, De la Pêcherie. Temperature from 50° to 57° F. The climate is not equal to the Pyrenees. Open from March to October. Imported.

FACHINGEN (Nassau, on the Lahn).

To correct acid in the stomach, and useful in diseases of kidney and bladder.

Fresenius's Analysis of 16 oz. Temperature, 50° F.

Bicarbonate of Soda.	28·0883	grains.
Bicarbonate of Lime.	2·8960	„
Bicarbonate of Magnesia	2·2912	„
Bicarbonate of Iron	·1103	„
Bicarbonate of Strontia.	·0008	„
Bicarbonate of Lithia	·0006	„
Sulphate of Soda	·1372	„
Phosphate of Soda.	·0506	„
Phosphate of Lithia	·0002	„
Phosphate of Lime	·0004	„
Phosphate of Alumina	·0003	„
Phosphate of Silica	·2610	„
Fluoride of Calcium	·0027	„
Chloride of Sodium	4·5574	„
Chloride of Calcium	·0034	„
	38·3918	grains.
Gases.		
Carbonic Acid	32·9750	c. in.
Nitrogen.	·0256	„
Imported.	33·0006	c. in.

FRANZENSBAD (Bohemia). Altitude 1569′. Mean annual temperature 45° F.

For drinking and for baths. Highly successful in all forms of abdominal plethora, anæmia, and chlorosis. The moor-bath chalybeate for rheumatism and gout.

Analysis of 16 oz.

	Wiesenquelle.	Sabequelle.	
Temperature, Fahr.	51°	52·6°	
Carbonate of Iron	·376	·016	grains.
Carbonate of Manganese	·093	·004	,,
Sulphate of Soda	25·223	17·933	,,
Sulphate of Potash	·1362	0	,,
Phosphate of Soda	·062	0	,,
Chloride of Sodium	9.346	9·216	,,
Bromide of Sodium Iodide of Sodium	traces	0	,,
Carbonate of Magnesia	1·190	·132	,,
Carbonate of Lithia	·063	0	,,
Carbonate of Lime	1.291	1·607	,,
Carbonate of Strontia	·049	·003	,,
Phosphate of Lime and Alumina	·007	·004	,,
Silica	·056	·333	,,
	45·108	38·568	grains.
Carbonic Acid	45·107	26·89	c. in.

	Franzensquelle.	Kalte-Sprudel.	Louisenquelle.	
Temperature, Fahr.	52·9°	51°	53·9°	
Carbonate of Iron	·23	·200	·328	grains.
Carbonate of Manganese	·04	·004	0	,,
Chloride of Sodium	9·23	8·600	6·766	,,
Sulphate of Soda	24·50	26·930	21·416	,,
Carbonate of Soda	5·17	7·173	5·498	,,
Carbonate of Lime	1·82	1·600	1·600	,,
Carbonate of Strontia	·003	·001	0	,,
Carbonate of Magnesia	·67	·013	0	,,
Carbonate of Lithia	·08	0	0	,,
Phosphate of Lime and Magnesia	·032	·028	0	,,
Silica	·47	·056	·228	,,
	42·18	44·606	35·836	grains.
Gases.				
Carbonic Acid	40·84	39·4	32·53	c. in.

FRIEDRICHSHALL (Saxe-Meiningen, near Hildburghausen). Situated in a charming valley. Bitter Water. Alterative and aperient; used in diseases of the stomach, liver, and urinary organs. There is no establishment here.

Liebig's Analysis in 16 oz.:

Sulphate of Soda	46·51	grains.
Sulphate of Magnesia	39·55	,,
Chloride of Sodium	61·10	,,
Chloride of Magnesium	30·25	,,
Bromide of Magnesium	·37	,,
Sulphate of Potash	1·52	,,
Sulphate of Lime	10·34	,,
Carbonate of Lime	·11	,,
Carbonate of Magnesia	1·16	,,
Silica	·33	,,
	190·25	grains.
Carbonic Acid	5·32	c. in.

Imported.

GASTEIN (Austria). Altitude 3051′, surrounded by mountains. Mean summer temperature, 59° F. Specially useful in nervous exhaustion.

Chiefly used for bathing. Season, July and August.

Wolfe's Analysis of 16 oz.

	Temperature, from 95° to 118° Fahr.
Sulphate of Soda	1·51 grains.
Chloride of Sodium	·36 ,,
Carbonate of Lime	·36 ,,
Silica	·24 ,,
Carbonate of Soda	·04 ,,
Phosphate of Alumina	·04 ,,
Carbonate of Iron	·05 ,,
Carbonate of Manganese	·02 ,,
Sulphate of Potash	·01 ,,
Carbonate of Magnesia	·02 ,,
Fluoride of Calcium	traces
Strontia	traces
Organic Matter	traces
	2·68 grains.
Gases.	
Nitrogen	69·112 per cent.
Oxygen	30·888 ,,

HOMBURG (Central Germany.) Altitude 600′. Air pure and bracing.

The springs are laxative, slightly tonic, and useful in plethora, dyspepsia, hysteria, hypochondria, etc. Source Louise, discovered in 1855, contain, iron and sulphur, 32 grains of salts, and 38 cubic inches of carbonic acid The water is also used for baths. Ludwigs-brunnen is a pleasant drinking water. Both the Kaiser-brunnen and the Stahl-brunnen have a chalybeate taste. Open all the year. Season, May to September.

Liebig and Hofmann's Analysis of 16 oz.

	Elizabeth-brunnen.	Kaiser-brunnen.	Ludwigs-brunnen.	Stahl-brunnen.	
Temperature, Fahr.	50°	52·25°	53·3°	50°	
Chloride of Sodium	79·15	104·94	47·96	79·86	grs.
Chloride of Potassium	0	·28	1·71	·18	,,
Chloride of Magnesium	7·79	8·52	3·06	5·33	,,
Chloride of Calcium	0	17·50	7·28	10·67	,,
Carbonate of Iron	·46	·53	·42	·94	,,
Sulphate of Lime	0	·17	·15	·15	,,
Carbonate of Lime	10·99	·68	5·74	7·53	,,
Carbonate of Magnesia	2·01	0	·10	0	,,
Sulphate of Soda	·38	0	0	0	,,
Silica	·32	·09	·20	·31	,,
	108·87	132·71	66·63	104·97	grs.
Free Carbonic Acid	48·64	109·16	43·59	46·91	c. in.

Imported.

ISCHIA (South Italy). Principal spring, Gurgitello. Temperature, 158° F. Contains in 16 oz., 135 grains, chiefly chloride of sodium, carbonate of soda, and carbonic acid. Serviceable in such cases as hot baths are usually employed, rheumatism, paralysis, skin disease, etc. Season, in the spring and summer. Whey cure.

Saline springs, and sand baths. Temperature 108° to 133° F. Patients are immersed in these for rheumatism, gout, palsy, and scrofula.

ISCHL (Austria). Altitude 1400′. Air peculiarly soft and refreshing, and is its chief attraction. The brine from the salt-works, when diluted, is used for baths. Season, May to end of September.

KISSINGEN (Bavaria). Altitude 800′. Climate mild, dry, and salubrious. Pleasing and healthful place of residence.

The waters are laxative, and used in indigestion, obstructions of the liver, morbid conditions of the kidneys, giving tone to the organs. The season lasts four months, May to September. There is also a Kissingen bitter-wasser, which closely resembles Friedrichshall.

Liebig's Analysis of 16 oz.

	Rakoczi.	Pandur.	Maxbrunnen.
Temperature, Fahr.	51°	51°	49°
Chloride of Sodium	44·71	42·39	17·52 grains.
Chloride of Potassium	2·20	1·85	1·14 „
Chloride of Lithium	·15	·12	·004 „
Chloride of Magnesium	2·33	1·62	·51 „
Bromide of Sodium	·06	·05	0 „
Iodide of Sodium	traces	traces	0 „
Nitrate of Soda	·07	·02	·65 „
Sulphate of Magnesia	4·50	4·59	0 „
Sulphate of Lime	2·99	2·30	1·06 „
Phosphate of Lime	·04	·04	·03 „
Carbonate of Lime	8·14	7·79	4·62 „
Carbonate of Iron	·24	·20	0 „
Silica	·09	·03	.07 „
	65·70	61·30	28·10 grains.
Gases.			
Carbonic Acid	41·77	48·17	41·85 c. in.
Ammonia	·007	·029	0 „

Imported.

KOSEN (Saxony, in a valley sheltered from the N. and N.E. winds).

Baths. Useful in scrofulosis.

Analysis of 16 oz. :— Temperature, Fahr. 65°.

Chloride of Sodium	335 grains.
Sulphate of Soda	2·2 „
Sulphate of Potash	2·4 „
Sulphate of Lime	33·5 „
Carbonate of Lime	1·0 „
Sulphate of Magnesia	7·9 „
Oxide of Iron	0·1 „
	382·1

KŒNIGSDORFF-JASTRZEMB (Upper Silesia). Not much known.

Drunk for glandular enlargements.

Analysis of 16 oz. :—

Chloride of Sodium	87·9 grains.
Chloride of Potassium	0·5 „
Chloride of Calcium	4·25 „
Chloride of Magnesium	2·6 „
Iodide of Magnesium	.04 „
Bromide of Magnesium	·22 „
Carbonate of Lime	·33 „
Carbonate of Magnesia	·01 „
Carbonate of Iron	·03 „
Sulphate of Lime	·08 „
	95·96

KRANKENHEIL (Bavaria). Altitude 2467′. Climate pure, bracing, and mild. Useful in scrofulous diseases of the skin.

Analysis of 16 oz. of the waters:—

	Johann-Georgen-quelle.	Bernhard-quelle.	Anna-quelle.	
Sulphate of Potash	·09	.07	·15	grains.
Sulphate of Soda	·09	·03	2·25	„
Chloride of Sodium	1·79	2·27	·23	„
Iodide of Sodium	·01	·01	—	„
Bicarbonate of Soda	2·48	2·56	1·49	„
Bicarbonate of Lime	·70	·78	1·91	„
Bicarbonate of Magnesia	·22	·22	—	„
Bicarbonate of Iron	—	—	—	„
Bicarbonate of Manganese	—	—	—	„
Silicate of Alumina	·02	·01	1·84	„
Silicic Acid	·06	·07	·03	„
	5·50	5·07	7·98	grains.
Gases.				
Free Carbonic Acid	·32	·23	·63	c. in.
Sulphuretted Hydrogen	·05	·07	·23	„

KREUZNACH (Rhenish Prussia). Altitude 285′. Climate warm, clear and dry.

Kreuznach Salt: the Mother Lye of Kreuznach, which remains after the salt has crystallized out, contains 2484 grains of solids in the 16 oz.

A strongly iodized water, powerfully tonic and stimulant to the lymphatic system, used for constitutional syphilis, disease of the skin, rheumatism, paralysis, scrofula, tuberculosis, and leucorrhœa; used also for baths. Season, from June to September.

Analysis of 16 oz.:—

	Elisen-quelle.	Oranien-quelle.	Brine Spring.	
Temperature, Fahr.	54·5°	54·5°		
Chloride of Sodium	72·883	108·705	1311·89	grains.
Chloride of Calcium	13·389	22·749	241·00	„
Chloride of Magnesium	4·071	0	73·22	„
Chloride of Potassium	·624	·460	11·23	„
Chloride of Lithium	·613	0	0	„
Bromide of Magnesium	·278	1·780	5·00	„
Iodide of Magnesium	·035	·012	·63	„
Carbonate of Lime	1·693	·255	0	„
Carbonate of Magnesia	·106	·130	0	„
Carbonate of Iron	0	·356	0	„
Silica	·129	·999	0	„
Phosphate of Alumina	·025	·095	0	„
	93·846	135·541	1642·97	grains.

The water, the salt, and the brine, are all imported.

KRONTHAL (Nassau). Altitude 512′. In a valley open to the south. Climate very mild.

Resorted to by persons suffering from bronchitis or affections of the lungs.

Löwe's Analysis of 16 oz.:—

	Stahl-quelle.	Wilhelms-quelle.	
Temperature, Fahr.	57°	61°	
Chloride of Sodium	22·27	27·20	grains.
Chloride of Potassium	·77	·67	„
Chloride of Ammonium	·07	·04	„
Chloride of Calcium	·07	·16	„
Carbonate of Lime	4·17	5·10	„
Sulphate of Lime	·21	·23	„
Carbonate of Magnesia	·72	·72	„
Carbonate of Iron	·05	·10	„
Carbonate of Manganese	·02	·01	„
Silica	·66	·55	„
Organic Matter	·11	·01	„
	29·16	35·26	grains.

Carbonic Acid	40·0	33·0 c. in.

LABASSÈRE (Hautes Pyrénées). Altitude 1800′.

Drunk for bronchial and laryngeal catarrh.

Containing 3·68 grains of solids in 16 oz., viz.:—
Temperature, 54°–57° Fahr.

Sulphuret of Sodium	·35
Chloride of Sodium	1·58
Chloride of Potassium	·02
Carbonate of Soda	·17
Silicate of Lime	·33
Silicate of Magnesia	·07
Alum (in excess)	·01
Iodine	traces.
Organic Matter	1·11

LANDECK (Prussian Silesia). Altitude 1398′. Climate bracing.

Vapour inhaled for bronchial catarrh. Resembles in purity Buxton and Clifton. There are moor-baths for rheumatism, etc.

Fischer's Analysis of 16 oz.:—

	Wiesenquelle. 81° F.	Georgenbrunnen. 83° F.
Sulphate of Soda	·542	·248 grain.
Bicarbonate of Soda	·545	0 „
Chloride of Potassium	0	·165 „
Chloride of Sodium	·005	0 „
Chloride of Calcium	·064	0 „
Crenate of Soda	0	·286 „
Sulphate of Lime	0	·008 „
Carbonate of Lime	·075	·081 „
Carbonate of Magnesia	·005	·009 „
Phosphate of Alumina, Iron, and Manganese	0	·012 „
Silica	·327	·271 „
	1·563	1·122 grains.
Gases.		
Sulphuretted Hydrogen	·015	traces c. in.
Carbonic Acid	·172	·26 „
Nitrogen	0	·62 „

LANGENBRÜCKEN (Baden). Altitude 440′. In a valley, with luxuriant foliage. Climate mild. Season, spring to autumn.

Useful in chronic catarrh of the bladder, rheumatism, and bronchial irritation.

Trinkquelle. Temperature, 52° Fahr. Contains 3¾ grains of solids in 16 oz., viz.:—

Sulphate of Soda	·25 grains.
Sulphate of Lime	·5 „
Sulphate of Potash	·15 „
Chloride of Sodium	·08 „
Carbonate of lime	2·12 „
Carbonate of Magnesia	·35 „
Carbonate of Iron	·07 „
Silica	·01 „
Gases.	
Sulphuretted Hydrogen	0·10 c. in.
Carbonic Acid	27·98 „

WALDQUELLE. Temperature, 57° F. Contains 11¾ grains of solids in 16 oz., viz.:—

Sulphate of Soda	1·63 grains.
Sulphate of Magnesia	3·88 „
Sulphate of Lime	2·41 „
Phosphate of Lime	·16 „
Sulphate of Potash	·15 „
Sulphuret of Calcium	·14 „
Chloride of Potassium	·10 „
Carbonate of Lime	1·81 „
Carbonate of Magnesia	1·84 „
Sulphuret of Iron	·03 „
Alumina	·03 „
Silica	·13 „
Gases.	
Sulphuretted Hydrogen	·15 c. in.
Carbonic Acid	3·09 „

LEUK (Switzerland). Altitude 4275′, at the foot of the Gemmi. Climate rough and bracing.

Both sexes, in suitable dresses, promenade in these baths. They are useful in skin diseases, chronic swellings of the glands, in catarrh, and have also a diuretic action.

Brunner's Analysis of 16 oz. of the Lorenzquelle. Temperature, 124° F.

Sulphate of Lime	12·712 grains.
Sulphate of Magnesia	1·991 „
Sulphate of Soda	·509 „
Sulphate of Strontia	·031 „
Chloride of Sodium	·055 „
Chloride of Potassium	·02 „
Chloride of Magnesium	·027 „
Carbonate of Lime	·357 „
Carbonate of Magnesia	·002 „
Carbonate of Iron	·024 „
Silica	·102 „
	15·830 grains.
Gases.	
Carbonic Acid	·267 c. in.
Oxygen	·192 „
Nitrogen	·347 „

LIPPIK (Slavonia).

Useful in hysteria.

KLEINBADQUELLE contains 20 grains of solids in 16 oz., viz.:—

	Temperature, 111° F.
Sulphate of Soda	5.25 grains.
Chloride of Sodium	4·8 „
Chloride of Calcium	·75 „
Iodide of Calcium	·2 „
Carbonate of Soda	9·5 „
Carbonate of Magnesia	·75 „
Carbonate of Lime	1·33 „
Phosphate of Alumina	·02 „
Silica	·08 „
Gases.	
Carbonic Acid	28·5 per cent.
Nitrogen	71·4 „

LIPPSPRINGE (Prussian Westphalia). Altitude 378′, having beautiful walks for exercise. Climate mild, calming, and equable.

Useful in bronchial irritation and incipient tuberculosis. Season, June to August.

ARMINIUSQUELLE, in 16 oz. are :—

	Temperature, 70° F.
Sulphate of Lime	4·25 grains.
Carbonate of Lime	5·27 „
Sulphate of Soda	5·20 „
Bicarbonate of Soda	1·60 „
Sulphate of Magnesia	.80 „
Carbonate of Magnesia	·60 „
Carbonate of Iron	·14 „
Chloride of Sodium	·86 „
Chloride of Magnesium	·80 „
Iodides	traces.
	19·52 grains.
Gases.	
Carbonic Acid	16·17 c. in.
Nitrogen	4·46 „
Oxygen	·55 „
	21·12 c. in.

LUCCA (Central Italy). Situate on the slope of a hill, surrounded with shady trees. Climate warm.

Employed externally and internally for skin disease and chronic rheumatism. Season, June, July, and August.

Giulii's Analysis of 16 oz. of its thermal spring—

	Temperature, 116°.
Sulphate of Lime	5.82 grains.
Carbonate of Lime	·39 „
Carbonate of Magnesia	·06 „
Chloride of Sodium	1·28 „
Chloride of Magnesium	·32 „
Alumina	·32 „
Sulphate of Magnesia	1·18 „
	9·37 grains.

LUHATSCHOWITZ (Moravia). Altitude 1600′. Climate mild but moist.

Useful in Chronic bronchial, gastric, uterine, and vaginal catarrh, especially if combined with scrofulosis ; in congested liver and hæmorrhoids, arising from sedentary habits.

	Vincenz-brunnen.	Amand-brunnen.	Johann-brunnen.	Luisen-quelle.	Bade-wasser.	
Temperature, Fahr.	47·75°	45·7°	45·7°	48·6°		
Chloride of Potassium	1·79	1·59	2·14	1·61	1·85	grains.
Chloride of Sodium	23·35	25·75	27·88	33·47	20·87	„
Bromide of Sodium	·25	·10	·07	·08	·11	„
Iodide of Sodium	·13	·12	·17	·18	·35	„
Carbonate of Soda	23·26	36·03	44·21	43·21	24·13	„
Carbonate of Lithia	0	·01	·01	·01	0	„
Carbonate of Magnesia	·42	·56	·55	·51	·42	„
Carbonate of Baryta	·07	·06	·04	·06	0	„
Carbonate of Lime	4·63	4·81	4·89	4·40	4·79	„
Carbonate of Strontia	·09	·11	·07	·12	0	„
Carbonate of Iron	·11	·13	·09	·18	·15	„
Silica	·39	·10	·41	·47	·14	„
	54·85	69·5	80·7	84·4	59·7	grains.
Carbonic Acid	50	29	16	27·6	28	c. in.

MARIENBAD (Bohemia). Altitude 1900′. Air dry and pure. Season, May to September.

Springs are drunk as laxatives, and are useful in abdominal enlargement, gravel, gout, and derangement of the digestive organs. Mud-baths are applied to stimulate the skin, and to remove glandular swellings.

	Kreuz-brunnen.	Ferdinand-brunnen.	Wald-quelle.	Wiesen-quelle.	Marien-quelle.	
Temperature, Fahr.	53·3°		43·25°	52°–54°		
Sulphate of Soda	36·269	38·766	5·228	·883	·353	grs.
Bicarbonate of Soda	12·394	13·999	5·107	·704	0	„
Chloride of Sodium	11·166	15·397	2·116	·369	·048	„
Sulphate of Potash	·449	·499	1·495	0	0	„
Bicarbonate of Lithia	·077	·110	·009	0	0	„
Bicarbonate of Lime	6·630	6·021	2.725	6·516	·436	„
Bicarbonate of Strontia	·017	·008	0	0	0	„
Bicarbonate of Magnesia	5·399	5·299	0	4·373	·061	„
Bicarbonate of Iron	·482	·653	·187	·373	·035	„
Bicarbonate of Manganese	·053	·166	·035	·161	0	„
Phosphate of Alumina	·054	·014	·011	0	0	„
Phosphate of Lime	·018	·015	0	0	0	„
Silica	·079	·741	·507	·691	·189	„
	73·736	81·515	20·091	14·070	1·197	grs.
Carbonic Acid	7·424	14·800	13·509	12·828	9·056	c. in.

Imported.

	Carolinen-brunnen.	Ambrosius-brunnen.	
Temperature, Fahr.	50°	50°	
Sulphate of Soda	2·79	1·86	grains.
Chloride of Sodium	·82	1·64	„
Carbonate of Soda	·20	1·66	„
Carbonate of Lime	3·66	2·89	„
Carbonate of Magnesia	3·94	2·72	„
Carbonate of Iron	·44	·34	„
Silica	·46	·48	„
Extractive Substance	·38	0	grains.
Carbonic Acid	15·43	12·9	c. in.

MEINBERG (Germany). Altitude 634′. Situated in a charming fertile plain.

These waters are generally tonic, and good in facial neuralgia, relaxed condition of system, whether cutaneous or otherwise.

In 16 oz. are contained as follows:—

	Trink-quelle.	Neu-brunnen.	Quelle im Stern.	Schwefel-quelle.	Kochsalz-quelle.	Acidulous Spring.	
Temp.				61° F.			
Sulphate of Soda	1·15	4·51	1·34	5·84	11·01	0	grs.
Sulphate of Magnesia	1·14	2·52	3·67	1·73	0	0·04	„
Sulphate of Lime	0·28	3·45	15·16	8·33	13·46	0·18	„
Chloride of Sodium	0	0	0	0	40·95	0·07	„
Chloride of Magnesia	0·81	0·98	0·24	1·03	6·31	0·14	„
Carbonate of Lime	1·45	2·65	1·17	2·14	6·03	5·02	„
Carbonate of Magnesia	0·15	0·24	0·17	0·17	0·51	2·04	„
Carbonate of Iron	0·08	0·07	0·01	0·008	0·07	0·005	„
Silica	0·06	0·25	0·08	0·12	0·05	0·05	„
Extractive Substance	0·57	0	0	0	0	0	„
	5·96	14·73	23·36	19·48	73·44	7·57	grs.
Gases.							
Carbonic Acid	34·36	0	1·83	2·12	9·74	18·49	c. in.
Sulphuretted Hydrogen	0	0	0	0·55	0	0	„
Nitrogen	0·14	0	0	0	0	0	„

MERGENTHEIM (Würtemberg). Altitude 591′. Charming situation. Climate mild. Mean annual temperature 51° F., mean summer temperature 64° F.

The concentrated bitter-water contains 235 grains in the 16 oz. The water is used internally and externally in biliary obstructions, hæmorrhoids, and lithiasis.

The "Quelle im Carlsbad" spring, contains 107 grains of solids in 16 oz., viz.:—

Chloride of Sodium	51·25 grains.
Chloride of Potassium	·78 „
Chloride of Lithium	·01 „
Bromide of Sodium	·07 „
Sulphate of Soda	21·89 „
Sulphate of Magnesia	15·88 „
Sulphate of Lime	9·86 „
Carbonate of Magnesia	1·40 „
Carbonate of Lime	5·45 „
Carbonate of Iron	·05 „
Silica	·45 „
	107·16 grains.

Gases.

Carbonic Acid	7·5 c. in.
Nitrogen	18 „

MONDORF (Luxemburg). Altitude 2278′. Surrounded by beautiful shady walks.

Extremely useful in hyperæmic conditions of the mucous membrane of the respiratory or intestinal functions, especially in leuco-phlegmatic anæmic individuals.

There is an artesian well here, 2278 feet deep, and the water out of it is 108·5° F.

Kirchhoff's Analysis of 16 oz.:—

Temperature, 77° Fahr.

Chloride of Sodium	66·98 grains.
Chloride of Calcium	24·31 „
Chloride of Potassium	1·58 „
Chloride of Magnesium	3·25 „
Bromide of Magnesium	·76 „
Sulphate of Lime	12·61 „
Carbonate of Magnesia	·05 „
Carbonate of Iron	·22 „
Silica	·05 „
Arsenic Acid	·001 „
	109·911 grains.

Gases.

Free Carbonic Acid	1·06 c. in.
Nitrogen	·47 „

NENNDORF (Prussian Westphalia). Environs charming.

Used for drinking and for baths, to increase the tone of the skin. Gas, douche, and mud baths are employed for gout and rheumatism, etc., Brine baths are also employed. Season, June to September.

Temperature, 52° F.

	Quelle unter dem Gewölbe.	Trink-brunnen.	Bade-quelle.	Sool of Rodenberg.
Sulphate of Soda . .	5·22	4·91	1·11	10·81 grs.
Sulphate of Magnesia .	2·83	2·54	1·89	10·01 „
Sulphate of Lime . .	7·15	6·31	5·56	14·82 „
Sulphate of Potash . .	0	0	0	0·10 „
Chloride of Sodium .	0	0	0	49·84 „
Chloride of Magnesium	1·63	1·62	0·42	10·01 „
Chloride of Lime . .	4·30	4·51	3·18	4·61 „
Silica	0·05	0·06	0	0·20 „
	21·4	20·7	12·19	90·0 grs.
Gases.				
Carbonic Acid . . .	5·2	4·32	2·75	0·14 c. in.
Sulphuretted Hydrogen	1·21	1·20	0·61	0 „

NEUENAHR (Rhenish Prussia). Altitude 225′. Scenery picturesque and romantic. Climate mild.

Good for gout and rheumatism, scrofula, emphysema of the lungs, bronchial catarrh, uric acid diathesis, and all diseases of the mucous membrane.

Contents in 16 oz. :—	Augusten-quelle.	Mohr. Marien-sprudel.	Bisch. Apollinaris-brunnen.	Victoria-quelle.
Temperature, Fahr.	90°	102°	70°	
Carbonate of Soda . .	5·99	5·62	9·65	10·80 grs.
Carbonate of Magnesia	1·77	2·68	3·39	3·74 „
Carbonate of Lime . .	1·68	1·61	·45	3·30 „
Chloride of Sodium . .	·71	·69	3·57	0·91 „
Sulphate of Soda . .	·58	·76	2·30	0·73 „
Oxide of Iron	·04 }	0·06	0·15	0·10 „
Alumina	·13 }			
Silica	·17	0·19	0·06	0·25 „
	11·11	11·66	19·59	19·83 grs.
Carbonic Acid . . .	24·73	22·52	47·04	12·86 c. in.

OFEN or BUDA (opposite Pesth, Hungary). Altitude 461′.

Used externally. Efficacious in chronic gout, rheumatism, eczema, and psoriasis. Internally, in gastric catarrh, gouty diathesis, ulceration of the stomach, obstinate constipation. There are three swimming baths.

Sigmundi's Analysis of 16 oz. of the Trinkquelle :—

Temperature, 141·5° Fahr.

Sulphate of Soda	2·95 grains.
Chloride of Sodium	·82 „
Carbonate of Soda	2·02 „
Carbonate of Magnesia	0·46 „
Carbonate of Lime	3·12 „
Silica	0·69 „
Alumina	0·18 „
	10·24 grains.
Gases.	
Carbonic Acid	5·72 c. in.
Sulphuretted Hydrogen	traces.

OREZZA (Corsica). Air warm. Temperature, 59° F.

Is a kind of ferruginous Seltzer Water, very agreeable to drink ; it consists of Carbonates of Lime, Magnesia, Iron, Manganese, and Cobalt, Sulphate of Alumina, about 90 grains in 20 oz., with an abundance of Carbonic Acid. They are drunk with pleasure and with benefit for indigestion, want of appetite, and general debility. Imported.

OTTILIENQUELLE (Paderborn, Westphalia).

For incipient tuberculosis, great emaciation, etc., in short, they are both tonic and restorative.

Analysis of 16 oz.

Carbonate of Lime	2·5 grains.
Carbonate of Iron	·05 „
Chloride of Sodium	6·75 „
Sulphate of Lime	·5 „
Chloride of Calcium	·5 „
Chloride of Magnesium	·25 „
Iodine and Bromine	traces.
	10·55

Gases.

Carbonic Acid	2·34
Nitrogen	8·98
Oxygen	1·17

MARIENQUELLE (in the neighbourhood), a chalybeate, contains 4¾ grains of solids. Amongst them—

Carbonate of Lime	1·75 grains.
Bicarbonate of Iron	·45 „

PFAFFERS (Switzerland), altitude 2108′, and RAGATZ, altitude 1604′, which has the same water conveyed to it.

Pfaffers is situated in a ravine, and is the most valued; Ragatz is in an open country, with purer air. They are chiefly valued for the warmth of their springs. Season, June to September.

Capeller's Analysis of 16 oz.:—

Temperature, 100° F.

Carbonate of Magnesia	·87 grain.
Carbonate of Lime	·32 „
Sulphate of Soda	·62 „
Sulphate of Lime	·37 „
Chloride of Sodium	·21 „
Chloride of Magnesium	·16 „
	2·55 grains.

Gases.

Oxygen	1·3 c. in.
Nitrogen	3.7 „
Carbonic Acid	4·15 „

PLOMBIÈRES (Vosges, France). Altitude 1310′. Air bracing and pure, Subject to change of temperature.

Chiefly used as baths. And Dr. Hebra's beds are used, to keep patients immersed for days together; most suitable for gout, rheumatism, spinal, and female complaints. There are, also, cool chalybeate springs for drinking. Often visited by the Emperor Napoleon III.

Analysis of 16 oz.

Temperature, from 80° to 159° F.	Bain des Dames.	Bain Romain.
Silicate of Soda	·6257	·5278 grain.
Silicate of Potash	·0080	0 „
Silicate of Lime and Magnesia	·1530	·052 „
Chloride of Sodium, Chloride of Potassium, Chloride of Calcium	·2754	·2290 „
Sulphate of Soda	·6273	·3901 „
Arseniate of Soda	·0053	0 „
Silica	·0887	·3213 „
Alumina	·0760	·1980 „
Nitrogenous organic matter	·1530	0 „
Imported.	2·0024	1·6759

PULLNA (Bohemia).

A bitter saline purgative, twice the strength of Seidlitz, useful in obstinate constipation.

Struve's Analysis of 16 oz. :—

Sulphate of Soda	123·800 grains.
Sulphate of Potash	4·800 „
Sulphate of Lime	2·600 „
Carbonate of Lime	·770 „
Sulphate of Magnesia	93·086 „
Chloride of Magnesium	16·666 „
Carbonate of Magnesia	6·406 „
Phosphate of Lime	·003 „
Silica	·176 „
	248·307 grains.

Carbonic Acid Gas.
Imported.

PYRMONT (Waldeck). Altitude 404′. In a valley ; the environs picturesque. Mean annual temperature, 48·5°.

Chalybeate drinking springs, taste fresh and slightly ferruginous. The saline somewhat bitter ; they are highly restorative. There is also a Grotto del Cane here. Imported.

Wigger's Analysis of 16 oz.

Temperature, 51°–54½° F.	Trink-quelle.	Brodel-brunnen.	Augen-quelle.	Neu-brunnen.	Sool-quelle.	Myr. Sal-quelle.	Säuer-ling.	
Sulphate of Lime	7·22	6·07	4·10	0	14·58	5·51	·31	grs.
Sulphate of Magnesia	2·69	5·53	4·56	3·47	2·33	0	·60	„
Sulphate of Soda	2·14	0	1·71	7·34	5·29	12·24	·37	„
Carbonate of Lime	5·98	4·52	3·81	7·86	2·71	6·92	1·81	„
Carbonate of Magnesia	·32	·24	·25	·96	·46	0	·16	„
Carbonate of Soda	0	4·78	·84	2·62	1·49	6·23	·30	„
Carbonate of Iron	·49	·58	·13	·75	·08	·06	0	„
Chloride of Sodium	0	0	·44	4·38	61·68	65·49	·01	„
Chloride of Magnesium	1·12	1·48	·45	·97	6·92	12·07	·12	„
Silica	·49	·25	·10	·20	0	0	0	„
	20·02	23·62	16·46	28·98	95·32	108·7	3·72	grs.
Gases.								
Carbonic Acid	44·52	38·51	36·28	39·28	17·46	26·19	21·84	c. in.
Sulphuretted Hydrogen	0	0	·39	0	0	0	0	

RECOARO (Venetia). Altitude 1465′. Climate mild and bracing.

Situate at the foot of the Alps. Chiefly resorted to for the mild air and chalybeate springs. Season, May to October.

Cenedella's Analysis of 16 oz. :—

Carbonate of Iron	·23 grains.
Carbonate of Lime	5·15 „
Carbonate of Magnesia	·47 „
Carbonate of Soda	0 „
Sulphate of Magnesia	5·00 „
Sulphate of Soda	·23 „
Sulphate of Lime	9·5 „
Chloride of Magnesium	·023 „
Silica	·319 „
	20·78 grains.

Gases.

Carbonic Acid	17·99 c. in.

REICHENHALL (Upper Bavaria). Altitude 1407′. Mean temperature, of spring, 56° F.; of summer, 64° F.; of autumn, 54° F. Climate mild and bracing.

Used only for baths, for scrofula and incipient tuberculosis, and for inhalation. Season, July and August.

Of the nineteen saline springs, the most abundant is

The "EDELQUELLE" which contains in 16 oz.,

Chloride of Sodium	1723·10 grains.
Chloride of Ammonium	·19 „
Chloride of Magnesium	13·84 „
Bromide of Magnesium	·23 „
Sulphate of Soda	15·36 „
Sulphate of Potash	4·70 „
Sulphate of Lime	31·98 „
Carbonate of Lime	·07 „
Carbonate of Magnesia	traces.
Oxide of Iron and Alumina	·06 „
Silica	·08 „
	1789·61
Free Carbonic Acid	traces.

RIPPOLDSAU (Baden). Altitude 1886′. Air pure, fresh, and bracing.

Tonic resolvent for chlorotic and anæmic patients; also useful in pulmonary catarrh. Season, middle of May to middle of September.

Bunsen's Analysis of 16 oz.

	Joseph-quelle.	Leopolds-quelle.	
Temperature, Fahr.	46°	49°	
Bicarbonate of Iron	·395	·455	grains.
Bicarbonate of Manganese	·033	·078	„
Bicarbonate of Lime	12·939	14·598	„
Bicarbonate of Magnesia	·543	2·888	„
Sulphate of Soda	9·316	6·769	„
Sulphate of Potash	·465	·271	„
Sulphate of Lime	·428	·134	„
Sulphate of Magnesia	1·866	·150	„
Phosphate of Lime	0	·136	„
Chloride of Magnesium	·650	·336	„
Alumina	·034	·120	„
Silica	·439	·663	„
Phosphoric Acid, Arsenic and organic matter	traces.	traces.	
	26·908	26·853	grains.
Gases.			
Free Carbonic Acid	14·936	15·985	c. in.
Nitrogen	·003	·0003	„
Oxygen	0	·003	„

SANKT-MORITZ or SAINT-MAURICE, Upper Engadin (Switzerland). Altitude 5464′. Climate rough; environs romantic. Mean temperature of summer months, 51° F.

Tonic and stimulating, in debility, anæmia, neuralgia, scrofula, and in some conditions of lung disease. Used for drinking and for baths. Season, July and August.

The old spring contains in 16 oz.,
Temperature, Fahr. 42°

Carbonate of Lime	5·5 grains.
Carbonate of Magnesia	1·0 ,,
Carbonate of Iron	·18 ,,
Carbonate of Manganese	·03 ,,
Carbonate of Soda	1·46 ,,
Sulphate of Soda	2·0 ,,
Chloride of Sodium	·29 ,,
Sulphate of Potash	.12 ,,
Silica	·29 ,,
Phosphoric Acid	·03 ,,
Bromine, Iodine, and Fluorine	traces.
	10·90 grains.
Carbonic Acid	39·5 c. in.

The new spring contains 13½ grains of solids in 16 oz., viz :—
More Lime and Magnesia than the old spring, 0·25 grain of Iron, and 40½ cubic inches of Carbonic Acid.

SCHLANGENBAD (Nassau). Altitude 933′. Mean annual temperature, 50° F. Locality romantic. Air mild and bracing. Season, June, July, and August.

The baths have a sedative and a beautifying influence on the skin, rendering it soft and juvenile; highly useful in nervous irritability arising from debility.

Fresenius's Analysis of 16 oz.

Sulphate of Potash	0·091 grain.
Chloride of Potassium	0·004 ,,
Chloride of Sodium	1·325 ,,
Phosphate of Soda	0·004 ,,
Carbonate of Potash	0·079 ,,
Carbonate of Lime	0·250 ,,
Carbonate of Magnesia	0·047 ,,
Silica	0·258 ,,
	2·558 grains.
Carbonic Acid	0·668 grain.

SCHWALBACH (Nassau). Altitude 909′. Climate bracing. Mean season temperature, 64° F.

Resorted to for quiet, and recruiting dilapidated health. Season, June, July, and August.

Fresenius's Analysis of 16 oz.	Stahl-brunnen.	Wein-brunnen.	Paulinen-brunnen.	Rosen-brunnen.	
Temperature, Fahr.	46°–51°	49°–50°	48°–50°		
Bicarbonate Protoxide of Iron	·643	·443	·65	·91	grain.
Bicarbonate Protoxide of Manganese	·141	·070	0	0	,,
Bicarbonate of Soda	·158	1·884	·45	·35	,,
Chloride of Sodium	·052	·066	·03	·32	,,
Sulphate of Soda	·061	·048	·02	·8	,,
Sulphate of Potash	·029	·057	0	0	,,
Bicarbonate of Lime	1·700	4·394	2·95	2·95	,,
Bicarbonate of Magnesia	1·630	4·467	2·75	·98	,,
Silica	·246	·357	0	0	,,
Gases.	3·660	11·786	6·86	5·57	grains
Carbonic Acid	50·27	45·6	39·5	26	c. in.
Sulphuretted Hydrogen	·003	·003	0	0	,,

The first two are for drinking, the last two for bathing. The Stahl-brunnen is employed for general torpidity.

Imported.

SEIDLITZ (Bohemia). Imported.

Steinmann's Analysis of 16 oz.

Sulphate of Magnesia	79·55 grains.
Sulphate of Soda	17·44 „
Carbonate of Lime	5·29 „
Carbonate of Magnesia	·20 „
Carbonate of Strontia	·009 „
Sulphate of Lime	4·14 „
Sulphate of Potash	4·41 „
Chloride of Magnesium	1·06 „
Carbonate of Protoxide of Iron and Manganese	·05 „
Silica	.05 „
Fluoride and Bromide of Magnesium	trace.
	112·199 grains.

SELTERS (Nassau). Altitude 800′. Furnishes the well-known *Seltzer-water*. Imported.

Kastner's Analysis of 16 oz.

	Temperature, 62° F.
Bicarbonate of Soda	9·7741 grains.
Chloride of Sodium	17·2285 „
Chloride of Potassium	·2890 „
Sulphate of Soda	·2615 „
Phosphate of Lime	·0004 „
Phosphate of Alumina	·0002 „
Phosphate of Soda	·2615 „
Fluoride of Calcium	·0016 „
Bicarbonate of Lime	2·6678 „
Bicarbonate of Magnesia	2·5586 „
Bicarbonate of Iron	·1088 „
Bicarbonate of Manganese	·0032 „
Bromide of Sodium	·0002 „
Silica	·2500 „
	33·4054 grains.

Gases.

Carbonic Acid	30·0100 c. in.
Nitrogen	·0285 „
Oxygen	·0046 „
	30·0431 c. in.

SODEN (Nassau). Altitude 437′. Locality charming; air mild; temperature steady.

There are nineteen other springs not in use. In Germany these springs have a great reputation for chest diseases, are employed in atonic gout, scrofula, and diseases peculiar to females.

Analysis of 16 oz.:—	Milch-brunnen.	Warm-brunnen.	Wilhelms-brunnen.	Sool-brunnen.	
Temperature, Fahr.	74°	70°	57°	68°	
Chloride of Sodium	17·68	26·13	104·10	114·40	grains.
Chloride of Potassium	·16	1·29	2·53	3·52	„
Sulphate of Lime	·19	·25	·98	·76	„
Carbonate of Lime	2·73	4·47	8·38	8·63	„
Carbonate of Magnesia	1·37	2·63	1·28	·29	„
Carbonate of Iron	·16	·30	·30	·60	„
Alumina	·01	0	·05	·88	„
Silica	·16	·23	·30	·50	„
	23·46	35·30	117·92	129·58	grains.
Carbonic Acid	17·0	35·9	48·9	14·0	c. in.

SCHINZNACH (Switzerland). Altitude 1060′. Mountainous and picturesque. Climate mild and salubrious.

There is only one spring; it is the most sulphureous of all the Continental waters, and the most frequented. The visitors are chiefly French. The baths are cooled to 90°; they are used for skin diseases, diseases of the bones, and local rheumatism.

Analysis of 16 oz.:—

Temperature, 96°.

Sulphate of Soda	9·87 grains.
Sulphate of Potash	·68 „
Sulphate of Lime	1·20 „
Chloride of Potassium	5·48 „
Chloride of Magnesium	1·14 „
Magnesia	·64 „
Carbonate of Magnesia	·03 „
Carbonate of Lime	1·09 „
Oxide of Iron	·008 „
Alumina	·07 „
Silica	·09 „
Gases.	
Carbonic Acid	2·38 c. in.
Sulphuretted Hydrogen	1·72 „
Nitrogen	a trace.

SPA (Belgium). Altitude 1030′. Sheltered. Air salubrious and bracing, but subject to sudden changes of temperature. Imported.

There are seven springs in all.

These chalybeates are highly beneficial in anæmia, debility, depression of system. Season, August and September.

Struve's Analysis of 16 oz. of Pouhon:—

Temperature, 52° Fahr.

Carbonate of Protoxide of Iron	·375 grains.
Carbonate of Protoxide of Manganese	·052 „
Carbonate of Soda	·738 „
Carbonate of Lime	·986 „
Carbonate of Magnesia	1·123 „
Sulphate of Potash	·079 „
Sulphate of Soda	·038 „
Chloride of Sodium	·050 „
Phosphate of Lime	·013 „
Phosphate of Alumina	·009 „
Silica	·499 „
	3·962 grains.
Carbonic Acid Gas	21·6 c. in.

TARASP (Switzerland). Lower Engadine. Altitude 4265′. Scenery mountainous and cultivated.

Useful in abnormal obesity, oppressed functions of the glandular and vascular system, gout, rheumatism, and skin diseases, the mountain air contributing largely to invigorate the system. Season, June to September, when the weather is genial and constant. Mean temperature of July, 51° F.

Dr. Planta's Analysis of 16 oz.:—

	Grosse-quelle. Temperature, 37°	Kleine-quelle.
Sulphate of Soda	16·547	16·417 grains.
Carbonate of Soda	27·229	28·535 „
Chloride of Sodium	29·401	29·381 „

	Gross-quelle Temperature, 37.°	Kleine-quelle.
Carbonate of Magnesia	5·076	4·977 grains.
Carbonate of Protoxide of Iron	·152	·140 „
Carbonate of Lime	12·432	12·402 „
*Iodide of Sodium	1·536	„
Sulphate of Potash	2·998	3·337 „
Silica	·247	·092 „
Alumina	·002	
Phosphoric Acid	·002	
Carbonic Acid	34·887 grains.	33·271 „

* Dr. Killias has corrected Planta. He says the quantity of Iodide of Sodium is only 0·0015 grains.

TCHITLI (Turkey). Bicarbonate of Soda Spring.

Rises at 55° F., Sp. g. 1005.

Contents of a Litre.

Bicarbonate of Soda	4·554
„ „ Potash	·148
„ „ Magnesia	·365
„ „ Lime	·367
Sulphate of Soda	·132
Phosphate of Soda	·061
Chloride of Sodium	·066
Protoxide of Iron	·005
Iodide of Sodium	a trace.
Silex	·057
Free Carbonic Acid	·475
	6·230

TOEPLITZ or TEPLITZ (Bohemia). Altitude 648′. Sheltered. Climate mild and salubrious. Mean annual temperature, 50°.

There are several springs, ranging from 78° to 120°, nine bathing establishments, and mud baths also. The baths are best suited to nervous patients, very efficacious in chronic rheumatism, gout, paralysis, and neuralgia.

Wolf's Analysis of 16 oz.:—	Haupt-quelle. Temperature, 120° F.
Sulphate of Potash	0·098 grains.
Sulphate of Soda	·290 „
Carbonate of Soda	2·635 „
Phosphate of Soda	0·014 „
Fluoride of Silicium	·351 „
Chloride of Sodium	·433 „
Carbonate of Lime	·330 „
Carbonate of Strontia	·027 „
Carbonate of Magnesia	·088 „
Carbonate of Protoxide of Iron	·019 „
Carbonate of Protoxide of Manganese	·021 „
Sulphate of Alumina	·020 „
Silica	·443 „
Crenic Acid	·034 „
	4·803

VALS (France).

Beneficial in lithiasis, indigestion, syphilitic and skin diseases and scrofula. Imported.

M. Henri's Analysis of 1 litre (35 oz.) :—

	Saint-Jean.	Précieuse.	Désirée.	Rigolette.	Magdeleine.
Temperature	66° F.	66° F.	68° F.	68° F.	66° F.
Bicarbonate of Calcium	0·3100	0·630	0·571	0·259	0·520
Bicarbonate of Magnesia	0·1200	0·750	0·900		0·672
Bicarbonate of Soda	1·4800	5·940	6·040	5·800	7·280
Bicarbonate of Potash	0·0400	0·230	0·263	0·265	0·255
Bicarbonate of Protoxide of Iron with trace of Manganese	0·0060	0·010	0·010	0·024	0·029
Chloride of Sodium and Potassium	0·0600	1·080	1·100	1·200	0·016
Sulphate of Soda	0·0540	0·185	0·200	0·220	0·235
Sulphate of Calcium	0·0700				
Alumina	0·0110	0·060	0·058	0·060	0·097
Bicarbonate of Lithia, Arseniate of Soda, Alkaline Ioduret, Organic Matter	traces.	traces.	traces.	traces.	traces.
Grammes	2·1510	8·885	9·142	7·828	9·104
= Grains	33	136	141	120	140
Carbonic Acid Gas	0·4250	2·218	2·145	2·095	2·050

Saint-Jean, sedative; Désirée, Précieuse, laxative; Rigolette, Magdeleine, renovating; Dominique, tonic.

VERNET (Eastern Pyrenees). The principal sources of the ancient Thermæ used by the Romans.

There are three springs, temperature 48° F., 91° F., and 137° F. Here Ibrahim Pasha resided. By means of pipes fed by the thermal water, the apartments are kept at a comfortable warmth (54° to 59°) the whole of the winter (most desirable for phthisical patients), so that the waters can be taken at all seasons. Mean temperature of the atmosphere in October, 61°; in November, 51° F.; showing a mild and equable climate.

VICHY (Central France). Altitude 787′. Locality charming; climate very mild, hot in summer.

Useful in kidney disease and diabetes, also in gout and hepatic derangement.

Both for drinking and bathing. Season, May to October. Imported.

Bouquet's Analysis of a litre (35 oz.) :—

	Grande Grille.	Hôpital.	Célestins.	Hauterive.	Des Dames.
Temperature	106° F.	86° F.	57·6° F.	59° F.	62·5° F.
Carbonic Acid	0·908	1·067	1·299	2·183	1·908
Bicarbonate of Soda	4·883	5·029	4·101	4·687	4·016
Bicarbonate of Potash	0·352	0·440	0·231	0·189	0·189
Bicarbonate of Magnesia	0·303	0·200	0·554	0·501	0·425
Bicarbonate of Strontia	0·003	0·005	0·005	0·003	0·003
Bicarbonate of Lime	0·434	0·570	0·669	0·432	0·604
Bicarbonate of Protoxide of Iron	0·004	0·004	0·004	0·017	0·026
Bicarb. of Protoxide of Manganese	A trace.	A trace.	A trace.	A trace.	A trace.
Sulphate of Soda	0·291	0·291	0·314	0·291	0·250
Phosphate of Soda	0·130	0·046	A trace.	0·046	A trace.
Arseniate of Soda	0·002	0·002	0·003	0·002	0·003
Borate of Soda	A trace.	A trace.	A trace.	A trace.	A trace.
Chloride of Sodium	0·534	0·518	0·550	0·534	0·355
Silica	0·070	0·050	0·065	0·071	0·032
Organic Matter, Bituminous	A trace.	A trace.	A trace.	A trace.	A trace.
Grammes	7·914	8·222	7·865	8·946	7·811
= Grains	122	126	121	138	120

WEILBACH (Nassau). Altitude 420′. Situate on a fertile declivity. Climate mild.

The water is generally warmed before being drunk.
Good in chest diseases, in gout, rheumatism, and herpetic affections, and in lead and mercury poisoning. Imported.

Fresenius's Analysis of 16 oz. :—

Sulphur Spring, Temperature 57° F.		New Soda-Lithia, Temperature 54·5° F.	
Bicarbonate of Soda	3·123		7·3748
Bicarbonate of Lithia	·006		·0452
Bicarbonate of Baryta	·009	Carbonate of Iron	·0193
Bicarbonate of Strontia	·001	Carbonate of Manganese	·0039
Chloride of Sodium	2·083		9·6677
Chloride of Potassium	·214	Sulphate of Soda	1·7073
Sulphate of Potash	·298		·4233
Phosphate of Alumina	·001	Bromide of Sodium	·0056
Phosphate of Lime	·002	Iodide of Sodium	·0010
Carbonate of Lime	2·909		·7504
Carbonate of Magnesia	2·758		·5563
Silica	·111		·0943
Organic Matter	·037	Carbonate of Ammonia	·0871
	11·566		20·6581
Gases.			
Carbonic Acid	3·126 c. in.	Carbonic Acid	5·9553
Sulphuretted Hydrogen	·169 „	Sulph. Hydrogen	·0026

WIESBADEN (Nassau). Altitude 346′. Open to the south, with charming environs. Mean annual temperature 51°. Season, May to September.

There are twenty-three springs; the Kochbrunnen is the principal.
Useful in chronic rheumatism and gout. The baths are allowed to cool before using them.

Fresenius's Analysis of 16 oz. :—

Temperature, 160° F.	
Chloride of Sodium	52·50 grains.
Chloride of Potassium	1·12 „
Chloride of Lithium	·001 „
Chloride of Ammonium	·130 „
Chloride of Calcium	3·620 „
Chloride of Magnesium	1·570 „
Bromide of Magnesium	·030 „
Sulphate of Lime	·690 „
Silica	·460 „
Carbonate of Lime	3·210 „
Carbonate of Magnesia	·080 „
Carbonate of Protoxide of Iron	·040 „
Carbonate of Protoxide of Manganese	·004 „
Phosphate of Lime	·003 „
Arseniate of Lime	·001 „
Silicate of Alumina	·004 „
Gases.	
Carbonic Acid	16·72 c. in.
Nitrogen	·10 „

WILDBAD (Würtemberg). Altitude 1300′. Scenery wild and romantic. Season, June to September, when the weather is hot; the other months very cold.

There are about fifty warm springs.
These baths are used in chronic rheumatism and gout, and in paraplegic paralysis of the lower extremities. Plethoric habits require care in using the baths.

Analysis of 16 oz. :—

Temperature, 96° F.

Chloride of Sodium	1·82 grains.
Carbonate of Soda	·53 „
Sulphate of Soda	·40 „
Sulphate of Potash	·20 „
Carbonate of Lime	·34 „
Carbonate of Magnesia	·70 „
Carbonate of Protoxide of Iron and Manganese	·29 „
Silica	·39 „
	3·58 grains.

Gases

Carbonic Acid

Nitrogen

Oxygen

[The above have been condensed from the works of Dr. Sutro, Dr. Althaus, Dr. Glover, and the various pamphlets issued at the sources of the several Spas.]

The following have been imported in bottles :—

ADELHEIDSQUELLE (Heilbrunn, Germany). Contains a large proportion of Salts of Bromine and Iodine, acts powerfully on the glandular, lymphatic, and cutaneous systems. *Vide* analysis.

* ALET (France). Chalybeate. Useful in cases of debility.

APOLLINARIS (Neuenahr). Acidulous, gaseous, and combines the properties of Seltzer and Ems (Krähnchen). Good for sickness, dyspepsia, and bad appetite. *Vide* analysis, under Neuenahr.

* BARÉGES (France, *Hautes Pyrénées*). Sulphureous; effective in skin diseases, scrofula, diseased bone and ulcers. *Vide* analysis.

* BIRMENSTORFF (Switzerland). Alterative bitter saline, consisting chiefly of Sulphates of Lime, Magnesia, and Soda.

BONNES (France, *Basses Pyrénées*). Sulphureous; is highly extolled for incipient consumption, scrofula, rheumatism, and as a purifier of the blood. *Vide* analysis.

BUSSANG (France, *Vosges*). Saline chalybeate; strengthens the digestive organs, acting mildly on the bowels and kidneys.

CARLSBAD (Sprudel, 165° F., Mühlbrunnen, 127° F., and Schlossbrunnen) Alkaline and gaseous; Sprudel is the favourite; is drunk for bilious affections, gall stones, jaundice, gout, and gravel; are powerfully purgative. *Vide* analysis.

CARLSBAD-SALT. In bottles.

* CAUTERETS (France, *Hautes Pyrénées*). Sulphureous; more exciting than Baréges and Bonnes; useful in skin diseases, rheumatism, and scrofula.

* CHALLES (Savoy). Sulphureous; milder in action than Baréges.

* CHATELDON (France, *Puy de Dôme*). Acidulated, gaseous; may be drunk with meals, helps digestion, may be mixed with wine.

CONDILLAC (France, *Drome*). Acidulated, gaseous; drunk with meals, largely drunk in France.

CONTREXEVILLE (France, *Vosges*). Alkaline, chalybeate; promotes circulation of the blood, good in chlorosis, gastralgia, etc.

EMS (Kessel and Kränchen, Nassau). Saline, gaseous, preferred to Carlsbad in nervous irritability, good in pulmonary as well as scrofulous complaints, gout, etc. *Vide* analysis. EMS-SALT in bottles.

ENGHIEN (Paris, Montmorency). A valuable sulphureous water, useful in glandular affections, and as a general tonic.

FACHINGEN (Nassau). Acidulous, gaseous; a favourite beverage, acting on the kidneys and bladder, and counteracts the tendency to lithic acid. *Vide* analysis.

FRIEDRICHSHALL, Bitter Water (Saxe-Meiningen). Alterative, aperient; acting on the liver and pancreas; similar to Pullna. *Vide* analysis. It is very largely consumed in England, being a most valuable Alterative and Aperient; it is made warm and drank in doses of half a tumblerful in the morning twice a week. The importations are frequent, as it is bottled at the Spring throughout the year except in frosty weather.

HOMBURG (Central Germany). More active than Kissingen Ragoczy, and better suited to a torpid state of bowels. *Vide* analysis.

KISSINGEN (Maxbrunnen, Bavaria). Saline, gaseous; less exciting and more aperient than Carlsbad. (Ragoczy, Pandur.) Saline, gaseous; aperient, alterative, deobstruent, with a specific action on the uterine system of females. *Vide* analysis.

KISSINGEN, Bitter Water, is similar to that of Friedrichshall.

KREUZNACH (Elizabeth, Prussia). Saline; contains Iodine; alterative, tonic and renovating, useful in lymphatic and torpid habits. *Vide* analysis. KREUZNACH-SALT in bottles.

MARIENBAD (Kreuzbrunnen, Bohemia). A gaseous bitter saline, similar in properties to Carlsbad, but milder. *Vide* analysis.

NEUENAHR (on the Rhine, Apollinaris). Gaseous saline; exhilarating, diuretic, slightly acting on the liver and stomach. *Vide* analysis.

OREZZA (Corsica). Chalybeate, with a trace of Manganese, and highly sparkling; useful in gastralgia, sluggish liver, and spleen, chlorosis, amenorrhœa, and leucorrhœa.

* PLOMBIÈRES (France). Alkaline; much valued for rheumatism and gout.

POUGUES (France). Saline, slightly chalybeate, contains 34 grs. in 20 oz., chiefly Bicarbonates of Lime and Magnesia, with Carbonic Acid: drunk for gravel and catarrh of the bladder.

PULLNA (Bohemia). A bitter saline; mild and effective purge, acting without griping. *Vide* analysis.

PYRMONT (Westphalia). A valuable chalybeate in dyspepsia, debility from exhausting diseases and constitutional weakness. *Vide* analysis.

SAINT-GALMIER (France). Acidulous, gaseous; called the French Seltzer, restorative to the digestive organs.

SCHWALBACH (Weinbrunnen and Stahlbrunnen, Nassau). Chalybeate; pleasant to drink, tonic, alterative, and restorative; the Weinbrunnen preferred.

SCHWALHEIM (Hesse-Cassel). Gaseous, for drinking at table.

* SEIDLITZ, Bitter Water (Bohemia). Purgative.

SELTZER (Nassau). A favourite gaseous beverage; promotes the secretions generally, particularly of the skin and kidneys.

SOULTZMATT (France). Acidulated, gaseous; much used in France as a beverage.

SPA, Pouhon; Prince de Condé. Gaseous, chalybeate waters; restorative in cases of debility consequent upon disease, bodily or mental exertion, for both sexes, either of them may be used.

VALS (France). Strongly resembling those of Vichy, but less lowering; the principal are, Magdeleine, Précieuse, Rigolette, and Dominique. *Vide* analysis.

VICHY (France). Saint-Yorre, alkaline; Parc, 71°, alkaline; Des Dames, 61°

chalybeate, most gaseous; Célestins, 39°, for gravel and gout; Hauterive, 59°, Hôpital, 87°, for indigestion; Grande Grille, 107°, for liver, dyspepsia, and intermittent fever, loss of appetite, congestion of liver and spleen; Lardy, chalybeate, for anæmia. VICHY-SALT in bottles. *Vide* analysis.

* WEILBACH (Nassau). A weak sulphureous water, and largely impregnated with Carbonic Acid Gas; used in chest diseases.

WILDUNGEN (Waldeck). Alkaline, diuretic, antilithic, tonic; restorative, useful in leucorrhœa, spermatorrhœa, and, mixed with milk, for chronic bronchial affections.

WOODHALL and PURTON are also sold in bottles.

Those marked with an asterisk are not so frequently in demand, and should be ordered in advance.

CLASSIFICATION OF THE MINERAL WATERS.

Comparatively Pure.

Bristol.
Buxton.
Clifton.
Gastein, 118°.
Malvern.
Schlangenbad, 50°.
Wildbad, 98°.
Winfred.

Alkaline and Gaseous.

Chateldon.
Condillac.
Contrexville, 53°.
Ems, 85° to 117°.
Fachingen.
Neuenahr, 70° to 102°.
Vals.
Vichy.
Wildungen, 96°.

Saline.

Homburg, 50° to 52°.
Kissingen, 49° to 51°.

Bitter Saline.

Birmenstorff.
Cheltenham.
Epsom.
Friedrichshall.
Kingswood.
Leamington.
Marienbad.
Pullna.
Seidlitz.

Saline containing Bromine and Iodine.

Achselmannstein, 61°.
Adelheidsquelle, 50°.
Arnstadt.
Carlsbad, 119·3° (Mark-brunnen).
Durkheim.
Ischl.
Kœnigsdorff-Jastrzemb.
Kissingen, 49° to 51°.
Krankenheil.
Kreuznach, 54·5°.
Luhatschowitz, 48·6°.
Megentheim.
Mondorf, 77°.
Reichenhall.
Tarasp, 37°.
Wiesbaden, 160°.
Woodhall.

Saline containing Lithia.

Baden-Baden.
Carlsbad, 119° (Mark-brunnen).
Franzensbad, 45°.
Kissingen, 47° to 51°.
Weilbach, 54°.

COOL, AND THERMAL, UNDER 98° F.

Sulphureous.

Baden, Austria, 92°.
Berka.
Bonnes, 91·5°.
Challes.
Eilsen, 59°.
Enghien.
Krankenheil.
Labassère, 54°, 57°.
Landeck, 81° to 83°.
Meinburg, 61°.
Nenndorf, 52°.
Schinznach, 96°.

Chalybeate and Gaseous.

Alet.
Alexandersbad.
Alexisbad.
Altwasser.
Auteuil.
Berka.
Bocklet, 50°.
Bossang.
Charlottenbrunn.
Driburg, 51°.
Kösen, 65°.
Kronthal, 61°,

Chalybeate,—*continued.*

Lippspringe, 70°.
Marienbad.
Meinburg.
Orezza.
Pougues.
Pyrmont.
Recoaro.
Rippoldsau.
Saint Maurice, 42°.
Schwalbach, 46° to 51°.
Soden, 68° to 74°.
Spa, 52°.

HOT SPRINGS.

Wildbad, 98°.
Pfeffers, 100°.
Neuenahr, 102°.
Vichy, 106°.
Lippik, 111°.
Lucca, 116°.
Ems, 117°.
Bath, 118°.
Gastein, 118°.
Teplitz, 120°.
Leuk, 124°.
Verney, 137°.
Ofen, 141°.
Baden-Baden, 155°.
Ischia, 158°.
Plombières, 159°.
Wiesbaden, 160°.
Carlsbad, 162°.
Borcette, 171°.

Sulphureous.

Baréges, 111°.
Aix-les-Bains, 116°.
Aix-la-Chapelle, 131°.
Cauterets, 131°.
Borcette, 140°.
Bagnières de Luchon, 154°.

INDEX.

The Names adopted by the British Pharmacopœia are put in Roman letters; all others, whether referring to Official or Non-official Medicines, are put in Italics. The Appendix is not indexed.

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Abies Balsamea	5 grs.	285
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Acacia Catechu		86
Acaciæ Gummi		1
„ *Mistura*		1
„ Mucilago	1 to 4 drms.	1
Acetas Plumbi Depuratus		218
Acétate de Plomb		218
Acetate of Ammonia Solution		34
Acetic Acid		3
„ „ diluted		3
„ „ glacial		4
Acetum		2
„ Cantharidis		77
„ Scillæ	15 to 40 minims	256
Acide Acétique, crystallisable		4
„ „ *du Bois*		3
„ *Phénique. See* Acidum Carbolicum		7
„ *Prussique Médicinale*		11
Acidi Carbolici Glycerinum	5 to 10 minims	7
„ „ *Emplastrum*		7
„ „ Suppositoria	1 gr. each	7
„ Gallici Glycerinum	10 to 60 minims	9
„ Hydrocyanici Vapor		11
„ Tannici Glycerinum	10 to 40 minims	17
„ „ *Pessary*		17
„ „ *c. Opio Suppositorium*		17
„ „ Suppositoria		17
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„ „ *aromaticum*		4
„ „ *concentratissimum*		4
„ „ *concentratum*		4
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„ „ glaciale		4
„ „ *for subcutaneous injection*		3

Official Names in Roman; all others in Italics.

AC to AD	Dose.	Page
Acidum Arseniosum	$\frac{1}{60}$ to $\frac{1}{12}$ gr.	5
„ *Arsenicosum*		5
„ Benzoicum	5 to 15 grs.	6
„ Carbolicum	1 to 3 grs.	6
„ „ *for hypodermic injection*		7
„ „ *Causticum*		7
„ Citricum	10 to 30 grs.	8
„ *Chloronitrosum*		13
„ *Cyanhydric*		11
„ Gallicum	3 to 10 grs.—10 to 60 in albuminuria	9
„ Hydrochloricum		10
„ „ dilutum	10 to 30 minims	10
„ Hydrocyanicum dilutum	2 to 8 minims	10
„ „ vapor		11
„ *Meconicum*		203
„ *Muriaticum purum*		10
„ Nitricum		12
„ „ dilutum	10 to 30 minims	12
„ Nitro-hydrochloricum dilutum	5 to 20 minims.	12
„ „ „ „ *Bath*		13
„ *Opianicum*		203
„ *Phenicum*		6
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„ „ *glaciale*		14
„ „ *siccum*		14
„ *Prussicum Scheele*		11
„ *Pyroligneum*		3
„ *Pyro-gallicum*		10
„ Sulphuricum		14
„ „ Aromaticum	5 to 30 minims	15
„ „ dilutum	5 to 20 minims	15
„ Sulphurosum	$\frac{1}{2}$ to 1 drm.	15
„ *Sulpho-carbolicum*		8
„ Tannicum	2 to 10 grs.	16
„ Tartaricum	10 to 30 grs.	18
Aconiti Extractum	1 to 2 grs.	19
„ *Chloroformum*		20
„ *Extr. Rad. Alcoholic.*		20
„ Folia		18
„ Linimentum		19
„ Radix		19
„ *Succus*	15 to 20 minims	19
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Official Names in Roman; all others in Italics.

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„ *Sulphuricus*		23
„ „ *Alcoholicus*		24
Ætheris Nitrosi Spiritus	½ to 2 drms.	272
„ Spiritus	30 to 60 minims.	24
„ „ *Muriaticus*		24
„ „ *Compositus*		24
Albumen Ovi		26
„ of Egg		26
Alchemilla Arvensis		26
„ „ *Decoctum*		26
Alcohol Amylicum		26
„ *Phenylic*		6
Alcoöl Camphré		75
Alcoolat de Lavande		174
„ *d'Ecorce d'Oranger*		55
„ „ *Menthe Poivrée*		189
Alcoolatum Aromaticum Ammoniacale		36
Almonds, bitter and sweet		39
Aloe Barbadensis	2 to 4 grs.	27
„ Socotrina	3 to 6 grs.	28
„ *Vulgaris*		27
Aloes Barbadensis Enema		27
„ „ Extractum	1½ to 3 grs.	27
„ „ Pilula	4 to 8 grs.	27
„ „ „ et Ferri	5 to 10 grs.	27
„ Socotrinæ Decoctum Comp.	½ to 2 oz.	28
„ „ Enema		29
„ „ Extractum	1½ to 3 grs.	29
„ „ Pilula	5 to 10 grs.	29
„ „ *cum Sapone*		29
„ „ Pilula et Assafœtidæ	5 to 10 grs.	29
„ „ et Myrrhæ Pilula	5 to 10 grs.	29
„ „ Tinctura	1 to 2 drms.	29
„ „ Vinum	1 to 2 drms.	29
Aloine	1 to 2 grs.	27
Alum		30
„ *Cataplasm*		31
„ *Chlor-*		31
„ *Gargle*		31

Official Names in Roman; all others in Italics.

AL to AM	Dose.	Page
Alum *Iron*		31
„ *Whey*		31
Alumen	10 to 15 grs.	30
„ exsiccatum		31
„ *Ustum*		31
Alumina		30
Aluminium		30
„ *Chloride of*		31
Amidon		40
„ *Glycérée*		40
Ammonia		34
Ammonia Liquida		37
„ *Pura Liquida*		37
Ammoniaci Emplastr. c. Hydrarg.		152
„ *Haust. Fœtid.*		37
„ Mistura	½ to 1 oz.	31
„ „ *Ipec. et Lobeliæ*		32
„ „ *Comp.*		32
Ammoniacum	10 to 20 grs.	31
Ammoniaque Benzoate		35
„ *Carbonate*		35
„ *Liquide*		36
Ammoniæ Acetatis Liquor	2 to 6 drms.	34
„ *Aqua. See* Liquor		37
„ Aromaticus Spiritus		35
„ *Arsenitis Liquor*		5
„ Benzoas	10 to 20 grs.	35
„ Carbonas	3 to 10 grs.	35
„ Citratis Liquor	2 to 6 drms.	36
„ *Hydrochloras*		33
„ Linimentum		36
„ Liquor	10 to 20 minims	37
„ Liquor fortior		36
„ *Murias*		33
„ Nitras		38
„ Phosphas	5 to 20 grs.	38
„ *Sesquicarbonas. See* Ammoniæ Carbonas		35
„ Spiritus Aromaticus	20 to 60 minims	35
„ Spiritus Fœtidus		37
„ *Tinctura Composita*		37
Ammonii Bromidum	2 to 20 grs.	32
„ „ *Gargle*		33
„ „ *Lozenges*		33
„ *Caustici Liquor*		37
„ Chloridum	10 grs.	33
„ „ *Draught*		33
„ „ *Lotion*		33
„ „ *Lozenges*		33
„ *Iodidum*	2 to 5 grs.	33
„ „ *Ointment*		33
Ammonium		32

Official Names in Roman; all others in Italics.

AM to AN	Dose.	Page
Ammonium Arsenicum		5
„ *Carbonicum*		35
„ *Chloratum*		33
„ *Phosphoricum*		38
Amygdala Amara		38
„ Dulcis		39
Amygdalæ *Amaræ Mistura*		39
„ Mistura	1 to 2 oz.	39
„ Oleum	2 to 4 drms.	39
„ Pulvis compositus	60 to 120 grs.	39
Amygdalus communis		39
Amyl Nitris	2 to 5 minims	40
Amyli Glycerinum		40
„ *Decoctum*		40
„ Mucilago		40
„ *Plasma*		40
Amylic Alcohol		26
Amylum		40
„ *Iodatum*		40
Anacyclus Pyrethrum		236
Analysis of Mineral Springs. See Waters, Mineral		320
Aneth		41
Anethi Aqua	½ to 1 oz.	41
„ Fructus		41
„ Oleum	1 to 4 minims	41
Anethum graveolens		41
Angustura bark		112
Animal charcoal		79
„ „ purified		80
Anisi Essentia	10 to 20 minims	41
„ Oleum	1 to 4 minims	41
Anodyne Spirit, Hoffman's		23
Anthemidis Extractum	2 to 10 grs.	42
„ Flores		41
„ Infusum	1 to 3 oz.	42
„ Oleum	2 to 4 minims	42
Anthemis nobilis		41
Antidotes to Acids, Arsenious		5
„ „ Hydrochloric		10
„ „ Hydrocyanic		11
„ „ Nitric		12
„ „ Nitrohydrochloric		13
„ „ *Prussic*		11
„ „ Sulphuric		15
„ Aconite		20
„ Alkalies, Potash		227
„ „ Soda. Same as for Potash		227
„ Antimony		45
„ Argenti Nitras		49
„ Arnica		51
Arseniate of Iron		124

Official Names in Roman; all others in Italics.

AN	Dose.	Page
Antidotes to Arseniate of Soda. Same as Arsenious Acid		5
„ Arsenic		5
„ Atropia. Same as for Belladonna		53, 59
„ Belladonna		59
„ Calx Chlorata		69
„ Camphor		75
„ Cannabis Indica		76
„ Cantharides		77
„ Chlori Liquor		91
„ Chloride of Lime		69
„ „ Zinc		300
„ Chloroform		92
„ Colchicum		99
„ Conium		103
„ Copper, Sulphate of		112
„ Croton Oil		110
„ Digitalis		115
„ Elaterium		117
„ Hyoscyamus		162
„ Iodine		165
„ Iron, Arseniate of		124
„ Laurocerasi Folia. *See* Acidum Hydrocyanicum		11
„ Lead		221
„ Lobelia		181
„ Mercury		158
„ Morphia		194
„ Nux Vomica		199
„ Opium		204
„ Savin		248
„ Potash		227
„ Silver Nitrate		49
„ Soda. Same as for Potash		227
„ Strychnia		277
„ Stramonium. Same as for Belladonna		59
„ Tabaci Folia		284
„ Zinc, Salts of		298
Antimoniale Vinum	5 to 30 minims	46
Antimonialis Pulvis	2 to 6 grs.	43
Antimonii Chloridi Liquor		43
„ *Butyrum*		44
„ Oxidum	1 to 3 grs.	43
„ *Oxysulphuretum.* *See* Ant. Sulphuratum		44
„ *et Potassæ Tartras.* *See* Ant. Tartaratum		45
„ *Potassio-Tartras*		45
„ *Sulphuretum aureum.* *See* Ant. Sulphuratum		44
„ *Sulphuretum præcipitatum.* *See* Ant. Sulphuratum		44
„ Tartarati Unguentum		46
„ *Unguentum*		46
Antimonium		42
„ *Depuratum*		43
Antimonium Nigrum		44

Official Names in Roman; all others in Italics.

AN to AR	Dose.	Page
Antimonium *Oxidatum*		43
„ Sulphuratum	1 to 5 grs.	44
„ Tartaratum „ *Tartarizatum*	Diaphoretic $\frac{1}{16}$ to $\frac{1}{8}$ gr. Depressant $\frac{1}{8}$ to 1 gr. Emetic . . 1 to 2 grs.	45
Antimony		42
Apomorphia		203
Aqua (*group*)		46
„ *Acidi Carbolici*		8
„ *Ammoniæ*		37
„ Anethi	$\frac{1}{2}$ to 1 oz.	41
„ Aurantii Floris	$\frac{1}{2}$ to 1 oz.	54
„ *Calcariæ*		71
„ *Calcis.* *See* Liquor		71
„ Camphoræ	1 to 2 oz.	74
„ Carui	1 to 2 oz.	82
„ Chloroformi		93
„ Cinnamomi	1 to 2 oz.	98
„ *Creasoti*		107
„ Destillata		47
„ Fœniculi	1 to 2 oz.	140
„ Laurocerasi	5 to 30 minims	173
„ *Lithiæ Effervescens.* *See* Liquor		180
„ Menthæ Piperitæ	1 to 2 oz.	189
„ „ Viridis	1 to 2 oz.	190
„ *Opii*		207
„ *Picis*		217
„ Pimentæ	1 to 2 oz.	215
„ *Potassæ Effervescens.* *See* Liquor		229
„ *Regia*		13
„ Rosæ	1 to 2 oz.	245
„ Sambuci		249
„ *Sodæ Effervescens.* *See* Liquor		266
Arctostaphylos Uva Ursi		293
Areca		48
Argenti Nitras	$\frac{1}{6}$ to $\frac{1}{3}$ gr.	49
„ „ *Lotiones*		49
„ Oxidum	$\frac{1}{2}$ to 2 grs.	50
Argentum		48
„ purificatum		50
Aristolochia Serpentaria		259
Armenian Bole		30
Armoraciæ *Infusum compositum*		51
„ Radix		50
„ Spiritus compositus	1 to 3 drms.	51
Arnica Montana		51
„ *Opodeldoc*		51
Arnicæ Radix		51
„ Tinctura	1 to 2 drms.	51
Aromatic Sulphuric Acid		15
Arsenias Ferri	$\frac{1}{16}$ gr.	124

Official Names in Roman; all others in Italics.

AR to AX	Dose.	Page
Arsenias Sodæ	$\frac{1}{16}$ gr.	265
Arseniatis Sodæ Liquor	5 to 10 minims	265
Arsenic, Teroxide of		5
„ *Iodide*		6
„ White		5
Arsenical Caustic Powders		6
„ *Paste for Dentists*		6
„ „ *for cancer*		6
Arsenicalis Liquor	2 to 8 minims	5
Arsenici Antidotum		5
Arsenici Liquor Hydrochloricus	2 to 8 minims	5
Arsenici *Iodidum*	$\frac{1}{30}$ gr.	6
Arsenicum		52
„ *album*. *See* Acidum Arseniosum		5
Arsenious Acid		5
Arsénite de Potasse, Solution		5
Artanthe elongata		188
Artemisia Santonica		250
Asagræa officinalis		247
Asclepedin		319
Aspidium Filix-Mas		139
Assafœtida	5 to 20 grs.	52
Assafœtidæ Enema		52
„ Pilula composita	5 to 10 grs.	52
„ „ et Aloes	5 to 10 grs.	29
„ Tinctura	$\frac{1}{2}$ to 1 drm.	53
Assafœtidæ Spir. Ammon. *See* Ammoniæ Spiritus Fœtidus		53
Astragalus verus		290
Atropa Belladonna		58
Atropia		53
Atropiæ Liquor	1 minim	53
„ „ *Fleming's*		53
„ Sulphas		54
„ „ Liquor	1 to 2 minims	54
„ „ „ *for subcutaneous injection*	2 to 3 minims	54
„ Unguentum		53
Atropine Gelatine		54
„ *Paper*		54
Atropinum		53
„ *Sulphuricum*		54
Aurantii Floris Aqua	$\frac{1}{2}$ to 1 oz.	54
„ „ Syrupus	1 to 2 drms.	54
„ Cortex		55
„ Infusum	1 to 2 oz.	55
„ „ compositum	1 to 2 oz.	55
„ Syrupus	1 to 2 drms.	55
„ Tinctura	1 to 2 drms.	55
„ „ Recentis	1 to 2 drms.	56
„ Vinum		56
Autenriethi Unguentum		46
Axungia. *See* Adeps		21

Official Name in Roman; all others in Italics.

AZ to BE	Dose.	Page
Azotic Acid		12
Bael Fruit		58
Balneum Alkalinum		267
„ *Sulphuretum*		228
Balsam of Peru	10 to 15 minims	56
„ „ Tolu		57
„ „ „ Syrup	1 to 2 drms.	57
„ „ „ Tincture	15 to 30 minims	57
Balsami Peruviani Unguentum		56
„ „ „ *Resinosum*		56
Balsamodendron Myrrha		197
Balsamum Canadense. See Terebinthina Canadensis		285
Balsamum Dipterocarpi		56
Balsamum Peruvianum	10 to 15 minims	56
„ Tolutanum	10 to 20 grs.	57
Baptisin		319
Barbadoes Aloes		27
Barley		151
Barosma betulina		66
„ *crenulata*		66
„ *serratifolia*		66
Bath of Acidum Nitrohydrochloricum dilutum		13
Baume de Copahu		105
„ *de Vie. See* Decoct. Aloes Co.		28
„ *du Commandeur*		61
Bearberry leaves		293
Beaver		84
Beberiæ Sulphas	1 to 3 grs. tonic. 5 to 10 grs. antiperiodic	57
Bebeeru Bark		198
Beer Yeast		87
Belæ Fructus		58
„ Extractum Liquidum	1 to 2 drms.	58
Belladonna		58
Belladonnæ Emplastrum		59
„ *Chloroformum*		60
„ Extractum	¼ to ½ gr.	59
„ *Suppositoria*		61
„ Linimentum		60
„ „ *Comp.*		60
„ Radix		60
„ Succus	5 to 15 minims	59
„ Tinctura	5 to 20 minims	60
„ Unguentum		60
Benzoate d'Ammoniaque		35
Benzoate of Ammonia		35
Benzoated Lard		22
Benzoic Acid	5 to 15 grs.	6
Benzoin, Flowers of		6
Benzoini Lotio		61
„ Tinctura composita	½ to 1 drm.	61
„ *Tinctura simplex*		61

Official Names in Roman; all others in Italics.

BE to BR	Dose.	Page
Benzoini Unguentum		61
Benzoinum	10 to 30 grs.	61
Betel Nut		48
Benzoyl, Hydrate of		6
Betula Alba		62
„ „ *Oleum*		62
Beurre d'Antimoine		44
„ *de Cacao*		287
„ *de Muscade*		197
Bicarbonate de Soude		266
Bichloride of Methylene		93
Bismuthi Carbonas	5 to 20 grs.	62
„ Liquor et Amm. Citratis	½ to 1 drm.	63
„ *Lotio*		64
„ *Nitras*		63
„ Oxidum	5 to 15 grs.	64
„ Subnitras	5 to 15 grs.	63
„ Trochisci	2 grs. each. 1 to 6 loz.	63
„ *Unguentum*		63
„ *Nitras et B. album.* *See* Bismuthi Subnitras		63
Bismuthum purificatum		62
„ *Sub-nitricum*		63
„ *Nitricum Basicum*		63
Bitter Almond		38
„ „ *Emulsion*		39
Black Antimony		44
Black Catechu		85
Black Drop (Cook)		207
Black Pepper		215
Black Wash		160
Bladder-Wrack		140
Blanc de Baleine		88
Blistering Fluid		78
„ Paper		78
Blistering Tissue, Brown's		78
Bois de Campéchu		150
„ *de Gayac*		147
Bone Ash		208
„ Black		79
Boracis Gargarisma	½ to 1½ drms.	65
Boracis Glycerinum		65
„ *Lotio*		65
„ Mel		65
„ *Tinct. et Myrrhæ*		65
„ *Unguentum*		65
Borate de Soude		65
Borax	5 to 30 grs.	64
Bougies, Medicated		318
Brandish's Alkali		227
Brandy		272
Brayera Anthelmintica		113

Official Names in Roman; all others in Italics.

BR to CA	Dose.	Page
Bread Crumb		191
Brecknell's Pure Yellow Soap		252
British Vinegar		2
Brockendon's compressed Pills		229
Bromide of Ammonium	2 to 20 grs.	32
„ „ *Gargle*		33
„ „ *Lozenges*		33
„ Potassium	20 to 60 grs.	223
Bromum		65
Broom, Decoction		257
„ Juice		257
„ Tops		257
Brown's Blistering Tissue		78
Buchu Folia	20 to 40 grs.	66
„ Infusum	1 to 2 oz.	66
Tinctura	1 to 2 drms.	66
Buckthorn Juice		241
„ Syrup		241
Bulbus Scillæ		256
Burgundy Pitch		216
Burnett's Solution		300
Busserole		294
Butter of Antimony		44
Butter of Cacao, or Oil of Theobroma		287
Butyrum Antimonii		44
Byne		66
Bynes Extractum		66
Cabbage Rose Petals		245
Cacao Butter		287
Cachou		85
Cadmii Iodidum		67
„ Iodidi Unguentum		67
Cadmium		66
" *Sulphuricum*		67
Cajuputi Oleum	1 to 3 minims	67
„ Spiritus	50 to 100 minims	67
Calabar Bean	1 to 3 grs.	213
„ Extract	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	213
„ *Paper*		214
„ *Tincture*		214
Calamine		299
Calcaria Chlorata		69
„ *Hypochlorosa*		69
„ *Hyperphosphorosa*		71
„ *Phosphorica*		72
Calcii Chloridum		68
„ „ *in Crystals*		68
„ *Chloridi Liquor*		68
Calcis Carbolas		8
Calcis Carbonas præcipitata	10 to 100 grs.	69
„ *Carbonas.* *See* Creta præparata		108

Official Names in Roman; all others in Italics.

CA	Dose.	Page
Calcis *Chloruretum*		60
„ Hydras		70
„ Linimentum		70
„ Liquor	½ to 2 oz.	71
„ „ Chloratæ	20 to 40 minims	69
„ „ Saccharatus	15 to 60 minims	71
„ Hypophosphis	5 to 10 grs.	71
„ Phosphas	10 to 40 grs.	71
Calcium		68
Calendula		72
„ *Tinctura*	1 to 2 drms.	72
Calomelas. *See* Hydr. Subchloridum		158
Calotropis Gigantea		196
Calumbæ Radix	10 to 20 grs.	72
„ Extractum	2 to 10 grs.	72
„ Infusum	1 to 2 oz.	72
„ Tinctura	½ to 2 drms.	72
Calx		69
„ Chlorata		69
„ *Chlorinata*		69
„ *Hydrargyri Alba.*		161
Cambogia	1 to 5 grs.	73
Cambogiæ Pilula composita	5 to 10 grs.	73
Camphora	2 to 10 grs.	74
„ *c. Creta*		75
„ *officinarum*		74
Camphoræ Aqua	1 to 2 oz.	74
„ *Ceratum*		75
„ *Essentia*		75
„ Linimentum		74
„ „ compositum		74
„ *Mistura*		74
„ Spiritus	10 to 30 minims	75
„ „ *Fortior*		75
„ Tinct. compositum „ „ *c. Opio*	15 to 16 minims	75
„ *Unguentum*		75
Camphor Balls		75
„ *Vinegar*		75
Canella Alba		75
Canellæ Albæ Cortex		75
Cannabis Indica		76
„ Indicæ Extractum	¼ to 1 grain	76
„ „ Tinctura	5 to 20 minims	76
„ *Sativa*		76
Canada Balsam		285
Cannelle		97
Cantharis		77
„ *Vesicatoria*		77
Cantharidis Acetum		77
„ Charta Epispastica		77

Official Names in Roman; all others in Italics.

CA	Dose.	Page
Cantharidis Emplastrum		77
„ Emplastrum Calefaciens		78
„ *Linimentum*		78
„ Liquor Epispasticus		78
„ Tinctura	5 to 20 minims	78
„ Unguentum		78
Capsici Fructus	½ to 1 gr.	79
„ *Gargarisma*		79
„ *Linimentum*		79
„ *Oleo-resin*		79
„ Tinctura	10 to 20 minims	79
Capsicin		79
Capsicum fastigiatum		79
Capsulæ Hydrargyri		153
Caraway fruit		82
Carbo Animalis		80
„ „ purificatus	20 to 60 grs.	80
Carbo Ligni	20 to 60 grs.	80
Carbolate of Lime	2 grs.	8
Carbolic Acid	1 to 3 grs.	6
„ „ *Gargle*		7
„ „ *Gauze*		8
„ „ Glycerine of	5 to 10 minims	7
„ „ *Inhalation*		7
„ „ *Ointment*		7
„ „ *Plaster*		7
„ „ *Putty*		7
„ „ *Soap*		250
„ „ Suppositories		7
Carbolsäure		7
Carbon, Tetrachloride of		93
Carbonas Plumbi Venale		219
Carbonate d'Ammoniaque		35
Carbonate of Ammonia		35
„ of Bismuth		62
„ *de Magnésie*		184
„ *de Plomb*		219
„ *de Soude crystallisé*		267
Carbonis Cataplasma		81
Cardamomi Tinctura composita	½ to 2 drms.	81
Cardamomum	5 to 20 grs.	81
Carmine		99
Carnis Extractum		81
Carrageen		88
Carron Oil. *See* Linim. Calcis		70
Carui Fructus		82
„ Aqua	1 to 2 oz.	82
„ Oleum	2 to 4 minims	82
Carum Carui		82
Caryophylli Infusum	1 to 2 oz.	82
„ Oleum	1 to 4 minims	83

Official Names in Roman; all others in Italics.

CA to CE	Dose.	Page
Caryophyllum	5 to 10 grs.	82
Caryophyllus Aromaticus		82
Cascarillæ Cortex	10 to 30 grs.	83
„ Infusum	1 to 2 oz.	83
„ Tinctura	½ to 2 drms.	83
Cassia elongata		257
„ *Fistula*		84
„ *lanceolata*		257
„ *obovata*		257
Cassiæ Pulpa	Laxative, 60 to 120 grs. Purgative, 1 to 2 oz.	84
Castor Oil		244
Castorei Tinctura	½ to 1 drm.	84
Castoreum	5 to 10 grs.	84
Cataplasma *Aluminis*		31
„ Carbonis		81
„ Conii		103
„ Fermenti		87
Lini		177
„ Sinapis		261
„ Sodæ Chloratæ		267
Cataplasmata (*group*)		84
Cataplasme Rubifiant		261
Catechu pallidum	10 to 30 grs.	85
„ Infusum	1 to 2 oz.	85
„ „ *Comp.*		85
„ Pulvis compositus	15 to 30 grs.	85
„ Tinctura	½ to 2 drms.	85
„ Trochisci	1 gr. each. 1 to 3 loz.	85
„ *Nigrum*		86
Caulophyllin		319
Caustic Potash		226
„ Soda		263
„ *Points*		49
Caustica Acidi Carbolici		7
Cephaëlis Ipecacuanha		166
Cera alba		86
„ flava		86
Cérat Simple		86
„ *Saturné*		222
Ceratum Camphoræ		75
„ *Plumbi Acetatis*		219
Cerevisiæ Fermentum	½ to 1 oz.	87
„ Fermenti Cataplasma		87
Cerii Oxalas	1 to 2 grs.	87
Cerussa		219
Cetacei *Mistura*		88
„ Unguentum		88
Cetaceum	20 to 60 grs.	88
Cetraria		88
„ *Islandica*		88
Cetrariæ Decoctum	1 to 2 oz.	89

Official Names in Roman; all others in Italics.

CE to CH	Dose.	Page
Cevadilla		247
Chalk		108
„ Prepared		108
Chamomile Flowers		41
Charbon Végétal		80
Charcoal		80
„ *Biscuits*		81
„ *Capsules*		81
„ *Charpie*		80
Charta Epispastica		77
„ *Cantharidis*		77
„ *Nitrata*		232
„ Sinapis		261
Chelsea Pensioner		279
Chemical Food (Parrish's)		135
Cherry-laurel		173
Chien-dent		291
Chinæ Tinctura		96
Chinium Sulphuricum		239
Chirata		89
Chiratæ Infusum	1 to 2 oz.	89
„ *Extractum*		90
„ Tinctura	15 to 60 minims	89
Chloral Hydras	5 to 10 grs.	90
„ Syrup.	½ to 2 drms.	91
Chloralum Hydratum Crystal.		91
Chlorhydrate de Morphine		193
Chlorhydric Acid		10
Chlori Liquor	10 to 20 minims	92
„ Vapor *vide* Calx Chlorata		69
Chloric Ether		93
Chloride of Ammonium		33
„ „ *Draught*		33
„ „ *Lotion*		33
„ „ *Lozenges*		33
Chloride of Calcium		68
„ *of Aluminium*		31
Chlorinated Lime		69
Chlorodyne, substitute for		93
Chloroformi Linimentum		93
„ Aqua	½ to 2 oz.	93
„ *Mistura c. Ammonia*		93
„ *Liquor Camphoratus*		93
„ „ *compositus*		93
„ Spiritus	10 to 60 minims	93
„ Tinct. comp.	20 to 60 minims	93
„ *Unguentum*		93
„ *Vapor*		93
Chloroformum	1 to 5 minims	92
„ *Aconiti*		20
„ *Belladonnæ*		60

Official Names in Roman; all others in Italics.

CH to CO	Dose.	Page
Chloroformum purificatum		92
Chlorum Solutum		91
Chlorure de Zinc		300
„ „ *Sodium*		271
Chloruretum Calcis		69
Cholera Mixture		109
Christison's Pill		102
Cimicifugin	1 to 4 grs.	21 and 319
Cinchona		94
„ *Calisaya*		94
„ *Condaminea*		96
„ *Cordifolia*		95
„ *Oblongifolia*		97
„ *Succirubra*		97
Cinchonæ Decoctum	1 to 2 oz.	95
„ Extractum liquidum	10 to 30 minims	96
„ flavæ Cortex	Tonic, 15 grs. Antiperiodic, 60 to 120 grs.	95
„ *Haustus Comp.*		96
„ Infusum	1 to 2 oz.	96
„ *Infusum Spissatum*		96
„ *Mistura compositus*		96
„ „ *c. Acido Sulphurico*		96
„ pallidæ Cortex	10 to 60 grs.	96
„ rubræ cortex		97
„ Tinctura	1 to 2 drms.	96
„ „ composita	½ to 2 drms.	97
Cinnamomi Aqua	1 to 2 oz.	98
„ Cortex	10 to 20 grs.	97
„ Oleum	1 to 4 minims	98
„ Pulvis compositus	3 to 10 grs.	98
„ Tinctura	1 to 2 drms.	98
Cinnamomum Zeylanicum	10 to 20 grs.	97
Cire		86
Cire Blanche		86
Cissampelos Pareira		210
Citrate de Fer Ammoniacal		127
Citric Acid		8
Citrullus Colocynthis		101
Citrus Limetta		8
„ *Aurantium*		54
„ *Bigaradia*		55
„ *Limonum*		175
Clarified Honey		188
Clover		291
Cloves		81
Clutton's Febrifuge Spirit		24
Coca		98
Cocci Tinctura	30 to 90 minims	99
„ *Mistura*		99
Coccionella		98
Cocculus Palmatus		72

Official Names in Roman; all others in Italics.

CO	Dose.	Page
Coccus		98
Coccus Cacti		98
Cochineal		98
Cochenille		98
Cochlearia Armoracia		50
Cod-Liver Oil		195
Codeia		202
Codeiæ Syrupus		207
Colchici Cormus	2 to 8 grs.	99
„ Extractum	1 to 4 grs.	99
„ „ Aceticum	1 to 2 grs.	100
„ *Mistura*		100
„ „ *Alkalina*		100
„ „ *c. Magnes. Sulph.*		100
„ Vinum	10 to 30 minims	100
„ Semina		100
„ Seminum Tinctura	15 to 30 minims	100
„ *Tinctura composita*		100
„ „ *Florum*		100
„ *Vinum Seminum*		101
Colchicum autumnale		99
Cold Cream		86
Collodion Hæmostatic		101
Collodium		101
„ Flexile		101
Colloid Styptic		101
Collyrium Hydrargyri		158
„ *Cupri Sulph.*		112
Colocynthidis Pulpa	2 to 8 grs.	101
„ Extractum compositum	2 to 5 grs.	102
„ Pilula composita	5 to 10 grs.	102
„ „ et Hyoscyami	5 to 10 grs.	102
„ *Tinctura*		102
Colombo		72
Coloquinte		102
Comfrey Root		281
Concombre Sauvage		116
Condy's Fluid		232
Confectio *Amygdalæ*. *See* Pulv. Amygd. Comp.		39
„ *Aromatica* (Pulv. Cretæ Arom.). *See* Pulvis Cretæ Aromaticus		108
„ Opii	5 to 20 grs.	204
„ Piperis	60 to 120 grs.	216
„ Rosæ Caninæ	1 drm.	245
„ „ Gallicæ	½ to 1 drm.	245
„ *Rutæ*		247
„ Scammonii	10 to 30 grs.	255
„ Sennæ	60 to 120 grs.	258
„ Sulphuris	2 to 4 drms.	279
„ Terebinthinæ	1 to 4 drms.	286
Confectiones (*group*)		103
Conii Cataplasma		103

Official Names in Roman; all others in Italics.

CO to CR	Dose.	Page
Conii Extractum	4 to 8 grs.	104
„ Folia	2 to 8 grs.	103
„ Fructus.		104
„ *Mist. c. Hyoscyamo*		104
„ Pilula composita	5 to 10 grs.	104
„ Succus	30 to 60 minims	104
„ Tinctura.	½ to 1 drm.	104
„ Vapor		104
Conium maculatum		103
Conserva Amygdalarum. *See* Pulv. Amygd. comp.		39
„ *Cynorrhodi*		245
Consoude		281
Convolvulus Scammonia		254
Copaiba	20 to 60 minims	105
Copaibæ Oleum	5 to 30 minims	105
„ *Mistura*		105
Copaifera multijuga		105
Copper		111
Coquelicot		243
Coriandri Fructus	20 to 60 grs.	106
„ Oleum	1 to 4 minims	106
Coriandum Sativum		106
Cornin		319
Corrosive Sublimate		157
Corydalin		319
Cosmoline		22
Cotton Wool		146
Cream of Tartar		234
Creasoti *Aqua*		107
„ Mistura	1 to 2 oz.	107
„ „ *c. Opio*		107
„ Unguentum		107
„ Vapor		107
Creasotum	1 to 3 minims	107
Creeping Couch Grass		291
Cremor Frigidus		86
Cremor Lithargyri		222
Creta		108
„ *Depurata*		108
„ præparata	10 to 100 grs.	108
Cretæ Mistura	1 to 2 oz.	108
„ „ *c. Opio*		109
„ Pulvis Aromaticus	30 to 60 grs.	108
„ „ „ cum Opio	10 to 40 grs.	109
„ *Unguentum*		109
Croci Tinctura	½ to 2 drms.	109
Crocus		109
Crocus of Mars		133
Crocus Sativus		109
Croton Eleuteria		83
„ *Tiglium*		110

Official Names in Roman; all others in Italics.

CR to DE	Dose.	Page
Croton-chloral Hydrate	1 to 2 grs.	91
Crotonis Oleum	⅓ to 1 minim	110
„ Linimentum		110
Cryptopia		203
Cubeba officinalis		110
Cubebæ	1 to 2 drms.	110
„ *Fructus*		110
„ Oleum	5 to 20 minims	111
„ Tinctura	1 to 2 drms.	111
Cupri Sulphas	½ gr.—10 grs. an emetic	111
„ *Pilula Comp.*		112
„ *Sulphatis Collyrium*		112
„ „ *Haustus*		112
Cuprum		111
„ *Aluminatum*		112
Cuspariæ Cortex	10 to 40 grs.	112
„ Infusum	1 to 2 oz.	113
Cusso	¼ to ½ oz.	113
„ Infusum	4 oz.	113
Cutch		86
Cyanhydric Acid		11
Cydonia Vulgaris		113
Cydonii Decoctum		113
Cydonium		113
Cynorrhodons		244
Cypripedin		319
Damson, Mountain		260
Dandelion Root		284
Daphne Mezereum		190
„ *Laureola*		190
Datura Stramonium		276
Deadly Nightshade		58
Decocta (*group*)		114
Decoctum Aloes compositum	½ to 2 oz.	28
„ *Alchemillæ Arvensis*		26
„ *Amyli*		40
„ Cetrariæ	1 to 2 oz.	89
„ Cinchonæ	1 to 2 oz.	95
„ *Cydonii*		113
„ *Dulcamaræ*		116
„ *Gallæ*		141
„ Granati	1 to 2 oz.	147
„ *Gummi Rubri*		149
„ Hæmatoxyli	1 to 2 oz.	151
„ Hordei		151
„ Papaveris		209
„ „ *concentratum*		210
„ Pareiræ	1 to 2 oz.	210
„ Quercus	1 to 2 oz.	238
„ *Ricini Foliæ*		244

Official Names in Roman; all others in Italics.

DE to EL	Dose.	Page
Decoctum Sarsæ.	10 to 20 oz. } per diem	253
„ „ compositum	10 to 20 oz. }	
„ Scoparii	2 to 4 oz.	257
„ Taraxaci	2 to 4 oz.	285
„ *Tritici Repentis*		291
„ Ulmi	4 to 6 oz.	292
„ *Uvæ Ursi*		293
Deutochlorure de Mercure		158
Depilatory		270
Dewar's Spray Producer		16
De Valangin's Solution		6
Dextrotartaric Acid		18
Digitalinum	$\frac{1}{60}$ to $\frac{1}{30}$ gr.	114
Digitalis Folia	$\frac{1}{2}$ to 2 grs.	115
„ Infusum	$\frac{1}{4}$ to $\frac{1}{2}$ oz.	115
„ *Pilula Comp.*		115
„ *purpurea*		114
„ *Succus*		115
„ Tinctura	10 to 30 minims	115
Dill Fruit		41
Diosma		66
Diplolepis Gallæ-Tinctoriæ		141
Dog-Rose Fruit		244
Donovan's Solution (*Arsenic*)		6
Dorema Ammoniacum		31
Douce-amère		116
Dover's Powder		167
Dugong Oil		115
Dulcamara		115
Dulcamaræ Infusum	1 to 2 oz.	116
Easton's Syrup		135
Eau Camphrée		74
Eau de Canelle		98
Eau de Chaux		71
Eau de Goudron		217
Eau de Laitue		173
Eau de Luce		37
Eau distillée de Fleur d'Oranger		54
Eau Regale		13
Ecbalii Fructus		116
Ecbalium officinarum		116
„ *Agreste*		116
Écorce de Chêne		238
Egg Albumen		26
„ Yolk of		208
Elaterii Pilula		117
„ Pulvis Compositus	$\frac{1}{2}$ to 5 grs.	117
„ *Mistura*		117
Elaterine		117
Elaterium	$\frac{1}{16}$ to $\frac{1}{2}$ gr.	116
Elder Flower		249

Official Names in Roman; all others in Italics.

EL to ER	Dose.	Page
Électuaire Lénitif		259
Electuarium Sennæ		259
Elemi		117
„ Unguentum		117
Elettaria Cardamomum		81
Elixir, Paregoric		75
„ *of Vitriol*		15
„ „ *Mynsicht's*	5 to 10 minims	15
Elm Bark		292
Emetina		167
Emplastra (*group*)		117
Emplastrum Ammoniaci cum Hydrargyro		152
„ *Acidi Carbolici*		7
„ Belladonnæ		59
„ Calefaciens		78
„ Cantharidis		77
„ Cerati Saponis		252
„ *Cerussa*		221
„ *Diachylon Simplex*		220
„ Ferri		133
„ Galbani		141
„ „ *Crocatum*		141
„ Hydrargyri		152
„ *Lithargyri. See* Empl. Plumbi		221
„ Opii		204
„ Picis		216
„ „ *cum Cantharide*		78
„ Plumbi		221
„ Plumbi Iodidi		220
„ Resinæ		240
„ *Roborans. See* Empl. Ferri		133
„ Saponis		252
„ *Thuris. See* Empl. Ferri		133
„ *Vesicatorium*		77
Emplâtre Dyachylon Gommé		141
„ *Vésicat*		77
Emulsion Simple		39
„ *Purgative avec la Scammonée*		255
Enemata (*group*)		118
Enema Aloes Barbadensis		27
„ „ Socotrinæ		29
„ Assafœtidæ		52
„ Magnesiæ Sulphatis		186
„ Opii		204
„ Tabaci		283
„ Terebinthinæ		286
Ergota	20 to 30 grs.	118
Ergotæ Extractum liquidum	15 to 30 minims	119
„ Infusum	1 to 2 oz.	119
„ *Mistura Comp.*		120
„ Tinctura	15 to 60 minims	119

Official Names in Roman; all others in Italics.

ER to EX	Dose.	Page
Erigeron Canadense Oleum		120
Esprit de Nitre Dulcifié		273
Essence of Peppermint		189
Essentia Anisi	10 to 20 minims	41
„ *Camphoræ*		75
„ Menthæ Piperitæ	10 to 20 minims	189
„ *Rosmarini*		246
„ *Zingiberis*		302
Ether		23
„ *Inhaler for*		25
„ Pure		24
„ *Sulphuric*		23
Eucalyptus Globulus		120
„ „ *Extractum fluidum*		120
„ „ *Spiritus*		120
„ „ *Syrupus*		120
„ „ *Tinctura*		120
„ *Rostrata*		148
Eucalyptol		120
Eugenia Pimenta		215
Euonymin		319
Euryangium Sumbul		280
Exogonium Purga		168
Extracta (*group*)		120
Extractum Aconiti	1 to 2 grs.	19
„ *Aconiti Rad. Alcoholic.*		20
„ Aloes Barbadensis	1 to 3 grs.	27
„ Aloes Socotrinæ	1½ to 3 grs.	28
„ Anthemidis	2 to 10 grs.	42
„ Belæ liquidum	1 to 2 drms.	58
„ Belladonnæ	¼ to 1 gr.	59
„ *Bynes*		66
„ Calumbæ	2 to 10 grs.	72
„ Cannabis Indicæ	¼ to 1 gr.	76
„ *Chiratæ*		90
„ Cinchonæ flavæ liquidum	10 to 30 minims	95
„ Colchici	1 to 2 grs.	99
„ „ Aceticum	1 to 2 grs.	100
„ Colocynthidis compositum	2 to 5 grs.	102
„ *Colombo*		72
„ Conii	4 to 8 grs.	104
„ „ *siccum*		104
„ Ergotæ liquidum	15 to 30 minims	119
„ Filicis liquidum	30 to 60 minims	139
„ *Fuci Vesiculosi Liquidum*		140
„ Gentianæ	10 to 15 grs.	142
„ „ *Fluidum*		142
„ Glycyrrhizæ	½ to 1 drm.	145
„ „ liquidum		146
„ *Gummi Rubri Liquidum*		149
„ Hæmatoxyli	10 to 30 grs.	150

Official Names in Roman; all others in Italics.

EX to FE	Dose.	Page
Extractum *Hellebori Nigri*		150
„ Hyoscyami	3 to 6 grs.	162
„ *Ignatiæ Amaræ*		162
„ Jalapæ	5 to 15 grs.	168
„ Krameriæ	5 to 20 grs.	172
„ Lactucæ	5 to 10 grs.	173
„ Lupuli	5 to 10 grs.	181
„ *Lupulinæ*		182
„ *Malti*		66
„ Mezerei Ethereum		190
„ Nucis Vomicæ	⅛ to 1 gr.	199
„ Opii	½ to 1 gr.	204
„ „ liquidum	12 to 20 minims	205
„ Papaveris	2 to 5 grs.	209
„ „ *liquidum*		210
„ Pareiræ	10 to 20 grs.	211
„ „ liquidum	½ to 2 drms.	211
„ Physostigmatis	1/16 to ¼ gr.	213
„ Quassiæ	3 to 5 grs.	237
„ Rhei	3 to 10 grs.	242
„ Sarsæ liquidum	1 to 4 drms.	253
„ *Sarsæ comp. liquidum*		254
„ *Seminis Strychni*		199
„ Stramonii	¼ gr.	276
„ Taraxaci	5 to 15 grs.	285
„ *Vincæ Majoris Liquidum*		297
Extrait Alcoolique de Houblon		182
„ *Ethéré de Garou*		191
„ „ *de Fougère Mâle*		139
„ *de Ciguë*		104
Extrait de Réglisse		145
Faba Calabarica		213
Farina Tritici		122
Farine de Lin		177
Fel Bovinum purificatum	3 to 6 grs.	122
Fel Tauri Depuratum Siccum		122
Fennel		140
Fermentum		123
Ferri Acetatis Tinctura	5 to 30 minims	124
„ „ „ *Etherea*		125
„ *Acetatis Vinum*		124
„ *Acetici Liquor*		124
„ *Aceticum Siccatum*		124
„ *Ammonio-chloridi Tinctura*		132
„ Arsenias	1/16 to 1 gr.	124
„ *Bromidi Solutio*		125
„ „ *Syrupus*		125
„ Carbonas saccharata	5 to 20 grains	125
„ Carbonatis Pilula	5 to 20 grs.	126
„ Citratis Vinum	1 to 4 drms.	127
„ *Chloridi Tinctura*		131

Official Names in Roman; all others in Italics.

FE	Dose	Page
Ferri Chloroxydi Liquor		132
„ Emplastrum		133
„ et Ammoniæ Citras	5 to 10 grs.	126
„ „ „ „ *Haustus*		127
„ „ Quiniæ Citras	5 to 10 grs.	127
„ „ „ *Mist. Efferv.*		128
„ *Hypophosph. Syrup*		135
„ *Iodidi Liquor*		129
„ „ *Mistura*		130
„ Iodidi Pilula	3 to 8 grs.	129
„ „ Syrupus	20 to 60 minims	129
„ Iodidum	1 to 5 grs.	128
„ *Lotio c. Conio*		136
„ Mistura Comp.	1 to 2 oz.	125
„ „ Aromatica	1 to 2 oz.	130
„ „ *Efferves.*		132
„ *Muriatis Tinctura*		131
„ *Nitratis Liquor*		132
„ *Mist. Laxans*		136
„ Oxidum magneticum	5 to 10 grs.	130
„ *Oxidum nigrum. See* Ferri Ox. Magneticum		131
„ „ *rubrum*		133
„ *Oxydatum nativum rubrum*		133
„ Perchloridi Liquor	10 to 30 minims	131
„ „ „ fortior		131
„ „ Tinct.	10 to 30 minims	131
„ Pernitratis Liquor	10 to 40 minims	132
„ Peroxidum Humidum		133
„ „ Hydratum	5 to 30 grs.	133
„ Persulphatis Liquor		136
„ Phosphas	5 to 10 grs.	134
„ Phosphatis Syrupus	1 to 4 drms.	135
„ *Phosphatis c. Quinia et Strychnia Syrupus* (*Easton's*)		135
„ *Phosphatis Syrupus comp. Parrish*		135
„ „ *c. Manganesio*		135
„ *Potassio-tartras. See* Ferrum Tartaratum		138
„ *Pulvis. See* Ferrum Redactum		137
„ *Sesquichloridi Tinctura*		131
„ *Sesquioxidum*		133
„ Sulphas	3 to 5 grs.	135
„ „ exsiccata	½ to 3 grs.	136
„ „ granulata	3 to 5 grs.	137
„ *Sulphatis Lotio*		136
„ Redacti Trochisci, 1 gr. each	1 to 6 loz.	138
„ „ *Pilula*		138
„ Vinum	1 to 4 drms.	139
Ferrocyanide of Potassium		224
Ferrum		123
„ *Aceticum Siccatum*		124
„ *Carbonicum Saccharatum*		125
„ *Citricum Ammoniatum*		127

Official Names in Roman; all others in Italics.

FE to GA	Dose.	Page
Ferrum *Hydricum*		133
„ „ *in aqua*		134
„ *Iodatum Saccharatum*		129
„ *Ioduretum*		128
„ redactum	1 to 5 grs.	137
„ Tartaratum	5 to 10 grs.	138
„ *Tartarizatum*		138
Fetid Spirit of Ammonia		37
Ficus		139
„ *Carica*		139
Fig		139
Filicis Extractum liquidum	60 to 80 minims	139
„ *Mistura*		140
„ *Oleoresina*		140
Filix Mas	60 to 180 grs.	139
Fir-wool Oil, Laritz's		217
Flax		177
Flour		122
Flowers of Benzoin		6
Fluid Magnesia		184
Fœniculi Aqua	1 to 2 oz.	140
„ Fructus		140
Fœniculum dulce		140
Foie de Soufre		228
Fougère		139
Fousel Oil		26
Fowler's Solution		5
Foxglove		114
Frankincense		216, 288
Fraxinus Ornus		187
„ *Rotundifolia*		187
Friar's Balsam		61
Fucus Vesiculosus, Extract. liquid.		140
Fullers' Earth		30
Fumigatio Potassæ Nitratis		232
Gadus Morrhua		195
Galbanum		140
Galbani Emplastrum		141
„ *Pilula Comp.* *See* Assafœtidæ Pilula composita		51, 141
Galena		217
Galipea Cusparia		112
Galla	10 to 20 grs.	141
Gallæ *Decoctum*		142
„ *Suppositoria*		142
„ Tinctura	½ to 2 drms.	141
„ Unguentum		142
„ „ c. Opio		142
Gallic Acid	3 to 5 grs.	10 to 60 in albuminuria 9
„ „ Glycerine of		9
Gallus Banckiva		25, 208
Gamboge		73

Official Names in Roman; all others in Italics.

GA to GL	Dose.	Page
Gambogia		73
Garcinia Morella		73
Gargarisma Aluminis		31
„ *Ammonii Bromidi*		33
„ *Boracis*		65
„ *Capsici*		79
„ *Hydrargyri*		158
„ *Iodi*		166
„ *Myrrhæ*		198
„ *Plumbi*		222
„ *Potassæ Chloratis*		231
„ „ *Nitratis*		232
Gaskoin's Solution		5
Gelatine Atropine		54
Gelatine, Calabar		214
Gelsemin		319
Genêt		257
Gentiana Lutea		142
Gentianæ Radix	10 to 40 grs.	142
„ Extractum	10 to 15 grs.	142
„ Infusum comp.	1 to 2 oz.	143
„ Mistura	½ to 1 oz.	143
„ „ *Alkalina*		143
„ „ *c. Magnesiæ Sulphate*		143
„ „ *et Sennæ*		143
„ *Tinctura*		143
„ „ composita	1 to 2 drms.	143
Gentiane		142
Geranin		319
Getchell's Charcoal Cautery		81
Gingembre		302
Ginger		302
Girofles		82
Glacial Acetic Acid		4
Glandulæ Lupuli		181
Glauber Salt		270
Glycéré d'Amidon		40
Glycerine Cream for Chilblains		144
„ „ *with Camphor*		144
„ *Ointment*		144
„ *Pessary*		145
„ *with Rose Water*		145
„ *Soap*		145, 250
Glycerinum	10 to 60 minims	144
Acidi Carbolici	5 to 10 minims	7
„ „ Gallici	10 to 60 minims	9
„ „ Tannici	10 to 40 minims	17
„ Amyli		40
„ Boracis		65
„ *Sodii Boracis*		65
Glycerole of Hypophosphites		145

Official Names in Roman; all others in Italics.

GL to GU	Dose.	Page
Glycerole of Lead		220
Glycyrrhiza Glabra		145
„ *Echina*		145
„ *Elixir*		146
Glycyrrhizæ Extractum		145
„ „ Liquidum.	1 drm.	146
„ Pulvis Compositus	30 to 60 grs.	146
„ Radix		145
Gossypium		146
Goudron Végétal		217
Granati Radicis Cortex		146
„ „ Decoctum	1 to 2 oz.	147
Granular preparations		317
„ Citro-tartrate of Soda		268
Grape Vine		294
Greenheart Tree		198
Gregory's Pill		102
Gregory's Powder		242
Grenadier		146
Grey Powder		161
Group Aquæ		47
„ Cataplasmata		84
„ Confectiones		103
„ Decocta		114
„ Emplastra		118
„ Enemata		118
„ Extracta		120
„ Glycerina		144
„ Infusa		164
„ Linimenta		176
„ Liquores		178
„ Misturæ		191
„ Mucilagines		196
„ Olea		200
„ Opium, preparations of		206
„ Pilulæ		214
„ Pulveres		235
„ Soda preparations		263
„ Spiritus		274
„ Succi		278
„ Suppositoria		281
„ Syrupi		283
„ Tincturæ		288
„ Trochisci		291
„ Unguenta		293
„ Vina		297
„ Zinc preparations		298
Guaiaci Lignum		147
„ *Haustus Comp.*		148
„ Mistura	½ to 2 oz.	148
„ Resina	10 to 30 grs.	147

Official Names in Roman; all others in Italics.

GU to HI	Dose.	Page
Guaiaci *Tinctura*		148
„ Tinct. Ammoniata	½ to 1 drm.	148
Guaiacum officinale		148
Guarana		148
Gum Arabic		1
Gummi Gutti		73
„ *Rubrum*		148
„ *Rubri Decoctum*		149
„ „ *Extract. Liquid.*		149
„ „ *Syrupus*		149
„ „ *Tinctura*		149
„ „ *Trochisci*		149
Gun Cotton		236
Gurjan Balsam		56
Gutta Percha		149
„ „ Liquor		149
Hachisch		76
Hæmatoxyli Decoctum	1 to 2 oz.	150
„ Extractum	10 to 30 grs.	150
„ Lignum		149
„ *Mistura*		149
„ „ *Comp.*		150
„ „ *c. Creta*		150
„ „ *Infantium*		150
Hæmatoxylum Campechianum		149
Hæmostatic Collodion		101
Hair Liniment		78
Hair-Wash		78
Hartshorn Spirit and Oil		36
Haustus Ammoniac. Fœtid.		37
„ *Ammonii Chloridi*		33
„ *Cinchonæ Comp.*		96
„ *Cupri Sulph.*		112
„ *Emeticus*		112
„ *Ferri et Ammoniæ Citratis*		127
„ *Guaiac. comp.*		148
„ *Ipecac. comp.*		168
„ „ *et Ammon.*		168
Hebra's Ointment		221
Hellebore, Green		296
„ „ Tincture		296
Helleboris nigri Extractum		150
„ „ *Tinctura*		150
Hemidesmi Radix		150
„ Syrupus	1 to 4 drms.	151
Hemidesmus Indicus		150
Hemlock		103
Henbane		161
Hepar Sulphuris		227
Hips		244
Hirudo		151

Official Names in Roman; all others in Italics.

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Hoffman's Anodyne Spirit		24
Honey		188
„ Clarified		188
Hop		181
Hordei Decoctum		151
Hordeum decorticatum		151
„ *distichon*		151
Horse-Radish Root		50
Houblon		181
Huile de Cade		170
Huile de Foie de Morue		195
„ *Volatile de Carvi*		82
„ „ *de Romarin*		246
Humulus Lupulus		181
Hydrargyri Ammoniati Unguentum		161
„ *Ammonio-chloridum.* *See* Hydrargyrum Ammoniatum		160
„ *Bichloridum* (now Hydr. Perchloridum)		158
„ *Bichloratum corrosivum*		158
„ *Biiodatum*		154
„ *Biniodidum*		154
„ „ *Pilula*		154
„ „ *Solutio*		154
„ *Bibromidum Pessus*		153
„ *Bromidum Pessus*		153
„ *Capsula*		153
„ *Chloridum*, former name for Calomel, now Subchloridum		159
„ „ *Mite*		159
„ *Corrosivum Sublimatum*		158
„ *Corrosivum*		158
„ *Collyrium*		158
„ Emplastrum		152
„ „ c. Ammoniaco		152
„ *Iodatum flavum*		155
„ Iodidum rubrum	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	154
„ Iodidi rubri Unguentum		154
„ Iodidi *Mistura*		154
„ „ *Pilula*		154
„ „ *Solutio*		154
„ Iodidum viride	1 to 3 grs.	155
„ „ „ *Pilula*		155
„ Linimentum		153
„ Lotio Flava		158
„ Nigra		160
„ Nitratis Liquor acidus		155
„ „ Unguentum		156
„ *Nitrico-oxidum.* *See* Hydr. Oxid. Rub.		157
„ *Oleatum*		157
„ *Oxidatum Rubrum*		157
„ Oxidum rubrum	$\frac{1}{4}$ to 1 gr.	157
„ Oxidi rubri Unguentum		157
„ „ Flavum		156

Official Names in Roman; all others in Italics.

HY	Dose.	Page
Hydrargyri *Oxidi Flavum Unguentum*		157
„ *Oxidulati Nitric Liquor*		156
„ Perchloridum		158
„ Perchloridi *Collyrium*		158
„ „ *Gargarisma*		158
„ „ Liquor	30 to 120 minims	158
„ „ „ *for subcutaneous injection*		159
„ „ Lotio flava		158
„ „ *Pilula*		158
„ „ *c. Aconito Pil.*		159
„ „ *Unguentum*		159
„ Pilula	3 to 6 grs.	153
„ *præcipitati albi. Ung.*		161
„ Subchloridum	½ to 1 gr. alterative, 2 to 8 grs. purgative	158
„ Subchloridi Lotio nigra		160
„ „ Pilula composita	5 to 10 grs.	160
„ „ „ *c. Coloc.*		160
„ „ „ *c. Jalap*		160
„ „ „ *c. Opio*		160
„ „ „ *c. Quinia*		160
„ „ „ *c. Scammonia*		160
„ „ Unguentum		160
„ *sublimatus corrosivus*		158
„ Sulphas		160
„ Suppositoria		153
„ Unguentum		153
„ „ comp.		153
„ „ *cinerei*		153
„ „ *c. Ammoniæ Muriate*		153
Hydrargyrum		151
„ Ammoniatum		161
„ *Biiodatum rubrum*		154
„ *Chloratum Mite*		158
„ *Corrosivum Sublimatum.*	See Hydr. Perchloridum	158
„ c. Creta	3 to 8 grs.	161
„ *Iodatum Flavum*		155
Hydrargyrum *Oxidatum rubrum*		157
„ *Precipitatum Album*		161
Hydrastin		319
Hydrate of Chloral		90
Hydrate de Magnésie		183
Hydrate of Benzoyl		6
Hydrate of Phenyl		6
Hydrochlorate of Ammonia		33
Hydrochloric Acid		10
Hydrocyanic Acid		11
Hydrometers compared		xx
Hyoscyami Extractum	3 to 6 grs.	162
„ Folia		161
„ *Pilula c. Scilla*		162
„ Succus	½ to 1 drm.	162

Official Names in Roman; all others in Italics.

HY to IN	Dose.	Page
Hyoscyami *Suppositoria*		162
„ Tinctura	15 to 60 minims	162
Hyoscyamus niger		161
Hypochlorite de Chaux		69
„ *Soude Liquide*		266
Hypophosphite of Lime	5 to 10 grs.	71
„ of Soda	2 to 5 grs.	269
Hyposulphite of Soda		270
Iceland Moss		88
Iceland Moss Jelly		89
Ignatia Amara		162
„ „ *Extractum*		162
Illicium Anisatum		41
Incompatibles: Acaciæ Gummi		1
„ Acetum		2
„ Acidum Arseniosum		5
„ „ Citricum		9
„ „ Gallicum. *See Galla*		9
„ „ Hydrochloricum		10
„ „ Hydrocyanicum		11
„ „ Nitricum		12
„ „ Phosphoricum		14
„ „ Sulphuricum		15
„ „ Tannicum		17
„ „ Tartaricum		18
„ Ammoniæ Acetatis Liquor		34
„ „ Benzoas		35
„ „ Carbonas		35
„ „ Fœtidus Spiritus		37
„ Ammonii Bromidum		32
„ „ Chloridum		33
„ Antimonium Tartaratum		45
„ Argenti Nitras		49
„ Arsenic		5
„ Beberiæ Sulphas		58
„ Belladonna		59
„ Bismuthi et Ammoniæ Citratis Liquor		63
„ Borax		65
„ Calcis Hydras		70
„ Cannabis Indica		76
„ Caryophyllum		82
„ Cascarillæ		83
„ Catechu Pallidum		85
„ Chlori Liquor		91
„ Cinchonæ Flavæ		95
„ „ Rubræ		97
„ Colchicum		99
„ Conii Folia		103
„ Creta Præparata		108
„ Cupri Sulphas		112
„ Cuspariæ Cortex		113

Official Names in Roman; all others in Italics.

IN		Dose.	Page
Incompatibles:	Digitalis		115
,,	Ergota		119
,,	Ferri Carbonas Saccharata		125
,,	,, et Ammoniæ Citras		127
,,	,, et Quiniæ Citras		128
,,	,, Iodidum		129
,,	,, Perchloridi Fortior Liquor		132
,,	Ferrum Tartaratum		139
,,	Galla		141
,,	Gentianæ Radix		142
,,	Granati Radicis Cortex		146
,,	Guaiaci Resina		148
,,	Hæmatoxyli Lignum		150
,,	Hydrargyri Nitratis Unguentum		156
,,	,, Perchloridum		158
,,	Hydrargyrum cum Creta		161
,,	Hyoscyami Folia		162
,,	Iodi Tinctura		165
,,	Ipecacuanha		167
,,	Kino		171
,,	Krameriæ Radix		171
,,	Laurocerasi Aqua		11
,,	Limonis Cortex		175
,,	Lini Infusum		178
,,	Lupulus		181
,,	Magnesia		183
,,	Magnesiæ Sulphas		185
,,	Morphiæ Hydrochloras		194
,,	Opium		204
,,	Pareiræ Radix		211
,,	Plumbum		221
,,	Plumbi Subacetatis Liquor		221
,,	Potassa Caustica		227
,,	Potassæ Permanganatis Liquor		232
,,	Potassii Bromidum		224
,,	,, Iodidum		225
,,	Quercus Cortex		238
,,	Quiniæ Sulphas		239
,,	Sarsæ Radix		253
,,	Spiritus Ætheris Nitrosi		273
,,	Stramonium		276
,,	Ulmi Cortex		292
,,	Unguentum Hydrargyri Nitratis		156
,,	Uvæ Ursi Folia		294
,,	Zinci Valerianas		302
,,	Zincum		298
Indian Hemp			76
Inhaler for Ether			25
Infusa (*group*)			163
Infusion Pot			163
Infusum Anthemidis		1 to 3 oz.	42

Official Names in Roman; all others in Italics.

IN to IO	Dose.	Page
Infusum *Angusturæ*		113
„ *Armoraciæ compositum*		51
„ Aurantii	1 to 2 oz.	55
„ „ compositum	1 to 2 oz.	55
„ Buchu	1 to 2 oz.	66
„ Calumbæ	1 to 2 oz.	73
„ Caryophylli	1 to 2 oz.	82
„ Cascarillæ	1 to 2 oz.	83
„ Catechu	1 to 2 oz.	85
„ *Chinæ frigide paratum*		97
„ Chiratæ	1 to 2 oz.	89
„ Cinchonæ flavæ	1 to 2 oz.	96
„ „ *spissatum*		95
„ Cuspariæ	1 to 2 oz.	113
„ Cusso	4 oz.	113
„ Digitalis	¼ to ½ oz.	115
„ *Diosmæ*		66
„ Dulcamaræ	1 to 2 oz.	116
„ Ergotæ	1 to 2 oz.	119
„ Gentianæ compositum	1 to 2 oz.	143
„ Krameriæ	1 to 2 oz.	172
„ *Laxativum*		259
„ Lini		178
„ Lupuli	1 to 2 oz.	182
„ Maticæ	1 to 2 oz.	188
„ Quassiæ	1 to 2 oz.	237
„ *Rhataniæ.* *See* Infus. Krameriæ		172
„ Rhei	1 to oz.	242
„ Rosæ Acidum	1 to 2 oz.	246
„ „ *cum Acido Nitrico*		246
„ Senegæ	1 to 2 oz.	257
„ Sennæ	1 to 2 oz.	259
„ Serpentariæ	1 to 2 oz.	260
„ *Simarubæ*		260
„ *Sinapis*		261
„ *Table of*		164
„ Uvæ Ursi	1 to 2 oz.	294
„ Valerianæ	1 to 2 oz.	294
Inhalatio. *See* Vapores		295
„ Acidi Hydrocyanici		11
„ Chlori		69
„ *Chloroformi*		93
„ Conii		104
„ Creasoti		107
„ Iodi		166
„ *Iodi cum Conio*		166
Injectio Morphiæ Hypodermica		192
Insect Powder		236
Iodi *Gargarisma*		166
„ *Inhalatio c. Conio*		166
„ Linimentum		165

Official Names in Roman; all others in Italics.

IO to JU	Dose.	Page
Iodi Liquor		165
„ *Lotio comp.*		166
„ *Mistura Composita*		166
„ Tinctura	5 to 20 minims	165
„ „ *comp.*		166
„ „ *Decolorata*		166
„ Unguentum		166
„ „ *comp.*		166
„ *Mistura comp.*		166
„ Vapor		166
Iodide of Ammonium		33
„ *Arsenic*		6
„ Cadmium		67
„ Iron		129
„ Potassium	2 to 10 grs.	224
„ Sulphur		279
Iodoform		166
Iodum	½ gr.	164
Iodure de Fer		129
Ipecacuanha	Expectorant, ½ to 2 grs. Emetic, 15 to 30 grs.	166
Ipecacuanhæ Pil. c. Scilla	5 to 10 grs.	167
„ Pulvis compositus	5 to 10 grs.	167
„ „ *Opiatus*		167
„ „ *c. Opio*		167
„ *Haustus comp.*		168
„ „ *et Ammoniæ*		168
„ *Syrupus*	15 to 60 minims	168
„ *Tinctura*		168
„ Trochisci (¼ gr. each)	1 to 3 loz.	167
„ „ et Morphiæ	1 to 6 loz.	167
„ Vinum	5 to 40 minims	168
Iridin		319
Iron		123
„ *Alum*		30
„ *Malate of, Wine*		139
„ *Sugar*		134
Jalapa	10 to 30 grs.	168
Jalapæ Extractum	5 to 15 grs.	168
„ *Mistura comp.*		169
„ *Pilula c. Calomel*		169
„ Pulvis comp.	20 to 60 grs.	169
„ Resina	2 to 5 grs.	169
„ *Sapo*		169
„ Tinctura	½ to 2 drms.	169
Jalapine. See Jalapæ Resina		169
James's Fever Powders		43
Jateorrhiza Columba		72
Jeremie's Laudanum		207
Jordan Almonds		39
Juices, *group*		278
Juniperi Oleum	1 to 3 minims	169

Official Names in Roman; all others in Italics.

JU to LA	Dose.	Page
Juniperi Oleum *Empyreum*		170
„ Spiritus	30 to 60 minims	169
Juniperus communis		169
„ *Sabina*		247
Juniper Tar		170
„ *Soap*		252
Jusquiame		162
Kali. See Potassa		223
Kalium Bicarbonicum Purum		229
„ *Bitartaricum Purum*		234
„ *Carbonicum Depuratum*		230
„ *Causticum*		228
„ *Chloricum*		230
„ *Hypermanganicum*		232
„ *Nitricum.*		232
„ *Stibiato-Tartaricum*		45
„ *Sulphuricum.*		233
„ *Tartaricum Neutrum*		234
„ *Sulphuratum*		228
Kamala	60 to 120 grs.	170
Kamalæ Tinctura		170
Kino	10 to 30 grs.	170
„ Pulv. comp.	5 grs.	171
„ Tinctura	½ to 2 drms.	171
Kokum Oil		22
Kousso. See Cusso		113
Krameria triandra		171
Krameriæ Extractum	5 to 20 grs.	72
„ Infusum	1 to 2 oz.	172
„ Radix	Pulv. 20 to 60 grs.	171
„ Tinctura	1 to 2 drms.	172
„ *Suppositoria*		172
„ *Trochisci*		172
Lac		172
„ *Sulphuris*		280
Lactuca		172
„ *Virosa*		172
Lactucæ Extractum	5 to 10 grs.	173
„ *Succus*		173
Lactucarii Tinctura		173
Lactucarium		173
Laitue, Eau de		173
Lapis Calaminaris		297
„ *Divinus*		112
„ *Infernalis*		49
„ *Tutiæ*		301
Larch Bark		174
Lard, Benzoated		22
„ *Odorated*		22
„ *Oxygenated*		22
„ Prepared		21

Official Names in Roman; all others in Italics.

LA to LI	Dose.	Page
Lard, *Substitutes for*		22
Larix Europæa		174
Laricis Tinctura	20 to 25 minims	174
Laudanum. See Tinct. Opii		205
„ *Jeremie's*		207
„ *Sydenham's*		207
Laurocerasi Aqua	5 to 30 minims	173
„ Folia		173
Lavandula Vera		174
Lavandulæ Oleum	1 to 4 minims	174
„ Spiritus	30 to 60 minims	174
„ „ *compositus*		174
„ Tinctura comp.	½ to 2 drms.	174
Lead		217
„ *Sugar of*		218
Leech		151
Lemon Juice		176
„ „ *Substitute for*		8
Lenitive Electuary		258
Leopard's Bane		51
Leptandrin		319
Lettuce		172
Lignum Guaiaci		147
„ *Campechianum*		149
Lime		68
„ *Carbolate of*		8
„ Chlorinated		69
„ Slaked		70
Lime Water		70
Limon		175
Limonade sèche au Citrate de Magnésie		268
„ *Purgatif*		185
Limonis Cortex		175
„ Oleum	1 to 4 minims	175
„ Succus	½ drm. to 4 oz.	176
„ Syrupus	1 to 2 drms.	175
„ Tinctura	½ to 2 drms.	175
Lini Cataplasma		177
„ Farina		177
„ Infusum		178
„ Oleum		178
„ Semen		177
Linimenta (*group*)		176
Linimentum Aconiti		19
„ Ammoniæ		36
„ Belladonnæ		60
„ „ *comp.*		60
„ *Calcaire*		70
„ Calcis		70
„ Camphoræ		74
„ Camphoræ compositum		74

Official Names in Roman; all others in Italics.

LI	Dose.	Page
Linimentum *Cantharidis*, now called Liquor Epispasticus		78
„ *Capsici*		79
„ Chloroformi		93
„ *Crinale*		78
„ Crotonis		110
„ Hydrargyri		153
„ Iodi		165
„ Opii		205
„ Potassii Iodidi c. Sapone		225
„ Saponis		252
„ *Simplex*		22
„ Sinapis compositum		261
„ Terebinthinæ		286
„ „ Aceticum		287
Linseed Meal		177
Linum		177
„ *usitatissimum*		177
Liquidambar orientale		277
Liquores (*group*)		178
Liquor Ammoniæ	10 to 20 minims	37
„ „ Acetatis	2 to 6 drms.	34
„ „ *Arsenitis*		5
„ „ Citratis	2 to 6 drms.	36
„ „ fortior		36
„ *Ammonii Iodidi*		166
„ Antimonii Chloridi		43
„ „ *Tartarizati*		45
„ Arsenicalis	2 to 8 minims	5
„ *Arsenici Chloridi*		6
„ Arsenici Hydrochloricus	2 to 8 minims	5
„ *Arsenici et Hydrargyri Hydriodatis*		6
„ Atropiæ	1 minim	53
„ „ *Fleming's*		53
„ „ Sulphatis, 4 grs. to 1 oz.	1 minim	54
„ „ „ *for hypodermic injection*		54
„ Bismuthi Ammonio-citratis	½ to 1 drm.	63
„ *Calcii Chloridi*		68
„ Calcis	½ to 2 oz.	71
„ „ Chloratæ	20 to 40 minims	69
„ „ saccharatus	15 to 60 minims	71
„ *Carbonis detergens*		107
„ Chlori	10 to 20 minims	91
„ *Chloroformi Camphoratus*		93
„ „ *compositus*		93
„ *Donovani*		6
„ Epispasticus, Blistering Liquid		78
„ *Ferri Acetici*		124
„ „ *Iodidi*		129
„ „ *Bromidi*		125
„ „ *Chloroxydi*		132
„ „ Pernitratis		132

Official Names in Roman; all others in Italics.

LI to LO	Dose.	Page
Liquor *Ferri Nitratis*		132
„ „ Perchloridi	10 to 30 minims	131
„ „ „ fortior		131
„ „ Persulphatis		136
„ *Fowleri*		5
„ *Hydrargyri Iodidi Rubri*		154
„ „ *Nitratis*		156
„ „ „ Acidus		155
„ „ *Oxydulati Nitrici*		156
„ „ Perchloridi	30 to 120 minims	158
„ „ „ *for subcutaneous injection*		159
„ Iodi		165
„ Lithiæ Effervescens	5 to 10 oz.	180
„ Magnesiæ Carbonatis	1 to 2 oz.	184
„ „ Citratis		185
„ „ *Sulphatis*		186
„ Morphiæ Acetatis	10 to 60 minims	193
„ „ Hypodermica	1 to 6 minims	192
„ „ *c. Atropia for hypodermic injection*		193
„ „ *Bimeconatis*		207
„ „ Hydrochloratis	10 to 60 minims	193
„ *Opii Sedativus*		207
„ *Plumbi Diacetatis* / „ Subacetatis		221
„ „ „ dilutus		222
„ Potassæ	15 to 60 minims	226
„ „ *Arsenitis.* *See* Liquor Arsenicalis		5
„ „ Effervescens	5 to 10 oz.	229
„ „ Permanganatis	¼ to ½ oz.	232
„ *Quiniæ Ammoniatus*, now Tinct.		239
„ *Sedativus* (*Battley*)		207
„ Sodæ	½ to 1 drm.	263
„ „ Arseniatis	2 to 8 minims	265
„ „ Chloratæ	10 to 20 minims	267
„ „ Effervescens		266
„ Strychniæ	4 to 10 minims	277
„ *Volatilis Cornu-cervi*		36
„ Zinci Chloridi		300
Liquorice		145
Liquoritiæ Pulvis Compositus		146
Lithargyrum		220
Lithargyri Cremor		222
Lithia		179
Lithiæ Carbonas	3 to 6 grs.	179
„ Liquor Effervescens	5 to 10 oz.	180
„ Citras	5 to 10 grs.	180
Lobelia		180
„ *inflata*		180
Lobeliæ Tinctura	10 to 30 minims	181
„ Tinctura Ætherea	10 to 30 minims	181
Logwood		149

Official Names in Roman; all others in Italics.

LO to MA	Dose.	Page
Lotio *Ammonii Chloridi*		33
„ *Argenti Nitratis Ætherea*		49
„ „ „ *Fortis*		49
„ *Benzoini*		61
„ *Bismuthi*		64
„ *Boracis*		65
„ *Crinalis*		37
„ *Ferri c. Conio*		136
„ „ *Sulphatis*		136
„ Hydrargyri flava		158
„ „ nigra		160
„ *Iodi Comp.*		166
„ *Plumbi Acetatis*		219
„ „ *Diacetatis*		221
„ *Zinci Acetatis*		299
Lotion avec l'Acétat de Plomb		221
Lozenges		291
Lugol's Solution		166
„ *Caustic*		166
Lupuli Extractum	5 to 10 grs.	181
„ *Glandulæ*		181
„ Infusum	1 to 2 oz.	182
„ Tinctura	½ to 2 drms.	182
Lupulina		182
Lupulinæ Extractum		182
„ *Tinctura*		182
Lupulus		181
Mace, Oil of		197
Macidis Oleum Æthereum		197
Magistery of Bismuth		63
Magnesia	Antacid, 10 to 20 grs. Purgative, 20 to 60 grs.	183
„ levis	Antacid, 10 to 20 grs. Purgative, 20 to 60 grs.	184
Magnesiæ Carbonas	Antacid, 10 to 20 grs. Purgative, 30 to 60 grs.	184
„ „ levis	Antacid, 10 to 20 grs. Purgative, 30 to 60 grs.	185
„ Carbonatis Liquor	1 to 2 oz.	184
„ *Carbonas Ponderosum.* *See* M. Carbonas		184
„ Citras Liquor	5 to 10 oz.	185
„ *Mistura c. Rheo*		184
„ Sulphas	2 to 4 drms.	185
„ Sulphatis *Liquor*		186
„ „ Enema		186
„ „ *Mistura c. Rheo Infantium*		186
„ *Sulphis*		186
Magnesium		182
„ *Carbonicum*		184
Magnetic Oxide of Iron		130
Malate of Iron Wine		139
Male-Fern		139
Manganesii Oxidum Nigrum		186
„ „ *præparatum*	10 to 30 grs.	186
„ *Sulphas*		186

Official Names in Roman; all others in Italics.

MA to MI	Dose.	Page
Manna	2 to 8 drms.	187
Marble		187
Marigold		72
Marmor album		187
Mastiche	20 to 40 grs.	187
Materia Medica table		xxii–xxxi
Maticæ Folia	½ to 2 drms.	188
„ Infusum	1 to 2 oz.	188
„ *Tinctura*		188
Meconic Acid		203
Meconin		203
Mel		188
„ Boracis		65
„ depuratum		188
Melaleuca Minor		67
Menispermin		319
Menthæ Piperitæ Aqua	1 to 2 oz.	189
„ „ Essentia	10 to 20 minims	189
„ „ Oleum	1 to 4 minims	189
„ „ Spiritus	30 to 60 minims	189
„ Viridis Aqua	1 to 2 oz.	190
„ „ Oleum	1 to 4 minims	190
Mercury		151
Methylene Bichloride		93
Mezerei Cortex		190
„ Extractum Ethereum		190
„ *Unguentum*		191
Mézéréon ou Bois Gentil		190
Mica Panis		191
„ „ *Cataplasma*		191
Milk		172
Mindererus Spirit. *See* Liquor Ammon. Acetatis		34
Misturæ (*group*)		191
Mistura *Acaciæ*		1
„ „ *Levis et Spissa*		1
„ *Alba*		184
„ Ammoniaci	½ to 1 oz.	31
„ „ *comp.*		32
„ „ *Ipec. et Lobeliæ*		32
„ Amygdalæ	1 to 2 oz.	39
„ *Amygdalæ amaræ*		39
„ *Camphoræ.* *See* Aqua Camphoræ		74
„ *Cetacei*		88
„ *Chloroformi c. Ammon.*		93
„ *Cinchonæ Comp.*		96
„ *Cinchonæ c. Acido Sulph.*		96
„ *Colchici*		100
„ *Colchici Alkalina*		100
„ *Colchici c. Mag. Sulph.*		100
„ *Conii c. Hyoscyam.*		104
„ *Copaibæ*		105

Official Names in Roman; all others in Italics.

MI to MO	Dose.	Page
Mistura Creasoti	1 to 2 oz.	107
„ „ *c. Opio*		107
„ Cretæ	1 to 2 oz.	108
„ „ *c. Opio*		109
„ *Elaterii*		117
„ *Ergotæ comp.*		120
„ Ferri Aromatica	1 to 2 oz.	130
„ „ composita	1 to 2 oz.	125
„ „ *et Quiniæ Effervescens*		128
„ „ *Effervescens*		132
„ „ *Laxans*		136
„ *Filicis*		140
„ Gentianæ	½ to 1 oz.	143
„ „ *Alkalina*		143
„ „ *c. Magnes. Sulph.*		143
„ *Gentianæ et Sennæ*		143
„ *Gummosa*		2
„ Guaiaci	½ to 2 oz.	148
„ *Hæmatoxyli*		150
„ „ *Comp.*		150
„ „ *c. Creta*		150
„ „ *Infantium*		150
„ *Hydrargyri Iodidi*		154
„ *Iodi Comp.*		166
„ *Jalapæ Comp.*		169
„ *Magnesiæ c. Rheo*		184
„ „ *Sulphatis c. Rheo Infantium*		186
„ *Moschi*		196
„ Scammonii	Infant, ½ to 1 oz. Adult, 1 to 2 oz.	255
„ Sennæ compos.	1 to 1½ oz.	259
„ *Sodæ Sulpho-carbolatis*		8
„ „ „ „ *et Cinchonæ*		8
„ Spiritus Vini Gallici	½ to 1½ oz.	274
Mixture for Cholera		109
„ *Whooping Cough*		99
Mori Succus		191
„ Syrupus	1 to 2 drms.	192
Morphia		202
„ *Oleate of*		195
Morphiæ Acetas	⅛ to ½ gr.	192
„ Acetatis Liquor	10 to 60 minims	193
„ „ „ Hypodermica	1 to 6 minims	192 & 193
„ *Bimeconatis Solutio*		207
„ Hydrochloras	⅛ to ½ gr.	193
„ Hydrochloratis Liquor	10 to 60 minims	194
„ „ Suppositoria		194
„ *Murias.* *See* Morphiæ Hydrochloras		194
„ Suppositoria c Sapone		194
„ *Syrupus*		208
„ Trochisci	1 or 2 loz.	194
„ Trochisci et Ipecac.	1 or 2 loz.	194
Morus Nigra		191

Official Names in Roman; all others in Italics.

MO to NI	Dose.	Page
Morrhuæ Oleum	1 to 4 drms.	195
Moschus	5 to 10 grs.	195
„ *Moschiferus*		195
Moschi Mistura		196
„ *Tinctura*		196
Mountain Damson		260
Mucilage de Gomme Adragante		291
Mucilagines (*group*)		196
Mucilago Acaciæ		1
„ *Acaciæ spissa et levis*		1
„ Amyli		40
„ Tragacanthæ		290
Mudar		196
Mulberry Juice		191
Muriate of Ammonia		33
„ „ *Lime, in crystals*		68
„ „ *Morphia*		193
Muriatic Acid		10
Mûrier Noir		191
Musc		196
Muscadier cultivé		197
Musk		195
Musk Root		280
Mustard		261
„ Paper		261
Mynsicht's Elixir of Vitriol		15
Myristica	5 to 15 grs.	197
„ *officinalis*		197
Myristicæ *Adeps.* *See* Ol. Expressum		197
„ Oleum	2 to 6 minims	197
„ „ Expressum		197
„ Spiritus	30 to 60 minims	197
Myrospermum		57
Myroxylon Pereira		56
„ *Toluifera*		57
Myrrha	10 to 30 grs.	197
Myrrhæ *Gargarisma*		197
„ Tinctura	½ to 1 drm.	198
„ *Tinctura et Boracis*		198
Narcein		203
Narcotina		202
Narthex Assfœtida		52
Natro-Kali Tartaricum		264
„ *Bicarbonicum*		266
„ „ *Acidulum*		266
„ *Hydricum Solutum*		263
„ *Phosphoricum*		270
Nectandra Rodiæi		198
Nectandræ Cortex		198
Nepenthe		207
Nephrodium Filix-Mas		139
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Nitrate de Mercure Liquide		156
„ of Ammonia		38
„ *of Bismuth*		63
„ of Silver		48
„ „ „ *Black Stains to remove*		50
Nitre		231
Nitric Acid		12
„ „ Dilute		12
Nitrite of Amyl		40
Nitro-Hydrochloric Acid		13
„ „ *Bath*		13
Noix des Galles		141
„ *Vomique*		199
Nucis Vomicæ Extractum	⅓ to 1 gr.	199
„ „ Tinctura	10 to 30 minims	199
Nutmeg		197
Nux Moschata		197
„ Vomica	1 to 3 grs.	199
Oak Bark		237
Oil of Mace		197
„ Anise		41
„ Dill		41
„ *Male-Fern*		139
„ *Vitriol*		14
Olea Europæa		201
Olea (*group*)		200
Oleoresina Capsici		79
„ *Filicis*		139
„ *Zingiberis*		303
Oleum Amygdalæ	2 to 4 drms.	39
„ Anethi	1 to 4 minims	41
„ Anisi	1 to 4 minims	41
„ Anthemidis	2 to 4 minims	42
„ *Betulæ Albæ*		62
„ Cajuputi	1 to 5 minims	67
„ *Camphoratum*		74
„ Carui	2 to 4 minims	82
„ Caryophylli	1 to 4 minims	83
„ Cinnamomi	1 to 4 minims	98
„ Copaibæ	5 to 30 minims	105
„ Coriandri	1 to 4 minims	106
„ Crotonis	⅓ to 1 minim	110
„ Cubebæ	5 to 20 minims	111
„ *Dugong*		115
„ *Erigeron Canadense*		120
„ *Filicis Maris.* *See* Extractum		139
„ *Jecoris Aselli*		195
„ Juniperi	1 to 3 minims	169
„ Lavandulæ	1 to 4 minims	174

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OL to OR	Dose.	Page
Oleum Limonis	1 to 4 minims	175
„ Lini		178
„ *Macidis Æthereum*		197
„ Menthæ Piperitæ	1 to 4 minims	189
„ „ Viridis	1 to 4 minims	190
„ Morrhuæ	1 to 4 drms.	195
„ Myristicæ	2 to 6 minims	197
„ Myristicæ expressum		197
„ *Nucis Moschatæ*		197
„ Olivæ	½ to 1 oz.	201
„ Phosphoratum	5 to 10 minims	213
„ Pimentæ	1 to 3 minims	215
„ *Pini Sylvestris*		216
„ Ricini	Infant, 1 to 3 drms. Adult, ½ to 1 oz.	244
„ Rosmarini	2 to 5 minims	246
„ Rutæ	2 to 6 minims	247
„ Sabinæ	1 to 5 minims	248
„ *Santal. flav.*		235
„ Sinapis		261
„ *Succini*		278
„ Terebinthinæ	10 to 30 minims. Anthelm. 2 to 6 drms.	286
„ Theobromæ		287
„ *Tiglii*		110
Olivæ Oleum	½ to 1 oz.	201
Onguent Basilicum		241
Ophelia Chirata		89
Opianic Acid		203
Opianine		205
Opii *Aqua*		207
„ Confectio	5 to 20 grs.	204
„ Emplastrum		204
„ Enema		204
„ Extractum	½ to 1 gr.	204
„ „ liquidum	10 to 30 minims	205
„ Linimentum		205
„ *Liquor Sedativus*		207
„ *Pilula;* now Pil. Sapon. comp.		205
„ Pulv. comp.	2 to 5 grs.	205
„ Tinctura	10 to 30 minims	204
„ „ Ammoniat.	½ to 1 drm.	205
„ Trochisci	1 or 2 loz.	205
„ *Unguentum*		207
„ Vinum	10 to 40 minims	206
Opium	½ to 2 grs.	202 & 204
„ Group of Preparations, with Proportions		206
„ *Therapeutical Equivalents of*		193
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„ *Steers'*		252
„ *Arnica*		51
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Os Ustum		208
Ovi Albumen		26
„ Vitellus		208
Ox bile purified		122
Oxalate of Cerium		87
Oxide of Ethyl		23
Oxide of Zinc Soap		252
„ „ Antimony		43
„ „ Silver		50
Oxyde Noir de Fer		130
„ *Rouge de Mercure*		157
Oxygenated Lard		22
Oxymel	1 to 2 drms.	188
„ Scillæ	½ to 2 drms.	256
Pancreatic Emulsion		209
„ *Juice*		208
Pancreatine		208
Papaverin		202
Papaver Rhœas		243
„ *somniferum*		209
Papaveris Capsulæ		209
„ Decoctum		209
„ „ *concentratum*		210
„ Extractum	2 to 5 grs.	209
„ „ *liquidum*		210
„ Syrupus	1 drm.	210
Paper of Atropine		54
„ „ *Calabar*		214
Papier d'Albespeyres		78
Papiers Carbonifères		80
Papier Épispastique		77
Paramorphia		202
Paregoric Elixir		75
„ *Scotch*		206
Pareiræ Decoctum	1 to 2 oz.	210
„ Extractum	10 to 20 grs.	211
„ „ liquidum	½ to 2 drms.	211
„ Radix	30 to 60 grs.	210
Parietaria		211
Parrish's Chemical Food		135
Parsley Breakstone		26
Pasta Caustica		227
Paste, Arsenical		6
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Pearl Barley		151
Pearson's Solution		265
Pegu Catechu		86
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PE to PI	Dose	Page
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„ Preparations		189
Pepsin	2 to 5 grs.	211
Pepsine de Boudault		212
Pepsine Porci		212
Percolation, instructions for		290
Periwinkle, great		297
Pessaries (group)		318
Pessus Acidi Tannici		18
„ *Glycerini*		145
„ *Hydrargyri*		153
„ „ *Bromidi*		153
„ „ *Bibromidi*		153
„ *Plumbi Acet.*		219
„ „ „ *c. Opio*		219
„ „ *Iodidi*		220
„ *Potassii Bromidi*		224
„ „ *Iodidi*		226
„ *Sodæ Bicarbonatis*		266
Phenic Acid		6
Phenol		6
Phenyl, Hydrate of		6
Phenylic Alcohol		6
Phosphate de Soude		270
Phosphate Ferroso-Ferrique		134
Phosphate of Ammonia	5 to 20 grs.	38
„ „ Iron		134
„ „ Lime		71
„ „ Soda		269
Phosphoric Acid, diluted	10 to 30 minims	13
Phosphorus		212
„ Oil of		213
„ Pills of		213
Physalis Alkakengi		213
Physeter Macrocephalus		88
Physostigma Venenosum		213
Physostigmatis Extractum	$\frac{1}{16}$ to $\frac{1}{4}$ gr.	213
„ Faba	1 to 4 grs.	213
„ *Tinctura*	10 mins.	214
„ „ *for subcutaneous injection*		214
Phytolaccin		319
Picis Burgundicæ Emplastrum		216
„ liquidæ *Aqua*		217
„ *Capsulæ*		217
„ *Pilulæ*		217
„ Unguentum		217
Picræna excelsa		237
Pierre Divine		112
Pilulæ (*group*)		214
„ Aloes Barbadensis	4 to 8 grs.	27
„ „ *diluta.* *See* Pil. Aloes Barbadensis		27

Official Names in Roman; all others in Italics.

PI	Dose.	Page
Pilula Aloes et Assafœtidæ	5 to 10 grs.	29
„ „ et Ferri	5 to 10 grs.	27
„ „ et Myrrhæ	5 to 10 grs.	29
„ „ Socotrinæ	5 to 10 grs.	29
„ *Antimonii comp.* *See* Pil. Hydrarg. Subchlor. Comp.		160
„ Assafœtidæ composita	5 to 10 grs.	52
„ *Calomelanos composita.* *See* Pil. Hydrarg. Subchioridi		160
„ Cambogiæ composita	5 to 10 grs.	73
„ *Carbonatis Ferrosi*		126
„ Colocynthidis composita	5 to 10 grs.	102
„ „ et Hyoscyami	5 to 10 grs.	102
„ Conii composita	5 to 10 grs.	104
„ *Cupri comp.*		112
„ *Digitalis comp.*		115
„ *Elaterii*		117
„ Ferri Carbonatis	5 to 20 grs.	126
„ „ Iodidi	3 to 8 grs.	129
„ „ *Redacti*		138
„ *Galbani composita.* *See* Pil. Assaf. Co.		52
„ Hydrargyri	Alterative, 3 to 6 grs. Purgative, 10 grs.	153
„ „ *Biniodidi*		154
„ „ *Iodidi*		155
„ „ *Perchloridi*		158
„ „ „ *c. Aconito*		159
„ „ Subchloridi composita	5 to 10 grs.	160
„ „ „ *c. Colocynth*		160
„ „ „ *c. Jalap*		160
„ „ „ *c. Opio*		160
„ „ „ *c. Quinia*		160
„ „ „ *c. Scammonia*		160
„ *Hyoscyami c. Scilla*		162
„ *Jalapæ c. Calomel*		169
„ Ipecacuanhæ c. Scilla	5 to 10 grs.	167
„ *Opii.* *See* Pil. Saponis composita		205
„ *Picis*		217
„ Phosphori	$\frac{1}{30}$ to $\frac{1}{15}$ gr.	213
„ Plumbi c. Opio	4 grs.	218
„ *Plummeri.* *See* Pil. Hyd. Subchl. Co.		160
„ Quiniæ	2 to 10 grs.	239
„ Rhei composita	5 to 10 grs.	242
„ *Rufi*		29
„ Saponis composita	3 to 6 grs.	205
„ Scammonii Compos.		215
„ Scillæ composita	5 to 10 grs.	256
Pilules des Bontius		73
„ *de Protocarbonate de Fer*		126
„ *de Protiodure de Fer, selon Blanchard*		129
Pimenta	10 to 30 grs.	215
Pimentæ Aqua	1 to 2 oz.	215
„ Oleum	1 to 3 minims	215
Piment de la Jamaïque.		215

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Pimpinella Anisum		41
Pinus Sylvestris		216
„ *maritimi*		217
„ *Palustris*		288
„ *Pinaster*		286
„ *Tæda*		288
Piper	5 to 20 grs.	215
„ *Nigrum*		215
Piperis Confectio	60 to 120 grs.	215
Pissenlit		285
Pistacia Lentiscus		187
Pitch Burgundy		216
Pix Alba		216
Pix Burgundica		216
„ „ Emplast.		216
„ liquida	20 to 60 minims	215
Placenta Lini Seminis		177
Plasma. See Glycerinum Amyli		40
Plumbi Acetas	2 to 8 grs.	218
„ *Acetatis Lotio*		219
„ „ *Pessus*		219
„ „ Unguentum		219
„ Carbonas		219
„ Carbonatis Unguentum		219
„ *Diacetatis Liquor*		221
„ „ *Lotio*		222
„ Emplastrum		220
„ *Gargarisma*		222
„ Iodidum		219
„ Iodidi Emplastrum		220
„ „ *Pessus*		220
„ „ Unguentum		220
„ *Lotio Diacetatis*		222
„ Nitras		220
„ Oxidum		220
„ Pil. c. Opio	4 grs.	218
„ Subacetatis Liquor		221
„ „ „ dilutus		222
„ „ Unguentum comp.		222
„ Suppositoria comp.	3 grs. each. 1 gr. Opium	218
Plumbum		217
Plumbum Acetum Solutum		221
„ *Aceticum*		218
„ *Carbonicum*		219
„ *Hydrico-aceticum Solutum*		221
Podophylli Radix	10 to 20 grs.	222
„ Resina	$\frac{1}{6}$ to 2 grs.	222
„ *Suppositorium*		223
Podophyllum Peltatum		222
Poivre Noir		215
„ *à Queue*		111

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Poix de Bourgogne		216
Polygala Senega		257
Pomegranate		146
Pommade Epispastique Jaune		78
„ „ *Verte*		79
„ *d'Iodure de Potassium Iodurée*		166
„ *de Goudron*		217
„ *Mercuriale Simple*		153
„ *Stibiée*		46
Poppy Capsules		209
„ Petals, Red		245
Potash Water		227
Potassa. See Potassa Caustica		226
Potassa Cautisca		226
„ *c. Calce*		227
„ Sulphurata	3 to 8 grs.	227
Potassæ Acetas	10 to 20 grs.	228
„ *Arsenitis Liquor*		5
„ Bicarbonas	10 to 20 grs.	229
„ Bichromas		229
„ *Bitartras. See* Potassæ Tartras Acida		234
„ *Boro-tartras. Soluble Cream of Tartar*		234
„ Carbonas	5 to 12 grs.	229
„ Chloras	10 to 20 grs.	230
„ Chloratis Trochisci	5 grs. each. 1 to 6 loz.	231
„ „ *Gargarisma*		231
„ Citras	20 to 60 grs.	231
„ *Hydras. See* Potassa Caustica		226
„ Liquor		226
„ „ *Brandish*		227
„ Liq. Effervescens	5 to 10 oz.	229
„ Nitras	5 to 20 grs.	231
„ Nitratis *Fumagatio*		232
„ „ *Gargarisma*		232
„ Permanganas	1 to 2 grs.	232
„ Permanganatis Liquor	2 to 4 drms.	232
„ *Prussias Flava*		233
„ *Subcarbonas*		229
„ Sulphas	10 to 20 grs.	233
„ *Sulphis*		233
„ Sulphuratæ Unguentum		228
„ Tartras	Alterative, 20 to 60 grs. Purgative, 120 to 200 grs.	233
„ Tartras Acida	Diuretic, 20 to 60 grs. Aperient, 60 to 120 grs.	234
Potassii Bromidum	20 to 60 grs.	223
„ *Bromidi Pessus*		224
„ *Cyanidum Purum*		224
„ *Ferrocyanidum*		224
„ Iodidum	2 to 10 grs.	224
„ Iodidi Linimentum c. Sapone		225
„ „ *Pessus*		226
„ „ Unguentum		225

Official Names in Roman; all others in Italics.

PO to QU	Dose.	Page
Potassii Sulphuretum		227
Potassium		223
Potion Gommeuse		2
Poudre Antimoniale de James		43
„ *de Craie*		108
„ *de Dover*		167
Proof Spirit		274
Prunum		234
Pruni Virginianæ Cortex		235
„ „ *Syrupus*		235
Prunus Domestica		234
„ *Laurocerasus*		173
Prussiate of Potash	2 grs.	224
Prussic Acid		11
„ „ *Scheele's*		11
„ „ Vapor		11
Pterocarpi Lignum		235
Pterocarpus Marsupium		170
„ *Santalinus*		235
Pulveres (*group*)		235
Pulvis Amygdalæ compositus	60 to 120 grs.	39
„ Antimonialis	2 to 6 grs.	43
„ *Aromaticus.* *See* Pulv. Cinnam. comp.		98
„ Catechu compositus	15 to 30 grs.	85
„ Cinnamomi comp.	3 to 10 grs	98
„ Cretæ Aromaticus	30 to 60 grs.	108
„ „ „ c. Opio	10 to 40 grs.	109
„ *Doveri*		167
„ Elaterii Comp.		117
„ Glycyrrhizæ Compositus		146
„ *Gregorii*		241
„ Ipecacuanhæ compositus „ „ *c. Opio*	5 to 10 grs.	167
„ *Jacobi*		43
„ Jalapæ compositus	10 to 20 grs.	169
„ Kino compositus „ „ *c. Opio*	5 grs.	171
„ *Liquoritiæ compositus*		146
„ *Magnesiæ c. Rheo pro infantibus*		242
„ Opii compositus	2 to 5 grs.	205
„ Rhei compositus.	30 to 60 grs.	242
„ *Salinus Anticholericus*		266
„ Scammonii compositus	10 to 20 grs.	255
„ Tragacanthæ compositus	10 to 60 grs.	291
Punica Granatum		146
Pyrethri Radix		236
„ Tinctura		236
Pyrethrum Roseum		236
Pyrogallic Acid		10
Pyroligneous Acid purified		3
Pyroxylin		236
Quassiæ Extractum	3 to 5 grs.	237

Official Names in Roman; all others in Italics.

QU to RI	Dose.	Page
Quassiæ Infusum	1 to 2 oz.	237
„ Lignum		237
„ Tinctura	1 to 2 drms.	237
Quercus Cortex	30 to 120 grs.	237
„ Decoctum	1 to 2 oz.	238
„ *Pedunculata*		237
Quillaya Saponaria		237
Quince Seed		113
Quiniæ *Arsenias*		240
„ *Carbolas*		240
„ *Citras*		240
„ *Dikinatis Syrupus*		240
„ *Disulphas*		238
„ *Hydriodatis Syrupus*		240
„ Pilula	2 to 10 grs.	239
„ Sulphas	1 to 5 grs.	238
„ Tinctura	1 to 1½ drm.	239
„ „ Ammoniata	1 to 2 drms.	239
„ *Valerianas*		240
„ Vinum	½ to 1 oz.	240
Quinquina, Teinture de		96
Raifort		50
Raisins		294
Rectified Spirit		273
Red Rose Petals		245
Resina		240
„ *Alba*		240
„ Jalapæ	2 to 5 grs.	169
„ *Pini*		240
„ Podophylli	⅙ to ½ gr.	222
Resinæ Emplastrum		240
„ Unguentum		240
Rhamni Succus		241
„ Syrupus	1 drm.	241
Rhamnus catharticus		241
Rhatania. *See* Krameria		171
Rhei Radix	Stom. 1 to 5 grs. Purg. 10 to 20 grs.	241
„ Extractum	3 to 6 grs. Br. Ph. dose 5 to 20 grs.	242
„ „ *Compositus*		243
„ Infusum	1 to 2 oz.	242
„ Pilula comp.	5 to 10 grs.	242
„ Pulv. comp.	½ to 1 drm. 5 to 10 grs. for a child.	242
„ Syrupus	1 to 4 drms.	242
„ Tinctura	1 to 2 drms.	243
„ Vinum	1 to 2 drms.	243
Rheum Ponticum		242
Rhœados Petala		241
„ Syrupus	1 to 2 drms.	243
Rhubarb		243
Ricini Oleum	Adult ½ to 1 oz. Infant 1 to 3 drms.	244
„ *Decoctum*		244

Official Names in Roman; all others in Italics.

RI to SA	Dose.	Page
Ricinus Communis		244
Roche Alum		30
Rochelle Salt		264
Rosa Canina		244
Rosa Centifolia		245
Rosa Gallica		245
Rosæ Aqua	1 to 20 oz.	245
„ Caninæ Fructus		244
„ „ Confectio	60 grs.	245
„ Centifoliæ Petala		245
„ Gallicæ Petala		245
„ „ Confectio	½ to 1 drm.	245
„ Infusum Acidum	1 to 2 oz.	246
„ „ *c. Acidio Nitrico*		246
„ Syrupus	1 to 2 drms.	246
Rose pâle		245
Rosmarini *essentia*		246
„ Oleum	2 to 5 minims	246
„ Spiritus	10 to 30 minims	246
Rosmarinus Officinalis		246
Rottlera Tinctoria		170
Rouge		133
Rue, Oil of		247
Rumicin		319
Ruta graveolens		247
Rutæ Oleum	2 to 6 minims.	247
„ *Confectio*		247
„ *Syrupus*		247
Sabadilla	4 to 6 grs.	247
Sabinæ cacumina	5 to 10 grs. powder	247
„ *Ceratum*		248
„ Oleum	1 to 5 minims	248
„ Tinctura	15 to 30 minims	248
„ Unguentum		248
Sacchari Fæx		287
Saccharum Lactis	1 to 2 drms.	249
„ *officinarum*		248
„ purificatum		248
Sachets de Charpie Carbonifères		80
Saffron		109
Safran		109
St. Ignatius's bean		199
Sal Ammoniac		33
„ *Enixum*		233
„ *Polychrestum*		233
„ *Polychrestum Seignetti*		264
„ *Volatile*		35
Salicinum		249
Salix Alba		249
Salt		271
„ *of Tartar*		229

Official Names in Roman; all others in Italics.

SA to SC	Dose.	Page
Salt *of Wormwood*		229
Saltpetre		231
Sambuci Aqua		249
„ Flores		249
„ *Unguentum*		250
„ „ *Viride*		250
Sambucus nigra		249
Sandal-Wood, Red		235
Sangsue médicinale		151
Sanguinarin		319
Sanguisuga officinalis		151
„ *medicinalis*		151
Santal Rouge		235
Santonica	10 to 60 grs.	250
Santoninum	Infant, 2 to 6 grs.	250
Sapo		251
„ animalis		251
„ durus	5 to 15 grs.	251
„ Hispanicus		251
„ mollis		252
Saponis Emplastrum		252
Saponis Emplastrum Cerati		252
„ Linimentum		252
„ Pilula Comp. *See* Opium		204
Sarothamnus Scoparius		257
Sarsaparilla		253
„ *Indian*		150
Sarsæ Decoctum	½ to 1 pint	253
„ „ compositum	½ to 1 pint	253
„ Extractum liquidum	1 to 4 drms.	253
„ „ „ *compositum*		254
„ Radix		253
Sassafras *officinale*		254
„ Radix		254
Savin Tops		247
Savon Blanc de Marseille		251
„ *de Potasse*		253
Scammoniæ Radix		255
„ Resina	4 to 8 grs.	255
Scammonii Confectio	10 to 30 grs.	255
„ Mistura	2 oz.	255
„ Pilula Composita	5 to 15 grs.	255
„ Pulvis compositus	10 to 20 grs.	255
Scammonium	5 to 10 grs.	254
Scheele's Prussic Acid		11
Schuster's Pastilles		18
Scilla	1 to 2 grs.	256
Scillæ Acetum	15 to 40 minims	256
„ Oxymel	½ to 1 drm.	246
„ Pil. comp.	5 to 10 grs.	256
„ Syrupus	½ to 1 drm.	256

Official Names in Roman; all others in Italics.

SC to SI	Dose.	Page
Scillæ Tinctura	15 to 30 minims	256
Scoparii Cacumina		257
„ Decoctum	2 to 4 oz.	257
„ Succus	1 to 2 drms.	257
Scott's Ointment		153
Scutellarin		319
Secale cereale		119
„ *cornutum*		119
Seidlitz Powder		264
Seigle Ergoté		119
Semen Myristicæ		197
„ *Contra*		250
„ *Strychni*		199
Senecionin		319
Senegæ Infusum	1 to 2 oz.	257
„ *Decoctum*		257
„ Radix	15 to 20 grs. powder	257
„ *Syrupus*		258
„ Tinctura	½ to 2 drms.	258
Senna Alexandrina	10 to 30 grs. powder	258
„ *Indica*	10 to 30 grs.	258
„ Tinnivelly		258
Sennæ Confectio	1 to 2 drms.	258
„ *Electuarium*		258
„ Infusum	1 to 2 oz.	259
„ Mistura comp.	1 to 1½ oz.	259
„ Syrupus	1 to 2 drms.	259
„ Tinctura	2 to 8 drms.	259
Serpentariæ Infusum	1 to 2 oz..	260
„ Radix	10 to 15 grs. powder	259
„ Tinctura	½ to 2 drms.	260
Sevum præparatum		260
Sherry		297
Silver		48
Simabæ Cedronis Semen		261
Simaruba		260
„ *officinalis*		260
Simarubæ Infusum		260
Sinapine		79
„ *paper*		262
Sinapis		261
„ *alba*		261
„ Cataplasma		261
„ Charta		261
„ *Charta*, U. S.		262
„ *Infusum*		261
„ Liniment. comp.		261
„ *nigra*		261
„ Oleum		261
Sirop Diacode		210
„ *de Gomme*		2

Official Names in Roman; all others in Italics.

SI to SO	Dose.	Page
Sirop de Mûres		192
„ *de Rhubarbe composé*		243
Slaked Lime		70
Smilax officinalis		253
Snake Root, Black		20
Soap		251
„ *Bark*		238
Soaps, various		252
Socotrine Aloes		27
Soda preparations (*group*)		262
„ caustica		263
„ Tartarata	2 to 4 drms.	264
Soda-water		266
Sodæ Acetas		264
„ Arsenias	$\frac{1}{16}$ to $\frac{1}{8}$ gr.	265
„ Arseniatis Liquor	5 to 10 minims	263
„ *Biboras.* *See* Borax		64
„ Bicarbonas	10 to 30 grs.	265
„ Bicarbonatis *Pessus*		266
„ „ Trochisci	1 to 6 loz.	266
„ Carbonas	10 to 30 grs.	267
„ „ exsiccata	3 to 10 grs.	267
„ Chloratæ Cataplasma		268
„ „ Liquor	10 to 20 minims	267
„ Citro-tartras effervescens	1 to 2 drms.	269
„ *et Potassæ Tartras*		264
„ *Hydras*		263
„ Hypophosphis		269
„ *Hypophosphitis Solutio*		269
„ *Hyposulphis*		270
„ Liquor	$\frac{1}{2}$ to 1 drm.	263
„ „ effervescens		266
„ *Murias*		271
„ Nitras		269
„ Phosphas	$\frac{1}{4}$ to 1 oz.	269
„ *Sesquicarbonas*		265
„ Sulphas	$\frac{1}{2}$ to 1 oz.	270
„ *Sulphis*		270
„ Valerianas	1 to 5 grs.	270
Sodii Chloridum	Tonic, 10 to 60 grs. Cathartic, 2 to 4 drms.	271
„ *Iodidum*		271
Sodium		262
Solanum Dulcamara		115
Solenostemma Argel		258
Soluble Cream of Tartar		234
„ *Oxide of Iron*		132
„ *Tartar*		233
Solutio Sodæ Hypophosphitis		269
„ *solventis mineralis* (*De Valangin*)		6
Solutions (*group*)		178
Solution of Acetate of Ammonia	2 to 6 drms.	34

Official Names in Roman; all others in Italics.

SO to SP	Dose.	Page
Solution of Acetate of Morphia		193
„ „ „ „	for Hypodermic injection	192
„ „ Ammonia		37
„ „ „ stronger		36
„ „ Arsenic (Liquor Arsenicalis)	2 to 8 minims	5
„ *d'Arsénite de Potasse*		5
„ of *Bimeconate of Morphia*		207
„ „ „ „	*for Hypodermic injection*	207
„ „ *Bromide of Iron*		125
„ „ Chloride of Antimony		43
„ „ Chlorine		91
„ „ *Chloroxyde of Iron*		132
„ „ Citrate of Ammonia		36
„ *De Valangin*		6
„ *Donovan's*		6
„ Fowler's		5
„ of Arsenic, Hydrochloric.	2 to 8 minims	5
„ of Lime		70
„ *Lugol's*		166
Soude Caustique Liquide		264
Soufre Lavé		279
„ *Précipitaté*		279
Sous-acétat de Plomb Liquide		221
Sous-nitrate de Bismuth		63
Specific Gravities		xx, xxi
Spearmint Oil		190
„ Water		190
Spermaceti		88
Spirit of Salt		10
„ *of Hartshorn*		36
Spiritus (*group*)		274
„ Ætheris	30 to 60 minims	24
„ „ *Chlorati*		24
„ *Ætheris Nitrici. See* Sp. Æth. Nitrosi		272
„ „ *Muriaticus*		24
„ „ Nitrosi	½ to 2 drms.	272
„ „ *Compositus*		24
„ Ammoniæ Aromaticus	20 to 60 minims	35
„ „ Fœtidus	½ to 1 drm.	37
„ „ „ *Haustus*		37
„ Armoraciæ compositus	1 to 3 drms.	51
„ Cajuputi	30 to 60 minims	67
„ Camphoræ	10 to 30 minims	75
„ „ *Fortior*		75
„ Chloroformi	10 to 60 minims	93
„ Juniperi	30 to 60 minims	170
„ Lavandulæ	30 to 60 minims	174
„ „ *comp.*		174
„ Menthæ Piperitæ	30 to 60 minims	189
„ *Mindereri*		34
„ Myristicæ	30 to 60 minims	197

Official Names in Roman; all others in Italics.

SP to SU	Dose.	Page
Spiritus rectificatus, sp. g. ·838		273
„ *Salis Dulcis*		24
„ Rosmarini	10 to 30 minims	246
„ *Sal Volatile*		35
„ tenuior, sp. g. ·920		274
„ Vini Gallici		274
„ „ „ Mistura	½ to 1½ oz.	274
Spirit, Hoffman's Anodyne		24
„ *Clutton's Febrifuge*		24
„ *of Hartshorn*		36
Spray Producer, Dr. Dewar's		16
Squill		256
Squirting Cucumber		116
St. John Long's Liniment		287
Staphisagria		275
Starch		40
Star Anise		41
Steers' Opodeldoc		252
Stevens' Powders		266
Stibii liquidum		44
Stibium Sulphuratum Aurantiacum		45
Storax		277
Stramonii Extractum	¼ gr.	276
„ Folia		276
„ Semina		276
„ Tinctura	10 to 20 minims	276
Strychnia	1/30 to 1/12 gr.	277
Strychniæ Liquor	4 to 10 minims	277
„ „ *for subcutaneous injection*		277
Strychnos Nux-Vomica		199
Styptic Colloid		101
Styrax *Benzoin*		61
„ præparatus	10 to 20 grs.	277
Subacetas Plumbi Liquidus		221
Subcarbonate of Potash		229
Subnitrate of Bismuth		63
Succi (*group*)		278
Succini Oleum		278
Succus *Aconiti*		19
„ Belladonnæ		59
„ Conii	30 to 60 minims	104
„ *Digitalis*		115
„ Hyoscyami		162
„ *Lactucæ virosæ*		173
„ Limonis	½ to 4 oz.	175
„ Mori		191
„ Rhamni		241
„ Scoparii	1 to 2 drms.	257
„ Taraxaci	2 to 4 drms.	285
Suet, Prepared		260
Sugar		248
„ *of Lead*		218

Official Names in Roman; all others in Italics.

SU to SY	Dose.	Page
Sugar of Milk		249
Suif de Mouton		260
Sulfate de Potasse		233
„ „ *Zinc*		301
Sulfure d'Antimoine		45
Sulphate of Alumina and Ammonia		30
„ „ *Nickel*		198
Sulphate of Atropia		54
„ „ Beberia		57
„ „ Copper		111
„ „ Quinine	1 to 5 grs.	238
Sulpho-carbolic Acid		8
Sulpho-carbolates		8
„ „ *mixtures*		8
Sulphur		278
„ præcipitatum	20 to 60 grs.	279
„ sublimatum	Stimulant, 10 to 20 grs. Laxative, 30 to 60 grs.	279
Sulphuret of Antimony		44
Sulphurated Antimony		44
Sulphuric Acid		14
„ „ Aromatic		15
„ „ Diluted		15
„ *Ether*		23
Sulphuris Confectio	1 to 2 drms.	279
„ Iodidum		280
„ Iodidi Unguentum		280
„ *Lac*		279
„ Unguentum		279
Sulphurous Acid	1 drm.	15
Sumbul Radix		280
„ Tinctura	15 to 30 minims	280
Suppositoria, not official (group)		317
Suppositoria, official (*group*)		280
„ Acidi Carbolici c. Sapone	contain 1 gr. each	7
„ „ Tannici	contains 3 grs.	17
„ „ „ c. Sapone	contains 3 grs.	17
„ „ „ *c. Opio*		17
„ „ „ *Vaginal*	„ 10 grs.	18
„ *Belladonnæ*	1 gr.	61
„ *Gallæ*		142
„ Hydrargyri	5 grs. ointment	153
„ *Hyoscyami*	5 grs. Extract	162
„ *Krameriæ*		172
„ Morphiæ	½ gr.	194
„ „ c. Sapone	½ gr.	194
„ Plumbi comp.	3 grs. Acet. Lead 1 gr. Powdered Opium	218
„ *Podophylli*	1 gr. each	223
Swan's Solution		269
Sydenham's Laudanum		207
Symbols		316
Symphytum		281

Official Names in Roman; all others in Italics.

SY to TA	Dose.	Page
Syrup of Dikinate of Quinia		240
Syrupi (*group*)		281
Syrupus		248
„ Aurantii	1 to 2 drms.	55
„ „ Floris	1 to 2 drms.	54
„ Chloralis		91
„ *Codeiæ*		207
„ Ferri Iodidi	20 to 60 minims	129
„ „ *Bromidi*		125
„ „ Phosphatis	1 to 4 drms.	134
„ „ „ *comp., Parrish*	1 to 2 drms.	135
„ „ „ *c. Manganesio*		135
„ „ „ *c. Quinia et Strychnia, Easton's*		135
„ „ *Hypophosphitis*		135
„ *Gummi Rubri*		149
„ Hemidesmi	1 to 4 drms.	151
„ *Ipecacuanhæ*		168
„ Limonis	1 to 2 drms.	175
„ Mori	1 to 2 drms	192
„ *Morphiæ*		208
„ Papaveris	1 to 2 drms.	210
„ „ *Rhœados*		243
„ *Pruni Virginianæ.*		235
„ *Quiniæ Hydriodatis*		240
„ „ *Dikinatis*		240
„ Rhamni	1 drm.	241
„ Rhei	1 to 4 drms.	242
„ Rhœados	1 to 2 drms.	243
„ Rosæ	1 to 2 drms.	246
„ *Rutæ*		247
„ Scillæ	½ to 1 drm.	256
Syrupus Senegæ		258
Syrupus Sennæ	1 to 2 drms.	259
„ Tolutanus	1 to 2 drms.	57
„ *Trifolii*		291
„ Zingiberis	1 to 4 drms.	302
Tabac		283
Tabaci Enema		284
„ Folia		283
Tables of Materia Medica		xxii–xxxi
Tablettes d'Ipécac.		167
„ *de Bismuth*		63
Tamarindus	¼ oz.	284
„ *Indica*		284
Tannic Acid		16
„ „ Glycerine of		17
„ „ Lozenges		17
„ „ *Pessary*		17
„ „ Suppositories		17
Tapeworm Remedy		147
Tar		216
„ *Capsules*		217

Official Names in Roman; all others in Italics.

TA to TI	Dose	Page
Tar Ointment		217
„ *Pills*		217
„ *Water*		217
Taraxaci Decoctum	2 to 4 oz.	285
„ Extractum	5 to 15 grs.	284
„ Radix		284
„ Succus	2 to 4 drms.	285
Taraxacum Dens-Leonis		284
Tartarus Ferratus		138
Tartaric Acid		18
Tartarated Antimony		45
Tartras Ferrico-Potassicus		138
Tartarus Stibiatus		45
Tartrate of Soda and Potash		264
„ *Antimony and Potash*		45
Tartrate Neutre de Potasse		233
„ *Acide* „ „		234
„ *de Potasse et d'Antimoine*		45
Teinture de Quinquina		96
Terchloride of Formyl		92
Terebinthina Canadensis		285
„ *Cocta*		240
Terebinthinæ Confectio	1 to 4 drms.	286
„ Enema		286
„ Linimentum		286
„ „ Aceticum		287
„ Oleum	10 to 30 minims.	286
„ Unguentum		287
Terra Japonica		86
Testing, Articles employed in		305
„ *Solutions for*		307
„ *Volumetric*		301
Tetrachloride of Carbon		93
Theobromæ Oleum		287
„ *Cacao*		287
Thermometric Scales compared		xix
Theriaca		287
Thridace		173
Thus		216
Thus Americanum		288
Tincturæ (*group*)		288
Tinctura Aconiti	5 to 15 minims	19
„ „ *for subcutaneous injection*		19
„ *Actææ Racemosæ*		21
„ Aloes	1 to 2 drms.	29
„ *Ammon. composita*		37
„ Arnicæ	1 to 2 drms.	51
„ Assafœtidæ	½ to 1 drm.	52
„ Aurantii	1 to 2 drms.	55
„ „ Recentis	1 to 2 drms.	56
„ Belladonnæ	5 to 20 minims	60
„ *Benzoini*		61

Official Names in Roman; all others in Italics.

TI	Dose	Page
Tinctura Benzoini composita	½ to 1 drm.	61
„ Buchu	1 to 2 drms.	66
„ *Cachou*		85
„ Calumbæ	½ to 2 drms.	73
„ Camphoræ composita	15 to 60 minims	75
„ *Camphoræ c. Opio*		
„ Cannabis Indicæ	5 to 20 minims	76
„ Cantharidis	5 to 20 minims	78
„ Capsici	10 to 20 minims	79
„ „ *Conc.* (*Turnbull*)		79
„ *Cardamomi*		81
„ Cardamomi composita	½ to 2 drms.	81
„ Cascarillæ	½ to 2 drms.	83
„ Castorei	½ to 2 drms.	84
„ Catechu	½ to 2 drms.	85
„ *Chinæ*		96
„ „ *Comp.*		97
„ Chiratæ	½ to 2 drms. 15 to 60 minims	89
„ Chloroformi composita	20 to 60 minims	93
„ Cinchonæ composita	½ to 2 drms.	97
„ „ flavæ	1 to 2 drms.	96
„ Cinnamomi	1 to 2 drms.	98
„ Cocci	30 to 90 minims	99
„ Colchici *composita*		100
„ „ *Florum*		100
„ „ Seminum	15 to 30 minims	100
„ *Colocynthidis*		102
„ Conii	½ to 1 drm.	104
„ Croci	½ to 2 drms.	109
„ Cubebæ	1 to 2 drms.	111
„ Digitalis	10 to 30 minims	115
„ *Diosmæ*		66
„ Ergotæ	15 to 60 minims	119
„ „ *Ætherea*		120
„ *Eucalypti*		120
„ Ferri Acetatis	5 to 30 minims	124
„ *Ferri Acetatis Æther*		124
„ „ *Ammonii Chloridi*		132
„ „ *Muriatis*		
„ „ Perchloridi	10 to 30 minims	131
„ „ *Sesquichloridi*		
„ „ *Chloridi*		
„ Gallæ	½ to 2 drms.	141
„ *Gentianæ*		143
„ „ composita	1 to 2 drms.	143
„ *Guaiaci*		148
„ Guaiaci Ammoniata	½ to 1 drm.	148
„ *Gummi Rubri*		148
„ *Hellebori Nigri*		150
„ Hyoscyami	15 to 60 minims	162
„ Iodi	5 to 20 minims	165
„ „ *Decolorata*		166

Official Names in Roman; all others in Italics.

TI to TR	Dose.	Page
Tinctura *Ipecacuanha*		168
„ Jalapæ	½ to 2 drms.	169
„ *Kamalæ*		170
„ Kino	½ to 2 drms.	171
„ Krameriæ	1 to 2 drms.	172
„ *Lactucarii*		173
„ Lavandulæ composita	½ to 2 drms.	174
„ Laricis	20 to 25 minims	174
„ Limonis	½ to 2 drms.	175
„ Lobeliæ	10 to 30 minims	181
„ „ Ætherea	10 to 30 minims	181
„ Lupuli	½ to 2 drms.	182
„ *Lupulinæ*		182
„ *Lyttæ.* *See* Canthar.		78
„ *Maticæ*		188
„ *Moschi*		196
„ *Myrrhæ et Boracis*		65
„ Myrrhæ	½ to 1 drm.	198
„ Nucis Vomicæ	10 to 30 minims	199
„ Opii	10 to 30 minims	205
„ „ Ammoniata	½ to 1 drm.	205
„ *Physostigmatis*		214
„ *Piper. Hispan.*		79
„ Pyrethri		236
„ Quassiæ	1 to 2 drms.	237
„ Quiniæ	1 to 1½ drms.	239
„ „ Ammoniata	1 to 2 drms.	239
„ Rhei	Stom. 1 to 2 drms. Purgative, ½ to 1 oz.	243
„ „ *Vinosa*		243
„ Sabinæ	15 to 30 minims	248
„ Scillæ	15 to 30 minims	256
„ Senegæ	½ to 2 drms.	258
„ Sennæ	2 to 8 drms.	259
„ Serpentariæ	½ to 2 drms.	260
„ Stramonii	10 to 20 minims	276
„ Sumbul	15 to 30 minims	280
„ *Thebaicæ*		207
„ Tolutana	15 to 30 minims	57
„ Valerianæ	1 to 2 drms.	295
„ „ Ammoniata	½ to 1 drm.	295
„ „ *Ætherea*		295
„ Veratri Viridis	5 to 20 minims	296
„ Zingiberis	10 to 30 minims	302
„ „ fortior	5 to 20 minims	302
Tinnivelly Senna		258
Tisane d'Orge		151
„ *de Ratanhie*		172
„ *de Polygala*		257
Tragacantha	20 grs.	290
Tragacanthæ Mucilago	1 oz.	291
„ Pulv. comp.	10 to 60 grs.	291
Traumatic Balsam		61

Official Names in Roman; all others in Italics.

TR to UN		Dose.		Page
Treacle				287
Trifolii Syrupus				291
Tritici Repentis Decoctum				291
Triticum Vulgare				122
Trochisci (*group*)				291
Trochisci Acidi Tannici	½ gr. each	1 to 6 lozenges		17
„ *Ammonii Bromidi*				33
„ „ *Chloridi*				33
„ Bismuthi	2 grs. each	1 to 6 lozenges		63
„ Catechu	1 gr. each	1 to 3 lozenges		85
„ Ferri Redacti	1 gr. each	1 to 6 lozenges		138
„ *Gummi Rubri*				149
„ Ipecacuanhæ	¼ gr. each	1 to 3 lozenges		167
„ „ et Morphiæ				167
„ *Krameriæ*				172
„ Morphiæ	1/30 gr. each	1 to 2 lozenges		194
„ „ et Ipecac.		1 to 6 lozenges		167, 194
„ Opii	1/10 gr. Ext.	1 to 2 lozenges		206
„ Potassæ Chloratis	5 grs.	1 to 6 lozenges		231
„ Sodæ Bicarb.	5 grs.	1 to 6 lozenges		266
Turpentine				286
Ulmi Cortex				292
„ Decoctum		2 to 4 oz.		292
Ulmus Campestris				292
„ *Fulva*				292
Uncaria Gambir				85
Unguenta (*group*)				292
Unguentum Aconitiæ				20
„ *Antimoniale*				46
„ *Antimonii*				46
„ Antimonii Tartarati				46
„ Atropiæ				53
„ *Balsami Peruviani*				56
„ *Balsami Peruviani Resinosum*				56
„ *Basilicum*				241
„ Belladonnæ				60
„ *Benzoini*				61
„ *Bismuthi*				63
„ *Boracis*				65
„ Cadmii Iodidi				67
„ *Calomelanos*, now Hydr. Subchloridi				160
„ Cantharidis				78
„ *Cereum*				86
„ Cetacei				88
„ *Chloroformi*				93
„ *Citrinum*. *See* Ung. Hydr. Nitr.				156
„ Creasoti				107
„ *Cretæ*				109
„ *Diachylon Hebræ*				221
„ Elemi				118
„ Gallæ				142
„ „ c. Opio				142

Official Names in Roman; all others in Italics.

UN to VA	Dose.	Page
Unguentum *Glycerini*		144
„ Hydrargyri		153
„ „ *Cinereum*		153
„ „ *c. Ammoniæ Muriate*		153
„ „ Ammoniati		161
„ „ compositum		153
„ „ Iodidi rubri		154
„ „ Nitratis		156
„ „ Oxidi rubri		157
„ „ „ Flav.		157
„ „ *Perchloridi*		159
„ „ Subchloridi		160
„ Iodi		166
„ „ *Comp.*		166
„ *Kali Iodati*		226
„ *Mezerei*		191
„ *Opii*		207
„ Picis		217
„ Plumbi Acetatis		219
„ „ Carbonatis		219
„ „ Iodidi		220
„ „ Subacetatis compos.		222
„ Potassæ Sulphuratæ		228
„ Potassii Iodidi		225
„ *Præcipitati Albi.* *See* Ung. Hydrarg. Ammon.		161
„ Resinæ		241
„ Sabinæ		248
„ *Sambuci*		250
„ „ *Viride*		250
„ Simplex		86, 293
„ *Stimulans*		78
„ Sulphuris		279
„ „ Iodidi		280
„ *Tartari Stibiati*		46
„ Terebinthinæ		287
„ Veratriæ		296
„ Zinci		301
Urethral Suppositories		316
Urginea Scilla		256
Uvæ		294
Uvæ Ursi Folia	10 to 30 grs.	293
„ *Decoctum*		293
„ Infusum	1 to 2 oz.	293
Vaginal Suppositories. See *Pessaries*		318
Valangin's Solution		6
Valeriana officinalis		294
Valerianæ Infusum	1 to 2 oz.	294
„ Radix	10 to 30 grs. powder.	294
„ Tinctura	1 to 2 drms.	295
„ „ Ammoniata	½ to 1 drm.	295
„ „ *Æthera*		295

Official Names in Roman; all others in Italics.

VA to WA	Dose.	Page
Vapor Acidi Hydrocyanici		11
„ Chlori		69
„ *Chloroformi*		93
„ Conii		104
„ Creasoti		107
„ Iodi		166
„ „ *c. Conio*		166
Vapores (*Group*)		295
Veratria		295
Veratriæ Unguentum		296
Veratrinum		296
Veratrium		296
Veratri Viridis Radix	4 to 6 grs.	296
„ „ Tinctura	5 to 20 minims	296
Veratrum Viride		296
Vienna Paste		227
Vin Émétique		46
Vina (*group*)		296
Vinaigre Anglaise		4
„ *de Quatre Voleurs*		4
Vinca Major		297
Vincæ Majoris Extract. Liquid.		297
Vinegar, British	1 to 2 drms.	2
„ *Aromatic*		4
„ distilled		3
Vinegar of Four Thieves		4
Vinum Aloes	1 to 2 drms.	29
„ Antimoniale	10 to 60 minims	46
„ Aurantii		56
„ *Chinæ*		96
„ Colchici	10 to 30 minims	100
„ „ *Seminum*		101
„ *Emétique*		46
„ Ferri	1 to 4 drms.	139
„ Ferri *Acetatis*		124
„ „ Citratis	1 to 4 drms.	127
„ Ipecacuanhæ. Expectorant, 5 to 40 minims. Emetic, 3 to 6 drms.		168
„ *Seminis Colchici*		101
„ Opii	10 to 40 minims	206
„ Quiniæ	½ to 1 oz.	240
„ Rhei	1 to 2 drms.	242
„ *Stibiatum*		46
„ *Stibiato Tartaricum.*		46
„ Xericum		297
Virginian Tobacco		283
Vitis Vinifera		294
Vitriol Elixir		15
„ *Mynsicht's*		15
„ *Oil of*		14
Water, degrees of purity of the various supplies		46
Waters, distilled (*group*)		46

Official Names in Roman; all others in Italics.

WA to ZI	Dose.	Page
Waters, mineral (*classified list*)		320
„ „ a list of those sold in bottles		349
Wax, White		86
„ Yellow		86
Weights of the British Pharmacopœia		xv
„ „ „ „ compared with foreign pharmacopœias		xvii
„ Troy and avoirdupois compared		xvi
„ Metrical		xviii
Wheat Starch		40
Wheaten Flour		122
Whey Alum		31
White Arsenic		5
White Bismuth		63
„ *precipitate*		160
„ Wax		86
Whooping Cough Mixture		99
Wild Cherry Bark		235
Wines (*group*)		296
Winter Cherry		213
Wood Oil		56
Yellow Wax		86
„ Oxide of Mercury		156
Yolk of Egg		208
Zincum		297
Zincum (group)		298
„ *Chloratum*		300
„ *Chloruretum*		300
„ Granulatum		298
„ *Oxydatum*		300
„ *Sulphuricum*		301
Zinci Acetas	1 to 2 grs.	298
„ *Acetatis Lotio*		299
„ Carbonas	2 to 10 grs.	299
„ Chloridum	½ to 2 grs.	299
„ Chloridi Liquor		300
„ Oxidum	2 to 10 grs.	300
„ Sulphas	Tonic, 1 to 2 grs. Emetic, 10 to 30 grs.	301
„ Unguentum		301
„ Valerianas	1 to 6 grs.	301
Zingiber	10 to 20 grs.	302
„ *officinale*		302
Zingiberis *Essentia*		302
„ Syrupus	1 to 4 drms.	302
„ Tinctura	10 to 30 minims	302
„ „ fortior	5 to 10 minims	302
„ *Oleoresina*		303

THERAPEUTICAL CLASSIFICATION OF REMEDIES,

COMPILED FROM VARIOUS AUTHORS, THE ARRANGEMENT BEING TAKEN FROM THE DICTIONARY OF MATERIA MEDICA, BY DR. WAHLTUCH.

SECTION A. AGENTS OF DEFINITE OPERATION.

Alteratives.—Medicines which gradually change and correct a morbid condition of the organs. They are given in moderate doses.

Those of *Antimony* are, Antimonii Oxidum, A. Sulphuratum, A. Tartaratum.

Arsenic—Liquor Potassæ Arsenitis, Liquor Sodæ Arseniatis, Liquor Arsenici Hydrochlorici.

Chlorine—Acidum Nitrohydrochloricum, Ammon. Chloridum, Chlori Liquor, Potassæ Chloras, Liquor Sodæ Chloratæ, Calcii Chloridum, Zinci Chloridum.

Iodine—Iodum, Ferri Iodidum, Potassii Iodidum, Sulphur Iodidum.

Mercury—Hydrarg. c. Creta, Pilula Hydrarg., Hydrarg. Subchloridum, Hydrarg. Iodidum.

Sulphur—Sulphur Sublimatum, Sulphur Præcipitatum.

Vegetable—Dulcamara, Guaiacum, Mezereum, Sarsaparilla, Taraxacum.

Eclectics—Corydalin, syphilitic; Iridin, renal; Leptandrin, hepatic; Phytolaccin, scorbutic; Podophyllin, Rumicin, Sanguinarin, hepatic.

Mineral Waters—Adelheidsquelle, Carlsbad, Ems, Friedrichshall.

Anæsthetics.—Substances which, when inhaled in vapour, have the property of suspending consciousness, and at the same time causing insensibility to pain: Æther, Chloroform, Carbon Tetrachloride, Bichloride of Methyline, Nitrite of Amyl, Nitrous Oxide Gas.

Anodynes.—Medicines which act upon the brain, alleviating pain: Aconitum, Atropia, Belladonna, Camphor, Cannabis Indica, Conium, Gelsemin, Lupulus, Hyoscyamus, Morphia, Opium, Stramonium.

Antacids.—Agents which correct acidity, and render the blood and secretions more fluid; useful in Gout, Rheumatism, etc.: Ammonia, A. Carbonas, A. Acetas, Calcis Aqua, C. Carbonas, C. Saccharatus Liquor, Lithiæ Aq. Efferv., L. Carbonas, L. Citras, Magnesia, M. Carbonas, Potassæ Liquor, P. Bicarbonas, Sapo Durus, Sodæ Liquor, S. Liquor Efferv., S. Bicarbonas.

Mineral Waters—Contrexville, Ems, Fachingen, Tarasp, Vichy.

Antalkalines.—Medicines which neutralize excess of alkaline matter, in the alimentary canal and urinary organs: Acid. Benzoic, A. Citric, A. Phosphoric. Dilut., A. Sulphuric. Dilut.

Anti-Anæmics.—If Anemia be present the salts of iron should be given; if wasting of the body, Cod Liver Oil would be beneficial: Ferri Ammon. Citr., F. Phosph. Co. Syr. (Parrish), Ferrum Redactum, Easton's Syrup.

Mineral Waters—Berka, Franzensbad, Mondorf, Rippoldsau, St. Moritz, Spa.

Antemetics.—Medicines which arrest vomiting arising from disease or sea-sickness: Acid. Hydrocyanic. Dil., Belladonna, Bismuth, Calcii Chlorid., Calcis Aqua, Cerii Oxalas, Chloral, Chloroform, Creasotum, Magnesia.

Anthelmintics or Vermifuges.—Medicines which destroy worms.

Ascarides or Thread Worm.—Areca, Calcis Liquor, Enema Aloes, Enema Sodii Chloridii, E. Ol. Olivæ, E. Quassiæ, Mucuna, Santoninum, Scammonia, Spigelia.

Round Worm.—Calomel, Calcis Aqua, Jalap, Mucuna Pruriens, Sabina.

Tape Worm.—Granati Cort. Rad. Decoctum, Filicis Oleum, Cusso, Kamala, Tereb. Confectio et Oleum.

Anthidrotics.—Medicines which check perspiration: Acid. Acetic., A. Sulphuric Dilut., A. Tannic, Ferri Sulphas, Ferri Comp. Mist., Hæmatoxyli Decoct., Zinci Oxydum.

Antilithics.—Medicines which counteract a tendency to the formation of Calculi, or deposition of urinary sediments: Acid. Nitric. Dil., Acid. Phosph. Dilut., Lithiæ Liq. Efferv., L. Carbon, L. Citras., Magnes. Liq. Efferv., Potassæ Liq. Efferv., Sodæ Liq. Efferv., Parieræ Rad., Potas. Bicarb., Sapo, Sodæ Citro-tart. Efferv.

Mineral Waters—Mergentheim, Neuenahr, Selters, Tchitli, Vals, Vichy, Wildungen.

Antiparasitics.—Medicines which destroy vegetable and animal parasites: Acid. Sulphurosum, Hydr. Ammoniatum, Olea Expressa et Essent., Pyrethrum Roseum, Sulphur, Tabacum.

Antiperiodics.—Medicines which have the property of interrupting periodical attacks of disease: Acid. Arseniosum, Arsenicalis Liquor, Beberiæ Sulph., Cinchonæ Extr. Liquor, Quiniæ Dikin. Syrup., Sodii Chloridum.

Antiseptics.—Agents which prevent the decomposition of organic structures, and destroy infection and fœtid odours: Acidum Carbolicum, A. Hydrochloricum, A. Sulphurosum, Calx Chlorata, Chlorum, Calcis Sulphocarbolas, Carbo Ligni, Creasotum, Glycerinum, Potass. Permanganas, Sodæ Chloratæ Liquor, Sodii Chloridum, Zinci Chloridum.

Antispasmodics.—Medicines which allay irregular and inordinate muscular contraction, and prevent the recurrence of spasms: Acid. Hydrocyanici Dil., Ether, Ammonia, A. Carbonas, A. Spiritus Aromaticus, Assafœtida, Belladonna, Cajuput. Ol., Camphor, Cannabis Indica, Castoreum, Chloral-Hydrate, Chloroformum, Conium, Galbanum, Hyoscyamus, Lobelia, Moschus, Menth. Pip. Ol., Ruta, Stramonium, Sumbul, Terebinthina, Valeriana and Valerianates, Zinci Oxidum.

Aperients, *see* Cathartics.

Aromatics.—Substances having an agreeable taste and smell, and having the property of dispelling flatus and correcting the griping from acrid medicines: Aqua Anethi, A. Carui, A. Cinnamom., A. Fœniculi, A. Menth. Pip., A. Menth. Vir., A. Pimentæ, Cascarillæ Inf., Caryophylli Inf., Myristicæ Sp., Zinigiberis Syr., Cardam. Tinct. Co., Zingiber. Tinct.

Astringents.—Medicines which produce contractions of the tissues, and coagulation of the albuminous fluids; they are given to improve digestion and check increased secretions, mucus discharges, and hæmorrhages; or applied topically to obviate relaxation and to stop bleeding.

Mineral Substances are, all the Dilute Mineral Acids, and all the Salts of the Metals; Alum, Borax, Carbolic Acid, Creasotum.

Vegetable Substances.—Acid. Acetic., A. Benzoic, A. Citric, A. Gallic, A. Tannic. A. Tartaric, Bela, Catechu, Cornin, Ergota, Galla, Geranin., Gummi Rubr., Hæmatoxylum, Krameria, Kino, Larix, Matico, Quercus, Rheum, Rosa, Rumicin, Terebinthina, Ulmus, Uva Ursi, Vinca Major.

Cathartics.—Medicines which promote alvine evacuations.

Mild or Laxative.—Belladonna, Cassiæ Pulpa, Euonymin, Ficus, Elaterii Pulv. Comp., Glycyrrh. Pulv. Comp., Magnesia, M. Carbonas, Manna, Mel, Olivæ Oleum, Potassæ Sulphas, P. Tartras, P. Tart. Acida, Prunum, Ricini Oleum, Sapo, Sinapis Semen, Sodæ Phosphas, S. Sulphas, S. Tartarata, Sulphur, Sulphur Præcip., Tamarindus.

Actively Aperient.—Aloes Barb., A. Socotr., Baptisin, Colchicum, Fel Bovinum, Helleboris Niger, Iridin, Jalapa, Jalapinum, Magnes. Sulphas, Leptandrin, Podophyllin, Rheum, Senna, Sodæ Sulphas.

Drastic or Hydragogues.—Cambogia, Colocynthis, Crotonis Oleum, Elaterium, Rhamni Syrupus, Scammonium.

Mineral Waters.—Achselmannstein, Birmenstorff, Carlsbad, Friedrichshall, Kissengen, Homburg, Marienbad, Pullna, Seidlitz.

Caustics.—Substances which destroy the vitality of the parts they are applied to: Acid. Acetic. Glaciale, A. Arseniosum, A. Carbolicum, A. Nitricum, A. Sulphurici Pastæ, Alum. Siccatum, Ammon. Chlorid., Antim. Chlor., Argenti. Nitras, Calx, Cupri Sulphas, Hydr. Iod. Rubr., H. Oxid. Rubr., H. Perchloridum, Hydr. Nitrat. Acidus Liquor, Potassa, P. c. Calce, Soda, Zinci Chloridum.

Cholagogues.—Agents which cause a flow of bile into the intestines: Ammonii Chloridum, Hydrargyr. Subchlor, Podophyllin.

Mineral Waters.—Ems, Friedrichshall, Kissengen.

Demulcents.—Acacia, Amylum, Cydonii Semen, Ficus, Glycerinum, Glycyrrhiza, Hordeum, Lini Semen, Oleum Olivæ, Sevum, Tragacantha, Triticum Repens, Ulmi Cortex, Uvæ.

Desiccants.—Agents which check secretion, and dry up mucous discharges from ulcers and wounds: Calcis Carbonas, Calcis Hydras, Creta Præparata, Magnesiæ Carbonas, Plumbi Acetas, P. Carbonas, Zinci Oxidum.

Diaphoretics.—Medicines which increase the exhalation of the skin and produce sweating. Employed in fresh colds, in fevers, dropsy, and some skin diseases: Ammoniæ Acetatis Liquor, Antimonialis Pulvis, Antimon. Tartarati Vin., Cajuputi Sp., Colchici Vin., Doveri Pulv., Ether. Nitr. Sp., Guaiaci Ammon. Tinct., Ipecac. Pulv., Ipecac. Vin., Mudar, Potas. Nitras, Serpentaria, Camphor. Sp.

Deodorizers and Disinfectants, *see* Antiseptics

Diuretics.—Medicines which promote the secretion of Urine: Ammon. Acet. Liq., Borax, Buchu, Caulophyllin, Colchicum, Copaiba, Copaibæ Resin, Cubeba, DigitalisInf., Euonymin, Ether Nitros Sp., Juniperi Oleum, Lithiæ Efferv. L., Potassæ Efferv. L., Pareiræ Bravæ Decoct., Parietaria, Physalis Alkakengi, Potassæ Acetas, P. Nitras, Senegæ Inf., Iridin, Senecionin, Scoparium, Scillæ Acetum, Terebinthina, Ulmi Decoctum.

Mineral Waters.—Friedrichshall, Kissengen, Leuk.

Ecbolics.—Substances which promote the contraction of the Uterus and facilitate the expulsion of the contents: Borax, Cinnamomum, Ergota, Sabina.

Purgatives, *see* Cathartics.

Emetics.—Medicines which excite vomiting: Anthemis, Antimonium Tartaratum, Apomorphia, Baptisin, Cupri Sulphas, Ipecacuanha, Sinapis Pulvis, Sodii Chloridum, Tabacum, Zinci Sulphas.

Emmenagogues.—Medicines which maintain or restore a healthy condition of the menstrual discharge, and increase the quantity: Aloes Decoctum Co., Aloes pilul. et Myrrh., Ammonii Chloridum, Borax, Ergota with Hyoscyamus, Ferrum Redactum, Ruta, Sabina, Senecionin.

Emollients.—Substances which relax the solid tissues; also such as protect sensitive surfaces, employed to allay irritation, painful ulceration in diseases of the mucous membranes of the alimentary canal: Acacia, Adeps, Cera, Cetaceum, Collodion, Cydonium, Hordei Dec., Glycerinum, Glycer. Amyli, Lini Decoct, Sevum, Tragacantha.

Escharotics, *see* Caustics.

Expectorants.—Medicines which promote the secretion of bronchial mucus: Acid. Benzoicum, Ammonia, A. Carbon, Ammoniacum, Ammonii Chloridum, Antim. Tartar., Bals. Peruv., Bals. Tolut., Copaiba, Cubeba, Galbanum, Ipecacuanha, Myrrha, Scilla, Senegæ.

Febrifuges.—Mineral and Vegetable Acids: Alkakengi Tinct., Hydrastin, Potassæ Chloras, P. Citras, P. Nitras, Sp. Salis Dulcis.

Hæmatinics.—Medicines which augment the number of red corpuscles: Ferri-carbonas Sacch., Ferri et Ammonio-citras, Ferri Chloroxydum, Ferri Phosph. Syr. (Parrish).

Hæmostatics.—Substances which arrest hæmorrhage, *see* Styptics.

Hypnotics. (Soporifics)—Medicines which cause sleep: Cannabis Ind., Chloral, Chloroformum, Codeia, Conium, Croton-chloral, Hyoscyamus, Lupulus, Morphia, Opium, Papaver, Sumbul.

Irritants.—Substances which stimulate and cause irritation or inflammation of the parts they are applied to: Acidum Aceticum glaciale, Acetum Cantharid., Antim. Tart., Cataplasm. Sinapis, Charta Sinapis, Charta Epispatica, Empl. Calefaciens, E. Cantharid., E. Picis, Hydr. Iod. Rubr., Hydr. Perchloridum, Lin. Ammoniæ, Lin. Camph. Co., Lin., Iodi, Lin., Sinap. Co., Lin., Terebinth.

Laxatives, *see* Cathartics.

Narcotics.—Medicines which cause stupor or sleep, allay pain, arrest inordinate secretion, and subdue irritation: Belladonna, Chloroformum, Ext. Cannab. Ind., Hyoscyami Ex., Lupulus, Morphia, Nitrite of Amyl, Opium, Stramonium.

Nutritives.—Substances which quicken assimilation, and improve the composition of the living tissues: Acacia, Amygdala, Bynes Extractum, Carnis Extract., Cetrariæ Decoctum, Lac, Morrhuæ Ol., Ovis Vitellus, Sacch. Lactis, Sevum, Sp. Vini Gallici Mist., Theriaca.

Purgatives, *See* Cathartics.

Refrigerents.—Medicines which diminish heat and quench thirst: Aqua, Acidum Aceticum, A. Citricum, A. Tartaricum, A. Phosp. Dilut., A. Sulph. Dil., Ammonii Chlorid., Aurantii Succus, Limonis Succus, Mori Syrup., Oxymel, Potas. Citras, P. Chloras, P. Nitras, P. Tart. Acida, Æther. Nitr. Sp., Æther. Muriatici Sp., Tamarindus,

Restoratives, *See* Tonics.

Rubefacients.—Agents which, when applied to the skin, irritate and redden it: Ammoniæ Liquor, Acet. Cantharid., Lin. Camphoræ Co., Lin. Capsici, Lin. Crotonis, Lin. Sinapis Co., Oleum Succini, Oleum Terebinth.

Sedatives.—Medicines which depress the action of the heart and of the vascular system, given in palpitation of the heart, hypertrophia cordis, and acute inflammatory diseases.

Arterial.—Acidum Hydrocyanicum, Aqua Laurocerasi, Digitalis, Plumbi Acetas, Veratrum Viride.

Spinal.—Ammonii Bromidum, Physostigmata, Potassii Bromidum.

Soothing.—Medicines which directly depress the energy of the nervous and vascular system, without causing any previous excitement, used in irritable cough, neuralgic pain, spasmodic affections, and great excitability: Aconitum, Atropia, Belladonna, Camphor, Cerii Oxalas, Colchicum, Conium, Hydrarg. Subchloridum, Hyoscyamus, Morphia, Opium, Papaver.

Stomachic.—Acid. Carbolic., A. Hydrocyanic, Argenti Nitras, Bismuth. Carbon., Cerii Oxalas, Creasotum, Potass. Bicarb., Zinci Oxidum.

Sialogogues.—Medicines that increase the secretion of the saliva when chewed, used in affections of the face and head, toothache, and in paralysis of the tongue: Armoracia, Mastich, Mezereum, Nicotiana, Piper, Pyrethrum, Sinapis, Zingiber.

Soporifics, *See* Anodynes.

Stimulants.—Medicines which increase the sensibility of the nervous and muscular system, and the secretions of the mucous membranes, and give energy to the whole system.

Spinal.—Arnica, Cannabis Ind., Cantharis, Ergota, Nux Vomica, Phosphorus, Strychnia.

Stomachic.—Ammon. Carbon., Anethum, Anisum, Armoracia, Assafœtida, Cajuputi Oleum, Capsicum, Chloroform, Cardamomum, Carum, Caryophyllum, Cinnamomum, Coriandrum, Fœniculum, Macis, Mentha Viridis, Mentha Piperita, Myristica, Pimenta, Piper, Sinapis, Sp. Vini Gallici, Zingiber.

Mineral Waters.—Alexandersbad, Barèges, Cauteret, Kreuznach, St. Moritz.

Stomachics.—Medicines which directly promote the functions of the stomach and improve the appetite and digestion: Anthemis, Aurantium, Calumba, Canella Alba, Capsicum, Cardamomum, Caryophyllum, Chirata, Cinchona, Cinnamomum, Cusparia, Gentiana, Lavandula, Limon, Lupulus, Mentha Piperita, Nux Vomica, Pimenta, Quassia, Quinia, Rheum.

Styptics.—Remedies which arrest bleeding, used in hæmorrhage from the nose, gums, vagina, and rectum: Acidum Acetum, A. Gallicum, A. Tannicum, Alumen, Cinchona Pulvis, Cupri Sulphas, Ergota, Ferri Perchlor., Granati Rad. Cort., Gummi Rubri Tinct., Matico, Spir. Rectificatus.

Sudorifics, *See* Diaphoretics.

Tonics.—*Stomachic* are those which improve the functions of the digestive organs, and thus give strength to the system generally: Acid. Hydrochlor. Dil., A. Nitric. Dil., A. Nitrohydrochlor. Dil., Beberiæ Sulphas, Bismuthi Oxid., Calumba, Chiretta, Cinchona, Gentiana, Lupulus, Nux Vomica, Quassia, Quiniæ Sulph., Strychnia.

Nervine.—Acid. Arseniosum, Argenti Nitras, A. Oxidum, Cupri Sulphas, Cusparia, Strychnia, Zinci Sulph.

Acting through the blood, and improving its quality.—Ferri Carb. Saccharata, F. Citras, F. Citras et Quiniæ, F. Chloroxydum, F. Iodidum, F. Oxidum Magneticum, F. Phosphas, F. Phosph. Co. Syrup (Parrish), F. Perchloridum, F. Redactum, Morrhuæ Oleum.

Mineral Waters.—Adelheidsquelle, Altwasser, Auteuil, Berka, Bocklet, Gastein, Meinberg, Ottilienquelle, Pyrmont, St. Moritz, Spa, Schwalbach, Wildungen.

Eclectic Tonics.—Cornin (stimulant, astringent), Hydrastin and Menispermin (dyspeptic), Cimicifugin and Scutellarin (Nervine sedative).

SECTION B. REMEDIES EMPLOYED IN SPECIAL AILMENTS.

THE FOLLOWING ARE A FEW DISEASES SELECTED FROM DRS. WARING, NELIGAN, AND OTHERS; THEY MAY SERVE IN SOME MEASURE TO REFRESH THE MEMORY WHEN NECESSARY; BUT FOR A FULLER LIST, THE READER IS REFERRED TO THOSE WORKS ON MATERIA MEDICA.

Abdominal Plethora. Fucus Vesiculosus, *Mineral Waters:* Franzensbad, Homburg, Marienbad, Tarasp.

Abscesses. Large. Chlori Liquor.

——— *Chronic.* Sarsæ Radix.

Acne Indurata. Blisters, Creasotum, Hydr. Ammon., Sulphur. Iodidum.

—— *Punctata.* Arsenic, Pix Liquida, Zinci Sulphas.

—— *Rosaceæ.* Arsenic., Amygdal. Mist., Creasotum, Hydrarg. Iodidum Viride, Potassæ Liq., Sulphur.

—— *Simplex.* Ammonii Chloridum, Acid. Hydrocyanic., Borax, Collodion, Ol. Morrhuæ, Potassa Sulphurata, Potassæ Liquor, Sulphur.

—— *Syphilitica.* Hydr. Iodid. Rubr., Hydr. Sulphuratum.

Ague. Arsenicum, Camphor, Ipecacuanha, Salicin.

Albuminuria. Acid. Gallicum, Ergota, Ferri Perchlor. Tinct., Senegæ Rad.

Alimentary Canal, Debility of. Nux Vomica.

Amenorrhœa. Aloes, Ergota, Ferri Phosphas, Ferrum Redactum, Mistura Ferri Co., Myrrha, Rutæ Oleum.

Anæmia.—See *Anti-anemics.*

Anasarca. Digitalis, Elaterium, Potas. Acet., Juniperi Sp., Scilla.

Angina Pectoris. Argenti Nitras, Acid. Hydrocyanic., Belladonna, Zinc. Sulph.

Antaphrodisiac. Camphora, Pot. Bromid.

Appetite to promote. Acid. Sulph. Dil.

Aphonia. Amoraciæ Rad., Pyrethrum.

Aphthous Ulcerations of Mouth. Argenti Nitras, Borax, Myrrha, Potass. Chlor., Quinia.

Apoplexy. Aloes, Croton. Ol., Terebinth. Enema, Hydrarg. Subchlor.

Ascarides.—See *Anthelmintics.*

Asthma. Acid. Hydrocyanic. Dil., Ammon. Fœtid. Spirit., Ammoniacum, Belladonna, Camphor, Cannab. Ind., Chloroformum, Charta Nitrata, Balsam Peruvian, Lobelia, Myrrha, Potass. Bromid., Stramonium, Tabaci Fol.

Baldness. Bals. Peruv., Crinale Linimentum, Crotonis Lin., Rosmarini Infus.

Bed Sores. Argenti Nitras, Acid. Sulphuros., Balsam. Peruv., Collodion, Zinci Oxid. Ung.

Bile deficiency of. Fel Bovinum.

Biliary Calculi. Sapo, Sodæ Bicarb.

Bites of fleas to prevent. Lavand. Ol., Pyrethrum Roseum, Camphora.

Bladder irritable. Belladonna, Camphora, Triticum Repens, Uvæ Ursi, Hyoscyamus, Matico, Acid. Carbolic., Buchu, Pareira Extr. Liq. *Mineral Waters:* Fachingen, Pougues, Langenbrücken, Luhatschowitz.

Bladder, Catarrh of the. See *Catarrhus Vesicæ.*

Blennorrhœa.—See *Gonorrhœa.*

Blood restorers.—See *Tonics.*

Boils. Cerevisiæ Ferment., Mel, Ficus, Ferrum.

Bones, Fracture of. Symphytum.

Bowels, Torpidity of. See *Cathartics.*

——— *Inflammation and Irritation of.* Ricini Oleum.

Brain excited. Potass. Bromid.

——— *Inflammation of.*—See *Meningitis.*

Breath, Fœtor of. Acid. Carbolic., Carbo Ligni, Potass. Chloras, Pepsin.

Bronchocele. Hyd. Iod. Rub. Ung., Iodum, Potass. Bromid.

Bronchitis. Ammon. Carb., Ammon. Liq., Ammon. Chloridum, Ant. Tart., Assafœtida, Copaiba, Cubeba, Chloral, Galbanum, Iodum, Larix, Lobelia,

Pix Liquid., Plumb. Acet., Scilla, Terebinth. Confectio. *Mineral Waters:* Kronthal, Labassère, Landeck, Langenbrücken, Lippspringe, Luhatschowitz, Neuenahr.

Bronchitis, Chronic. Camphor. et Lac, Ipecac., Lobelia, Senega, Serpentaria, Tar water.

Brow Ague. Quiniæ Sulph.

Bruises. Acetum, Arnica, Plumb. Subacet. Dil. Liq., Saponis Linim., Sodii Chlorid., Sp. Vini Rect.

Buboes. Ammonii Chloridum, Chlori Liquor, Hydr. Ung., Iodum.

Bunions. Amadou Plaster.

Burns and Scalds. Acid. Carbolic. c. Oleo, Acid. Sulphuros., Acid. Tannic. c. Oleo., Argenti Nitras, Calcis Liquor, Calcis Chlor. Liquor, Carron Oil, Collodion, Creasotum, Creta Præpar., Gossypium, Lini Oleum, Olivæ Oleum, Sp. Vini Rect., Terebinth. Oleum.

Calculus Renal, passage of. Alchemilla, Opium,, Triticum Repens.

Calculi, Lithic Acid. Ammon. Phos., Borax, Calcis Liq., Lithiæ Carb., Potassa C., Soda C., Sodæ Sulphas.

——— *Oxalate Lime.* Lini Semen.

——— *Phosphatic.* Acid. Nitric. Dil., Pareiræ Extr. Liquid.

Cancer. Acid. Arsen., Acid. Tannic., Antim. Chlorid., Conium, Ferri Arsenias, Hyd. Nit. Acid. Liq., Iodoform, Potass. Permanganas, Zinci Chlorid.

——— *of the Uterus.* Bromine.

Carbuncles. Acid. Carbolicum, Cerevisiæ Fermentum, Hyd. Co. Ung., Potassi Bromidum.

Cardialgia, or Heartburn. Bismuth. Subnitras, Pulv. Doveri.

Catarrh. Ammoniacum, Dulcamara, Lini Semen, Lobelia,, Sp. Æth. Nit., Bals. Peruv., Lichen Island, Cinchon. Cortex, Quiniæ Sulph., Matico, Myrrha, Picis Liquid, Senega.

Catarrhus Vesicæ. Alum, Ammoniæ Benzoas, Buchu, Uva Ursi, Triticum Repens. *Mineral Waters:* Langenbrücken, Pougues.

Chancres. Acid. Nitric., Argent. Nitr., Iodoform, Hydrarg. Nigra Lotio., Hydr. Nitrat. Liq. Acid., Hydr. Ox. Rubr.

Chaps. Cerat. Camphor., Glycerini. Ung.

Chilblains. Alum Poultice, Argenti Nitras, Boracis Ung., Calc. Chlor Liq., Capsici Liniment., Creasotum, Glycerinum.

Chlorosis. Ferri Chlorox., Ferri Perchlor. Tinct., Ferr. Redactum, Myrrha, Nickel Sulphas. *Mineral Waters:* Franzensbad, Rippoldsau.

Cholera. Camphor, Capsicum, Creasotum, Pulv. Salinus Dr. Stevens, Sodii Chlorid., Sumbul, Board of Health Cholera Mixture.

——— *Infantium.* Menth. Pip. Ol., Rheum, Hydr. Chlor., Ol. Ricini.

Chordee. Belladonna, Camphora, Lupulinum, Opium, Potassii Bromid.

Chorea. Argenti Nitras, Arsenic. Liquor, Cerii Oxalas, Chloral, Cimicifugin, Conium, Hyoscyamus, Cupri Sulphas, Ferrum Redactum, Morrhuæ Ol. Nux Vomica, Physostigmatis, Ruta, Valeriana, Zinci Sulphas et Valerianas.

Colic. Cajuputi Oleum, Guarana, Lavand. Oleum, Magnes. Sulph., Menth. Pip. Ol., Opium, Ricini Oleum, Rutæ Ol.

Conjunctiva, Inflammation of. Opii Vinum.

Constipation. Aloes Decoct. Co., Alum, Cambogia, Cassiæ Pulp., Colocynth. Pulp., Croton. Ol., Elaterii Pulv. Co., Ficus, Glycyrrh. Pulv. Co., Iridin, Lactuca, Magnesia, Magnesiæ Sulph., Manna, Mel, Mori Succus, Nux Vomica, Olivæ Ol., Ricini Ol., Rheum, Sapo Castil., Scammonium, Senna, Sinapis Semen, Sodæ Tartarata, Sodæ Phosphas, Sulphur, Tabaci Enema. *Mineral Waters:* Carlsbad, Carlsbad Salt, Friedrichshall, Ofen, Pullna.

——— *of Infants.* Cassiæ Pulp., Glycyrrh. Pulv. Co., Rhei Pulv. Co., Ricini Oleum, Scammon. Pulv. Co., Sennæ Syrupus.

——— *Habitual.* Belladonna.

——— *Obstinate.* Cambogia, Colocynthis, Croton. Ol., Tabaci Enema.

Consumption. Calc. Hypophosph., Camph. Co. Tinct., Ferri Phosp. Co. Syrup., Morrhuæ Ol.,Sacchar. Lactis.

Convalescence, after Debilitating Disease. Acid. Sulph. Dil. Calumba, Cascarilla, Chirata, Cusparia, Quassia.

Convulsions. Ammon. Fœtid Sp., Belladonna, Chloroform, Opium, Rutæ Oleum, Enema Terebinth.

Corns. Acid. Aceticum Glaciale, Ammon. Chlorid., Argent. Nitras, Plumbi c. Sapone Emp.

Coryza. Acid. Tannic., Sodii Chlorid., Zinci Oxidum.

Cough. Acaciæ G., Amygd. Amara, Cetaceum, Codeiæ Syr., Conium, Copaiba, Cubeba, Glycyrrhiza, Ipecacuanha, Lini Semen, Lobelia,

Morphiæ Syr., Morphiæ Troch., Scilla, Styrax Præp.

Cough, Chronic. Benzoin Co. Tinct.

——— *Convulsive.* Belladonna, Stramonium.

——— *Spasmodic.* Acid. Hydrocy. Dil.

——— *Tickling.* Acaciæ Gum, Acid. Phosph. Dil., Morphia, Can. Ind. Tinct.

Cramp. Cannab. Indica

Croup. Cubebæ Oleum, Emetics, Antim. Tart., Cupri Sulph., Ipecac., Lobelia. External, Camph. Linim. Co.

Cutaneous Diseases. Acid. Arsen., Amylum, Antim. Sulphurata. *Mineral Waters:* Achselmannstein (Aix-les-Bains, Eczema), Bagnières-de-Luchon, Croft, Gisland, Ischia, Krankenheil, Kreuznach, Leuk, Nenndorf, Plombières, Schinznach, Schlangenbad, Strathpeffer, Tarasp, Vals, Vernet, Weilbach.

Deafness. Glycerinum, Fel Bovinum.

Debility. Arnica, Calcis Hypophosphis, Cinch. Cortex, Ferrum, Quin. Sulph., Sp. Vini Rect. *Mineral Waters:* Berka, Orezza, Schlangenbad.

——— *of Lungs and Stomach.* Cetraria.

——— *Scrofulous.* Quiniæ Sulph., Quiniæ Dikinatæ Syr.

——— *of Digestive Organs.* Cetraria, Calumba, Caryophyllum, Ferri Phosphas. Syrup. Co., Gentiana, Ignatia Amara, Morrhuæ Ol., Nux Vomica Tinct., Pepsine, Potass. Ferrocyanid., Rhei Infus., Strychniæ Liquor. *Mineral Waters:* Appolinaris, Orezza, Spa, Schwalbach.

Delirium Tremens. Ammoniæ Liquor, Chloral. Hydras, Digitalis, Sumbul.

Diabetes. Acid. Phosphor. Dil., Jordan Almond Cakes, Creasotum, Codeia, Ferri Perchlor. Tinct., Ferri Phosphas, Potass. Permanganas, Uva Ursi. *Mineral Waters:* Carlsbad, Vichy.

Diarrhœa. Acid. Carbolicum, Acid. Tannic., Acid. Sulph. Dil., Belæ Fructus, Bismuthi Subnitras, Calcis Aqua, Calcis Carbolas, Calcis Carbon. Sacch., Camphora, Capsicum, Catechu, Doveri Pulv., Geranin, Granati Cort., Gummi Rubrum, Hæmatoxylum, Kino, Krameria, Opium, Plumbi Acetas, Quiniæ Sulph., Quiniæ Carbolas, Rhataniæ Extr., Rhei Tinct., Ricini Oleum, Serpentaria, Simaruba, Sodii Chlorid., Dr. Steven's Pulvis Salinus, Sumbul.

——— *Chronic.* Cetaceum, Cetraria, Cupri Sulph., Cinchona, Plumbi Acetas, Quiniæ Sulph., Simaruba.

Digestive Organs, Debility of. —See *Debility.*

Diphtheria. Acid. Carbolic., Acid. Hydrochlor., Acid. Sulphuros., Argenti Nitras, Ferri Perchlor. Liq. fort., Potass. Chloras, Potas. Permanganas, Iodi Tinct.

Dropsy. Aconiti Tinct., Ammon. Benzoas, Buchu, Cajuputi Ol., Cambogia, Colchicum, Elaterium, Iodum, Jalapa, Junip. Oleum, Nux Vomica, Parietaria, Potass. Acet., Potas. Iodidum, Potass. Tart. Acid., Rhammi Succus, Scoparium, Sodæ Bicarb., Æth. Nit. Sp.

——— *Hepatic.* Ammon. Chlor., Hydrarg. Subchlor., Taraxacum.

——— *Inflammatory.* Limonis Succus.

——— *Portal.* Ammonii Chloridum.

Dysentery. Acid. Tannic., Belæ Extract. Liquid., Cascarillæ Inf., Cupri Sulph., Cuspariæ Inf., Doveri Pulv., Geranin, Gummi Rubrum, Hæmatoxylum, Ipecacuanha, Lini Decoct., Mudar, Plumb. Acet., Ricini Oleum, Sodæ Chlorin. Liq., Sumbul.

——— *Chronic.* Cetraria, Cusparia, Hæmatoxylum, Plumbi Acet., Plumbi Pil. c. Opio, Rheum, Simaruba, Uva Ursi.

Dyspnœa. Lobelia.

Dysmenorrhœa. Ammon. Acetas, Borax, Senega, Bromides.

Dyspepsia. Aloes, Acid. Hydrocy. Dil., Bismuth. Carb., Buchu, Calcis Liq., Capsici Tinct., Carbo. Ligni, Cascarillæ Inf., Cetraria, Ferrum, Ferri Phosph., Geranin, Hæmatoxylum, Limon, Magnesia, Menispermin, Nux Vomica Ext., Pepsine, Potass. Liquor, Pot. Bicarb., Pot. Sulph., Quassia, Rheum, Salicinum, Sapo Durus, Senna, Serpentaria, Sodæ Liq., Sodæ Chlorin. Liq. Zingiber. *Mineral Waters:* Alet, Charlottenbrunnen, Dinsdale, Ems, Homburg, Orezza, Vals.

——— *Atonic.* Acid. Sulph., dil. Anthem. Inf., Armoracia, Calumba, Camphor, Capsicum, Catechu, Potas. Ferrocyan., Gentiana, Hæmatoxylum, Pepsine, Pip. Nig.

——— *Irritative.* Bismuth. Subnitras, Cerii Oxalas.

——— *Chronic.* Aloes, Morrhuæ Ol., Pepsine.

Eczema. Acid. Carbolic., Acid. Tannic. Glycer., Creasotum Ung., Glycerinum, Hydr. Ammon., Sodæ Arsenias.

——— *Chronic.* Ferri Arsenias.

Elephantiasis. Ferri Arsenias.
Epidermis, to dissolve. Borax.
Epilepsy. Ammon. Bromid., Argenti Nitras, Castoreum, Cerii Oxalas, Cupri Sulphas, Potass. Bromid., Quiniæ Sulphas, Strychnia, Zinci Sulph., Zinci Valerianas, Valeriana.
Eructations Fœtid. Carbo Ligni, Acid. Carbolic., Pepsine.
Eruptions Chronic. Potassa Sulphurata.
——— *Scrofulous and Venereal.* Hyd. Iodid. Viride.
——— *Pustular, to produce.* Croton. Oleum, Antim. Tartarata.
Erysipelas. Amyli Glycer., Amylum, Cinchona, Collodion, Creasotum, Creta, Lycopodium, Quiniæ, Sp. Vini Rect.
Excitement, Nervous, to quiet. Moschus, Sumbul, Potassii Bromidum.
Excoriations. Alum, Amylum, Boracis Glycerinum, Fullers' Earth, Glycerini Ung., Plumbi Carb., Zinci Oxid.
Expectoration, Fœtid. Potass. Permanganas, Chlorinum.
——— *to diminish.* Aconitum, Cetraria, Larix, Quinine.
Evacuations, Fœtid. Potas. Permangan., Sodæ Chlor. Liq.
Eyes, Application for the. Chloroformi Vapor, Lapis Divinus, Cydon. Decoct., Hyd. Iod. Rub. Ung., Hyd. Nitrat. Ung., Opii Vinum.
—— *to contract pupil of.* Physostigmat. Faba.
—— *to enlarge pupil of.* Belladonna, Atropia.

Face Lotion. Benzoin, Hydr. Perchloridum c. Amygdal. Mist.
Fainting. Ether.
Feet perspiring. Acid. Carbolic., Potas. Permanganas, Zinci Oxid. Unguentum.
Fever. Ammon. Acetas., Ammon. Citras, Æther. Muriat. Sp., Potassæ Chloras, Potas. Tart. Acid.
—— *hay.* Camphora, Cannab. Ind., Lobelia Inflata.
—— *bilious.* Cuspariæ Cortex.
—— *intermittent.* Arsenicalis Liquor, Capsici Tinct., Cuspar. Cort., Quassia, Quinia.
——— *of Drunkards.* Piper Nigrum.
—— *puerperal.* Ammonia, Menth. Pip. Ol., Opium.
——— *remittent.* Cinchona, Beberiæ Sulph., Quiniæ Sulph.
—— *scarlet.* Castorei Tinct., Capsici Tinct.
—— *typhoid.* Acid. Nitr. Dil., Ammon. Liq., Amyli Enema, Argent. Nitr., Chlori Liq., Cusparia, Serpentaria, Sumbul Tinct., Belladonna.
Flatulence. Æther, Aloes, Anethum, Anisum, Assafœtida, Capsicum, Carbo. Ligni, Caryophyllum, Lavand. Oleum, Menthæ Pip. Ol., Menthæ Virid. Ol., Piper Nigrum, Zingiber.
——— *Colic.* Cajuputi Ol., Carui Fructus.
——— *hysteric.* Assafœtidæ Tinct.
——— *infantile.* Fœniculi Fructus.
Fleas to keep away. Camphora, Pyrethrum Roseum.
Flooding. Ergota, Vincæ Major. Ext.
Flies and gnats to keep away. Rutæ Ol., Tereb. Ol.
Freckles. Calcis Lin., 8; Ammon. Liq. 1: mix.
Fungous Flesh. Alumen Exsiccatum, Cupri Sulphas.

Gall Stones. Sapo Durus.
Gangrene. Baptisin.
——— *senile.* Chloroformum.
Gargle, astringent. Acetum, Alum, Gummi Rubrum, Krameria, Rosæ Inf. Acid.
——— *for Putrescence.* Acid. Carbolic., Potas. Permangan., Sodæ Chlorinat. Liq.
Gastralgia. Æther, Argenti Nitras, Manganesii Oxid. Nig., Pepsine.
Gastric Irritation. Potass. Acetas, Bismuth. Ammonio-Citras.
Gastrodynia. Acid. Hydrocy. Dil., Aconitum, Calumba, Cerii Oxalas, Manganesii Oxid. Nig., Stramonium.
Generative Organs, loss of tone. Belladonna, Nux Vomica.
——— *sedative of.* Potass. et Ammon. Bromid.
Glands, scrofulous. Fucus Vesiculosus, Iodum, Ol. Morrhuæ.
——— *indurated.* Cadmii Iodid., Potass. Iodidum, Potass. Iodid. Linim.
Glandular diseases. Calcii Chlorid. Siccum, Sodæ Bicarb.
——— *enlargements.* Ammon. Chlorid., Croton. Oleum, Ammoniaci c. Hydrarg. Emp., Hydrarg. c. Ammoniæ Mur. Ung., Iodi Linim.
Gleet. Bals. Peruvianum, Cantharis, Copaiba, Creasotum, Galla, Ferri Perchlor. Solutio, Piper Nigrum, Zinc. Acet.
Gonorrhœa. Acid. Tannic., Bals. Canadensis, Copaiba, Creasotum, Cubeba, Hyd. Nit. Acid. Liq., Plumbi Acetas, Potass. Bicarb., Potass. Permang., Santal Flav. Ol., Styrax Præparata, Zinci Acetas, Z. Sulph., Z. Chlorid., Z. Sulphocarbol.

Gonorrhœa, Chronic. Acid. Tannic. Injectio, Alum, Cannab. Indic., Cubebæ Tinct.

Gout. Ammoniæ Benzoas, Ammoniæ Phosphas, Cajuputi Ol., Colchicum, Crotonis Oleum, Hyoscyamus, Lithiæ Carbonas, Lithiæ Citras, Magnesia, Potass. Citras, Sabina, Sodæ Carbonas, Veratrum Viride. *Mineral Waters:* Adelheidsquelle, Aix-les-Bains, Buxton, Carlsbad, Eilsen, Franzensbad, Marienbad, Nenndorf, Neuenahr, Ofen, Plombières, Soden, Strathpeffer, Tarasp, Toeplitz, Vichy, Wiesbaden, Wildbad.

—— *painful.* Hyoscyamus, Colchici Extr. c. Pulv. Doveri.

Gravel. Potass. Citras., Potas. Bicarb.

Gums inflamed. Krameriæ Tinct.

—— *spongy.* Gummi Rubri Tinct., Myrrhæ Tinct., Potass. Chloras, Quercus Decoct.

Hair falling off. Crinale Linimentum, Crinalis Lotio, Crotonis Linim.

Hay Fever. Belladonna, Camphora, Cannab. Ind., Lobelia Inflata, Stramonium.

Hæmaturia. Acid. Sulph. Dil., Acid. Tannic., Alumen, Galla, Ipecac., Matico, Plumbi Acet., Zincum.

Hæmorrhage. Acid. Gallic., Acid. Tannic., Alumen, Argenti Oxidum, Catechu, Colloid Styptic, Galla, Matico, Plumbi Acetas., Sp. Terebinth.

———— *internal.* Cinnamomum, Creasotum.

———— *local.* Acid. Gallic. Glycer.

———— *passive.* Ferri Perchlor., Hæmatoxylum, Krameria.

———— *pulmonary.* Ergota, Plumb. Acet.

———— *Uterine.* Acid. Tannic., Cannab. Indic., Ergota, Limonis Succus.

Hæmorrhoids. Gallæ Ung., Picis Pilulæ et Capsulæ, Piper Nigrum, Sulphur.

Hæmoptysis. Galla, Digitalis, Plumb. c. Opio Pil.

Headache, bilious. Hyd. Subchlorid., Ammon. Liq., Menth. Pip. Ol.

———— *nervous.* Potas. Bromid., Rosmarini Oleum, Ammon. Aromat. Spirit.

———— *sick.* Guarana, Magnesia, Potass. Ferrocyanid.

Heartburn. Bismuthum, Doveri Pulvis, Magnesiæ Carb., Sodæ Bicarb.

Heat of Surface. Acetum, Acid. Phosph. Dil.

Hectic Sweating. Acetum, Acid. Gallic.

Hepatitis. Ammon Chlorid., Hyd. Subchlorid.

Hernia, strangulated. Chloroform, Enema Tabaci.

Herpes. Ferri Arsenias, Glycerinum, Hydrargyrum Ammoniatum, Ulmi Decoctum, Zincum.

Hooping Cough. Belladonna, Coccus, Conium, Potassii Bromid., Succini Ol., Trifolii Syr.

Hypochrondria. Cypripedin, Lavand. Oleum. *Mineral Water:* Homburg.

Hysteria. Ammon. Carb., Ammonii Bromid., Assafœtida, Cajuputi Ol., Castoreum, Lavand. Ol., Potass. Bromid., Rosmarini Ol., Rutæ Ol., Terebinthinæ Ol., Valeriana Radix. Zinci Valerianas. *Mineral Waters:* Homburg, Lippik, Spa.

Hysteric Nausea. Creasotum.

———— *Flatulence.* Assafœtidæ Tinct., Galbanum

Hydrocele. Inject ʒss. Tinct. Iodine mixed with ʒiss. water.

Hydrocephalus. Hydr. Subchloridum.

Impetigo. Hydrargyrum Ammon.

Incontinence of Urine. Acidum Benzoic., Buchu, Ergota.

Indigestion, Atonic. Gentiana, Ignatia, Pepsine. *Mineral Waters:* Orezza, Vals.

Influenza. Ammon. Liq. Acetat., Antim. Tart., Sp. Æther Nitr.

Insects, to keep away. Camphor, Lavand. Oleum, Pyrethrum Roseum, Terebinth. Oleum.

Insomnia.—See *sleeplessness.*

Intermittents.—See *fever.*

Intermittent with drunkards. Piper Nigrum.

Iritis. Belladonna, Hydrarg. Subchlor., Hyoscyamus, Quinia.

Irritation, Nervous. Cannabis Indica.

Issues, to keep open. Elemi Ung., Sabinæ Ung.

—— *to heal.* Cetacei Ung., Adeps Benzoat.

Itch.—See *scabies.*

Itching of Skin, to allay. Acid. Hydrocy. Dil., Hydr. Oxidi Rub. Ung., Sodæ Carbonas.

Jaundice. Hyd. Subchlorid., Potassæ Sulphas, Sapo Durus, Taraxacum.

Joints, Diseased / —— *Enlarged* / —— *Indurated* — Ferri Iodidum, Iodum, Morrhuæ Oleum, Potass. Iodid., Veratria Ung., Potass. Iodid. Linim.

Kidneys Disordered. Buchu, Dulcamara,

Mezereum, Pareira, Terebinth. Ol., Uvæ Ursi. *Mineral Waters:* Fachingen, Kissengen, Leuk, Malvern, Shap, Vichy.

Kidneys, hæmorrhage from. Acid. Gallic., Iron alum.

Larynx, relaxed. Ammon. Bromid. Gargarisma.

Lead, Poisoning by. Iodum. *Mineral Water:* Weilbach.

Leech bites, to stop. Alum, Argent. Nitr., Ferri Perchlor., Ferri Chloroxid., Matico.

——— *to dislodge if swallowed.* Sodii Chlorid.

Lepra. Acid. Carbolic., Arsenici Iodidum, Dulcamara, Glycerinum, Picis Ung., Potass. Sulphurata.

Leucorrhœa. Acid. Carbolic., Acid. Gallic., Acid. Tannicum, Alumen, Calcis Sulpho-Carbolas, Catechu, Ferri Pernit. Liquor, Galla, Granati Cort., Gummi Rubrum, Krameria, Potass. Iodid., Quercus Cort., Santal Flav. Oleum, Sodæ Sulpho-Carbolas, Styrax Præparatus, Zinci Sulph., Zinci Sulpho-Carbolas. *Mineral Waters:* Kreuznach, Wildungen.

Lice, to destroy. Hydrarg. Ammoniat., Hyd. Perchlor., Olivæ Oleum, Hydr. Oleatum.

Lichen. Ferri Arsenias, Glycerinum.

Lips, cracked. Bals. Peru.

Lithiasis. Mineral Waters: Vals, Vichy.

Liver, Obstructions of. Acid. Nitro-Hydrochlor. Dil., Chlori Liquor, Hydrargyrum, Podophyllin, Potass. Bromid., Potass. Nitras, Taraxacum. *Mineral Waters:* Aix-la-Chapelle, Carlsbad, Ems, Friedrichshall.

——— *Enlarged.* Acid Nitro-hydrochloric, Conium, Potass. Bromidum.

——— *Torpidity of.* Podophyllin, Potass. Nitras, Sapo Durus, Taraxacum.

Lumbago. Aconitum, Belladonna, Lin. Bellad. et Chloroformi, Pix Burgundica Empl., Quiniæ Sulphas.

Lupus. Ferri Arsenias.

Mania. Cannabis Indica, Ergota, Potass. Bromidum.

Measles. Acid. Carbolic.

Melæna. Hydrarg. Subchloridum.

Meningitis, Acute. Antim. Tart., Hydr. Subchloridum, Digitalis, Purgatives, (Ice externally).

Menorrhagia. Alum, Beberiæ Sulphas, Ferri Pernitratis Liquor, Galla, Krameria, Uvæ Ursi, Vincæ Major. Ext. Fluid.

Menstruation, Defective. Ferrum, Myrrha.

——— *Painful.* Ergota et Hyoscyam.

Midges, to keep away. Tereb. Ol.

Milk Secretion, to increase. Fæniculum, Ricini Fol. Decoctum.

Mucus Discharges. Cantharis, Copaiba, Catechu, Cupri Sulph., Galla, Hydr. Perchlor., Iodum, Krameria, Plumbi Acet., Sodæ Chlor. Liquor.

——— *Membrane, Inflammation of.* Althæa Rad., Glycyrrhizæ Rad., Lini Semen. Apollinaris Water.

Nausea. Æther, Caryophyllum, Menthæ Pip. Oleum.

——— *in Hysteria.* Creasotum.

——— *in Pregnancy.* Cerii Oxalas, Creasotum, Pepsine.

Nervousness. Ammonii Bromid., Assafœtida, Camphor, Cantharis, Castoreum, Cimicifugin, Humulus, Lavand. Tinct. Co., Moschus, Sodæ Arsenias, Sodæ Hypophospis, Valeriana, Zinci Valerianas.

Nervous Irritation. Camphora, Cannabis Indica.

——— *System Excited.* Ammon. Bromidum, Hyoscyamus.

——— *Debility.* Phosphorus. Gastein Water.

Neuralgia. Acid. Sulphuros., Aconiti Lin., Actæa Racemosa, Ammon. Bromidum, Ammon. Chlorid., Arsenicum, Atropiæ, Solut. hypodermically, Belladonnæ Lin., Camphoræ Lin., Camphor. Lin. Co., Cannabis Indica, Cinchona, Conium, Crotonis Liniment., Ferrum, Ferri Oxid. Magnet., Gelsemin, Iodoform, Menth. Pip. Oleum, Papaveris Decoctum, Quiniæ Sulph., Q. Dikinat. Scutellarin, Sinapis Cataplasma, Veratriæ Ung., Veratrum Viride, Zinci Valerianas.

Nipples, Sore. Argenti Nitras, Bals. Peru., Boracis Ung., Sodæ Chlorinatæ Liq.

Nocturnal Emissions. Belladonna, Ferri Bromidum.

Nodes, Syphilitic. Emp. Ammoniaci c. Hydrarg., Hyd. Iodid. Rub. Ung.

Nymphomania. Potass. Bromidum.

Obesity. Fucus Vesiculosus.

Ophthalmia. Alumen, Ammoniæ Acetas, Opium, Ung. Hyd. Nit. Dil., Zinci Acetas, Zinci Sulphas.

Ozæna. Acid. Carbolic., Potass. Permanganas, Sodii Chloridum.

Paralysis. Belladonna, Ergota, Nux

Vomica. *Mineral Waters:* Aix-la-Chapelle, Baden-Baden, Eilson, Kreuznach.

Paralysis of Lead Poisoning. Strychnia.

——— *of the Tongue.* Pyrethrum.

Paraphlegia. Cantharis.

Pediculi. Adeps Præpar. Hyd. Ammon. Ung., Sabadilla.

Pericarditis. Charta Epispastica.

Perspiration, profuse. Acetum, Acid. Sulph. Dilut.

——— *Fœtid.* Acid. Carbolic. Glycer., Plumbi Oxid. Ung., Zinci Oxid. Ung.

Phagedenic Sores. Acid. Carbolic, Acid. Nitricum.

Phthisis. Acid. Carbolic., Aconiti Tinc., Cajuputi Lin., Calcis Hypophosphis, Camph. Co. Tinct., Conium, Morrhuæ Oleum, Plumbi Acetas, Saccharum Lactis.

——— *Chronic.* Iodum.

Piles.—See Hæmorrhoids.

Pityriasis, Versicolor. Dulcamara, Glycerinum, Borax.

Placenta, Expulsion of. Borax, Ergota.

Plethora. Mineral Water: Homburg.

Pleuritis. Cantharis, Crotonis Linim., Hydrarg. Subchlor, Potassæ Liquor.

Pneumonia. Ammon. Liquor, Antim. Tartarata, Cantharis. Æther. Nitr. Sp., Plumbi Acetas.

Porrigo. Hydrarg. Nit. Ung., Hydrarg. Ammon. Ung., Hyd. Perchlor. Ung.

Pregnancy, Nausea of. Creasotum, Calcis Sacchar. Liquor, Cerii Oxalas, Pepsine, Potass. Acetas.

Prolapsus Ani. Acid. Gallic, Alum Sulph., Cupri Sulph., Gummi Rubr. Extr. Liq., Krameriæ Rad., Suppositoria.

———*Uteri.* Querci Cort. Decoct.

Prostate, Disease of. Buchu.

Prostration. Moschus, Spirit. Vini Gallici Mistura.

Prurigo. Glycerinum, *genitalium,* Cupri Sulph., *Senilis,* Staphisagria.

Pruritus Ani. Plumb. Carb. Ung.

——— *Pudendi.* Argent. Nitr. Solut. 2 grs. to the ℥j.

——— *Scroti.* Limonis Succus.

Psoriasis. Acid. Carbolic., Dulcamara, Saponis Emp., Glycerinum, Ferri Arsenias, Picis Unguent., Potass. Arsenitis, Potassa Sulphurata, Soda Subcarb. Solut.

Pulmonary Chronic Affections. Pix Burgundica. *Mineral Waters:* Charlottenbrünnen, Clifton, Kronthal, Moffat, St. Moritz, Weilbach.

Pupil, to Dilate. Belladonna, Atropia.

Pupil, to Contract. Opium, Physostigmatis Extractum.

Pyemia. Potassæ Sulphis.

Pyrosis. Acid. Gallic., Bismuthi Subnitras, Catechu, Cerii Oxalas, Kino, Manganesii Oxid. Nigrum.

Retention of Urine.—See Urine.

Rheumatism. Acid. Arsen., Actæa Racemosa, Ammon. Chlorid., Ammon. Phosphas, Belladonnæ Compositum Lin., Cimicifugin, Chloroform, Camphoræ Lin., Colchicum, Crotonis Linim., Lithiæ, Citras, Mezereum, Opii Liniment., Phytolaccin, Pini Sylv. Ol., Potass. Liquor, P. Acetas, P. Bicarbonas, P. Citras, P. Iodidum, Veratrum Viride. *Mineral Waters:* Adelheidsquelle, Aix-les-Bains, Alexandersbad, Baden-Baden, Baréges, Bath, Berka, Buxton, Eilsen, Franzensbad, Ischia, Langenbrücken, Nenndorf, Neuenahr, Ofen, Plombières, Schinznach, Toeplitz, Wildbad, Woodhall.

——— *Acute.* Aconitum, Limonis Succus, Potass. Acet. et Bicarb., Colchicum, Pulv. Doveri.

——— *Chronic.* Acid. Arsenios., Antim. Sulphurata, Armoracia, Bals. Peru., Colchicum, Conium, Buchu, Cajuputi Ol., Dulcamara, Guaiacum, Iodum, Camph. Co. Lin., Morrhuæ Oleum, Pix Burgundica, Potassæ Liquor, Syr. Quiniæ Hydriod., Sabina, Sarzæ Rad., Sassafras, Serpentaria, Sodii Iodid., Sulphur, Chelsea Pensioner, Terebinth. Oleum, Iodoform. *Mineral Waters:* Baréges, Berka, Franzensbad, Lucca, Ofen, Toeplitz, Wiesbaden.

——— *painful.* Belladonna, Hyoscyamus.

Rickets, Rachitis — Acid. Phosphor. Dil., Calcis Aqua, Calcis Phosphas, Creta Præparata, Ferri Phosphas, Morrhuæ Oleum, Parrish's Syrup.

Ringworm. Cantharis, Creasoti Ung.

Salivation to Produce. Hydrarg. Linimentum, Hydr. Iodid. Vir.

——— *Obstinate.* Creasotum.

Salivary Glands, Stimulant of. Pyrethrum, Armoracia.

Sarcina Ventriculi. Acid. Sulphuros. Sodæ Sulphis, Sodæ Hyposulphis.

Scabies. Acid. Carbolic., Adeps Præparatus, Ammonii Chloridum, Calcis Chlorin. Liq., Hydrarg. Ammoniatum, Potass. Sulphurata, Sabinæ

Succus, Sulphocarbolates, Sulph. Co. Ung., Sulph. Ung.
Scalds. Acid. Carbolic. c. Oleo, Acid. Sulphuros., Linim. Calcis, Lini. Oleum, Sp. Vini Rect.
Scald Head.—See *Tinea Capitis.*
Scarlatina. Acid. Carbolic., Chlori Liquor, Potass. Chloras, Sodæ Chlorinat. Liquor.
Sciatica. Aconiti Lin. Iodoform, Bellad. Lin. Comp., Opium.—See also *Rheumatism.*
Scorbutic Affections. Sassafras.
Scrofula. Calcis Phosphas, Creta Præparata, Ferri Iodid., Fucus Vesiculosus, Hyd. Iod. Rub., Hyd. Iod. Virid., Hyd. Subchlor., Iodum, Mezereum, Morrhuæ Oleum, Potass. Bromid., Potass. Liquor, Pot. Bicarb., Quin. Sulph., Sodæ Bicarb., Sodæ Hyposulphis, Sodii Iodid. *Mineral Waters:* Adelheidsquelle, Kœnigsdorff, Kosen, Krankenheil, Kreuznach, Luhatschowitz, Reichenhall, St. Moritz, Soden, Strathpeffer, Vals, Woodhall.
Scurvy. Potass. Citras, Limonis Succus, Sassafras Radix.
Scybola. Scammonium.
Sea Sickness. Camphor, Capsici Tinct., Chloroformum, Creasotum.
Serous Inflammation. Hyd. Subchlor., Potassæ Liquor.
Sickness, to arrest. Acid. Carbolic., Acid. Hydrocy. Dil., Calcii Chlorid., Calcis Saccharatus Liquor, Menth. Pip. Oleum.—See also *Vomiting.*
——— *in Pregnancy.* Cerii Oxalas, Pepsine.
Skin Abraded. Collodion.—See *Excoriation.*
—— *Cracks in.* Cydonii Decoct.
—— *Diseases of.* Boracis Unguentum, Calcis Chlorinat. Liq., Huile de Cade, Sodæ Arseniatis Liquor, Balneum Alkalinum, Picis Unguentum.
—— *Chronic diseases of.* Acid. Arseniosum, Bismuthi Subnitras, Glycerinum, Hyd. Nit. Ung., Hydrarg. Perchlor., Hyd. Iodid. Viride, Hydrarg. Iodid. Rub., Hyd. Oxid. Flav., Hydrarg. Subchlor., Iodum, Potass. Liquor, Sodæ Arsenias, Sulph. Iodid. Ung.—See also *Cutaneous diseases.*
—— *Venereal.* Mezerei Radix, Sarzæ.
—— *Parasitic.* Sodæ Hyposulphis.
———— *Lichens.* Acid. Sulphurosum.
—— *Squamous.* Creasotum, Dulcamara, Ferri Arsenias.
—— *Irritable.* Acid. Citric., Amylum, Glycerin. Amyli, Carbon. Deterg. Liq.
Skin, Itching of. Acid. Hydrocy. Dil., Amygd. Amaræ Mist.
—— *Tender.* Chloroformi Linimentum
Sleeplessness. Ammon. Bromid., Chloral Hydrate, Cannab. Indica, Hyoscyamus, Humulus, Morphiæ Bimeconatis Liquor, Potass. Bromidum.
Small Pox. Acid. Carbolic., Chlori Liq., Potassæ Chloras.
Sores, Bed.—See *Bed sores.*
—— *Cancerous.* Chlori Liquor, Iodoform, Hydr. Oxid. Rub.
—— *Gangrenous.* Alum, Ferri Perchlorid., Potas. Permang., Sabinæ Succus.
—— *Irritable.* Sambuci Flor. Ung., Sambuci Viride Ung.
—— *Malignant.* Zinci Chlorid.
—— *Putrid.* Acid. Carbolic., Carbo Ligni.
—— *Venereal.* Hydr. Subchlor. Lotio Nigra.
Sore Nipples. Argenti Nitras, Bals. Peru., Borax, Ferri Sulph. Solut., Sodæ Chlorin. Liq.
—— *Throats.* Cubeba, Gummi Rubrum, Mori Syrup., Myrrha, Potass. Nitras, Potass. Chloras, Rosæ Infus.
—— ——— *Malignant.* Argent. Nitras, Capsicum, Chlori Liquor.
—— ——— *Putrid.* Acid Carbolic, Potass. Permang., Chlori Liquor.
—— ——— *Relaxed.* Alum, Capsicum, Gummi Rubri, Krameria.
—— ——— *Ulcerated.* Acid. Hydrochlor. Dil., Hydrarg. Perchlorid.
Spasmodic Cough. Acid. Hydrocy. Dil.
Spasms. Sinapis Cataplasma, Valeriana.
——— *Abdominal.* Assafœtida, Menthæ Piper. Oleum.
Spleen, enlargement of. Arsenicalis Liquor, Ferri Sulphas, Ferrum Redactum, Potass. Bromid., Quinia.
Sprains. Acetum, Plumbi Subacet. Dil. Liquor, Arnica, Sodii Chlorid., Sp. Vini Rectif.
Stings. Ammoniæ Liquor, Ipecacuanha, Sodæ Bicarbonas.
Stomach, Debility of. Pruni Virg. Syrup, Aurantii Tinctura.
——— *Cramp in.* Æther.
——— *Weak.* Cinchona.
——— *Irritability of.* Bismuthum, Anthemis Flor., Saccharum Lactis.
Suppurating Surfaces. Acidum Carbolicum, Zinci Sulph. Fusum.
Suppuration, to Promote. Sabinæ Ung.
Sweating, Hectic. Acetum, Acid. Gallic. Acid. Sulph. Dil.

Synovitis, Chronic. Emp. Ammon. c. Hydrarg.
Syphilis. Conium, Corydalin, Ferri Iodidi Syr., Hyd. Subchlor., Hyd. Iod. Rub., Hyd. Iod. Virid., Hyd. Perchlor, Iodum, Mezereum, Potass. Iodid., Potass. Liquor, Sarzæ Rad., Sassafras, Sodæ Bicarbonas, Sodæ Hyposulphis, Sodii Iodid. *Mineral Water:* Kreuznach.
Syphilitic Nodes. Hydrargyrum, Hyd. Iod. Rub. Ung., Ammon. c. Hydr. Emp., Hyd. Nitr. Acid. Liq.
——— *Warts.* Acid. Acet. Glaciale, Acid. Nitricum, Cupri Sulphas.

Tabes Mesenterica. Morrhuæ Oleum.
Tape Worm.—See *Anthelmintics.*
Tetanus. Aconitum, Cannabis Indica, Physostigmat. Faba.
Tetter. Picis Ung.
Thirst, to allay. Acid. Citric, Acid. Phosphoric.
Throat, Relaxed. Acid. Tannic., Alumen, Argent. Nitras., Capsicum, Gummi Rubrum.
——— *Fœtid.* Acid. Sulphuros. Spray.
——— *Sore.* Acid. Carbolic., Sod. Chlorinat. Liq., Potassæ Chloras. —See also *Sore Throat.*
Tic Douloureux. Ferri Oxid. Magnet., Ferri et Quin. Citras.
Tinea Capitis. Arsenici Iodidum, application; Acid. Acetic., Acid. Carbolic. Antim. Tart., Cupri Sulph., Picis Ung.,
——— *Favosa.*—See *Porrigo.*
Tonsilitis. Acid. Carbolic.
Tonsils, Relaxed. Cupri Sulphas, Zingiber.
——— *Ulceration of.* Iodi Gargarisma.
Toothache. Ammon. Liq. Fort., Cajuputi Oleum, Capsici Lin., Caryophylli Oleum, Chloroform. c. Camphora, Creasotum, Pyrethrum, Quiniæ Ammon. Liq.
Tubercles, Syphilitic. Hydrarg. Nit. Acid. Liquor.
Tuberculosis. Pil. Hyd. Biniodidi, Pil. Hyd. Perchlor. c. Aconit. *Mineral Waters:* Achselmannstein, Kreuznach, Lippspringe, Ottilienquelle, Reichenhall, Soden.
Tumours, Indolent. Ammon. Chlorid., Ung. Hydrarg. Co.
——— *Malignant.* Acidum Nitricum, Potass. Caustica.
——— *Painful.* Humulus, Hyoscyamus.
Typhoid Fever. Acid. Hydrochloric, Ammon. Liquor, Amyli Enema, Chlori. Liquor, Cerevisiæ Fermentum, Sumbul Radix, Serpentariæ Rad. —See *Fever.*
Typhoid state of system. Arnica.
Typhus. Acid. Nitric. Dil., Baptisin, Potass. Bromid., Potass. Chloras, Rhei Radix, Serpentariæ Radix, Sumbul Rad., Sodæ Chlorin. Liq.

Ulcerations. Zinci Oxidum.
Ulcers. Argenti Nitras, Calcis Chlorinatæ Liq., Collodium, Creta Præparat., Cupri Sulphas, Mel, Plumbi Acetas, Plumbi Carb., Resina Emp., Sabina, Zinci Sulphas, Zinci Ox. Ung.
—— *Cancerous.* Ferri Arsenias.
—— *Foul or Fœtid.* Carbo Animal. Purif., Chlori. Liq., Calx Chlorata, Potass. Permanganas.
—— *Indolent.* Bals. Peruv., Benzoini Co. Tinct., Hydrarg. Lin., Kino Pulv., Resinæ Ung., Sabinæ Ung.
—— *Malignant.* Potassa Caustica.
—— *Painful.* Hyoscyamus.
—— *Sloughing.* Chloroform.
—— *Syphilitic.* Hyd. Nit. Acid. Liquor.
Urine, Uric Acid in. Ammon. Phosphas, Borax, Calcis Liq., Lithiæ Citras, Potass. Bicarb., Sodæ Bicarbonas, Sodæ Sulphas. Vichy Water.
—— *Red Gravel.* Buchu, Potass. Bicarb., Potass. Citras.
—— *Phosphatic.* Acidum Phosphoric. Dilut., Ammon. Benzoas.
—— *Incontinence of.* Acid. Benzoic., Ergota.
—— *Retention of.* Belladonna, Buchu, Tabaci Enema.
—— *Nocturnal Incontinence.* Benzoinum, Chloral.
—— *Putrid.* Acid. Carbolic., Creasotum.
Uterine Hæmorrhage. Acid. Tannic., Limonis Succus.
——— *or Vesical Catarrh.* Arsenic, Potass. Chloras, Triticum Repens, Matico.
Uterus, to Contract. Borax, Cannab. Indic., Ergota.
Uvula, Relaxed. Catechu, Zingiber, Capsicum, Gummi Rubrum, Krameria, Pyrethrum, Rosa Inf. Acid.
Vermifuge.—See *Anthelmintics.*
Vesical Irritation. Doveri Pulv., Hyoscyamus.
Vomit, Black. Capsicum.
Vomiting, to allay.—See *Antemetics.*
——— *in Pregnancy.* Cerii Oxalas, Calcis Saccharat. Liquor.

Warts. Acid. Acetic. Glaciale, Acid. Nitric., Ammonii Chlor., Argenti Nitras., Sabina.
—— *Syphilitic.* Cupri Sulph., Hyd. Iod. Rub. Ung., Hyd. Nit. Acid. Liquor, Sabina.
Wax, indurated. Fel. Bovinum.
Whites.—See *Leucorrhœa.*
Whooping Cough. Ammon. Bromid., Acid. Nitric. Dil., Belladonna, Chloral, Cocci Mistura, Succini Lin., Trifolium Syrupus.
Worms, Ascarides, Tape, and Round Worms.—See *Anthelmintics.*
Wounds. Collodium Flexile, Glycerinum, Resinæ Emplastrum.
——— *Lacerated.* Acid. Carbolic. c. Oleo, Acid. Sulphurosum.

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