The dispensatory of the United States of America / by George B. Wood and Franklin Bache.

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PHARMACOPŒIA

OF THE

UNITED STATES.

THE

PHARMACOPŒIA

OF THE

UNITED STATES OF AMERICA.

BY AUTHORITY OF THE

NATIONAL MEDICAL CONVENTION,

HELD AT

WASHINGTON,

A. D. 1850.

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HISTORICAL INTRODUCTION.

THE Medical Convention for revising the Pharmacopœia of the United States, in pursuance of a resolution of the preceding Convention of 1840, met at Washington on Monday the 6th of May 1850, the following delegates being present:—JOSEPH MAURAN, M.D., from the Rhode Island Medical Society; JAMES BRYAN, M.D., from the Geneva Medical College; Messrs. JOHN MILHAU and GEO. D. COGGESHALL from the College of Pharmacy of the city of New York; LEWIS CONDICT, M.D., and WM. A. NEWELL, M.D., from the Medical Society of New Jersey; JOSEPH CARSON, M.D., HENRY BOND, M.D., and FRANCIS WEST, M.D., from the College of Physicians of Philadelphia; GEO. B. WOOD, M.D., and JAMES B. ROGERS, M.D., from the University of Pennsylvania; FRANKLIN BACHE, M.D., from the Jefferson Medical College of Philadelphia; HENRY S. PATTERSON, M.D., from the Medical Faculty of the Pennsylvania College; CLINTON G. STEES, M.D., from the Medico-Chirurgical College of Philadelphia; Messrs. DANIEL B. SMITH, CHARLES ELLIS, and WILLIAM PROCTER, JR., from the Philadelphia College of Pharmacy; ISAAC JUMP, M.D., and J. W. THOMSON, M.D., from the Medical Society of Delaware; DAVID STEWART, M.D., and JOSHUA COHEN, M.D., from the Medical and Chirurgical Faculty of Maryland; J. C. HALL, M.D., and HARVEY LINDSLY, M.D., from the Medical Society of the

District of Columbia; JOSHUA RILEY, M. D., THOMAS MILLER, M. D., and EDWARD FOREMAN, M.D., from the National Medical College of the District of Columbia; JAMES WYNNE, M.D., and S. D. GALE, M.D., from the Medical Department of the National Institute, D. C.; F. HOWARD, M.D., from the Georgetown Medical College; and G. N. FITCH, M.D., from the Rush Medical College of Illinois. The credentials of delegates from the New Hampshire Medical Institution, the University of Buffalo, the Medical Department of Hampden-Sidney College, the Medical Society of South Carolina, the Medical College of Ohio, the Cincinnati College of Pharmacy, the Missouri Medical Society, the Wisconsin State Medical Society, and the Medical Faculty of the University of Iowa, were presented by Dr. Wood, Vice-president of the Convention of 1840; but these delegates did not make their appearance during the session.

The Convention was organized by the appointment of GEORGE B. WOOD, M. D., of Philadelphia, President; JOSEPH MAURAN, M. D., of Providence, R. I., and T. Y. SIMONS, M. D., of Charleston, S. C., Vice-Presidents; HARVEY LINDSLY, M. D., of Washington, D. C., Secretary; and EDWARD FOREMAN, M. D., of Washington, D. C., Assistant Secretary.

With the view of giving the various medical interests of the country their due weight in the deliberations of the Convention, the Surgeon General of the Army, and the Chief of the Naval Bureau of Medicine and Surgery were invited to participate in the proceedings. An invitation to attend the meetings was also extended to all members of Congress who were at the same time medical graduates. HORACE GREEN, M. D., having been nominated by a delegate of the Castleton

Medical College as his substitute, though without the requisite credentials from the College, was invited to a seat in the Convention.

A report from the Committee for revising and publishing the Pharmacopœia of 1840, referring to a statement of their proceedings published in the Historical Introduction of the Pharmacopœia, and presenting their accounts, was laid before the Convention. The accounts were referred to an auditing Committee, who reported to the Convention that they had examined and found them correct.

The delegations from the several Medical and Pharmaceutical Bodies represented in the Convention, having been called on for contributions towards the amendment and revision of the Pharmacopœia; communications were received from the Rhode Island Medical Society, the College of Pharmacy of the city of New York, the College of Physicians of Philadelphia, the Philadelphia College of Pharmacy, and the Medical and Chirurgical Faculty of Maryland. These communications were referred to a Committee, with instructions to report a plan for the revision and publication of the Pharmacopœia. The following report was presented by the Committee.

"The Committee to whom were referred the several communications on the Pharmacopœia, submitted to the Convention from the Rhode Island Medical Society, the College of Pharmacy of the city of New York, the College of Physicians of Philadelphia, the Philadelphia College of Pharmacy, and the Medical and Chirurgical Faculty of Maryland, beg leave to recommend, that these communications, as well as all others relating to the revision and amendment of the Pharmacopœia, that may be received from bodies authorized to send delegates

to this Convention, be referred to a Committee of Revision and Publication, to meet in the city of Philadelphia as soon as practicable; and that this Committee be invested with power to fill its own vacancies, to publish the work after the completion of the revision, and to adopt all such measures as may be necessary to carry out the objects of the Convention. For these purposes the Committee propose the following resolutions:—

"1. That the Committee of Revision and Publication, to which all communications on the revision of the Pharmacopœia shall be referred, as above set forth, shall consist of nine members, three of whom shall form a quorum.

"2. That this Committee shall meet in the city of Philadelphia, and be convened as soon as practicable by the Chairman.

"3. That the said Committee shall be authorized to publish the work after its revision, and to take all other measures which may be deemed necessary to carry out the views and intentions of this Convention.

"4. That said Committee shall have power to fill its own vacancies.

"5. That the Committee, after the completion of their labours, shall transmit a report of their proceedings to the Secretary, to be laid before the next Convention.

"Before concluding the report, the Committee beg leave to state, that their attention has been called to the recommendation of the College of Pharmacy of New York, that the Pharmacopœia be published in the Latin as well as the English language. They think the subject worthy of the consideration of the Convention, and therefore refer the matter to their decision. All which is respectfully submitted."

The resolutions offered by the Committee were adopted; and the following delegates were appointed upon the Committee of Revision and Publication; *viz.*, FRANKLIN BACHE, M.D., JOSEPH CARSON, M.D., and Professor WILLIAM PROCTER, of Philadelphia; JOSEPH MAURAN, M.D., of Rhode Island; MR. JOHN MILHAU of New York; J. W. THOMSON, M.D., of Delaware; DAVID STEWART, M.D., of Baltimore; JOSHUA RILEY, M.D., of the District of Columbia; and G. N. FITCH, M.D., of Logansport, Indiana.

On motion it was resolved that the President of the Convention be added to the Committee of Revision and Publication, and act as its Chairman.

A proposition was brought before the Convention, that the Committee of Revision and Publication be instructed to publish the Pharmacopœia both in the Latin and English languages; but, after full discussion, it was negatived by a unanimous vote.

The Convention next provided for assembling a Convention in the year 1860, for the future revision of the Pharmacopœia, by adopting the resolutions of the Convention of 1840, with some modifications, as follows:—

"1. The President of this Convention shall, on the first day of May, 1859, issue a notice, requesting the several incorporated State Medical Societies, the incorporated Medical Colleges, the incorporated Colleges of Physicians and Surgeons, and the incorporated Colleges of Pharmacy, throughout the United States, to elect a number of delegates, not exceeding three, to attend a general Convention, to be held at Washington on the first Wednesday in May, 1860.

"2. The several incorporated bodies, thus addressed, shall

also be requested by the President to submit the Pharmacopœia to a careful revision, and to transmit the result of their labours, through their delegates, or through any other channel, to the next Convention.

"3. The several medical and pharmaceutical bodies shall be further requested to transmit to the President of this Convention the names and residences of their respective delegates, as soon as they shall have been appointed, a list of whom shall be published, under his authority, for the information of the medical public, in the newspapers and medical journals, in the month of March, 1860.

"4. In the event of the death, resignation, or inability to act of the President of the Convention, these duties shall devolve on the Vice-Presidents, in succession; and should the Vice-Presidents also be prevented from serving, upon the Secretary, or Assistant Secretary, the latter acting in the event of the inability of the former."

Before adjourning, the Convention adopted resolutions, similar to those of the Convention of 1840, in relation to the mode of preserving the Records, as follows:—"*First*, That the Secretary take charge of and preserve the existing Records until his successor shall be appointed by the Convention of 1860, when it shall be his duty to hand them over to such successor; *secondly*, that in case of the death, resignation, or inability to act of the Secretary, his duties shall devolve upon the Assistant Secretary; and *thirdly*, that it be recommended to future Conventions to appoint their Secretary and Assistant Secretary from delegates residing in the District of Columbia."

After the adjournment of the Convention, Dr. Wm. B. Chapman, one of the delegates from the Cincinnati College

of Pharmacy, arriving in Washington, stated to the Secretary his concurrence in the proceedings of the Convention.

In pursuance of the objects of their appointment, the Committee of revision and publication met in Philadelphia on the 23d of May, 1850;—present, Dr. Mauran of Providence, R. I., Mr. Milhau of New York, Drs. Wood, Bache, and Carson, and Professor Procter of Philadelphia, and Dr. Thomson of Wilmington, Delaware. The contributions towards the revision of the Pharmacopœia received by the Convention were laid before the Committee, together with a communication to the same effect from the Maryland College of Pharmacy, transmitted by Dr. David Stewart to the Secretary of the Convention after its adjournment. This communication was received, and placed on the same footing with the others.

The work of revision was commenced immediately, and was proceeded with at subsequent meetings, which were as frequent as the professional engagements of the members of the Committee would permit. Every article of the Pharmacopœia was examined with the most careful scrutiny, the suggestions contained in the several communications received from the different medical and pharmaceutical bodies were scrupulously considered, and when any point was deemed to be doubtful, recourse was had to experiment. All the new and modified processes were carefully tested, and the effects of the several reagents referred to in the work, when in any degree doubtful, were verified by trial. The new Dublin and London Pharmacopœias were compared with our own, with the view of introducing uniformity wherever more important considerations did not seem to forbid the requisite modifications; and the Committee have pleasure in acknowledging the politeness

of the President of the London College of Physicians, Dr. Paris, who kindly furnished the Chairman, upon personal application, with a copy of the Pharmacopœia of that College, before it had yet been published, in order that it might be made available for the object in view. After the revision had been completed, some time was consumed in the necessary arrangement of the work for publication; and the very careful examination to which every part of it was subjected, while passing through the press, in order to prevent errors, was the cause of still further delay. The Committee feel that they could not sooner have presented the Pharmacopœia to the public, with a due regard to the important interests involved. Though conscious of imperfections in the work, they believe that it has never been issued with higher claims to acceptance on the part of the medical and pharmaceutical professions; and they are happy to be able to add, that the publishers, in the improved dress in which it is presented, have done their share to render it worthy of its character as the national standard in pharmacy.

PREFACE.

In the successive editions of the Pharmacopœia of the United States since its first publication in 1820, various modifications of the original plan were introduced, which required more or less comment in order that they might be fully understood and appreciated. In the present edition, it has not been deemed advisable to depart, in any degree, from the plan of the work adopted in the revision of 1840; as, in the opinion of the Committee, no arrangement could be devised better calculated to present the subject, in its various details, in a clear, convenient, and impressive manner. The changes have been altogether in the individual contents of the Pharmacopœia. A few names have been altered; definitions and references have been modified in numerous instances; some medicines have been transferred from one of the two catalogues of the Materia Medica to the other; new medicines and preparations have been introduced; and many of the processes have been amended, replaced by others, or altogether omitted. The section of Fluid Extracts is quite new. These changes appeared to the Committee to be necessary to bring the work to the present level of medical and pharmaceutical knowledge, and to that of general science so far as it has relation to the subject. But the modifications referred to are such as scarcely to require or admit of comment in a Preface; and they are cheerfully trusted to the judgment of

the professional community, and to the test of experience. In the absence of any necessity for extended comment in reference to the present edition, it appears appropriate to devote a few pages to a general explanation of the principles upon which the work is arranged; especially at this time, when its plan, having been submitted to a trial of ten years, without exhibiting material defects, may perhaps be considered as definitively settled, and likely to be permanent.

The contents of the work are arranged in the two divisions of Materia Medica and Preparations; the former enumerating and defining medicines as they are derived from nature or furnished by the manufacturer, the latter containing formulæ or rules by which they are prepared for use. The propriety of such a division is too obvious to require comment. It is the basis of arrangement in most Pharmacopœias.

The subdivision of the Materia Medica into a primary and secondary list is a peculiarity of our national standard. It has the advantage of permitting a discrimination between medicines of acknowledged value, and others of less estimation, which, however, may still have claims to notice. Many substances, at one time much employed, are passing out of use, without having been wholly discarded; while others are brought to the notice of the profession, and are undergoing trial, without having been generally adopted. It is very convenient to have a section into which such doubtful medicines may be thrown, to await the decision of experience for or against them. Without being entirely lost sight of, they are thus kept in a subordinate position, which may prevent misapprehension as to their real or estimated value. It is necessary to be understood that the primary list contains not only

all substances of recognised efficacy, but others of little or no apparent importance as medicines, which, however, are employed in some one or more of the "preparations," and are therefore essential. Without this explanation, the propriety of introducing such bodies as *Animal Charcoal*, *Bone*, *Cochineal*, *Marble*, and *Red Saunders* into the primary list might be disputed.

Both in the Materia Medica and the Preparations, the alphabetical arrangement has been adopted. In a work intended not for regular perusal but for occasional reference, it has the great merit of convenience. It has moreover the advantage that, making no claim to scientific classification, it is not liable to the charge of failure, so often and so justly urged against more ambitious systems. In relation to the Preparations, it will be noticed that they are arranged in groups, the titles of which are placed in the alphabetical order. The pharmaceutical processes naturally throw themselves into such groups, which could not be divided and otherwise distributed without great inconvenience. Their affinity consists either in closely analogous modes of treatment, as in the decoctions, extracts, infusions, &c.; in having some common base, as in the preparations of the different metals; or in a certain resemblance of character, as in the acids and ethers. It happens fortunately that the several individuals in these groups are so named that they fall into the general alphabetical order, with but very few and insignificant exceptions. It is proper to observe that the order of succession is based on the Latin names throughout the work.

The Pharmacopœia was originally published both in the Latin and English languages. This was at the time an inno-

vation upon general usage; as codes of this kind had been almost always issued by the dignified bodies from which they emanated, exclusively in the Latin, which was considered as the language of science. In the revision of 1840, the Latin was dropped; as it did not offer advantages equivalent to the trouble of adapting a dead language to facts and processes for which it had no terms, and to the double cost of the work which it occasioned. As stated in the Historical Introduction, the recent National Convention was unanimous in their decision in favour of the English exclusively. The Latin names, however, of the medicines and preparations have been retained; as they are still generally and often very conveniently used in prescription; and it is desirable that medicines should have designations by which they may be recognised in all civilized countries.

The system of nomenclature of the Pharmacopœia of the United States is one of its chief merits. Adopted at a period when it was without example in other works of the kind, and improved with each successive revision, it now prevails to a considerable extent in all the Pharmaceutical codes recognised where our vernacular tongue is spoken. Its aim is to be simple, expressive, distinctive, and convenient. In relation to medicines of vegetable origin, it adopts for those which have been long and well known, the names by which they have at all times been recognised, and which have withstood and will no doubt continue to withstand all the mutations of science. In this category are such titles as *Ammoniacum*, *Camphora*, *Galla*, *Opium*, *Senna*, *&c.* For medicines of more recent origin, which had received no distinctive officinal designation, it takes either the generic or specific

title of the plant or animal from which the medicine is derived. Thus, we have the generic names *Anthemis* from Anthemis nobilis, *Chimaphila* from Chimaphila umbellata, *Eupatorium* from Eupatorium perfoliatum, *Gillenia* from Gillenia trifoliata, *Lobelia* from Lobelia inflata, &c.; and the specific names *Senega* from Polygala Senega, *Serpentaria* from Aristolochia Serpentaria, *Taraxacum* from Leontodon Taraxacum, &c. A very large proportion of the names have been formed in this way; and, as the generic or specific title of the plant had its origin in many instances in the vernacular name, the original designation is thus fixed and perpetuated. When it happens that two different medicines are obtained from different species of the same genus, it becomes necessary to adopt either for both the whole botanical title of the plants, or for one of them the generic or specific name, and for the other the whole name. Thus, we have *Cassia Fistula* and *Cassia Marilandica*, *Quercus alba* and *Quercus tinctorea*, as titles both for the plants and their medicinal products; and, in the case of the different species of Gentiana, the generic name *Gentiana* for the product of G. lutea, and the whole name *Gentiana Catesbæi* for that of the species so designated in scientific arrangements. When different parts of the same plant are recognised as distinct medicines, they are designated by attaching to the generic or specific title the name of the part employed. Thus are formed the names *Colchici Radix* and *Colchici Semen* from Colchicum autumnale, and *Stramonii Folia*, *Stramonii Radix*, and *Stramonii Semen* from Datura Stramonium. When these names become established in pharmacy, it does not follow that they are to be changed with the changing scientific titles. On the contrary, it is generally best to retain them, unless by

doing so injurious confusion may be occasioned. Thus, we have *Prunus Virginiana* as the name of wild-cherry bark, though the plant from which it is derived is now usually designated by botanists as Cerasus serotina. It will be noticed that the Latin names are generally used in the singular number, even though the idea of plurality may be essentially connected with the medicine. Thus, *Cantharis*, *Caryophyllus*, *Ficus*, *Galla*, *Limon*, &c., are used instead of the plural of these terms respectively; and, in reference to the names derived from the part of the plant employed, the same plan is mostly followed, as in the case of *Stramonii Semen*, *Colchici Semen*, &c. In this the example of the Roman medical writers, particularly of Celsus, has been followed. The leaves, however, are expressed in the plural, as *Stramonii Folia*, &c., which is also in accordance with the practice of the same classical author.

In the use of English names, it is not deemed necessary that they should be literal translations of the Latin terms; but that title is preferred which custom and the genius of the language seem to sanction. Thus, the English name corresponding to *Linum* is not *flax*, but *Flaxseed*; and, on the same principle, *Fœniculun* is called *Fennel-seed; Ulmus*, *Slippery Elm Bark; Glycyrrhiza*, *Liquorice Root*, &c. Nor are the English names always in the same number as the Latin. We may correctly say, *Caryophyllus*, *Galla*, *Prunum*, and *Rosa;* but the genius of our language requires that we should translate these terms *Cloves*, *Galls*, *Prunes*, and *Roses*.

The plan of nomenclature in relation to medicines of mineral origin is to give the proper scientific name, when convenience, or some higher principle does not call for a deviation

from that rule. Hence, the names of most mineral medicines are in strict accordance with existing scientific usage. But, in some instances, short and old established names are preferred to the scientific, especially when these happen to be somewhat unwieldy. Thus, *Alumen*, *Calamina*, and *Creta* have been preferred to the chemical names *Aluminæ et Potassæ Sulphas*, *Zinci Carbonas Impurus*, and *Calcis Carbonas Mollis*. In other instances, the chemical designation is more or less unsettled, or the composition of the substance has not been decisively determined. In such cases, either an old name is retained, as *Acidum Muriaticum* instead of either *Acidum Hydrochloricum* or *Acidum Chlorohydricum;* or some name is preferred generally expressive of the composition without aiming at chemical accuracy, as *Calx Chlorinata*, taken from the London Pharmacopœia, and *Ferrum Ammoniatum*. In other cases, it is considered safest to designate very active medicines, which, if their strict chemical titles were used, might be dangerously confounded, by names which, though upon the chemical basis, have some epithet attached expressive of their distinctive character, as *mild chloride of mercury* and *corrosive chloride of mercury*, instead of *protochloride of mercury* and *bichloride of mercury*. Sometimes, for convenience sake, when no risk of confusion can possibly arise, names are adopted sufficiently expressive of the nature of the substance, though not precisely so; as *sulphate of iron* instead of *sulphate of protoxide of iron*, *hydrated oxide of iron* instead of *hydrated sesquioxide of iron*, &c. If any part of the nomenclature of mineral bodies should seem at first sight somewhat incongruous, it will be found to have been adopted in accordance with some one of the principles

here stated, or in some other way to have the advantage of convenience or utility. Not a single name has been given or retained without careful consideration.

When the officinal names of particular medicines may be supposed not to have yet become universally known, and the old names are still extensively used, the latter are given as synonymes in a subordinate type and position; and those officinal titles which have been superseded by others adopted at the present revision, are inserted beneath, with a reference to the Pharmacopœia of 1840.

In the MATERIA MEDICA, the Latin and English officinal names are first given, and immediately afterwards, in a distinct paragraph, a definition fixing the precise character of the substance referred to; designating, for example, the plant or animal from which it is derived, and the part employed, if it be of vegetable or animal origin; and defining it by the precise chemical name, if mineral. When the officinal name sufficiently explains itself, as in the case of *Magnesiæ Sulphas*, *Potassæ Nitras*, and *Sodæ Carbonas*, no definition is given. To most of the mineral substances brief notes are appended, containing, in short and precise terms, an enumeration of those properties by which their identity can be determined, and of the tests by which their freedom from adulterations or accidental impurities may be ascertained. The same plan has been extended to many of the chemicals among the preparations. In relation to most of the medicines of organic origin, it has not been thought advisable to offer similar tests of genuineness and purity; as the means of judging are much less precise, and could not be readily expressed in a few brief rules.

Among the PREPARATIONS will be noticed several substances which are now seldom made by the apothecary, being obtained almost exclusively from the manufacturing chemist. They have been retained in their present position, because, in our widely-extended country, circumstances may not unfrequently render it desirable that the apothecary should be able to prepare them in the absence of a due supply; and, though the processes might not have been introduced if now claiming admission for the first time, yet, having a place already in the Pharmacopœia, it has not been deemed advisable to omit them, and transfer their products to the Materia Medica. The circumstance that these substances are placed among the preparations does not preclude their purchase from the manufacturer when they can be procured of the proper quality.

Another feature of the second part of the Pharmacopœia which requires a brief notice, is the introduction of double processes for many of the preparations, the apothecary having the choice between them. This might seem objectionable as leading possibly to difference in the preparations; but care has been taken to guard against this disadvantage, the processes being such as, if properly executed, must yield preparations either identical in character, or sufficiently alike for all practical purposes. It is only in cases to which the mode of filtration denominated *displacement* is adapted, that this duplication has been introduced; as in the preparation of some of the Vinegars, Extracts, Infusions, and Tinctures. Displacement affords so many advantages, both in an economical point of view, and in the character of the resulting preparations, and has, besides, been practically adopted to such an extent, that it could not, with propriety, be excluded

from a Pharmacopœia which claims to be on a level with the improvements of the times. Yet the process requires considerable skill and experience for its proper management, and, if conducted without due regard to the requisite cautions, will necessarily lead to imperfect and unequal results. Thus, if the substance to be acted upon be not in a suitable state of comminution, or be not sufficiently compacted in the instrument, the liquid will be apt to pass through it unequally and in distinct channels, so as not to come into proper contact with all parts of it, and therefore not completely to exhaust its soluble principles; while, on the other hand, if it be too fine and too close, the percolation may be prevented, or so much retarded as to deprive the process of its advantages. Now, to many of those who will adopt the Pharmacopœia as their guide in the preparation of medicines, the method of displacement is probably not yet familiar. If, therefore, it were exclusively adopted in the officinal processes to which it is applicable, there would be danger that the resulting preparation would, in some instances, be very different from the one contemplated. By leaving to the operator the choice between the former simple methods and the new, this danger is in a great measure avoided; and it is strongly recommended to those who have not made themselves practically familiar with the various sources of error in the method of displacement, to postpone its application, whenever an alternative is given in this work, until they shall have acquired the requisite skill.

Finally, to one familiar with the British Pharmacopœias it will be obvious that, in the preparation of our own, many of the processes have been taken from them with little alteration.

This has been done advisedly. It is of the highest importance that medicines having the same names should have the same composition; and, as British works on medicine are much read in this country, it would lead to never-ending confusion if the substances they refer to by name should differ materially from those known by similar names with us. It has, therefore, been a general aim to bring our pharmacy into as near a correspondence as possible with that of Great Britain; but in all cases in which greater purity or efficiency in the medicine, or greater convenience and economy in the process, or any peculiarity in the relation of the preparation to our own circumstances and wants, called for deviation from the British standards, modified or wholly original processes have been adopted.

PRELIMINARY NOTICES.

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Weights.

The kind of weight employed in this work is that commonly denominated *Troy-weight;* and the pound is divided in the following manner:—

The pound ℔	contains	Twelve ounces,	℥
The ounce		Eight drachms,	ʒ
The drachm		Three scruples,	℈
The scruple		Twenty grains,	gr.

The signs have been annexed by which the several weights are denoted.*

Measures.

The measures employed are derived from the wine gallon, which, for medical purposes, is divided in the following manner:—

The gallon C	contains	Eight pints,	O
The pint		Sixteen fluidounces,	f℥
The fluidounce		Eight fluidrachms,	fʒ
The fluidrachm		Sixty minims,	♏

The signs have been annexed by which the several measures are denoted.

* It is highly important that those engaged in preparing or dispensing medicines should be provided with Troy weights of all the denominations mentioned in the above table; but, when these are

Temperature.

When there is occasion to indicate the degree of heat, the scale of Fahrenheit's thermometer is employed. By the term *gentle heat*, is meant any temperature between 90° and 100°.

Specific Gravity.

When the specific gravity of a substance is mentioned, its temperature is supposed to be at 60°.

Saturation.

When an acid or alkali is directed to be saturated, the point of saturation is to be ascertained by means of litmus and turmeric, in the method usually followed by chemists.

Filtration.

The kind of filtration commonly designated as the *process of displacement*, which is frequently directed in this Pharmacopœia, is to be effected in the following manner, unless otherwise specially ordered. A hollow cylindrical instrument,

not to be had, the same end may be attained by calculating the Avoirdupois pound at 7000 Troy grains, and the Avoirdupois ounce at 437·5 grains, and making the requisite allowance. Thus, 42·5 grains, added to the Avoirdupois ounce, will make it equal to the Troy ounce; and 1240 grains, deducted from the Avoirdupois pound, will reduce it to the Troy pound.

called a *Percolator*, is to be used, somewhat conical towards the inferior extremity, having a funnel-shaped termination so as to admit of being inserted into the mouth of a bottle, and provided internally, near the lower end, with a transverse partition or diaphragm pierced with numerous minute holes, or, in the absence of such a partition, obstructed with some insoluble and inert substance, in such a manner that a liquid poured into the cylinder may percolate slowly. The substance to be acted upon, having been reduced to a coarse powder, and mixed with enough of the menstruum to moisten it thoroughly, is, after a maceration of some hours, to be introduced into the instrument, and slightly compressed upon the diaphragm. Any portion of the macerating liquid which may not have been absorbed by the powder, is afterwards to be poured upon the mass in the instrument, and allowed to percolate. Sufficient of the menstruum is then to be gradually added to drive before it, or displace, the liquid contained in the mass; the portion introduced is in like manner to be displaced by another portion; and so on till the required quantity of filtered liquor is obtained. If the liquor which first passes

should be turbid, it is to be again introduced into the instrument. Care must be taken that the powder be not, on the one hand, too coarse or loosely pressed, lest it should allow the liquid to pass too quickly, nor, on the other, too fine or compact, lest it should offer an unnecessary resistance. Should the liquor flow too rapidly, it is to be returned to the instrument, which is then to be closed beneath for a time, in order that the finer parts of the powder may subside, and thus cause a slower percolation.

MATERIA MEDICA.

MATERIA MEDICA.

In the following catalogue, the names of medicinal substances, not included among the Preparations, are given in Latin and English, with synonymes in the same languages, when names long employed and in common use do not correspond with the officinal. Such explanations as are necessary to identify the substances mentioned are also given, together with brief notes indicating the means of ascertaining the purity and genuineness of those most liable to be sophisticated. The names of the plants referred to, when not otherwise indicated, are those of Willdenow's edition of Linnæus's *Catalogus Specierum Plantarum*, and of the animals, those of the *Règne Animale* of Cuvier. When De Candolle is cited as authority, reference is had to the *Prodromus Systematis Naturalis* of that author.

ABSINTHIUM. *Wormwood.*

The tops and leaves of Artemisia Absinthium.

ACACIA. *Gum Arabic.*

The concrete juice of Acacia vera and other species of Acacia.

ACETUM. *Vinegar.*

Impure dilute acetic acid, prepared by fermentation.

One fluidounce is saturated by about 35 grains of crystallized bicarbonate of potassa. It is not coloured by sulphohydric acid, and yields no precipitate when boiled with a solution of chloride of calcium.

ACIDUM ACETICUM. *Acetic Acid.*

Acetic acid of the specific gravity 1·041.

Acetic Acid is colourless and of a pungent odour, is wholly volatilized by heat, yields no precipitate with chloride of barium or nitrate of silver, and does not change colour on the addition of sulphohydrate of ammonia. When saturated with ammonia, it gives no precipitate with iodide of potassium. If silver be digested in it, and chlorohydric acid afterwards added, no precipitate will be produced. Of this acid 100 grains saturate 60 grains of crystallized bicarbonate of potassa, and contain 36 grains of monohydrated acetic acid.

ACIDUM ARSENIOSUM. *Arsenious Acid.*

Sublimed arsenious acid in masses.

Arsenious Acid is entirely volatilized by heat, emits an alliaceous odour when thrown on ignited charcoal, and is completely dissolved by boiling water. The solution yields a yellow precipitate on the addition of sulphohydric acid, a lemon-yellow precipitate on the addition first of ammonia and then of nitrate of silver, and a green precipitate with potassa and sulphate of copper. Of this acid 100 grains, boiled with diluted chlorohydric acid, and then treated with sulphohydric acid, yield a deposit of tersulphuret of arsenic weighing 124 grains.

Acidum Citricum. *Citric Acid.*

In colourless crystals, wholly dissipated by a red heat, freely soluble in water, and soluble in alcohol. The solution affords with acetate of lead a precipitate entirely soluble in nitric acid, and yields no precipitate when added in excess to a solution of carbonate of potassa. Of Citric Acid 100 grains saturate 150 grains of bicarbonate of potassa.

Acidum Muriaticum. *Muriatic Acid.*

An aqueous solution of chlorohydric acid gas of the specific gravity 1·16.

Muriatic Acid is colourless; entirely volatilized by heat; when diluted with distilled water, yields no precipitate either with solution of chloride of barium, or with ammonia in excess; and does not dissolve gold leaf, even with the aid of heat.

Acidum Nitricum. *Nitric Acid.*

Nitric acid of the specific gravity 1·42.

Nitric Acid is colourless; is entirely volatilized by heat; dissolves copper with the disengagement of red vapours; and, when diluted with distilled water, yields no precipitate with nitrate of silver, or chloride of barium.

Acidum Sulphuricum. *Sulphuric Acid.*

Sulphuric acid of the specific gravity 1·845.

Sulphuric Acid is colourless and without smell; is entirely volatilized by a strong heat; and, when diluted with distilled water, is not coloured by sulphohydric acid.

Acidum Tartaricum. *Tartaric Acid.*

In colourless crystals, readily dissolved by water, and wholly or almost wholly dissipated by heat. The solution, added in excess to any neutral salt of potassa, produces a precipitate of bitartrate of potassa. With acetate of lead it yields a precipitate wholly soluble in nitric acid. Of Tartaric Acid 100 grains saturate 133·5 grains of bicarbonate of potassa.

Aconiti Folia. *Aconite Leaves.*

Aconitum, *U. S. Ph.*, 1840.

The leaves of Aconitum Napellus.

Aconiti Radix. *Aconite Root.*

The root of Aconitum Napellus.

Adeps. *Lard.*

The prepared fat of Sus Scrofa, free from saline matter.

ALCOHOL. *Alcohol.*

Rectified spirit of the specific gravity 0·835.

Alcohol is colourless, is wholly vaporizable by heat, and unites in all proportions with water and ether. It should be wholly free from foreign odour.

ALLIUM. *Garlic.*

The bulb of Allium sativum.

ALOE. *Aloes.*

The inspissated juice of the leaves of Aloe spicata, Aloe Socotrina (Lamarck, *Encyclopédie Méthodique*, i. 85), and other species of Aloe.

ALTHÆÆ FLORES. *Marshmallow Flowers.*

The flowers of Althæa officinalis.

ALTHÆÆ RADIX. *Marshmallow Root.*

Althæa, *U. S. Ph.*, 1840.

The root of Althæa officinalis.

ALUMEN. *Alum.*

Sulphate of alumina and potassa.

AMMONIACUM. *Ammoniac.*

The concrete juice of Dorema Ammoniacum (Don, *Transact. of the Lin. Soc.*).

AMMONIÆ MURIAS. *Muriate of Ammonia.*

Chlorohydrate of ammonia.

Translucent, entirely volatilized by heat and dis-

solved by water. The solution slightly reddens litmus, and gives no precipitate with chloride of barium. The salt, when rubbed with lime or potassa, emits the smell of ammonia.

AMYGDALA AMARA. *Bitter Almonds.*

The kernels of the fruit of Amygdalus communis—variety *amara* (De Candolle).

AMYGDALA DULCIS. *Sweet Almonds.*

The kernels of the fruit of Amygdalus communis—variety *dulcis* (De Candolle).

AMYLUM. *Starch.*

The fecula of the seeds of Triticum vulgare (Kunth, *Gramineæ*, 438).

ANGUSTURA. *Angustura Bark.*

The bark of Galipea officinalis (Hancock, *Trans. of the Medico-Bot. Soc.*).

ANISUM. *Anise.*

The fruit of Pimpinella Anisum.

ANTHEMIS. *Chamomile.*

The flowers of Anthemis nobilis.

ANTIMONII SULPHURETUM. *Sulphuret of Antimony.*

Native tersulphuret of antimony, purified by fusion.

In striated masses, totally dissolved by chlorohydric acid with the aid of heat, sulphohydric acid gas being evolved. Its solution in chlorohydric acid yields a white precipitate when added to water; and the resulting liquid, after filtration, yields an orange-red precipitate with sulphohydrate of ammonia.

Aqua. *Water.*

Natural water in the purest attainable state.

For signs of the purity of water, see *Aqua Destillata*.

Argentum. *Silver.*

The specific gravity of this metal is 10·4. It is entirely dissolved by dilute nitric acid; and its solution in this acid yields with chloride of sodium a white precipitate, totally soluble in ammonia. The solution, deprived of silver by chloride of sodium and filtered, is not coloured nor precipitated by sulphohydric acid.

Armoracia. *Horse-radish.*

The fresh root of Cochlearia Armoracia.

Arsenicum. *Arsenic.*

A brittle metal, of a steel-gray colour, having the specific gravity 5·88, and exhibiting a brilliant lustre when recently broken or sublimed. When exposed to heat, it sublimes without melting, giving rise to white vapours having a garlicky smell.

Assafœtida. *Assafetida.*

The concrete juice of the root of Narthex Assafœtida (Falconer, *Royle's Mat. Med.*).

Aurantii Cortex. *Orange Peel.*

The outer rind of the fruit of Citrus vulgaris or Citrus Aurantium (*De Candolle*).

Avenæ Farina. *Oatmeal.*

Meal prepared from the seeds of Avena sativa.

Balsamum Peruvianum. *Balsam of Peru.*

Myroxylon, *U. S. Ph.*, 1840.

The juice of Myrospermum Peruiferum (*De Candolle*).

Balsamum Tolutanum. *Balsam of Tolu.*

Tolutanum, *U. S. Ph.*, 1840.

The juice of Myrospermum Toluiferum (*De Candolle*).

Barytæ Carbonas. *Carbonate of Baryta.*

Entirely soluble in dilute chlorohydric acid, with effervescence. The solution in this acid is not coloured nor precipitated by ammonia or sulphohydric acid. When sulphuric acid is added in excess, the solution yields no precipitate with carbonate of soda.

Belladonna. *Belladonna.*

The leaves of Atropa Belladonna.

Benzoinum. *Benzoin.*

The concrete juice of Styrax Benzoin.

Bismuthum. *Bismuth.*

The specific gravity of this metal is 9·8. It is dissolved by diluted nitric acid, and its solution in this acid yields a white precipitate when added to distilled water. Ammonia, added in excess to the solution, produces a white precipitate, and does not alter the colour of the liquid.

Brominium. *Bromine.*

Brominum, *U. S. Ph.*, 1840.

Bromine is liquid, of a dark-red colour, of a strong, disagreeable odour, and entirely volatilized by heat in reddish vapour. It is sparingly soluble in water, more soluble in alcohol, and still more so in ether. It destroys the colour of sulphate of indigo, and renders starch yellow. Its specific gravity is 3.

Buchu. *Buchu.*

Diosma, *U. S. Ph.*, 1840.

The leaves of Barosma crenata, and other species of Barosma.

Calamina. *Calamine.*

Zinci Carbonas, *U. S. Ph.*, 1840.

Native impure carbonate of zinc.

It is nearly all soluble, with slight effervescence, in liquid chlorohydric acid; and its solution is affected by reagents in the same manner as the solution of zinc in sulphuric acid. (See Zincum.)

Calamus. *Sweet Flag.*

The rhizoma of Acorus Calamus.

Calcii Chloridum. *Chloride of Calcium.*

Colourless, slightly translucent, hard and friable, deliquescent, and entirely soluble in water. The solution yields white precipitates with nitrate of silver and oxalate of ammonia, and no precipitate with ammonia, chloride of barium, or ferrocyanuret of potassium dissolved in a large quantity of water.

Calx. *Lime.*

Lime recently prepared by calcination.

Upon the addition of water, it cracks and falls into powder, with the evolution of heat. Chlorohydric acid dissolves it without effervescence, and the solution yields no precipitate with ammonia.

Calx Chlorinata. *Chlorinated Lime.*

Syn. Calcis Chloridum. *Chloride of Lime.*

Calcis Hypochloris. *Hypochlorite of Lime.*

A compound resulting from the action of chlorine on hydrate of lime, and containing at least twenty-five per cent. of chlorine.

Grayish-white, pulverulent, dry or but slightly moist, and wholly dissolved by dilute chlorohydric acid with the escape of chlorine. Its solution quickly destroys vegetable colours. When 40 grains of it, triturated with a fluidounce of distilled water, are well shaken with a solution of 78 grains of crystallized sulphate of protoxide of iron, and 10 drops of sulphuric acid, in two fluidounces of distilled water, a liquid is formed which

does not yield a blue precipitate with ferridcyanuret of potassium (red prussiate of potassa).

CAMPHORA. *Camphor.*

A peculiar concrete substance derived from Camphora officinarum (Nees, *Laurin.*, 88), and purified by sublimation.

CANELLA. *Canella.*

The bark of Canella alba.

CANTHARIS. *Spanish Flies.*

Cantharis vesicatoria.

CANTHARIS VITTATA. *Potato Flies.*

Cantharis vittata.

CAPSICUM. *Cayenne Pepper.*

The fruit of Capsicum annuum, and of other species of Capsicum.

CARBO ANIMALIS. *Animal Charcoal.*

Charcoal prepared from bones.

CARBO LIGNI. *Charcoal.*

Charcoal prepared from wood.

CARDAMOMUM. *Cardamom.*

The fruit of Elettaria Cardamomum (Maton, *Act. Linn.*, 254).

CARUM. *Caraway.*

The fruit of Carum Carui.

CARYOPHYLLUS. *Cloves.*

The unexpanded flowers of Caryophyllus aromaticus (*De Candolle*).

CASCARILLA. *Cascarilla.*

The bark of Croton Eleuteria.

CASSIA FISTULA. *Purging Cassia.*

The fruit of Cassia Fistula.

CASSIA MARILANDICA. *American Senna.*

The leaves of Cassia Marilandica.

CASTOREUM. *Castor.*

A peculiar concrete substance obtained from Castor fiber.

CATECHU. *Catechu.*

The extract of the wood of Acacia Catechu.

CERA ALBA. *White Wax.*

Bleached yellow wax.

CERA FLAVA. *Yellow Wax.*

A peculiar concrete substance prepared by Apis mellifica.

CETACEUM. *Spermaceti.*

A peculiar concrete substance obtained from Physeter macrocephalus.

CETRARIA. *Iceland Moss.*

Cetraria Islandica (Acharius, *Lichenog. Univ.*).

CHENOPODIUM. *Wormseed.*

The fruit of Chenopodium anthelminticum.

CHIMAPHILA. *Pipsissewa.*

The leaves of Chimaphila umbellata (Pursh, *Flor. Amer. Sept.*).

CHONDRUS. *Irish Moss.*

Chondrus crispus (Greville, *Alg. Brit.*).

CIMICIFUGA. *Black Snakeroot.*

The root of Cimicifuga racemosa (Torrey & Gray, *Flor. of N. Amer.*).

CINCHONA. *Peruvian Bark.*

The bark of different species of Cinchona from the western coast of South America.

CINCHONA FLAVA. *Yellow Bark.*

The variety of Peruvian Bark derived from Cinchona Calisaya (Weddell, *Hist. Nat. des Quinquin.*, 30), and called in commerce *Calisaya bark.*

CINCHONA PALLIDA. *Pale Bark.*

The variety of Peruvian Bark derived from Cinchona Condaminea (Humb. and Bonpl., *Plant. Equinoct.*, i. 33), and Cinchona Micrantha (Ruiz and Pavon, *Flor. Peruv.*, ii. 52), and called in commerce *Loxa and Lima bark.*

CINCHONA RUBRA. *Red Bark.*

The variety of Peruvian Bark called in commerce *red bark.*

CINNAMOMUM. *Cinnamon.*

The bark of Cinnamomum Zeylanicum (Nees, *Laurin.*), and of Cinnamomum aromaticum (Nees, *Ibid.*).

COCCUS. *Cochineal.*

Coccus Cacti.

COLCHICI RADIX. *Colchicum Root.*

The cormus of Colchicum autumnale.

COLCHICI SEMEN. *Colchicum Seed.*

The seeds of Colchicum autumnale.

COLOCYNTHIS. *Colocynth.*

The fruit of Citrullus Colocynthis (Royle, *Mat. Med.*), deprived of its rind.

COLOMBA. *Columbo.*

The root of Cocculus palmatus (*De Candolle*).

CONII FOLIA. *Hemlock Leaves.*

The leaves of Conium maculatum.

CONII SEMEN. *Hemlock Seed.*

The fruit of Conium maculatum.

COPAIBA. *Copaiba.*

The juice of Copaifera officinalis, and of other species of Copaifera.

CORIANDRUM. *Coriander.*

The fruit of Coriandrum sativum.

CORNUS FLORIDA. *Dogwood.*

The bark of Cornus Florida.

CREASOTUM. *Creasote.*

A peculiar substance obtained from tar.

Creasote is an oleaginous, colourless liquid, of a strong characteristic odour, entirely volatilizable by heat, and freely soluble in alcohol and acetic acid. When dropped on paper and exposed to heat, it does not leave a greasy stain. It boils at 397°, and does not congeal at —17°.

CRETA. *Chalk.*

Native friable carbonate of lime.

Chalk is entirely soluble in dilute chlorohydric acid with effervescence, and the solution yields no precipitate with ammonia.

CROCUS. *Saffron.*

The stigmas of Crocus sativus.

CUBEBA. *Cubebs.*

The berries of Piper Cubeba.

CUPRI SUBACETAS. *Subacetate of Copper.*

Syn. Ærugo. *Verdigris.*

Impure subacetate of copper.

Subacetate of copper is almost wholly dissolved, with the aid of heat, in diluted sulphuric acid. Ammonia, added to the solution, produces a precipitate, which is wholly dissolved by an excess of the alkali.

Cupri Sulphas. *Sulphate of Copper.*

In blue crystals, slightly efflorescent in the air, and entirely soluble in water. Ammonia throws down from the solution a precipitate, which is wholly redissolved when the alkali is added in excess.

Digitalis. *Foxglove.*

The leaves of Digitalis purpurea.

Dulcamara. *Bittersweet.*

The stalks of Solanum Dulcamara.

Elaterium. *Elaterium.*

A substance deposited by the juice of the fruit of Momordica Elaterium.

Ergota. *Ergot.*

The diseased seeds of Secale cereale.

Eupatorium. *Thoroughwort.*

The tops and leaves of Eupatorium perfoliatum.

Extractum Glycyrrhizæ. *Liquorice.*

The extract of the root of Glycyrrhiza glabra.

Ferri Filum. *Iron Wire.*

FERRI RAMENTA. *Iron Filings.*

Iron Filings are wholly attracted by the magnet.

FICUS. *Figs.*

The dried fruit of Ficus Carica.

FŒNICULUM. *Fennel-seed.*

The fruit of Fœniculum vulgare (*De Candolle*).

GALBANUM. *Galbanum.*

The concrete juice of an unknown plant.

GALLA. *Galls.*

Morbid excrescences upon Quercus infectoria.

GAMBOGIA. *Gamboge.*

The concrete juice of an uncertain tree.

GAULTHERIA. *Partridge-berry.*

The leaves of Gaultheria procumbens.

GENTIANA. *Gentian.*

The root of Gentiana lutea.

GERANIUM. *Cranesbill.*

The rhizoma of Geranium maculatum.

GILLENIA. *Gillenia.*

The root of Gillenia trifoliata and of Gillenia stipulacea.

GLYCYRRHIZA. *Liquorice Root.*

The root of Glycyrrhiza glabra.

GOSSYPIUM. *Cotton.*

A filamentous substance separated from the seeds of Gossypium herbaceum, and of other species of Gossypium.

GRANATI FRUCTÛS CORTEX. *Pomegranate Rind.*

The rind of the fruit of Punica Granatum.

GRANATI RADICIS CORTEX. *Bark of Pomegranate Root.*

The bark of the root of Punica Granatum.

GUAIACI LIGNUM. *Guaiacum Wood.*

The wood of Guaiacum officinale.

GUAIACI RESINA. *Guaiac.*

The concrete juice of Guaiacum officinale.

HÆMATOXYLON. *Logwood.*

The wood of Hæmatoxylon Campechianum.

HEDEOMA. *Pennyroyal.*

Herb of Hedeoma pulegioides.

HELLEBORUS. *Black Hellebore.*

The root of Helleborus niger.

HORDEUM. *Barley.*

The decorticated seeds of Hordeum distichon.

HUMULUS. *Hops.*

The strobiles of Humulus Lupulus.

Hydrargyrum. *Mercury.*

This metal is of the specific gravity 13·5, is wholly volatilized by heat, and dissolved without residue by nitric acid. A globule made to roll over white paper leaves no trace. Pure sulphuric acid, agitated with it at common temperatures and afterwards evaporated, leaves no residue.

Hyoscyami Folia. *Henbane Leaves.*

The leaves of Hyoscyamus niger.

Hyoscyami Semen. *Henbane Seed.*

The seeds of Hyoscyamus niger.

Ichthyocolla. *Isinglass.*

The swimming bladder of Acipenser Huso, and other species of Acipenser.

Iodinium. *Iodine.*

Iodinum, *U. S. Ph.*, 1840.

The specific gravity of Iodine is 4·9. It is in crystalline scales, of a bluish-black colour, and metallic lustre. When heated, it first melts, and then rises in purple vapour. It is soluble without residue in alcohol and ether, and is very slightly soluble in water. With starch it produces a blue colour. When shaken in a dry bottle, it scarcely adheres to the surface of the glass.

Ipecacuanha. *Ipecacuanha.*

The root of Cephaelis Ipecacuanha (*De Candolle*).

JALAPA. *Jalap.*

The root of Ipomæa Jalapa (Coxe, *Am. Jour. of Med. Sciences*).

JUGLANS. *Butternut.*

The inner bark of the root of Juglans cinerea.

JUNIPERUS. *Juniper.*

The fruit of Juniperus communis.

KINO. *Kino.*

The inspissated juice of Pterocarpus Marsupium (*De Candolle*), and of other plants.

KRAMERIA. *Rhatany.*

The root of Krameria triandra (*De Candolle*).

LACTUCARIUM. *Lactucarium.*

The inspissated juice of Lactuca sativa.

LAVANDULA. *Lavender.*

The flowers of Lavandula vera (*De Candolle*).

LIMON. *Lemons.*

The fruit of Citrus Limonum (*De Candolle*).

LIMONIS CORTEX. *Lemon Peel.*

The outer rind of the fruit of Citrus Limonum (*De Candolle*).

LINUM. *Flaxseed.*

The seeds of Linum usitatissimum.

LIQUOR AMMONIÆ FORTIOR. *Stronger Solution of Ammonia.*

An aqueous solution of ammonia of the specific gravity 0·882.

Stronger Solution of Ammonia has a very pungent odour of ammonia, is wholly volatilized by heat, and gives no precipitate with lime-water. It does not effervesce on the addition of diluted nitric acid, and, when saturated with that acid, does not yield a precipitate with carbonate of ammonia, nitrate of silver, or chloride of barium. When it is saturated with nitric acid, neither carbonate of ammonia nor nitrate of silver causes a precipitate.

LOBELIA. *Lobelia.*

Herb of Lobelia inflata.

LUPULINA. *Lupulin.*

The powder attached to the strobiles of Humulus Lupulus.

MAGNESIÆ CARBONAS. *Carbonate of Magnesia.*

Distilled water which has been boiled with Carbonate of Magnesia does not change the colour of turmeric, and yields no precipitate with chloride of barium or nitrate of silver. It is wholly dissolved by dilute sulphuric acid with effervescence; and the solution does not give a precipitate with oxalate of ammonia.

MAGNESIÆ SULPHAS. *Sulphate of Magnesia.*

In colourless crystals, which slowly effloresce on ex-

posure to a dry atmosphere, and are very soluble in water. Its solution is not coloured nor precipitated by ferrocyanuret of potassium, and gives off no chlorohydric acid upon the addition of sulphuric acid. Of this salt 100 grains, dissolved in water and mixed with sufficient boiling solution of carbonate of soda completely to decompose it, yield a precipitate of carbonate of magnesia, weighing, when washed and dried, 34 grains.

MANNA. *Manna.*

The concrete juice of Ornus Europæa (Persoon, *Synopsis Plantarum*, i. 9).

MARANTA. *Arrow-root.*

The fecula of the rhizoma of Maranta arundinacea.

MARMOR. *Marble.*

White granular carbonate of lime.

Marble is wholly dissolved by dilute chlorohydric acid with effervescence; and the solution yields no precipitate with ammonia, or with an aqueous solution of sulphate of lime.

MEL. *Honey.*

A liquid prepared by Apis mellifica.

MENTHA PIPERITA. *Peppermint.*

The herb of Mentha piperita.

MENTHA VIRIDIS. *Spearmint.*

The herb of Mentha viridis.

MEZEREUM. *Mezereon.*

The bark of Daphne Mezereum, and of Daphne Gnidium.

MONARDA. *Horsemint.*

The herb of Monarda punctata.

MOSCHUS. *Musk.*

A peculiar concrete substance obtained from Moschus moschiferus.

MYRISTICA. *Nutmeg.*

The kernels of the fruit of Myristica moschata.

MYRRHA. *Myrrh.*

The concrete juice of Balsamodendron Myrrha (Nees, *Beschreib. officinal. Pflanzen*).

NUX VOMICA. *Nux Vomica.*

The seeds of Strychnos Nux vomica.

OLEUM AMYGDALÆ. *Oil of Almonds.*

The fixed oil of the kernels of the fruit of Amygdalus communis.

OLEUM AMYGDALÆ AMARÆ. *Oil of Bitter Almonds.*

The oil obtained by distilling with water the kernels of the fruit of Amygdalus communis —variety *amara* (De Candolle).

Oleum Bergamii. *Oil of Bergamot.*

The volatile oil of the rind of the fruit of Citrus Limetta (*De Candolle*)

Oleum Bubulum. *Neats-foot Oil.*

The oil prepared from the bones of Bos domesticus.

Oleum Cinnamomi. *Oil of Cinnamon.*

The volatile oil of the bark of Cinnamomum Zeylanicum (Nees, *Laurin.*), and of Cinnamomum aromaticum (Nees, *Ibid.*).

Oleum Limonis. *Oil of Lemons.*

The volatile oil of the rind of the fruit of Citrus Limonum (*De Candolle*).

Oleum Lini. *Flaxseed Oil.*

The oil of the seeds of Linum usitatissimum.

Oleum Morrhuæ. *Cod-liver Oil.*

A fixed oil obtained from the liver of Gadus Morrhua.

Oleum Myristicæ. *Oil of Nutmeg.*

The volatile oil of the kernels of the fruit of Myristica moschata.

Oleum Olivæ. *Olive Oil.*

The oil of the fruit of Olea Europæa.

OLEUM RICINI. *Castor Oil.*

The oil of the seeds of Ricinus communis.

OLEUM ROSÆ. *Oil of Roses.*

The volatile oil of the petals of Rosa centifolia.

OLEUM TEREBINTHINÆ. *Oil of Turpentine.*

The volatile oil distilled from the turpentine of Pinus palustris, and of other species of Pinus.

OLEUM TIGLII. *Croton Oil.*

The oil of the seeds of Croton Tiglium.

OPIUM. *Opium.*

The concrete juice of the unripe capsules of Papaver somniferum.

ORIGANUM. *Origanum.*

The herb of Origanum vulgare.

OS. *Bone.*

OVUM. *Egg.*

The egg of Phasianus Gallus.

PAPAVER. *Poppy-heads.*

The ripe capsules of Papaver somniferum.

PIMENTA. *Pimento.*

The unripe berries of Myrtus Pimenta.

PIPER. *Black Pepper.*

The berries of Piper nigrum.

PIX BURGUNDICA. *Burgundy Pitch.*

The prepared concrete juice of Abies excelsa (Lamarck, *Enc. Méthod.*).

PIX CANADENSIS. *Canada Pitch.*

Syn. Hemlock Pitch.

The prepared concrete juice of Abies Canadensis (Michaux, *N. Am. Sylva*).

PIX LIQUIDA. *Tar.*

The impure turpentine procured by burning from the wood of Pinus palustris and other species of Pinus.

PLUMBI ACETAS. *Acetate of Lead.*

Syn. SACCHARUM SATURNI. *Sugar of Lead.*

In colourless crystals, which effloresce on exposure to the air. It is dissolved by distilled water, with a slight turbidness, which is removed by the addition of distilled vinegar. With its solution, carbonate of soda produces a white, iodide of potassium a yellow, and sulphohydric acid a black precipitate. Upon the addition of sulphuric acid, vapour is evolved having the smell of vinegar.

PLUMBI CARBONAS. *Carbonate of Lead.*

Syn. White Lead.

In white powder or pulverulent masses, insoluble in water, but soluble with effervescence in dilute nitric

acid. With its solution in this acid potassa produces a white precipitate, which is wholly dissolved by an excess of the alkali. Heat renders it yellow, and, with the aid of charcoal, reduces it to the metallic state.

Plumbi Nitras. *Nitrate of Lead.*

In white, nearly opaque, octohedral crystals, permanent in the air, and of a sweet astringent taste. It is soluble in seven and a half parts of cold water, and in alcohol. Its solution is precipitated black by sulphohydrate of ammonia, white by ferrocyanuret of potassium, and yellow by iodide of potassium. When nitrate of lead is triturated with sulphuric acid, the mixture colours morphia red, and if heated evolves nitrous fumes.

Plumbi Oxidum Semivitreum. *Semivitrified Oxide of Lead.*

Syn. Litharge.

In minute yellowish or orange-coloured scales, insoluble in water, but almost wholly soluble in dilute nitric acid. Its solution in this acid is affected by potassa like that of carbonate of lead. Heated with charcoal it is reduced to the metallic state.

Podophyllum. *May-apple.*

The rhizoma of Podophyllum peltatum.

Potassæ Bitartras. *Bitartrate of Potassa.*

Syn. Cream of Tartar.

Bitartrate of Potassa is sparingly dissolved by water, but freely by a hot solution of potassa, which deposites it again upon the addition of an acid. Whatever re-

mains undissolved by the alkaline solution is impurity. The precipitate produced with its aqueous solution by chloride of barium is soluble in nitric acid. It reddens litmus, and by a red heat is converted into carbonate of potassa.

Potassæ Carbonas Impurus. ***Impure Carbonate of Potassa.***

The impure carbonate of potassa known in commerce by the name of *pearlash.*

The soluble matter contained in 100 grains neutralizes about 58 grains of sulphuric acid.

Potassæ Chloras. ***Chlorate of Potassa.***

In colourless tabular crystals, which have a pearly lustre, and are wholly soluble in distilled water. The solution yields no precipitate with nitrate of silver. When strongly heated, the salt first melts, and afterwards gives off abundance of pure oxygen, the evolution of which having ceased, the residue is chloride of potassium. When a little sulphuric acid is dropped on the crystals, they first become yellow, and afterwards red.

Potassæ Nitras. ***Nitrate of Potassa.***

In colourless prismatic crystals, unalterable in the air, and wholly soluble in water. The solution yields no precipitate with chloride of barium or nitrate of silver. With chloride of platinum it gives a yellowish precipitate. By a strong heat the salt is first melted, and then decomposed, oxygen escaping, and a salt remaining which emits orange-coloured fumes on the addition of sulphuric

acid. If 100 grains of nitrate of potassa, previously dried, be mixed with 60 grains of sulphuric acid, and the mixture be kept at a red heat until the salt ceases to lose weight, the residue will weigh 86 grains.

POTASSÆ SULPHAS. *Sulphate of Potassa.*

In hard colourless crystals, unalterable in the air, sparingly soluble in cold water, and insoluble in alcohol. The solution is not precipitated by solution of ammonia. With chloride of platinum it yields a yellowish precipitate, and with chloride of barium a white precipitate insoluble in nitric acid.

POTASSII FERROCYANURETUM. *Ferrocyanuret of Potassium.*

In crystals of a lemon-yellow colour, wholly soluble in water. Its solution yields with the salts of the sesquioxide of iron a deep blue, and with the salts of copper, a brown precipitate. Exposed to a gentle heat, it becomes white, and loses 12·6 per cent. of water.

PRUNUM. *Prunes.*

The dried fruit of Prunus domestica.

PRUNUS VIRGINIANA. *Wild-cherry Bark.*

The bark of Cerasus serotina (*De Candolle*)—Cerasus Virginiana (Michaux, *N. Am. Sylva*).

QUASSIA. *Quassia.*

The wood of Simaruba excelsa (*De Candolle*).

QUERCUS ALBA. *White-oak Bark.*

The bark of Quercus alba.

mains undissolved by the alkaline solution is impurity. The precipitate produced with its aqueous solution by chloride of barium is soluble in nitric acid. It reddens litmus, and by a red heat is converted into carbonate of potassa.

Potassæ Carbonas Impurus. ***Impure Carbonate of Potassa.***

The impure carbonate of potassa known in commerce by the name of *pearlash.*

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Potassæ Nitras. ***Nitrate of Potassa.***

In colourless prismatic crystals, unalterable in the air, and wholly soluble in water. The solution yields no precipitate with chloride of barium or nitrate of silver. With chloride of platinum it gives a yellowish precipitate. By a strong heat the salt is first melted, and then decomposed, oxygen escaping, and a salt remaining which emits orange-coloured fumes on the addition of sulphuric

acid. If 100 grains of nitrate of potassa, previously dried, be mixed with 60 grains of sulphuric acid, and the mixture be kept at a red heat until the salt ceases to lose weight, the residue will weigh 86 grains.

POTASSÆ SULPHAS. *Sulphate of Potassa.*

In hard colourless crystals, unalterable in the air, sparingly soluble in cold water, and insoluble in alcohol. The solution is not precipitated by solution of ammonia. With chloride of platinum it yields a yellowish precipitate, and with chloride of barium a white precipitate insoluble in nitric acid.

POTASSII FERROCYANURETUM. *Ferrocyanuret of Potassium.*

In crystals of a lemon-yellow colour, wholly soluble in water. Its solution yields with the salts of the sesquioxide of iron a deep blue, and with the salts of copper, a brown precipitate. Exposed to a gentle heat, it becomes white, and loses 12·6 per cent. of water.

PRUNUM. *Prunes.*

The dried fruit of Prunus domestica.

PRUNUS VIRGINIANA. *Wild-cherry Bark.*

The bark of Cerasus serotina (*De Candolle*)—Cerasus Virginiana (Michaux, *N. Am. Sylva*).

QUASSIA. *Quassia.*

The wood of Simaruba excelsa (*De Candolle*).

QUERCUS ALBA. *White-oak Bark.*

The bark of Quercus alba.

QUERCUS TINCTORIA. *Black-oak Bark.*

The bark of Quercus tinctoria.

RESINA. *Resin.*

The residuum after the distillation of the volatile oil from the turpentine of Pinus palustris and other species of Pinus.

RHEUM. *Rhubarb.*

The root of Rheum palmatum, and of other species of Rheum.

ROSA CENTIFOLIA. *Hundred-leaved Roses.*

The petals of Rosa centifolia.

ROSA GALLICA. *Red Roses.*

The petals of Rosa Gallica.

ROSMARINUS. *Rosemary.*

The tops of Rosmarinus officinalis.

SABADILLA. *Cevadilla.*

The seeds of Veratrum Sabadilla (*Retzius*).

SABBATIA. *American Centaury.*

The herb of Sabbatia angularis (Pursh, *Flor. Amer. Sept.*).

SABINA. *Savine.*

The tops of Juniperus Sabina.

SACCHARUM. *Sugar.*

The sugar of Saccharum officinarum, refined.

SAGO. *Sago.*

The prepared fecula of the pith of Sagus Rumphii.

SANGUINARIA. *Bloodroot.*

The rhizoma of Sanguinaria Canadensis.

SANTALUM. *Red Saunders.*

The wood of Pterocarpus santalinus.

SAPO. *Soap.*

Soap made with soda and olive oil.

SAPO VULGARIS. *Common Soap.*

Soap made with soda and animal oil.

SARSAPARILLA. *Sarsaparilla.*

The root of Smilax officinalis (*Humboldt and Bonpland*), and of other species of Smilax.

SASSAFRAS MEDULLA. *Sassafras Pith.*

The pith of the stems of Sassafras officinale (Nees, *Laurin.*).

SASSAFRAS RADICIS CORTEX. *Bark of Sassafras Root.*

The bark of the root of Sassafras officinale (Nees, *Laurin.*).

SCAMMONIUM. *Scammony.*

The concrete juice of the root of Convolvulus Scammonia.

SCILLA. *Squill.*

The bulb of Scilla maritima.

SENEGA. *Seneka.*

The root of Polygala Senega.

SENNA. *Senna.*

The leaflets of Cassia acutifolia (*Delile*), of Cassia obovata (*De Candolle*), and of Cassia elongata (Lemaire, *Journ. de Pharm.* vii, 345).

SERPENTARIA. *Virginia Snakeroot.*

The root of Aristolochia Serpentaria, of A. reticulata, and of other species of Aristolochia.

SEVUM. *Suet.*

The prepared suet of Ovis Aries.

SINAPIS. *Mustard.*

The seeds of Sinapis nigra, and of Sinapis alba.

SODÆ ACETAS. *Acetate of Soda.*

In white or colourless crystals, which effloresce in a dry air, and are wholly soluble in water. The solution yields no precipitate with carbonate of soda, chloride of platinum, or chloride of barium, and, if dilute, is not precipitated by nitrate of silver. The salt is decomposed by sulphuric acid, with the production of an acetous odour.

Sodæ Boras. *Borate of Soda.*

Syn. Borax.

Biborate of soda.

In colourless crystals, which slightly effloresce in a dry air, and are wholly soluble in water. The solution has an alkaline reaction. Sulphuric acid, added to the saturated solution, precipitates scaly crystals, which impart a green colour to the flame of burning alcohol.

Sodæ Carbonas. *Carbonate of Soda.*

When fresh, in colourless crystals, which speedily effloresce on exposure to the air, and fall into a white powder. It is very soluble in water, and insoluble in alcohol. Its solution has an alkaline reaction, and is decomposed with effervescence by acids. The precipitate produced with its solution by chloride of barium is wholly soluble in nitric acid.

Sodæ Sulphas. *Sulphate of Soda.*

In colourless crystals, which rapidly effloresce on exposure to the air, and ultimately fall into a white powder. It is wholly dissolved by water. The solution does not alter the colour of turmeric or litmus. With chloride of barium it yields a white precipitate insoluble in nitric acid. A dilute solution yields little or no precipitate with nitrate of silver. Of the crystals 100 grains lose 55·5 grains by a strong heat.

Sodii Chloridum. *Chloride of Sodium.*

Syn. Common Salt.

Chloride of Sodium is white, not deliquescent, and

almost equally soluble in cold and boiling water. Its solution yields no precipitate with carbonate of soda, chloride of barium, or ferrocyanuret of potassium.

SPIGELIA. *Pinkroot.*

The root of Spigelia Marilandica.

SPIRITUS VINI GALLICI. *Brandy.*

Spirit obtained from French wine by distillation.

SPONGIA. *Sponge.*

Spongia officinalis.

STANNUM. *Tin.*

The specific gravity of this metal is 7·29. When treated with nitric acid, at a gentle heat, it is converted into a white powder. It is wholly dissolved by chlorohydric acid, with the aid of heat, forming a colourless solution, which is rendered purple by chloride of gold. Its solution in nitromuriatic acid yields a white precipitate with ferrocyanuret of potassium, and no precipitate with sulphate of magnesia.

STATICE. *Marsh Rosemary.*

The root of Statice Caroliniana (Walter, *Flor. Car.*).

STILLINGIA. *Queen's-root.*

The root of Stillingia sylvatica.

STRAMONII FOLIA. *Stramonium Leaves.*

The leaves of Datura Stramonium.

STRAMONII RADIX. *Stramonium Root.*

The root of Datura Stramonium.

STRAMONII SEMEN. *Stramonium Seed.*

The seeds of Datura Stramonium.

STYRAX. *Storax.*

The concrete juice of Styrax officinale.

SUCCINUM. *Amber.*

SULPHUR. *Sulphur.*

Sublimed sulphur.

Sulphur is wholly volatilized by heat.

SULPHUR LOTUM. *Washed Sulphur.*

Sublimed sulphur, thoroughly washed with water.

Washed Sulphur is wholly volatilized by heat, and when moistened with water does not change the colour of litmus.

TABACUM. *Tobacco.*

The leaves of Nicotiana Tabacum.

TAMARINDUS. *Tamarinds.*

The preserved fruit of Tamarindus Indica.

TAPIOCA. *Tapioca.*

The fecula of the root of Janipha Manihot (*Bot. Mag.* 3071).

TARAXACUM. *Dandelion.*

The root of Leontodon Taraxacum.

TEREBINTHINA. *Turpentine.*

The juice of Pinus palustris, and of other species of Pinus.

TEREBINTHINA CANADENSIS. *Canada Turpentine.*

Syn. Canada Balsam. Balsam of Fir.

The juice of Abies balsamea (Lindley, *Flor. Med.*).

TESTA. *Oyster-shell.*

The shells of Ostrea edulis.

TRAGACANTHA. *Tragacanth.*

The concrete juice of Astragalus verus (Olivier, *Voyage dans l'Empire Ottoman*).

ULMUS. *Slippery Elm Bark.*

The inner bark of Ulmus fulva (*Michaux*).

UVA PASSA. *Raisins.*

The dried fruit of Vitis vinifera.

UVA URSI. *Uva Ursi.*

The leaves of Arctostaphylos Uva Ursi (Sprengel, *Syst.* ii. 287).

VALERIANA. *Valerian.*

The root of Valeriana officinalis.

VERATRUM ALBUM. *White Hellebore.*

The rhizoma of Veratrum album.

VERATRUM VIRIDE. *American Hellebore.*

The rhizoma of Veratrum viride.

VINUM ALBUM. *White Wine.*

Vinum, *U. S. Ph.*, 1840.

Sherry wine.

VINUM RUBRUM. *Red Wine.*

Port wine.

ZINCUM. *Zinc.*

The specific gravity of this metal is 6·8. It is almost entirely dissolved by dilute sulphuric acid, forming a colourless solution, which yields white precipitates with ferrocyanuret of potassium and sulphohydrate of ammonia. Ammonia throws down from this solution a white precipitate, which is wholly dissolved when the alkali is added in excess.

ZINGIBER. *Ginger.*

The rhizoma of Zingiber officinale (Roscoe, *Trans. Lin. Soc.*).

SECONDARY LIST.

ALETRIS. *Star Grass.*

The root of Aletris farinosa.

ANGELICA. *Angelica.*

The root and herb of Angelica atropurpurea.

APOCYNUM ANDROSÆMIFOLIUM. *Dog's-bane.*

The root of Apocynum androsæmifolium.

APOCYNUM CANNABINUM. *Indian Hemp.*

The root of Apocynum cannabinum.

ARALIA NUDICAULIS. *False Sarsaparilla.*

The root of Aralia nudicaulis.

ARALIA SPINOSA. *Angelica-tree Bark.*

The bark of Aralia spinosa.

ARNICA. *Leopard's-bane.*

The flowers of Arnica montana.

ARUM. *Dragon-root.*

Syn. Indian Turnip.

The cormus of Arum triphyllum.

ASARUM. *Canada Snakeroot.*

Syn. Wild Ginger.

The root of Asarum Canadense.

ASCLEPIAS INCARNATA. *Flesh-coloured Asclepias.*

The root of Asclepias incarnata.

ASCLEPIAS SYRIACA. *Common Silk-weed.*

The root of Asclepias Syriaca.

ASCLEPIAS TUBEROSA. *Butterfly-weed.*

The root of Asclepias tuberosa.

AZEDARACH. *Azedarach.*

The bark of the root of Melia Azedarach.

CAROTA. *Carrot Seed.*

The fruit of Daucus Carota.

CARTHAMUS. *Dyers' Saffron.*

The flowers of Carthamus tinctorius.

CASTANEA. *Chinquapin.*

The bark of Castanea pumila.

CATARIA. *Catnep.*

The leaves of Nepeta Cataria.

CONTRAYERVA. *Contrayerva.*

The root of Dorstenia Contrayerva.

CONVOLVULUS PANDURATUS. *Wild Potato.*

The root of Convolvulus panduratus.

COPTIS. *Goldthread.*

The root of Coptis trifolia.

CORNUS CIRCINATA. *Round-leaved Dogwood.*

The bark of Cornus circinata.

CORNUS SERICEA. *Swamp Dogwood.*

The bark of Cornus sericea.

COTULA. *Mayweed.*

The herb of Anthemis Cotula.

CURCUMA. *Turmeric.*

The rhizoma of Curcuma longa.

CYDONIUM. *Quince Seed.*

The seeds of Cydonia vulgaris (Persoon, *Enchir.* ii. 40).

DELPHINIUM. *Larkspur.*

The root of Delphinium Consolida.

DIOSPYROS. *Persimmon.*

The unripe fruit of Diospyros Virginiana.

DRACONTIUM. *Skunk Cabbage.*

The root of Dracontium fœtidum—Ictodes fœtidus (*Bigelow*), Symplocarpus fœtidus (Barton, *Med. Bot.*).

ERIGERON CANADENSE. *Canada Fleabane.*

The herb of Erigeron Canadense.

ERIGERON HETEROPHYLLUM. *Various-leaved Fleabane.*

The herb of Erigeron heterophyllum.

ERIGERON PHILADELPHICUM. *Philadelphia Fleabane.*

The herb of Erigeron Philadelphicum.

ERYNGIUM. *Button Snakeroot.*

The root of Eryngium aquaticum.

ERYTHRONIUM. *Erythronium.*

The root and herb of Erythronium Americanum (Bigelow, *Amer. Med. Botany*).

EUPHORBIA COROLLATA. *Large-flowering Spurge.*

The root of Euphorbia corollata.

EUPHORBIA IPECACUANHA. *Ipecacuanha Spurge.*

The root of Euphorbia Ipecacuanha.

EXTRACTUM CANNABIS. *Extract of Hemp.*

An alcoholic extract of the dried tops of Cannabis sativa—variety *Indica.*

FILIX MAS. *Male Fern.*

The rhizoma of Aspidium Filix mas.

FRASERA. *American Columbo.*

The root of Frasera Walteri (*Michaux*).

GENTIANA CATESBÆI. *Blue Gentian.*

The root of Gentiana Catesbæi (*Elliot*).

GEUM. *Water Avens.*

The root of Geum rivale.

HELIANTHEMUM. *Frostwort.*

The herb of Helianthemum Canadense (*Michaux*).

HEPATICA. *Liverwort.*

The leaves of Hepatica Americana (*De Candolle*).

HERACLEUM. *Masterwort.*

The root of Heracleum lanatum (*Michaux*).

HEUCHERA. *Alum-root.*

The root of Heuchera Americana.

INULA. *Elecampane.*

The root of Inula Helenium.

IRIS FLORENTINA. *Florentine Orris.*

The rhizoma of Iris Florentina.

IRIS VERSICOLOR. *Blue Flag.*

The rhizoma of Iris versicolor.

JUNIPERUS VIRGINIANA. *Red Cedar.*

The tops of Juniperus Virginiana.

LAPPA. *Burdock.*

The root of Lappa minor (*De Candolle*).

LIRIODENDRON. *Tulip-tree Bark.*

The bark of Liriodendron tulipifera.

LYCOPUS. *Bugle-weed.*

The herb of Lycopus Virginicus (*Michaux*).

MACIS. *Mace.*

The arillus of the fruit of Myristica moschata.

MAGNOLIA. *Magnolia.*

The bark of Magnolia glauca, Magnolia acuminata, and Magnolia tripetala.

MARRUBIUM. *Horehound.*

The herb of Marrubium vulgare.

MATRICARIA. *German Chamomile.*

The flowers of Matricaria Chamomilla.

MELISSA. *Balm.*

The herb of Melissa officinalis.

MUCUNA. *Cowhage.*

The bristles of the pods of Mucuna pruriens (*De Candolle*).

OLEUM CAJUPUTI. *Cajeput Oil.*

The volatile oil of the leaves of Melaleuca Cajuputi (Roxburgh, *Trans. Lond. Medico-Bot. Society*).

OLEUM SESAMI. *Benne Oil.*

The oil of the seeds of Sesamum Indicum, and of Sesamum orientale.

PANAX. *Ginseng.*

The root of Panax quinquefolium.

PAREIRA. *Pareira Brava.*

The root of Cissampelos Pareira.

PETROSELINUM. *Parsley Root.*

The root of Petroselinum sativum (Lindley, *Flor. Med.*).

PHYTOLACCÆ BACCÆ. *Poke Berries.*

The berries of Phytolacca decandra.

PHYTOLACCÆ RADIX. *Poke Root.*

The root of Phytolacca decandra.

POLYGALA RUBELLA. *Bitter Polygala.*

The root and herb of Polygala rubella.

PRINOS. *Black Alder.*

The bark of Prinos verticillatus.

PYRETHRUM. *Pellitory.*

The root of Anacyclus Pyrethrum (*De Candolle*).

RANUNCULUS. *Crowfoot.*

The cormus and herb of Ranunculus bulbosus.

RHUS GLABRUM. *Sumach.*

The fruit of Rhus glabrum.

RUBIA. *Madder.*

The root of Rubia tinctorum.

Rubus Trivialis. *Dewberry-root.*

The root of Rubus trivialis (*Michaux*).

Rubus Villosus. *Blackberry-root.*

The root of Rubus villosus.

Rumex Britannica. *Water Dock.*

The root of Rumex Britannica.

Rumex Obtusifolius. *Blunt-leaved Dock.*

The root of Rumex obtusifolius.

Ruta. *Rue.*

The leaves of Ruta graveolens.

Salix. *Willow.*

The bark of Salix alba.

Salvia. *Sage.*

The leaves of Salvia officinalis.

Sambucus. *Elder Flowers.*

The flowers of Sambucus Canadensis.

Scoparius. *Broom.*

The fresh tops of Cytisus Scoparius (*De Candolle*).

Sesami Folia. *Benne Leaves.*

Sesamum, *U. S. Ph.*, 1840.

The leaves of Sesamum Indicum, and of Sesamum orientale.

SIMARUBA. *Simaruba.*

The bark of the root of Simaruba officinalis (*De Candolle*).

SOLIDAGO. *Golden-rod.*

The leaves of Solidago odora.

SPIRÆA. *Hardhack.*

The root of Spiræa tomentosa.

TANACETUM. *Tansy.*

The herb of Tanacetum vulgare.

TORMENTILLA. *Tormentil.*

The root of Potentilla Tormentilla (*De Candolle*).

TOXICODENDRON. *Poison-oak.*

The leaves of Rhus Toxicodendron.

TRIOSTEUM. *Fever-root.*

The root of Triosteum perfoliatum.

VIOLA. *Violet.*

The herb of Viola pedata.

WINTERA. *Winter's Bark.*

The bark of Drimys Winteri (*De Candolle*).

XANTHORRHIZA. *Yellow-root.*

The root of Xanthorrhiza apiifolia.

XANTHOXYLUM. *Prickly Ash.*

The bark of Xanthoxylum fraxineum.

PREPARATIONS.

PREPARATIONS.

ACETA.

Acetum Destillatum.

Distilled Vinegar.

Take of Vinegar a gallon.

Distil the Vinegar, by means of a sand-bath, from a glass retort into a glass receiver. Discontinue the process when seven pints have been distilled, and keep these for use.

Distilled Vinegar is wholly volatilized by heat, yields no precipitate with acetate of lead or nitrate of silver, and does not change colour upon the addition of sulphohydric acid or ammonia. If silver be digested in it, and chlorohydric acid afterwards added, no precipitate will be produced. One fluidounce is saturated by about 35 grains of crystallized bicarbonate of potassa.

Acetum Colchici.

Vinegar of Colchicum.

Take of Colchicum Root, bruised, two ounces;
Diluted Acetic Acid two pints.

Macerate the Colchicum Root with the Diluted Acetic Acid, in a close glass vessel, for seven days; then express the liquor, and set it by that the dregs may subside; lastly, pour off the clear liquor.

Vinegar of Colchicum may also be prepared by macerating the Colchicum Root, in coarse powder, with a pint of Diluted Acetic Acid for two days, then putting the mixture into a percolator, and gradually pouring upon it Diluted Acetic Acid until the quantity of filtered liquor equals two pints.

In the above processes, Distilled Vinegar may be substituted for Diluted Acetic Acid.

Acetum Opii.

Vinegar of Opium.

(*Black Drop.*)

Take of Opium, in coarse powder, eight ounces;
Nutmeg, in coarse powder, an ounce and a half;
Saffron half an ounce;
Sugar twelve ounces;
Diluted Acetic Acid a sufficient quantity.

Digest the Opium, Nutmeg, and Saffron with a pint and a half of the Diluted Acetic Acid, on a sand-bath, with a gentle heat, for forty-eight hours, and strain. Digest the residue with an equal quantity of the Diluted Acetic Acid, in the same manner, for twenty-four hours. Then put the whole into a percolator, and return the filtered liquor, as it passes, until it comes away quite clear. When the filtration has ceased, pour Diluted Acetic Acid gradually upon the materials remaining in the instrument, until the whole quantity of filtered liquor equals three pints. Lastly, add the Sugar, and, by means of a water-bath, evaporate to three pints and four fluidounces.

In the above process, Distilled Vinegar may be substituted for Diluted Acetic Acid.

Acetum Scillæ.

Vinegar of Squill.

Take of Squill, bruised, four ounces;
Diluted Acetic Acid two pints.

Macerate the Squill with the Diluted Acetic Acid, in a close glass vessel, for seven days; then express the liquor, and set it by that the dregs may subside; lastly, pour off the clear liquor.

Vinegar of Squill may also be prepared by macerating the Squill, in coarse powder, with a pint of Diluted Acetic Acid for two days, then putting the mixture into a percolator, and gradually pouring upon it Diluted Acetic Acid until the quantity of filtered liquor equals two pints.

In the above processes, Distilled Vinegar may be substituted for Diluted Acetic Acid.

ACIDA.

Acidum Aceticum Dilutum.

Diluted Acetic Acid.

Take of Acetic Acid a pint;
Distilled Water seven pints.
Mix them.

Diluted Acetic Acid has the specific gravity 1·004; and 100 grains of it saturate 7·5 grains of crystallized bicarbonate of potassa. It is affected by reagents in the same manner as Acetic Acid. (See *Acidum Aceticum.*)

Acidum Benzoicum.

Benzoic Acid.

Take of Benzoin, in coarse powder, a pound.
Put the Benzoin into a suitable vessel, and, by

means of a sand-bath, with a gradually increasing heat, sublime until vapours cease to rise. Free the sublimed matter from oil by pressure in bibulous paper, and again sublime.

Benzoic Acid, thus obtained, is in white feathery crystals, of an agreeable odour, fusible, wholly volatilizable if cautiously heated, sparingly soluble in cold water, more soluble in boiling water, which deposites it on cooling, very soluble in alcohol, and dissolved by solutions of potassa, soda, ammonia, and lime, from which it is precipitated by chlorohydric acid.

Acidum Gallicum.

Gallic Acid.

Take of Galls, in powder, three pounds;
Distilled Water,
Animal Charcoal, each, a sufficient quantity.

Mix the Galls with sufficient Distilled Water to form a thin paste, and expose the mixture to the air, in a shallow glass or porcelain vessel, in a warm place, for a month, occasionally stirring it with a glass rod, and adding from time to time sufficient Distilled Water to preserve the semi-fluid consistence. Then submit the paste to expression, and, rejecting the expressed liquor, boil the residue in a gallon of Distilled Water for a few minutes,

and filter while hot through Animal Charcoal. Set the hot liquor aside that crystals may form, which may be dried on bibulous paper. If the crystals be not sufficiently free from colour, they may be purified by dissolving them in boiling Distilled Water, filtering through a fresh portion of Animal Charcoal, and crystallizing.

Gallic Acid is in small, silky, nearly colourless crystals, having a slightly acid and astringent taste. It is dissolved by 3 parts of boiling and 100 parts of cold water. The solution reddens litmus, and does not produce a precipitate with a solution of gelatin or of sulphate of protoxide of iron. With solutions of the salts of sesquioxide of iron it occasions a bluish-black precipitate, the colour of which disappears when the liquid is heated. It is decomposed by a strong heat, and entirely dissipated when thrown on red-hot iron.

Acidum Hydrocyanicum Dilutum.

Diluted Hydrocyanic Acid.

Acidum Hydrocyanicum, *U. S. Ph.*, 1840.

Take of Ferrocyanuret of Potassium two ounces;
Sulphuric Acid an ounce and a half;
Distilled Water a sufficient quantity.

Mix the Acid with four fluidounces of Distilled Water, and pour the mixture, when cool, into a glass retort. To this add the Ferrocyanuret of

Potassium, previously dissolved in ten fluidounces of Distilled Water. Pour eight fluidounces of Distilled Water into a cooled receiver, and, having attached this to the retort, distil, by means of a sand-bath, with a moderate heat, six fluidounces. Lastly, add to the product five fluidounces of Distilled Water, or as much as may be sufficient to render the Diluted Hydrocyanic Acid of such a strength, that 12·7 grains of nitrate of silver, dissolved in distilled water, may be accurately saturated by 100 grains of the Acid.

Diluted Hydrocyanic Acid may also be prepared, when wanted for immediate use, in the following manner.

Take of Cyanuret of Silver fifty grains and a half;
Muriatic Acid forty-one grains;
Distilled Water a fluidounce.

Mix the Muriatic Acid with the Distilled Water, add the Cyanuret of Silver, and shake the whole in a well-stopped vial. When the insoluble matter has subsided, pour off the clear liquor, and keep it for use.

Diluted Hydrocyanic Acid should be kept in closely stopped bottles from which the light is excluded.

Diluted Hydrocyanic Acid is colourless, of a peculiar odour, and wholly volatilizable by heat. It imparts a slight and evanescent red colour to litmus, and is not discoloured by sulphohydric acid. With solution of nitrate of silver, added in slight excess, 100 grains of it produce a white precipitate, which, when washed with water until the washings are tasteless, and then dried at a temperature not exceeding 212°, weighs 10 grains, and is wholly dissolved by boiling nitric acid. The Diluted Acid, prepared according to the above processes, contains two per cent. of anhydrous acid.

Acidum Muriaticum Dilutum.

Diluted Muriatic Acid.

Take of Muriatic Acid four fluidounces;
Distilled Water twelve fluidounces.
Mix them in a glass vessel.

The specific gravity of Diluted Muriatic Acid is 1·046.

Acidum Nitricum Dilutum.

Diluted Nitric Acid.

Take of Nitric Acid a fluidounce;
Distilled Water six fluidounces.
Mix them in a glass vessel.

The specific gravity of Diluted Nitric Acid is 1·07; and 100 grains of it saturate 20 grains of crystallized bicarbonate of potassa.

Acidum Nitromuriaticum.

Nitromuriatic Acid.

Take of Nitric Acid four fluidounces;
Muriatic Acid eight fluidounces.

Mix them in a glass vessel, and, when effervescence has ceased, keep the product in a well-stopped glass bottle, in a cool and dark place.

Acidum Sulphuricum Aromaticum.

Aromatic Sulphuric Acid.

(*Elixir of Vitriol.*)

Take of Sulphuric Acid three fluidounces and a half;
Ginger, in coarse powder, an ounce;
Cinnamon, in coarse powder, an ounce and a half;
Alcohol a sufficient quantity.

Add the Acid gradually to a pint of the Alcohol, and allow the liquor to cool. Mix the Ginger and Cinnamon, and, having put them into a percolator, pour Alcohol gradually upon them until a pint of filtered liquor is obtained. Lastly, mix the diluted acid and the tincture.

Acidum Sulphuricum Dilutum.

Diluted Sulphuric Acid.

Take of Sulphuric Acid a fluidounce;
Distilled Water thirteen fluidounces.

Add the Acid gradually to the Water, in a glass vessel, and mix them.

The specific gravity of this acid is 1·09; and 100 grains of it saturate 25 grains of crystallized bicarbonate of potassa.

Acidum Tannicum.

Tannic Acid.

Take of Galls, in powder,
Ether, each, a sufficient quantity.

Put into a glass adapter, loosely closed at its lower end with carded cotton, sufficient powdered Galls to fill about one half of it, and press the powder slightly. Then fit the adapter accurately to the mouth of a receiving vessel, fill it with Ether, previously washed with water, and close the upper orifice so as to prevent the escape of the Ether by evaporation. The liquid which passes separates into two unequal portions, of which the lower is much smaller in quantity and much denser than the upper. When the Ether ceases to

pass, pour fresh portions upon the Galls, until the lower stratum of liquid in the receiving vessel no longer increases. Then separate this from the upper, put it into a capsule, and evaporate with a moderate heat to dryness. Lastly, rub what remains into powder.

The upper portion of liquid will yield by distillation a quantity of ether, which, when washed with water, may be employed in a subsequent operation.

Tannic Acid is of a yellowish-white colour, and of a strongly astringent taste. It is decomposed and entirely dispersed when thrown on red-hot iron. It is very soluble in water, and less soluble in alcohol and in ether. Its solution reddens litmus, produces with solution of gelatin a white flocculent precipitate, with the salts of the sesquioxide of iron a bluish-black precipitate, and with solutions of the vegetable alkalies, white precipitates very soluble in acetic acid.

ACONITIA.

Aconitia.

Aconitia.

Take of Aconite Root, bruised, two pounds;
Alcohol three gallons;
Diluted Sulphuric Acid,
Solution of Ammonia,
Purified Animal Charcoal, each, a sufficient quantity.

Boil the Aconite Root with a gallon of the Alcohol, in a distillatory apparatus, for an hour. Pour off the liquor, and boil the Root in the same manner, and for the same length of time, with another gallon of the Alcohol and the portion distilled. Again pour off the liquor, boil as before with the remaining gallon of the Alcohol and the portion distilled, and decant. Submit the residue to expression, mix all the liquors, distil off the alcohol, and evaporate, by means of a water-bath, to the consistence of an extract. Treat this with distilled water, filter the resulting solution, and evaporate with a gentle heat to the consistence of syrup. To the residue add as much Diluted Sulphuric Acid, mixed with distilled water, as may be suffi-

cient to dissolve the Aconitia. Precipitate this with Solution of Ammonia, and dissolve the precipitate in Diluted Sulphuric Acid mixed with distilled water as before. Mix the Animal Charcoal with the solution, shake the mixture frequently for fifteen minutes, filter, again precipitate the Aconitia with Solution of Ammonia, and, lastly, wash it with water, and dry it.

Aconitia, thus obtained, is white with a tinge of yellow, without smell, and of a bitter acrid taste, accompanied with a sense of numbness. It melts at a moderate heat, and, at a high temperature, is decomposed and entirely dissipated, yielding the smell of ammonia. It requires 150 parts of cold, and 50 of boiling water for solution, and is readily dissolved by alcohol and ether. It neutralizes the acids, forming with them uncrystallizable salts.

ÆTHEREA.

ÆTHER.

Ether.

Æther Sulphuricus, *U. S. Ph.*, 1840.

Take of Alcohol four pints;
Sulphuric Acid a pint;
Potassa six drachms;
Distilled Water three fluidounces.

To two pints of the Alcohol, in an open vessel, add gradually fourteen fluidounces of the Acid, stirring them frequently. Pour the mixture, while still hot, into a tubulated glass retort, placed upon a sand-bath, and connected by a long adapter with a receiver kept cold by ice or water; then raise the heat quickly until the liquid begins to boil. When about half a pint of ethereal liquid has passed over, introduce gradually into the retort the remainder of the Alcohol, previously mixed with two fluidounces of the Acid, taking care that the mixture shall enter in a continuous stream, and in such quantity as shall supply the place, as nearly as possible, of the liquid which distils over. This may be accomplished by connecting a vessel containing the alcoholic liquid with the retort, by means of a tube, provided with a stop-cock to regulate the discharge, and passing nearly to the bottom of the retort, through a cork accurately fitted into the tubulure. When all the Alcohol has been thus added, continue the distillation until about three pints have passed over, or until white vapours appear in the retort.

To the product thus obtained add the Potassa previously dissolved in the Distilled Water, and

shake them frequently. At the end of twenty-four hours, pour off from the alkaline solution the supernatant ether, introduce it into a retort, and, with a gentle heat, distil until two pints have passed over, or until the distilled liquid has the specific gravity 0·750.

Ether wholly evaporates in the air. It does not redden litmus. Shaken with an equal bulk of water, it loses about one-tenth of its volume.

Oleum Ætherеum.

Ethereal Oil.

Take of Alcohol two pints;
Sulphuric Acid three pints;
Solution of Potassa half a fluidounce;
Distilled Water a fluidounce.

Mix the Acid cautiously with the Alcohol, and allow the mixture to stand for twelve hours; then pour it into a large glass retort to which a receiver kept cool by ice or water is adapted, and distil by means of a sand-bath until a black froth rises, when the retort is to be removed immediately from the sand-bath. Separate the lighter supernatant liquid in the receiver from the heavier, and expose it to the air for a day; then add to it the

Solution of Potassa previously mixed with the Distilled Water, and shake them together. Lastly, separate the Ethereal Oil as soon as it has subsided.

The specific gravity of Ethereal Oil is 1·096. It is volatile, of a yellowish colour and peculiar odour, very sparingly soluble in water, but readily dissolved by alcohol or ether, and does not change the colour of litmus.

Spiritus Ætheris Compositus.

Compound Spirit of Ether.

Spiritus Ætheris Sulphurici Compositus, *U. S. Ph.*, 1840.

(*Hoffmann's Anodyne Liquor.*)

Take of Ether half a pint;
Alcohol a pint;
Ethereal Oil three fluidrachms.

Mix them.

Compound Spirit of Ether is of the specific gravity 0·816, has the peculiar odour of Ethereal Oil, is wholly volatilized by heat, does not change the colour of litmus, and assumes a milky appearance when mixed with water.

Spiritus Ætheris Nitrici.

Spirit of Nitric Ether.

(Spiritus Nitri Dulcis.—*Sweet Spirit of Nitre.*)

Take of Nitrate of Potassa, in coarse powder, two pounds;

Sulphuric Acid a pound and a half;
Alcohol nine pints and a half;
Diluted Alcohol a pint;
Carbonate of Potassa an ounce.

Mix the Nitrate of Potassa and the Alcohol in a large glass retort, and, having gradually poured in the Acid, digest with a gentle heat for two hours; then raise the heat and distil a gallon. To the distilled liquor add the Diluted Alcohol and Carbonate of Potassa, and again distil a gallon.

Spirit of Nitric Ether is of the specific gravity 0·834, is colourless, has a peculiar odour, slightly reddens litmus, does not effervesce with carbonate of soda, and, if heated by means of a water-bath to 160°, begins to boil.

Chloroformum.

Chloroform.

Take of Chlorinated Lime ten pounds;
Water three gallons and a half;
Alcohol two pints.

Mix the Chlorinated Lime first with the Water, and then with the Alcohol, in a distillatory vessel having the capacity of about six gallons. Distil with a brisk heat into a refrigerated receiver, and, when the temperature approaches to 176°, with-

draw the fire, in order that the distillation may proceed by the heat derived solely from the reaction of the materials. When the distillation slackens, hasten it by a fresh application of heat, and continue to distil until the liquid ceases to come over with a sweet taste. Separate the heavier layer of liquid in the receiver from the lighter by decantation, and, having washed it first with water, and then with a weak solution of carbonate of soda, agitate it thoroughly with powdered chloride of calcium, and distil it off by means of a water-bath, stopping the distillation when eleven-twelfths of the liquid have come over. The residue, together with the light liquid of the first distillation, may be reserved for use in a second operation.

Chloroform is a colourless liquid, volatile, not inflammable, of a bland ethereal odour, and hot, aromatic saccharine taste. Its specific gravity is 1·49, and boiling point 142°. It is slightly soluble in water, but freely so in alcohol and in ether. Mixed with an equal volume of sulphuric acid, it does not assume a reddish-brown colour, nor is the acid discoloured. When dropped into a cold mixture of equal weights of sulphuric acid and water, it sinks to the bottom. If a small quantity be added to distilled water, it forms transparent globules under the water, without assuming a milky appearance.

Collodium.

Collodion.

Take of Cotton, freed from impurities, and finely carded, half an ounce;
Nitrate of Potassa, in powder, ten ounces;
Sulphuric Acid eight fluidounces and a half;
Ether two pints and a half;
Alcohol a fluidounce.

Add the Sulphuric Acid to the Nitrate of Potassa in a Wedgwood mortar, and triturate them until uniformly mixed; then add the Cotton, and, by means of the pestle and a glass rod, imbue it thoroughly with the mixture for four minutes. Transfer the Cotton to a vessel containing water, and wash it, in successive portions, by agitation and pressure, until the washings cease to have an acid taste, or to be precipitated on the addition of chloride of barium. Having separated the fibres by picking, dry the cotton with a gentle heat, dissolve it by agitation in the Ether previously mixed with the Alcohol, and strain. Collodion should be kept in closely stopped bottles previously well dried.

ALCOHOL.

Alcohol Dilutum.

Diluted Alcohol.

Take of Alcohol,

Distilled Water, each, a pint.

Mix them.

The specific gravity of Diluted Alcohol is 0·935.

ALUMEN.

Alumen Exsiccatum.

Dried Alum.

Take of Alum, in coarse powder, a convenient quantity.

Melt it in a shallow iron or earthen vessel, and maintain it at a moderate heat until ebullition ceases, and it becomes dry; then rub it into powder.

AMMONIA.

Liquor Ammoniæ.

Solution of Ammonia.

(Aqua Ammoniæ.—*Water of Ammonia.*)

Take of Muriate of Ammonia, in fine powder,
Lime, each, a pound;
Distilled Water a pint;
Water nine fluidounces.

Break the Lime in pieces, and pour the Water upon it in an earthen or iron vessel; then cover the vessel, and set it aside till the Lime falls into powder and becomes cold. Mix this thoroughly with the Muriate of Ammonia in a mortar, and immediately introduce the mixture into a glass retort. Place the retort upon a sand-bath, and adapt to it a receiver, previously connected, by means of a glass tube, with a quart bottle containing the Distilled Water. Then apply heat, to be gradually increased till the bottom of the iron vessel containing the sand becomes red-hot; and continue the process so long as ammonia comes over. Remove the liquor contained in the quart bottle, and for every fluidounce of it add three and a half fluidrachms of Distilled Water, or so

much as may be necessary to raise its specific gravity to 0·960. Keep the solution in small bottles well stopped.

Solution of Ammonia may also be prepared by mixing one part, by measure, of Stronger Solution of Ammonia with two parts of Distilled Water.

The specific gravity of Solution of Ammonia is 0·960, and 100 grains of it saturate 30 grains of officinal sulphuric acid. In other respects it agrees in properties with Stronger Solution of Ammonia. (See *Liquor Ammoniæ Fortior.*)

Spiritus Ammoniæ.
Spirit of Ammonia.

Take of Muriate of Ammonia, in fine powder,
Lime, each, a pound;
Alcohol twenty fluidounces;
Water nine fluidounces.

Slake the Lime with the Water, mix it with the Muriate of Ammonia, and proceed in the manner directed for Solution of Ammonia, the Alcohol being introduced into the quart bottle instead of Distilled Water. When all the ammonia has come over, remove the liquor contained in the quart bottle, and keep it in small bottles well stopped.

Of Spirit of Ammonia 100 grains saturate about 30 grains of officinal sulphuric acid.

Spiritus Ammoniæ Aromaticus.

Aromatic Spirit of Ammonia.

Take of Muriate of Ammonia five ounces;
Carbonate of Potassa eight ounces;
Cinnamon, bruised,
Cloves, bruised, each, two drachms;
Lemon Peel four ounces;
Alcohol,
Water, each, five pints.

Mix them and distil seven pints and a half.

Liquor Ammoniæ Acetatis.

Solution of Acetate of Ammonia.

(Spiritus Mindereri.—*Spirit of Mindererus.*)

Take of Diluted Acetic Acid two pints;
Carbonate of Ammonia, in powder, a sufficient quantity.

Add the Carbonate of Ammonia gradually to the Acid until it is saturated.

This solution is colourless, and does not become coloured by the action of sulphohydric acid. It yields no precipitate with nitrate of silver or chloride of barium.

Ammoniæ Carbonas.

Carbonate of Ammonia.

Take of Muriate of Ammonia a pound;
Chalk, dried, a pound and a half.

Pulverize them separately; then mix them thoroughly, and sublime with a gradually increasing heat.

Carbonate of Ammonia is in whitish, translucent masses, wholly dissipated by heat, of a pungent ammoniacal odour, and soluble without residue in water. On exposure to the air, it becomes opaque, falls into powder, and deteriorates by the loss of ammonia. When it is saturated by nitric acid, neither chloride of barium nor nitrate of silver causes a precipitate.

ANTIMONIUM.

Antimonii et Potassæ Tartras.

Tartrate of Antimony and Potassa.

(*Tartar Emetic.*)

Take of Sulphuret of Antimony, in fine powder, four ounces;
Muriatic Acid twenty-five ounces;
Nitric Acid two drachms;
Water a gallon.

Having mixed the Acids together in a glass ves-

sel, add by degrees the Sulphuret of Antimony, and digest the mixture, with a gradually increasing heat, till effervescence ceases; then boil for an hour. Filter the liquor when it has become cold, and pour it into the Water. Wash the precipitated powder frequently with water, till it is entirely freed from acid, and then dry it.

Take of this powder two ounces;

Bitartrate of Potassa, in very fine powder, two ounces and a half;

Distilled Water eighteen fluidounces.

Boil the Water in a glass vessel; then add the powders previously mixed together, and boil for an hour; lastly, filter the liquor while hot, and set it aside to crystallize. By further evaporation, the liquor may be made to yield an additional quantity of crystals, which should be purified by a second crystallization.

Tartrate of Antimony and Potassa is in transparent crystals, which become white and opaque on exposure to the air. It is wholly soluble in twenty parts of water. Its solution does not yield a precipitate with chloride of barium, nor, if very dilute, with nitrate of silver. Sulphohydric acid produces with it an orange-red precipitate. A solution, containing one part in forty parts of water, is not disturbed by an equal volume of a solution of eight parts of acetate of lead in thirty-two parts of water and fifteen of acetic acid.

Vinum Antimonii.

Antimonial Wine.

Take of Tartrate of Antimony and Potassa a scruple;
White Wine ten fluidounces.

Dissolve the Tartrate of Antimony and Potassa in the Wine.

Antimonii Sulphuretum Præcipitatum.

Precipitated Sulphuret of Antimony.

Take of Sulphuret of Antimony, in fine powder, six ounces;
Solution of Potassa four pints;
Distilled Water,
Diluted Sulphuric Acid, each, a sufficient quantity.

Mix the Sulphuret of Antimony with the Solution of Potassa and twelve pints of Distilled Water, and boil them over a gentle fire for two hours, constantly stirring, and occasionally adding Distilled Water so as to preserve the same measure. Strain the liquor immediately through a double linen cloth, and drop into it, while yet hot, Diluted Sulphuric Acid so long as it produces a precipitate; then wash away the sulphate of potassa with hot

water, dry the Precipitated Sulphuret of Antimony, and rub it into a fine powder.

Precipitated Sulphuret of Antimony is a reddish-brown, insoluble powder. When treated with twelve times its weight of chlorohydric acid of the sp. gr. 1·16, with the aid of heat, it is nearly all dissolved, with effervescence of sulphohydric acid. The residue, after having been washed and dried, burns with the characters of sulphur, and leaves a scanty ash. The chlorohydric solution, when added to water, deposits a white powder. The liquor filtered from this powder yields an orange-red precipitate with sulphohydrate of ammonia. Water in which the preparation has been boiled should not yield a white precipitate with chloride of barium or oxalate of ammonia.

AQUA.

Aqua Destillata.

Distilled Water.

Take of Water ten gallons.

First distil two pints, and throw them away; then distil eight gallons. Keep the Distilled Water in glass bottles.

Distilled Water is colourless and inodorous, and when evaporated leaves no residue. It is not affected by lime-water, sulphohydric acid, chloride of barium, nitrate of silver, or oxalate of ammonia.

AQUÆ MEDICATÆ.

Aqua Acidi Carbonici.

Carbonic Acid Water.

By means of a forcing pump, throw into a suitable receiver, nearly filled with Water, a quantity of carbonic acid equal to five times the bulk of the Water.

Carbonic acid is obtained from Marble by means of dilute sulphuric acid.

Carbonic Acid Water is not discoloured by sulphohydric acid or solution of ammonia, and yields no precipitate with sulphate of soda or ferrocyanuret of potassium.

Aqua Amygdalæ Amaræ.

Bitter Almond Water.

Take of Oil of Bitter Almonds sixteen minims;
Carbonate of Magnesia a drachm;
Water two pints.

Proceed in the manner directed for Cinnamon Water.

Aqua Camphoræ.

Camphor Water.

Take of Camphor two drachms;

Alcohol forty minims;
Carbonate of Magnesia four drachms;
Distilled Water two pints.

Rub the Camphor first with the Alcohol, afterwards with the Carbonate of Magnesia, and lastly with the Water gradually added; then filter through paper.

Aqua Cinnamomi.
Cinnamon Water.

Take of Oil of Cinnamon half a fluidrachm;
Carbonate of Magnesia a drachm;
Distilled Water two pints.

Rub the Oil of Cinnamon first with the Carbonate of Magnesia, then with the Water gradually added, and filter through paper.

In the same manner prepare

Aqua Fœniculi,
Fennel Water,

From Oil of Fennel;

Aqua Menthæ Piperitæ,
Peppermint Water,

From Oil of Peppermint; and

Aqua Menthæ Viridis,
Spearmint Water,

From Oil of Spearmint.

Aqua Rosæ.
Rose Water.

Take of Fresh Hundred-leaved Roses eight pounds;
Water two gallons.

Mix them and distil a gallon.

ARGENTUM.

Argenti Cyanuretum.
Cyanuret of Silver.

Take of Nitrate of Silver,
Ferrocyanuret of Potassium, each, two ounces;
Sulphuric Acid an ounce and a half;
Distilled Water a sufficient quantity.

Dissolve the Nitrate of Silver in a pint of Distilled Water, and pour the solution into a tubulated glass receiver. Dissolve the Ferrocyanuret of Potassium in ten fluidounces of Distilled Water, and

pour the solution into a tubulated retort, previously adapted to the receiver. Having mixed the Sulphuric Acid with four fluidounces of Distilled Water, add the mixture to the solution in the retort, and distil, by means of a sand-bath, with a moderate heat, until six fluidounces pass over, or until the liquid that passes produces no longer a precipitate in the receiver. Finally, wash the precipitate with distilled water, and dry it.

Cyanuret of Silver is a white powder, insoluble in water and in cold nitric acid, but soluble in that acid at the boiling temperature. When heated it is decomposed, cyanogen being given off, and metallic silver remaining.

Argenti Nitras.

Nitrate of Silver.

Take of Silver, in small pieces, an ounce;
Nitric Acid seven fluidrachms;
Distilled Water two fluidounces.

Mix the Acid with the Water, and dissolve the Silver in the mixture, on a sand-bath, with a gentle heat. Pour off the clear solution into a porcelain capsule, and, having evaporated it to one-half, allow it to cool that crystals may form. Pour off the supernatant liquid, and, after due evapora-

tion, put it aside for the formation of fresh crystals. Again pour off the liquid, and evaporate for a third crop of crystals. Lastly, place the crystals in a glass funnel, in order that they may drain, and, when they are dry, put them into a bottle, which is to be well stopped, and protected from the light.

The silver remaining in the mother water of the last crystallization may be obtained by introducing into it a plate of copper, which will precipitate the whole of the silver in the form of a gray powder, which, when washed with water, will be perfectly pure.

Nitrate of Silver is a colourless, anhydrous salt, wholly soluble in distilled water, and crystallizing in plates, which are sometimes of considerable size. Its solution yields with chloride of sodium a white precipitate totally soluble in ammonia. When deprived of silver by chloride of sodium, and filtered, the solution is not coloured nor precipitated by sulphohydric acid.

Argenti Nitras Fusus.

Fused Nitrate of Silver.

Take of Silver, in small pieces, an ounce;
Nitric Acid seven fluidrachms;
Distilled Water two fluidounces.

Mix the Acid with the Water, and dissolve the Silver in the mixture, on a sand-bath, with a gentle heat; then gradually increase the heat, and evaporate to dryness. Melt the resulting salt in a crucible over a gentle fire, and continue the heat until ebullition ceases; then immediately pour it into suitable moulds.

Fused Nitrate of Silver is at first white, but darkens on exposure to light. It is wholly soluble in distilled water. A solution, containing 25 grains of the salt, yields with chloride of sodium about 21 grains of a white precipitate totally soluble in ammonia. Its characters with other tests are the same as those given under Nitrate of Silver.

Argenti Oxidum.

Oxide of Silver.

Take of Nitrate of Silver four ounces;
Distilled Water half a pint;
Solution of Potassa a pint and a half,
or a sufficient quantity.

Dissolve the Nitrate of Silver in the Water, and to the solution add the Solution of Potassa, so long as it produces a precipitate. Wash the precipitate repeatedly with water until the washings are nearly tasteless. Lastly, dry the powder, and

keep it in a well stopped bottle, protected from the light.

Oxide of Silver is an olive-brown powder, very slightly soluble in water. Exposed to heat it gives out oxygen, and is wholly converted into metallic silver. When it is dissolved in nitric acid, and the solution is precipitated by chloride of sodium in excess, the supernatant liquid is not discoloured by sulphohydrate of ammonia.

ARSENICUM.

Arsenici Iodidum.

Iodide of Arsenic.

Take of Arsenic a drachm;
Iodine five drachms.

Rub the Arsenic in a mortar until reduced to a very fine powder, free from metallic lustre; then add the Iodine, and rub them together till they are thoroughly mixed. Put the mixture into a small flask or a test-tube, loosely stopped, and heat it very gently until liquefaction occurs. Then incline the vessel in different directions, in order that any portion of the Iodine, which may have condensed on its inner surface, may be returned

into the fused mass. Lastly, pour the melted Iodide on a porcelain slab, and, when it is cold, break it into pieces, and put it into a bottle, which is to be well stopped.

Iodide of Arsenic is an orange-red, crystalline solid, entirely soluble in water, and wholly volatilized by heat.

Liquor Arsenici et Hydrargyri Iodidi.

Solution of Iodide of Arsenic and Mercury.

Take of Iodide of Arsenic,
Red Iodide of Mercury, each, thirty-five grains;
Distilled Water half a pint.

Rub the Iodides with half a fluidounce of the Water, and, when they have dissolved, add the remainder of the Water, heat to the boiling point, and filter.

Liquor Potassæ Arsenitis.

Solution of Arsenite of Potassa.

Take of Arsenious Acid, in small fragments,
Pure Carbonate of Potassa, each, sixty-four grains;
Distilled Water a sufficient quantity;

Compound Spirit of Lavender half a fluidounce.

Boil the Arsenious Acid and Carbonate of Potassa, in a glass vessel, with twelve fluidounces of Distilled Water till the Acid is entirely dissolved. To the solution, when cold, add the Spirit of Lavender, and afterwards sufficient Distilled Water to make it fill exactly the measure of a pint.

BARIUM.

Barii Chloridum.

Chloride of Barium.

(Barytæ Murias.—*Muriate of Baryta.*)

Take of Carbonate of Baryta, in small fragments, a pound;
Muriatic Acid twelve fluidounces;
Water three pints.

Mix the Acid with the Water, and gradually add the Carbonate of Baryta. Towards the close of the effervescence apply a gentle heat, and, when the action has ceased, filter the liquor, and evaporate so that crystals may form when it cools.

Chloride of Barium is wholly soluble in water. Its solution is not affected by ammonia or sulphohydric acid. When sulphuric acid is added in excess, no further precipitate is produced on the addition of carbonate of soda.

Liquor Barii Chloridi.

Solution of Chloride of Barium.

Take of Chloride of Barium an ounce;
Distilled Water three fluidounces.

Dissolve the Chloride of Barium in the Water, and filter.

BISMUTHUM.

Bismuthi Subnitras.

Subnitrate of Bismuth.

Take of Bismuth, in fragments, an ounce;
Nitric Acid two fluidounces;
Distilled Water a sufficient quantity.

Mix a fluidounce of Distilled Water with the Nitric Acid, and dissolve the Bismuth in the mixture. When the solution is complete, pour the clear liquor into three pints of Distilled Water, and set the mixture by, that the powder may sub-

side. Lastly, having poured off the supernatant liquid, wash the Subnitrate of Bismuth with Distilled Water, wrap it in bibulous paper, and dry it with a gentle heat.

Subnitrate of Bismuth is a white powder, which is blackened by sulphohydric acid. It is dissolved, without effervescence, by nitric acid, forming a colourless solution, which does not yield a precipitate upon the addition of diluted sulphuric acid.

CALX.

Liquor Calcii Chloridi.

Solution of Chloride of Calcium.

(*Solution of Muriate of Lime.*)

Take of Marble, in fragments, nine ounces;
Muriatic Acid a pint;
Distilled Water a sufficient quantity.

Mix the Acid with half a pint of the Distilled Water, and gradually add the Marble. Towards the close of the effervescence apply a gentle heat, and, when the action has ceased, pour off the clear liquor and evaporate to dryness. Dissolve the residue in its weight and a half of Distilled Water, and filter the solution.

Liquor Calcis.

Lime-water.

Take of Lime four ounces;
Distilled Water a gallon.

Upon the Lime, first slaked with a little of the Water, pour the remainder of the Water, and stir them together; then immediately cover the vessel, and set it aside for three hours. Keep the solution, together with the undissolved Lime, in stopped glass bottles, and pour off the clear liquor when wanted for use.

Water free from saline or other obvious impurity, though not distilled, may be employed in this process.

Calcis Carbonas Præcipitatus.

Precipitated Carbonate of Lime.

Take of Solution of Chloride of Calcium five pints and a half;
Carbonate of Soda six pounds;
Distilled Water a sufficient quantity.

Dissolve the Carbonate of Soda in six pints of Distilled Water. Heat this solution and the Solution of Chloride of Calcium, separately, to the boiling point, and mix them. After the precipitate

has subsided, pour off the supernatant liquid, wash the precipitate repeatedly with Distilled Water, and dry it on bibulous paper.

Precipitated Carbonate of Lime is a very fine white powder, free from grittiness, insoluble in water, but wholly soluble in dilute chlorohydric acid, with copious effervescence of carbonic acid gas.

Creta Præparata.

Prepared Chalk.

Take of Chalk a convenient quantity.

Add a little water to the Chalk, and rub it into a fine powder. Throw this into a large vessel nearly full of water, stir briskly, and, after a short interval, pour the supernatant liquor, while yet turbid, into another vessel. Repeat the process with the Chalk remaining in the first vessel, and set the turbid liquor by, that the powder may subside. Lastly, pour off the water, and dry the powder.

Testa Præparata.

Prepared Oyster-shell.

Take of Oyster-shell a convenient quantity.

Free it from extraneous matter, wash it with

boiling water, and reduce it to powder; then prepare it in the manner directed for Chalk.

CARBO ANIMALIS.

Carbo Animalis Purificatus.

Purified Animal Charcoal.

Take of Animal Charcoal a pound;
Muriatic Acid,
Water, each, twelve fluidounces.

Pour the Muriatic Acid, previously mixed with the Water, gradually upon the Charcoal, and digest with a gentle heat for two days, occasionally stirring the mixture. Having allowed the undissolved portion to subside, pour off the supernatant liquor, wash the Charcoal frequently with water until it is entirely free from acid, and dry it.

Purified Animal Charcoal does not effervesce on the addition of chlorohydric acid, nor does it impart to the acid anything capable of yielding a precipitate with ammonia or its carbonate.

CERATA.

Ceratum Calaminæ.

Calamine Cerate.

Ceratum Zinci Carbonatis, *U. S. Ph.*, 1840.

(*Turner's Cerate.*)

Take of Prepared Calamine,
Yellow Wax, each, three ounces;
Lard a pound.

Melt the Wax and Lard together, and, when upon cooling they begin to thicken, add the Calamine, and stir the mixture constantly until cool.

Ceratum Cantharidis.

Cerate of Spanish Flies.

(Emplastrum Epispasticum.—*Blistering Plaster.*)

Take of Spanish Flies, in very fine powder, a pound;
Yellow Wax,
Resin, each, seven ounces;
Lard ten ounces.

To the Wax, Resin, and Lard, previously melted together and strained, add the Spanish Flies, and, by means of a water-bath, keep the mixture in a fluid state for half an hour, stirring occa-

sionally; then remove it from the bath, and stir it constantly until cool.

Ceratum Cetacei.

Spermaceti Cerate.

Take of Spermaceti an ounce;
White Wax three ounces;
Olive Oil six fluidounces.

Melt together the Spermaceti and Wax; then add the Oil previously heated, and stir the mixture until cool.

Ceratum Plumbi Subacetatis.

Cerate of Subacetate of Lead.

(*Goulard's Cerate.*)

Take of Solution of Subacetate of Lead two fluidounces and a half;
White Wax four ounces;
Olive Oil nine fluidounces;
Camphor half a drachm.

Mix the Wax, previously melted, with eight fluidounces of the Oil; then remove the mixture from the fire, and, when it begins to thicken, gradually pour in the Solution of Subacetate of Lead, stirring constantly with a wooden spatula till it becomes cool. Lastly, add the Camphor dissolved in the remainder of the Oil, and mix.

Ceratum Resinæ.

Resin Cerate.

(*Basilicon Ointment.*)

Take of Resin five ounces;
Lard eight ounces;
Yellow Wax two ounces.

Melt them together, strain through linen, and stir them constantly until cool.

Ceratum Resinæ Compositum.

Compound Resin Cerate.

Take of Resin,
Suet,
Yellow Wax, each, a pound;
Turpentine half a pound;
Flaxseed Oil half a pint.

Melt them together, strain through linen, and stir them constantly until cool.

Ceratum Sabinæ.

Savine Cerate.

Take of Savine, in powder, two ounces;
Resin Cerate a pound.

Mix the Savine with the Cerate previously softened.

Ceratum Saponis.

Soap Cerate.

Take of Solution of Subacetate of Lead two pints;
Soap six ounces;
White Wax ten ounces;
Olive Oil a pint.

Boil the Solution of Subacetate of Lead with the Soap, over a slow fire, to the consistence of honey; then transfer to a water-bath, and evaporate until all the moisture is dissipated; lastly, add the Wax previously melted with the Oil, and mix.

Ceratum Simplex.

Simple Cerate.

Take of Lard eight ounces;
White Wax four ounces.

Melt them together, and stir them constantly until cool.

Ceratum Zinci Carbonatis.

Cerate of Carbonate of Zinc.

Take of Precipitated Carbonate of Zinc two drachms;
Simple Ointment ten drachms.

Mix them.

CONFECTIONES.

Confectio Aromatica.

Aromatic Confection.

Take of Aromatic Powder five ounces and a half;
Saffron, in powder, half an ounce;
Syrup of Orange Peel six ounces;
Clarified Honey two ounces.

Rub the Aromatic Powder with the Saffron; then add the Syrup and Honey, and beat the whole together until thoroughly mixed.

Confectio Aurantii Corticis.

Confection of Orange Peel.

Take of Orange Peel, recently separated from the fruit by grating, a pound;
Sugar three pounds.

Beat the Orange Peel with the Sugar gradually added, till they are thoroughly mixed.

Confectio Opii.

Confection of Opium.

Take of Opium, in powder, four drachms and a half;
Aromatic Powder six ounces;
Clarified Honey fourteen ounces.

Rub the Opium with the Aromatic Powder; then add the Honey, and beat the whole together until thoroughly mixed.

Confectio Rosæ.

Confection of Roses.

(*Conserve of Roses.*)

Take of Red Roses, in powder, four ounces;
Sugar, in powder, thirty ounces;
Clarified Honey six ounces;
Rose Water eight fluidounces.

Rub the Roses with the Rose Water heated to 150°; then gradually add the Sugar and Honey, and beat the whole together until thoroughly mixed.

Confectio Sennæ.

Confection of Senna.

(*Lenitive Electuary.*)

Take of Senna eight ounces;
Coriander four ounces;
Liquorice Root, bruised, three ounces;
Figs a pound;
Pulp of Prunes,
Pulp of Tamarinds,
Pulp of Purging Cassia, each, half a pound;
Sugar two pounds and a half;
Water four pints.

Rub the Senna and Coriander together, and separate ten ounces of the powder with a sieve. Boil the residue with the Liquorice Root and Figs, in the Water, to one-half; then press out the liquor and strain. Evaporate the strained liquor, by means of a water-bath, to a pint and a half; then add the Sugar and form a syrup. Lastly, rub the Pulps with the syrup gradually added, and, having thrown in the sifted powder, beat all together until thoroughly mixed.

CUPRUM.

Cuprum Ammoniatum.

Ammoniated Copper.

Take of Sulphate of Copper half an ounce;
Carbonate of Ammonia six drachms.

Rub them together in a glass mortar till the effervescence ceases; then wrap the Ammoniated Copper in bibulous paper, and dry it with a gentle heat. Let it be kept in a well-stopped glass bottle.

DECOCTA.

Decoctum Cetrariæ.

Decoction of Iceland Moss.

Take of Iceland Moss half an ounce;
Water a pint and a half.

Boil down to a pint, and strain with compression.

Decoctum Chimaphilæ.

Decoction of Pipsissewa.

Take of Pipsissewa, bruised, an ounce;
Water a pint and a half.

Boil down to a pint, and strain.

Decoctum Cinchonæ Flavæ.

Decoction of Yellow Bark.

Take of Yellow Bark, bruised, an ounce;
Water a pint.

Boil for ten minutes in a covered vessel, and strain the liquor while hot.

Decoctum Cinchonæ Rubræ.

Decoction of Red Bark.

Take of Red Bark, bruised, an ounce;
Water a pint.

Boil for ten minutes in a covered vessel, and strain the liquor while hot.

Decoctum Cornûs Floridæ.

Decoction of Dogwood.

Take of Dogwood, bruised, an ounce;
Water a pint.

Boil for ten minutes in a covered vessel, and strain the liquor while hot.

Decoctum Dulcamaræ.

Decoction of Bittersweet.

Take of Bittersweet, bruised, an ounce;
Water a pint and a half.

Boil down to a pint, and strain.

Decoctum Hæmatoxyli.

Decoction of Logwood.

Take of Logwood, rasped, an ounce;
Water two pints.

Boil down to a pint, and strain.

Decoctum Hordei.

Decoction of Barley.

Take of Barley two ounces;
Water four pints and a half.

First wash away, with cold water, the extraneous matters which adhere to the Barley; then pour upon it half a pint of the Water, and boil for a short time. Having thrown away this Water, pour the remainder boiling hot upon the Barley; then boil down to two pints, and strain.

Decoctum Quercûs Albæ.

Decoction of White Oak Bark.

Take of White Oak Bark, bruised, an ounce;
Water a pint and a half.

Boil down to a pint, and strain.

Decoctum Sarsaparillæ Compositum.

Compound Decoction of Sarsaparilla.

Take of Sarsaparilla, sliced and bruised, six ounces;
Bark of Sassafras Root, sliced,
Guaiacum Wood, rasped,
Liquorice Root, bruised, each, an ounce;
Mezereon, sliced, three drachms;
Water four pints.

Macerate for twelve hours; then boil for a quarter of an hour, and strain.

Decoctum Senegæ.

Decoction of Seneka.

Take of Seneka, bruised, an ounce;
Water a pint and a half.

Boil down to a pint, and strain.

Decoctum Uvæ Ursi.

Decoction of Uva Ursi.

Take of Uva Ursi an ounce;
Water twenty fluidounces.

Boil down to a pint, and strain.

EMPLASTRA.

Emplastrum Ammoniaci.

Ammoniac Plaster.

Take of Ammoniac five ounces;
Diluted Acetic Acid half a pint.

Dissolve the Ammoniac in the Diluted Acetic Acid, and strain; then evaporate the solution by means of a water-bath, stirring constantly until it acquires a proper consistence.

Emplastrum Ammoniaci cum Hydrargyro.

Plaster of Ammoniac with Mercury.

Take of Ammoniac a pound;
Mercury three ounces;
Olive Oil a fluidrachm;
Sulphur eight grains.

Heat the Oil, and gradually add the Sulphur, constantly stirring, until they unite; then add the Mercury, and triturate until globules no longer appear. Boil the Ammoniac with sufficient water to cover it until they are mixed; then strain through a hair sieve, and evaporate, by means of a water-bath, until a small portion taken from the

vessel hardens on cooling. Lastly, add the Ammoniac, while yet hot, gradually to the mixture of Oil, Sulphur, and Mercury, and thoroughly incorporate all the ingredients.

Emplastrum Assafœtidæ.

Assafetida Plaster.

Take of Assafetida,
Lead Plaster, each, a pound;
Galbanum,
Yellow Wax, each, half a pound;
Alcohol three pints.

Dissolve the Assafetida and Galbanum in the Alcohol with the aid of a water-bath, strain the liquor while hot, and evaporate to the consistence of honey; then add the Lead Plaster and Wax previously melted together, stir the mixture well, and evaporate to the proper consistence.

Emplastrum Belladonnæ.

Belladonna Plaster.

Take of Resin Plaster three ounces;
Extract of Belladonna an ounce and a half.

Add the Extract to the Plaster, previously melted by the heat of a water-bath, and mix.

Emplastrum Ferri.

Iron Plaster.

(Emplastrum Roborans.—*Strengthening Plaster.*)

Take of Subcarbonate of Iron three ounces;
Lead Plaster two pounds;
Burgundy Pitch half a pound.

Add the Subcarbonate of Iron to the Lead Plaster and Burgundy Pitch, previously melted together, and stir them constantly until they thicken upon cooling.

Emplastrum Galbani Compositum.

Compound Galbanum Plaster.

Take of Galbanum eight ounces;
Turpentine ten drachms;
Burgundy Pitch three ounces;
Lead Plaster three pounds.

To the Galbanum and Turpentine, previously melted together and strained, add first the Burgundy Pitch, and afterwards the Lead Plaster, melted over a gentle fire, and mix the whole together.

Emplastrum Hydrargyri.

Mercurial Plaster.

Take of Mercury six ounces;
Olive Oil,
Resin, each, two ounces;
Lead Plaster a pound.

Melt the Oil and Resin together, and, when they have become cool, rub the Mercury with them till the globules disappear; then gradually add the Lead Plaster previously melted, and mix the whole together.

Emplastrum Opii.

Opium Plaster.

Take of Opium, in powder, two ounces;
Burgundy Pitch three ounces;
Lead Plaster a pound;
Boiling Water four fluidounces.

Melt together the Lead Plaster and Burgundy Pitch; then add the Opium previously mixed with the Water, and boil them over a gentle fire to the proper consistence.

Emplastrum Picis Burgundicæ.

Burgundy Pitch Plaster.

Take of Burgundy Pitch six pounds;
Yellow Wax half a pound.

Melt them together, and stir them constantly till they thicken on cooling.

Emplastrum Picis cum Cantharide.

Plaster of Pitch with Spanish Flies.

(Emplastrum Calefaciens.—*Warming Plaster.*)

Take of Burgundy Pitch three pounds and a half;
Cerate of Spanish Flies half a pound.

Melt them together by means of a water-bath, and stir them constantly till they thicken upon cooling.

Emplastrum Plumbi.

Lead Plaster.

Take of Semivitrified Oxide of Lead, in very fine powder, five pounds;
Olive Oil a gallon;
Water two pints.

Boil them together over a gentle fire, stirring constantly, until the Oil and Oxide of Lead unite

into a plaster. It will be proper to add a little boiling water, if that employed at the commencement be nearly all consumed before the end of the process.

Emplastrum Resinæ.

Resin Plaster.

(*Adhesive Plaster.*)

Take of Resin, in powder, half a pound;
Lead Plaster three pounds.

To the Lead Plaster, melted over a gentle fire, add the Resin, and mix them.

Emplastrum Saponis.

Soap Plaster.

Take of Soap, sliced, four ounces;
Lead Plaster three pounds.

Rub the Soap with sufficient water to bring it to a semi-fluid state; then mix it with the Plaster previously melted, and boil to the proper consistence.

EXTRACTA.

In the preparation of the Extracts, evaporate, unless otherwise directed, as quickly as possible, in broad, shallow dishes, by means of a water-bath, until they have acquired the consistence proper for forming pills; and, towards the end of the process, stir them constantly with a spatula.

Sprinkle upon the softer Extracts a small quantity of Alcohol.

Extractum Aconiti Alcoholicum.

Alcoholic Extract of Aconite.

Take of Aconite Leaves, in coarse powder, a pound;

Diluted Alcohol four pints.

Moisten the powder with half a pint of the Diluted Alcohol, and, having allowed the mixture to stand for twenty-four hours, transfer it to a percolator, and add gradually the remainder of the Diluted Alcohol. When the last portion of this has penetrated the powder, pour in sufficient water from time to time to keep the mass covered. Cease to filter when the liquid which passes be-

gins to produce a precipitate, as it falls, in that which has already passed. Distil off the alcohol from the filtered liquor, and evaporate the residue to the proper consistence.

In the same manner prepare

EXTRACTUM BELLADONNÆ ALCOHOLICUM,
Alcoholic Extract of Belladonna,
From Belladonna, in coarse powder;

EXTRACTUM CONII ALCOHOLICUM,
Alcoholic Extract of Hemlock,
From Hemlock Leaves, in coarse powder;

EXTRACTUM HELLEBORI,
Extract of Black Hellebore,
From Black Hellebore, in coarse powder;

EXTRACTUM HYOSCYAMI ALCOHOLICUM,
Alcoholic Extract of Henbane,
From Henbane Leaves, in coarse powder; and

EXTRACTUM SARSAPARILLÆ,
Extract of Sarsaparilla,
From Sarsaparilla, in coarse powder.

Extractum Cinchonæ Flavæ.
Extract of Yellow Bark.

Take of Yellow Bark, in coarse powder, a pound;
Alcohol four pints;
Water a sufficient quantity.

Macerate the Yellow Bark with the Alcohol for four days; then filter by means of a percolator, and, when the liquid ceases to pass, pour gradually upon the Bark sufficient Water to keep its surface covered. When the filtered tincture measures four pints, set it aside and proceed with the filtration until six pints of infusion are obtained. Distil off the alcohol from the tincture, and evaporate the infusion, till the liquids respectively are brought to the consistence of thin honey; then mix them, and evaporate so as to form an extract.

In the same manner prepare

Extractum Cinchonæ Rubræ,
Extract of Red Bark,

From Red Bark, in coarse powder;

Extractum Jalapæ,
Extract of Jalap,

From Jalap, in coarse powder; and

Extractum Podophylli,

Extract of May-apple,

From May-apple, in coarse powder.

Extractum Colchici Aceticum.

Acetic Extract of Colchicum.

Take of Colchicum Root, in coarse powder, a pound;
Acetic Acid four fluidounces;
Water a sufficient quantity.

To the Acetic Acid add a pint of Water, and mix the resulting liquid with the Colchicum Root. Transfer the mixture to a percolator, and pour Water gradually upon it until the liquid passes with little or no taste. Lastly, evaporate the liquid, in a porcelain vessel, to the proper consistence.

Extractum Colocynthidis Compositum.

Compound Extract of Colocynth.

Take of Colocynth, deprived of the seeds and sliced, six ounces;
Aloes, in powder, twelve ounces;
Scammony, in powder, four ounces;
Cardamom, in powder, an ounce;

Soap three ounces;
Diluted Alcohol a gallon.

Macerate the Colocynth in the Diluted Alcohol, with a gentle heat, for four days. Express and filter the liquor, and add to it the Aloes, Scammony, and Soap; then evaporate to the proper consistence, and, near the end of the process, mix the Cardamom with the other ingredients.

Extractum Conii.

Extract of Hemlock.

Take of fresh Hemlock Leaves a pound.

Bruise them in a stone mortar, sprinkling on them a little water; then express the juice, and, having heated it to the boiling point, filter it, and evaporate to the proper consistence, either in a vacuum with the aid of heat, or in shallow vessels, at ordinary temperatures, by means of a current of air directed over the surface of the liquid.

Extractum Gentianæ.

Extract of Gentian.

Take of Gentian, in coarse powder, a pound;
Water a sufficient quantity.

Mix the Gentian with a pint of Water, and,

after allowing the mixture to stand for twenty-four hours, transfer it to a percolator, and pour Water upon it gradually until the liquid passes but slightly impregnated with the properties of the Gentian. Heat the filtered liquor to the boiling point, strain, and evaporate to the proper consistence.

In the same manner prepare

EXTRACTUM DULCAMARÆ,
Extract of Bittersweet,

From Bittersweet, in coarse powder;

EXTRACTUM JUGLANDIS,
Extract of Butternut,

From Butternut, in coarse powder;

EXTRACTUM KRAMERIÆ,
Extract of Rhatany,

From Rhatany, in coarse powder; and

EXTRACTUM QUASSIÆ,
Extract of Quassia,

From Quassia, rasped.

Extractum Hæmatoxyli.

Extract of Logwood.

Take of Logwood, rasped, a pound;
Water a gallon.

Boil down to four pints, and strain the liquor while hot; then evaporate to the proper consistence.

Extractum Nucis Vomicæ.

Extract of Nux Vomica.

Take of Nux Vomica a pound;
Alcohol a sufficient quantity.

Expose the Nux Vomica to steam till it is softened; then, having sliced and dried it, grind it into powder. Introduce it into a percolator, and pour Alcohol upon it gradually until the liquid passes without bitterness. Distil off the greater part of the alcohol from the filtered liquor, and evaporate the residue to the proper consistence.

Extractum Opii.

Extract of Opium.

Take of Opium a pound;
Water five pints.

Cut the Opium into small pieces, macerate it

for twenty-four hours in a pint of the Water, and reduce it to a soft mass by trituration. Express the liquid, and treat the residue with each of the four remaining pints of Water successively in the same manner. Mix the liquors, filter, and evaporate by means of a water-bath to the proper consistence.

Extractum Rhei.

Extract of Rhubarb.

Take of Rhubarb, in coarse powder, a pound;
Diluted Alcohol a sufficient quantity.

Mix the Rhubarb with an equal bulk of coarse sand, moisten it thoroughly with Diluted Alcohol, and, having allowed it to stand for twenty-four hours, put it into a percolator, and add Diluted Alcohol gradually until four pints of filtered liquor are obtained; then, by means of a water-bath, evaporate to the proper consistence.

Extractum Stramonii Foliorum.

Extract of Stramonium Leaves.

Take of Stramonium Leaves a pound.

Bruise them in a stone mortar, sprinkling on them a little water; then express the juice, and, having heated it to the boiling point, strain, and evaporate to the proper consistence.

In the same manner prepare

EXTRACTUM ACONITI,

Extract of Aconite,

From fresh Aconite Leaves;

EXTRACTUM BELLADONNÆ,

Extract of Belladonna,

From fresh Belladonna; and

EXTRACTUM HYOSCYAMI,

Extract of Henbane,

From fresh Henbane Leaves.

EXTRACTUM STRAMONII SEMINIS.

Extract of Stramonium Seed.

Take of Stramonium Seed, ground into powder, a pound;

Diluted Alcohol a sufficient quantity.

Having rubbed the powder with half a pint of Diluted Alcohol, introduce the mixture into a percolator, and pour upon it gradually Diluted Alcohol till the liquid passes colourless. Distil off the alcohol from the filtered liquor, and evaporate the residue to the proper consistence.

Extractum Taraxaci.

Extract of Dandelion.

Take of Dandelion, gathered in September, five pounds.

Slice the Dandelion; bruise it in a stone mortar, sprinkling on it a little water, until reduced to a pulp; then express the juice, strain, and evaporate in a vacuum, or in a shallow dish over a water-bath, constantly stirring, to the proper consistence.

EXTRACTA FLUIDA.

Extractum Cubebæ Fluidum.

Fluid Extract of Cubebs.

Take of Cubebs, in powder, a pound;
Ether a sufficient quantity.

Put the Cubebs into a percolator, and, having packed it carefully, pour Ether gradually upon it until two pints of filtered liquor are obtained; then distil off, by means of a water-bath, at a gentle heat, a pint and a half of the ether, and expose the residue, in a shallow vessel, until the whole of the ether has evaporated.

Extractum Piperis Fluidum.
Fluid Extract of Black Pepper.

Take of Black Pepper, in powder, a pound;
Ether a sufficient quantity.

Put the powder into a percolator, and pour Ether gradually upon it until two pints of filtered liquor are obtained. From this distil off, by means of a water-bath, at a gentle heat, a pint and a half of ether, and expose the residue, in a shallow vessel, until the whole of the ether has evaporated, and the deposition of piperin in crystals has ceased. Lastly, separate the piperin by expression through a cloth, and keep the liquid portion.

Extractum Rhei Fluidum.
Fluid Extract of Rhubarb.

Take of Rhubarb, in coarse powder, eight ounces;
Sugar five ounces;
Tincture of Ginger half a fluidounce;
Oil of Fennel,
Oil of Anise, each, four minims;
Diluted Alcohol a sufficient quantity.

To the Rhubarb, previously mixed with an equal

bulk of coarse sand, add twelve fluidounces of Diluted Alcohol, and allow the mixture to stand for twenty-four hours. Transfer the mass to a percolator, and gradually pour upon it Diluted Alcohol until the liquid which passes has little of the odour or taste of the Rhubarb. Evaporate the tincture thus obtained, by means of a water-bath, to five fluidounces; then add the Sugar, and, after it is dissolved, mix thoroughly with the resulting Fluid Extract the Tincture of Ginger holding the Oils in solution.

Extractum Sarsaparillæ Fluidum.

Fluid Extract of Sarsaparilla.

Take of Sarsaparilla, sliced and bruised, sixteen ounces;
Liquorice Root, bruised,
Bark of Sassafras Root, bruised, each, two ounces;
Mezereon, sliced, six drachms;
Sugar twelve ounces;
Diluted Alcohol eight pints.

Macerate all the ingredients together, excepting the Sugar, for fourteen days; then express and filter. Evaporate the liquid, by means of a water-

bath, to twelve fluidounces; add the Sugar to it while still hot; and remove from the bath as soon as the Sugar is dissolved.

Extractum Sennæ Fluidum.

Fluid Extract of Senna.

Take of Senna, in coarse powder, two pounds and a half;
Sugar twenty ounces;
Oil of Fennel a fluidrachm;
Compound Spirit of Ether two fluidrachms;
Diluted Alcohol four pints.

Mix the Senna with the Diluted Alcohol, and, having allowed the mixture to stand for twenty-four hours, introduce it into a percolator, and gradually pour in water mixed with one-third of its bulk of Alcohol, until a gallon and a half of liquid shall have passed. Evaporate the liquid by means of a water-bath to twenty fluidounces, filter, then add the Sugar, and, when it is dissolved, the Compound Spirit of Ether holding the Oil of Fennel in solution.

Extractum Spigeliæ et Sennæ Fluidum.

Fluid Extract of Spigelia and Senna.

Take of Pinkroot, in coarse powder, a pound;
Senna, in coarse powder, six ounces;
Sugar a pound and a half;
Carbonate of Potassa six drachms;
Oil of Caraway,
Oil of Anise, each, half a fluidrachm;
Diluted Alcohol a sufficient quantity.

Mix the Pinkroot and Senna with two pints of Diluted Alcohol, and, having allowed the mixture to stand for two days, transfer it to a percolator, and gradually pour upon it Diluted Alcohol until half a gallon of liquid has passed. Evaporate the liquid, by means of a water-bath, to a pint; then add the Carbonate of Potassa, and, after the sediment has dissolved, the Sugar previously triturated with the Oils. Lastly, dissolve the Sugar with a gentle heat.

Extractum Valerianæ Fluidum.

Fluid Extract of Valerian.

Take of Valerian, in coarse powder, eight ounces;
Ether four fluidounces;

Alcohol twelve fluidounces;
Diluted Alcohol a sufficient quantity.

Mix the Ether and Alcohol, and, having incorporated the Valerian with one half of the mixture, introduce the mass into a percolator, and gradually pour in the remainder; then add Diluted Alcohol until the whole liquid which has passed shall amount to a pint. Put the ethereal liquid thus obtained into a shallow vessel, and allow it to evaporate spontaneously until reduced to five fluidounces. Upon the mass in the percolator pour gradually Diluted Alcohol until ten fluidounces of tincture have passed. With this mix the five fluidounces left after the spontaneous evaporation, taking care to dissolve in a little alcohol any oleo-resinous matter which may have been deposited, and to add it to the rest. Allow the mixture to stand, with occasional agitation, for four hours, and then filter. The resulting Fluid Extract should measure a pint; and, if it be less than that quantity, the deficiency should be supplied by the addition of alcohol.

FERRUM.

Tinctura Ferri Chloridi.

Tincture of Chloride of Iron.

(*Tincture of Muriate of Iron.*)

Take of Subcarbonate of Iron half a pound;
Muriatic Acid a pint;
Alcohol three pints.

Pour the Acid upon the Subcarbonate of Iron, in a glass or porcelain vessel, mix them, and, when effervescence has ceased, apply a gentle heat, and continue it, stirring occasionally, until the Carbonate is dissolved; then filter the solution, and mix it with the Alcohol.

Ferri Citras.

Citrate of Iron.

Take of Citric Acid five ounces and a half;
Sulphate of Iron twelve ounces;
Distilled Water five fluidounces.

Dissolve the Acid in the Water. Then prepare from the Sulphate the Hydrated Oxide of Iron, according to the formula for that substance. To the solution of the Acid, heated to about 150°, and

maintained at that temperature, gradually add the Hydrated Oxide, in its moist and recent state, as long as it is dissolved, and until the Acid is fully saturated. Filter the liquid, and, having evaporated it to the consistence of a thick syrup, spread it in layers on glass or porcelain plates, so that, when dried, it may form thin laminæ, which are to be detached from the plates, and broken into pieces of convenient size.

Citrate of Iron, as thus prepared, is in thin transparent pieces, of a garnet-red colour. It is slowly soluble in cold, but readily soluble in boiling water, and possesses a mild, acid, chalybeate taste.

Ferri et Potassæ Tartras.

Tartrate of Iron and Potassa.

Take of Sulphate of Iron eight ounces;
Bitartrate of Potassa seven ounces;
Distilled Water half a gallon.

Prepare from the Sulphate the Hydrated Oxide of Iron, according to the formula for that substance. Mix the Bitartrate of Potassa with the Distilled Water, heat the mixture to 140°, and, keeping it at that temperature, add gradually the Hydrated Oxide, frequently stirring, until it ceases

to be dissolved. Then filter the solution, evaporate it by means of a water-bath to the consistence of Syrup, and spread it upon plates of glass or porcelain, so that it may dry in the form of scales.

Tartrate of Iron and Potassa is in transparent scales, of a ruby-red colour, and wholly soluble in water. Its solution does not change the colour of litmus, and at common temperatures does not yield a precipitate with potassa, soda, or ammonia. Ferrocyanuret of potassium does not render it blue, unless an acid be added.

Ferri Ferrocyanuretum.

Ferrocyanuret of Iron.

(*Pure Prussian Blue.*)

Take of Sulphate of Iron four ounces;
Sulphuric Acid three fluidrachms and a half;
Nitric Acid six fluidrachms, or a sufficient quantity;
Ferrocyanuret of Potassium four ounces and a half;
Water two pints.

Dissolve the Sulphate of Iron in a pint of the Water, and, having added the Sulphuric Acid, boil the solution. Pour into it the Nitric Acid, in small portions, boiling the liquid for a minute or two after each addition, until a dark colour is no

longer produced; then allow it to cool. Dissolve the Ferrocyanuret of Potassium in the remainder of the Water, and add this solution gradually to the first liquid, agitating the mixture after each addition; then pour it upon a filter. Wash the precipitate with boiling water until the washings pass tasteless. Lastly, dry it and rub it into powder.

If Ferrocyanuret of Iron be boiled with dilute chlorohydric acid, and ammonia be added to the filtered liquor, no precipitate is produced.

Ferri Iodidum.

Iodide of Iron.

Take of Iodine two ounces;
Iron Filings an ounce;
Distilled Water a pint and a half.

Mix the Iodine with a pint of the Distilled Water, in a porcelain or glass vessel, and gradually add the Iron Filings, stirring constantly. Heat the mixture gently until the liquid acquires a light greenish colour; then filter, and, after the liquid has passed, pour upon the filter the remainder of the Distilled Water boiling hot. When this has passed, evaporate the filtered liquor, at a

temperature not exceeding 212°, in an iron vessel, to dryness. Keep the dry Iodide in a closely stopped bottle.

Iodide of Iron, when recently prepared, is wholly soluble in water, forming a greenish solution, which has the properties mentioned under Solution of Iodide of Iron. It is decomposed by heat, with the escape of violet vapours, and the production of sesquioxide of iron.

Liquor Ferri Iodidi.

Solution of Iodide of Iron.

Take of Iodine two ounces;
Iron Filings an ounce;
Sugar, in powder, twelve ounces;
Distilled Water a sufficient quantity.

Mix the Iodine with five fluidounces of Distilled Water, in a porcelain or glass vessel, and gradually add the Iron Filings, stirring constantly. Heat the mixture gently until all the Iodine is dissolved, or until the liquid acquires a light greenish colour. Then filter the solution into a glass bottle, containing the Sugar, and, after it has passed, pour Distilled Water gradually upon the filter until the filtered liquor, including the Sugar, measures twenty fluidounces. Lastly, shake the bottle until the Sugar is dissolved, and keep it closely stopped.

Solution of Iodide of Iron is of a pale greenish colour, but, on the addition of sulphuric acid, becomes brown, and emits violet vapours if heated. It deposits little or no sediment, and does not communicate a blue colour to starch.

Liquor Ferri Nitratis.

Solution of Nitrate of Iron.

Take of Iron Wire, cut in pieces, an ounce;
Nitric Acid three fluidounces;
Distilled Water a sufficient quantity.

Mix the Acid with a pint of Distilled Water, add the Iron, and agitate occasionally until gas ceases to be disengaged; then filter the solution, and add to it sufficient Distilled Water to make it measure thirty fluidounces.

Ferri Oxidum Hydratum.

Hydrated Oxide of Iron.

Take of Sulphate of Iron four ounces;
Sulphuric Acid three fluidrachms and a half;
Nitric Acid six fluidrachms, or a sufficient quantity;
Solution of Ammonia a sufficient quantity;
Water two pints.

Dissolve the Sulphate of Iron in the Water, and, having added the Sulphuric Acid, boil the solution; then add the Nitric Acid, in small portions, boiling the liquid for a minute or two after each addition, until the Acid ceases to produce a dark colour. Filter the liquid, allow it to cool, and add Solution of Ammonia in excess, stirring the mixture briskly. Wash the precipitate with water until the washings cease to yield a precipitate with chloride of barium, and keep it in close bottles with water sufficient to cover it.

Hydrated Oxide of Iron is wholly soluble in chlorohydric acid without effervescence. If dried by a heat not exceeding 180°, it afterwards loses, upon exposure to a red heat, 18 per cent. of water.

Ferri Phosphas.

Phosphate of Iron.

Take of Sulphate of Iron five ounces;
Phosphate of Soda six ounces;
Water a gallon.

Dissolve the Sulphate of Iron and Phosphate of Soda, severally, in four pints of the Water; then mix the solutions, and set the mixture by that the powder may subside; lastly, having poured off the

supernatant liquor, wash the Phosphate of Iron with hot water, and dry it with a gentle heat.

Phosphate of Iron is insoluble in water, but is dissolved by dilute chlorohydric acid, forming a solution which yields with ammonia a precipitate insoluble in an excess of the alkali.

Ferri Pulvis.

Powder of Iron.

Take of Subcarbonate of Iron, previously calcined in an open vessel, two pounds and a half, or a convenient quantity.

Into a wrought iron reduction tube, of about four inches in diameter, introduce the Subcarbonate, contained in an incomplete sheet-iron tube, open at both ends, made by bending the iron into the form of a cylinder, and of such a size as to fill loosely about seven-eighths of the reduction tube. Place the reduction tube longitudinally in an oblong charcoal furnace; and, by means of a self-regulating generator of hydrogen, pass through it a stream of that gas, previously purified by bubbling successively through Solution of Subacetate of Lead, diluted with three times its volume of water, and through milk of lime, severally contained in half-gallon bottles, about one-third filled. Connect with the further extremity of the re-

duction tube a lead tube bent so as to dip into water. Make all the junctions air-tight by appropriate lutes; and, when the hydrogen has passed long enough to fill the whole of the apparatus, to the exclusion of atmospheric air, light the fire, and bring that part of the reduction tube occupied by the Subcarbonate to a dull red heat, which must be kept up so long as the bubbles of hydrogen, breaking from the water covering the orifice of the lead tube, are smaller than those passing through the milk of lime. When the reduction is completed, remove the fire, and allow the whole to cool to the ordinary temperature, keeping up, during the refrigeration, a moderate current of hydrogen through the apparatus. Lastly, withdraw the reduced iron from the reduction tube, detach it from the sheet-iron tube, and, having powdered it, keep it in well-stopped bottles.

When two pounds and a half of Subcarbonate of Iron are operated on, the process occupies from five to eight hours.

Powder of Iron is tasteless, and of an iron-gray colour. When thrown into a dilute acid, it causes a lively effervescence. A small portion of it, struck on an anvil, with a smooth hammer, forms a scale having a brilliant metallic lustre.

Ferri Subcarbonas.

Subcarbonate of Iron.

(*Precipitated Carbonate of Iron.*)

Take of Sulphate of Iron eight ounces;
Carbonate of Soda nine ounces;
Boiling Water a gallon.

Dissolve the Sulphate of Iron and Carbonate of Soda, severally, in four pints of the Water; then mix the solutions, and, having stirred the mixture, set it by that the powder may subside; lastly, having poured off the supernatant liquor, wash the Subcarbonate of Iron with hot water, wrap it in bibulous paper, and dry it with a gentle heat.

Subcarbonate of Iron is wholly dissolved by dilute chlorohydric acid with a slight effervescence; and the sesquioxide of iron is precipitated from the solution by ammonia. The liquid which remains is not coloured by sulphohydric acid or ferrocyanuret of potassium.

Ferri Sulphas.

Sulphate of Iron.

Take of Iron Wire, cut in pieces, twelve ounces;
Sulphuric Acid eighteen ounces;
Water a gallon.

Mix the Sulphuric Acid and Water, and add

the Iron; then heat the mixture until effervescence ceases. Pour off the solution, and, having added half a drachm of Sulphuric Acid, filter through paper, allowing the lower end of the funnel to touch the bottom of the receiving vessel. Evaporate the filtered liquor in a matrass until sufficiently concentrated; then set it aside in a covered vessel to crystallize. Drain the crystals in a funnel, dry them on bibulous paper, and keep them in closely stopped bottles.

The crystals of Sulphate of Iron are transparent and bluish-green, but on exposure to the air effloresce and change their colour. They are wholly soluble in water, and iron does not produce with their solution a precipitate of copper.

Ferrum Ammoniatum.

Ammoniated Iron.

Take of Subcarbonate of Iron three ounces;
Muriatic Acid ten fluidounces;
Muriate of Ammonia two pounds and a half;
Distilled Water four pints.

Mix the Subcarbonate of Iron with the Muriatic Acid in a glass vessel, and digest for two hours; then add the Muriate of Ammonia, previously dis-

solved in the Distilled Water, and, having filtered the liquor, evaporate to dryness. Rub the residue to powder.

Ammoniated Iron is of an orange-red colour, and wholly soluble in water and diluted alcohol. Potassa throws down sesquioxide of iron from the solution, and afterwards, if added in excess, occasions the evolution of ammonia.

GLYCERINA.

Glycerina.

Glycerin.

Take of Lead Plaster, recently prepared and yet fluid,

Boiling Water, each, a gallon.

Mix them, stir briskly for fifteen minutes, then allow them to cool, and pour off the supernatant liquid. Evaporate this until it has the specific gravity 1·15, and pass a current of sulphohydric acid slowly through it until a black precipitate is no longer produced. Filter, and boil until the sulphohydric acid is driven off. Lastly, evaporate the liquid until it ceases to lose weight.

Glycerin is a colourless or straw-coloured syrupy liquid, inodorous, of a sweet taste, and of the specific gravity 1·25. It is soluble in water and in alcohol, but not in ether. Exposed to a full red heat, it takes fire, and continues to burn with a blue flame. It is destroyed by distillation. It combines with potassa and baryta, and also with sulphuric acid. When diluted with water it affords no precipitate with sulphohydrate of ammonia or ferrocyanuret of potassium.

HYDRARGYRUM.

Hydrargyri Chloridum Corrosivum.

Corrosive Chloride of Mercury.

(*Corrosive Sublimate.*)

Take of Mercury two pounds;
Sulphuric Acid three pounds;
Chloride of Sodium a pound and a half.

Boil the Mercury with the Sulphuric Acid until a white dry mass is left. Rub this, when cold, with the Chloride of Sodium, in an earthenware mortar; then sublime with a gradually increasing heat.

Corrosive Chloride of Mercury is in colourless crystals or crystalline masses, which are fusible by heat, sublime without residue, and are entirely soluble in water, alcohol, and ether. Solution of potassa and lime-water occasion with its solution a reddish or yellow, and ammonia a white precipitate.

Hydrargyri Chloridum Mite.

Mild Chloride of Mercury.

(Calomelas.—*Calomel.*)

Take of Mercury four pounds;
Sulphuric Acid three pounds;
Chloride of Sodium a pound and a half;
Distilled Water a sufficient quantity.

Boil two pounds of the Mercury with the Sulphuric Acid, until a dry white mass is left. Rub this, when cold, with the remainder of the Mercury, in an earthenware mortar, until they are thoroughly mixed. Then add the Chloride of Sodium, and rub it with the other ingredients till all the globules disappear; afterwards sublime. Reduce the sublimed matter to a very fine powder, and wash it frequently with boiling Distilled Water, till the washings afford no precipitate upon the addition of solution of ammonia; then dry it.

Mild Chloride of Mercury is a whitish powder, wholly volatilizable by heat, and insoluble in water, alcohol, or ether. It is blackened by potassa; and the oxide of mercury which results is reduced by heat to the metallic state. Distilled water, after having been boiled with it, yields no precipitate on the addition of ammonia or nitrate of silver.

Hydrargyri Cyanuretum.

Cyanuret of Mercury.

Take of Ferrocyanuret of Iron four ounces;
Red Oxide of Mercury three ounces,
or a sufficient quantity;
Distilled Water three pints.

Put the Ferrocyanuret of Iron and three ounces of the Oxide of Mercury, previously powdered and thoroughly mixed, into a glass vessel; and pour upon them two pints of the Distilled Water. Then boil the mixture, stirring constantly; and, if at the end of half an hour the blue colour remain, add small portions of the Oxide of Mercury, continuing the ebullition until the mixture becomes of a yellowish colour; after which, filter it through paper. Wash the residue in the remainder of the Distilled Water, and filter as before. Mix the solutions, and evaporate till a pellicle appears; then set the liquor aside that crystals may form. To purify the crystals, dissolve them in distilled water, filter and evaporate the solution, and set it aside to crystallize.

Cyanuret of Mercury is in transparent crystals, wholly soluble in water. When chlorohydric acid is added to the solution, cyanohydric acid is evolved, which is recognised by its odour, and bichloride of mercury is left, which is entirely

volatilized by heat. When Cyanuret of Mercury is heated, cyanogen is given off, and a black matter is left containing globules of mercury.

Hydrargyri Iodidum.

Iodide of Mercury.

(*Protiodide of Mercury.*)

Take of Mercury an ounce;
Iodine five drachms;
Alcohol a sufficient quantity.

Rub the Mercury and Iodine together, adding sufficient Alcohol to form a soft paste, and continue the trituration till the globules disappear. Then dry the Iodide in the dark, with a gentle heat, and keep it in a well stopped bottle protected from the light.

Iodide of Mercury is a greenish-yellow powder, insoluble in water, alcohol, or solution of chloride of sodium, but soluble in ether. Heated quickly, it sublimes in red crystals, which afterwards become yellow.

Hydrargyri Iodidum Rubrum.

Red Iodide of Mercury.

(*Biniodide of Mercury.*)

Take of Corrosive Chloride of Mercury an ounce;

Iodide of Potassium ten drachms;
Distilled Water two pints.

Dissolve the Chloride of Mercury in a pint and a half, and the Iodide of Potassium in half a pint of the Distilled Water, and mix the solutions. Collect the precipitate upon a filter, and, having washed it with distilled water, dry it with a moderate heat, and keep it in a well stopped bottle.

Red Iodide of Mercury is wholly volatilized by heat, condensing in scales, which are at first yellow, but afterwards become red. It is insoluble in water, but is dissolved by boiling alcohol, and by the solutions of iodide of potassium and chloride of sodium.

Hydrargyri Oxidum Nigrum.

Black Oxide of Mercury.

Take of Mild Chloride of Mercury,
Potassa, each, four ounces;
Water a pint.

Dissolve the Potassa in the Water, and, when the dregs have subsided, pour off the clear solution. To this add the Mild Chloride of Mercury, and stir them constantly together till the Black Oxide is formed. Having poured off the supernatant liquor, wash the Black Oxide with distilled water, and dry it with a gentle heat.

Black Oxide of Mercury becomes olive coloured by the action of light. It is wholly dissipated by a strong heat, and metallic globules are sublimed. It is insoluble in water, but is wholly dissolved by acetic acid. When digested for a short time in chlorohydric acid, it is not dissolved, and no precipitate is afterwards produced in the liquid by potassa or ammonia.

Hydrargyri Oxidum Rubrum.

Red Oxide of Mercury.

(*Red Precipitate.*)

Take of Mercury thirty-six ounces;
Nitric Acid eighteen fluidounces;
Water two pints.

Dissolve the Mercury, with a gentle heat, in the Acid and Water previously mixed together, and evaporate to dryness. Rub the dry mass into powder, and heat it in a very shallow vessel till red vapours cease to rise.

Red Oxide of Mercury is in orange-red crystalline scales, entirely soluble in chlorohydric acid. It emits no reddish fumes when heated, but yields oxygen; while the mercury either runs into globules, or is wholly dissipated.

Hydrargyri Sulphas Flavus.

Yellow Sulphate of Mercury.

(*Turpeth Mineral.*)

Take of Mercury four ounces;
Sulphuric Acid six ounces.

Mix them in a glass vessel, and boil by means of a sand-bath till a dry white mass remains. Rub this into powder, and throw it into boiling water. Pour off the supernatant liquor, and wash the yellow precipitated powder repeatedly with hot water; then dry it.

Yellow Sulphate of Mercury is a lemon-yellow powder, almost insoluble in water. It is entirely dissipated by heat, sulphuric acid being evolved, and metallic globules sublimed.

Hydrargyri Sulphuretum Nigrum.

Black Sulphuret of Mercury.

(*Ethiops Mineral.*)

Take of Mercury,

Sulphur, each, a pound.

Rub them together till all the globules disappear.

Black Sulphuret of Mercury is wholly dissipated by heat. It does not communicate a white stain to gold when rubbed upon it, and exhibits no mercurial globules under the microscope. Chlorohydric acid which has been boiled with it produces no precipitate when poured into water.

Hydrargyri Sulphuretum Rubrum.

Red Sulphuret of Mercury.

(*Cinnabar.*)

Take of Mercury forty ounces;

Sulphur eight ounces.

Mix the Mercury with the melted Sulphur over the fire; and, as soon as the mass begins to swell, remove the vessel from the fire, and cover it with considerable force, to prevent combustion; then rub the mass into powder, and sublime.

Red Sulphuret of Mercury is entirely volatilized by heat. When heated with potassa, it yields globules of mercury. It is not soluble in nitric acid or chlorohydric acid, but is dissolved by a mixture of the two. Acetic acid with which it has been digested does not yield a precipitate with iodide of potassium.

Hydrargyrum Ammoniatum.

Ammoniated Mercury.

(*White Precipitate.*)

Take of Corrosive Chloride of Mercury six ounces;
Distilled Water a gallon;
Solution of Ammonia eight fluid-ounces.

Dissolve the Corrosive Chloride of Mercury in the Water, with the aid of heat, and to the solution, when cold, add the Solution of Ammonia, frequently stirring. Wash the precipitate till the washings become tasteless, and dry it.

Ammoniated Mercury is in the form of a white powder or

of pulverulent masses, decomposed and entirely dissipated by a strong heat, insoluble in water or alcohol, but dissolved without effervescence by chlorohydric acid. Acetic acid with which it has been digested does not yield with iodide of potassium either a yellow or blue precipitate. It is not blackened when rubbed with lime-water. Heated with solution of potassa it becomes yellow, and evolves ammonia.

Hydrargyrum cum Cretâ.

Mercury with Chalk.

Take of Mercury three ounces;
Prepared Chalk five ounces.

Rub them together till all the globules disappear.

INFUSA.

Infusum Angusturæ.

Infusion of Angustura Bark.

Take of Angustura Bark, bruised, half an ounce;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Anthemidis.

Infusion of Chamomile.

Take of Chamomile half an ounce;
Boiling Water a pint.

Macerate for ten minutes in a covered vessel, and strain.

Infusum Armoraciæ.

Infusion of Horse-radish.

Take of Horse-radish, sliced,
Mustard, bruised, each, an ounce;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Buchu.

Infusion of Buchu.

Infusum Diosmæ, *U. S. Ph.*, 1840.

Take of Buchu an ounce;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Capsici.

Infusion of Cayenne Pepper.

Take of Cayenne Pepper, in coarse powder, half an ounce;

Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Caryophylli.

Infusion of Cloves.

Take of Cloves, bruised, two drachms;

Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Cascarillæ.

Infusion of Cascarilla.

Take of Cascarilla, bruised, an ounce;

Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Catechu Compositum.

Compound Infusion of Catechu.

Take of Catechu, in powder, half an ounce;
Cinnamon, bruised, a drachm;
Boiling Water a pint.

Macerate for an hour in a covered vessel, and strain.

Infusum Cinchonæ Compositum.

Compound Infusion of Peruvian Bark.

Take of Red Bark, in powder, an ounce;
Aromatic Sulphuric Acid a fluidrachm;
Water a pint.

Macerate for twelve hours, occasionally shaking, and strain.

The Infusion may also be prepared from the same quantity of Red Bark, in coarse powder, by the process of displacement, in the manner directed for Infusion of Yellow Bark, a fluidrachm of Aromatic Sulphuric Acid being added to the Water with which the Bark is moistened.

Infusum Cinchonæ Flavæ.

Infusion of Yellow Bark.

Take of Yellow Bark, bruised, an ounce;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

This Infusion may also be prepared from the same quantity of Yellow Bark, in coarse powder, in the following manner:—Having moistened the Bark thoroughly with water, introduce it into a percolator, press it slightly, and pour water upon its surface so as to keep it covered. So long as the liquid passes turbid, return it into the apparatus; then allow the filtration to continue until a pint of clear infusion is obtained.

Infusum Cinchonæ Rubræ.

Infusion of Red Bark.

Take of Red Bark, bruised, an ounce;
Boiling Water a pint.

Prepare the Infusion in the manner directed for Infusion of Yellow Bark.

Infusum Colombæ.

Infusion of Columbo.

Take of Columbo, bruised, half an ounce;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Digitalis.

Infusion of Foxglove.

Take of Foxglove a drachm;
Boiling Water half a pint;
Tincture of Cinnamon a fluidounce.

Macerate the Foxglove with the Water for two hours in a covered vessel, and strain; then add the Tincture of Cinnamon.

Infusum Eupatorii.

Infusion of Thoroughwort.

Take of Thoroughwort an ounce;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Gentianæ Compositum.

Compound Infusion of Gentian.

Take of Gentian, bruised, half an ounce;
Orange Peel, bruised,
Coriander, bruised, each, a drachm;
Diluted Alcohol four fluidounces;
Water twelve fluidounces.

First pour on the Diluted Alcohol, and, three hours afterwards, the Water; then macerate for twelve hours, and strain.

Infusum Humuli.

Infusion of Hops.

Take of Hops half an ounce;
Boiling Water a pint.

Macerate for two hours, in a covered vessel, and strain.

Infusum Krameriæ.

Infusion of Rhatany.

Take of Rhatany, bruised, an ounce;
Boiling Water a pint.

Macerate for four hours in a covered vessel, and strain.

This Infusion may also be prepared from the same quantity of Rhatany, in coarse powder, by the process of displacement, in the manner directed for Infusion of Yellow Bark.

Infusum Lini Compositum.

Compound Infusion of Flaxseed.

Infusum Lini, *U. S. Ph.*, 1840.

Take of Flaxseed half an ounce;
Liquorice Root, bruised, two drachms;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

Infusum Pruni Virginianæ.

Infusion of Wild-cherry Bark.

Take of Wild-cherry Bark, bruised, half an ounce;
Water a pint.

Macerate for twenty-four hours, and strain.

This Infusion may also be prepared from the same quantity of Wild-cherry Bark, in coarse powder, by the process of displacement, in the manner directed for Infusion of Yellow Bark.

Infusum Quassiæ.

Infusion of Quassia.

Take of Quassia, rasped, two drachms;
Water a pint.

Macerate for twelve hours, and strain.

Infusum Rhei.

Infusion of Rhubarb.

Take of Rhubarb, bruised, a drachm;
Boiling Water half a pint.

Digest for two hours in a covered vessel, and strain.

Infusum Rosæ Compositum.

Compound Infusion of Roses

Take of Red Roses half an ounce;
Boiling Water two pints and a half;
Diluted Sulphuric Acid three fluidrachms;
Sugar an ounce and a half.

Pour the Water upon the Roses in a glass vessel; then add the Acid, and macerate for half an hour; lastly, strain the liquor, and add the Sugar.

Infusum Sarsaparillæ.

Infusion of Sarsaparilla.

Take of Sarsaparilla, bruised, an ounce;
Boiling Water a pint.

Digest for two hours in a covered vessel, and strain.

This Infusion may also be prepared from the same quantity of Sarsaparilla, in coarse powder, by the process of displacement, in the manner directed for Infusion of Yellow Bark.

Infusum Sassafras Medullæ.

Infusion of Sassafras Pith.

Take of Sassafras Pith a drachm;
Water a pint.

Macerate for three hours, and strain.

Infusum Sennæ.

Infusion of Senna.

Take of Senna an ounce;
Coriander, bruised, a drachm;
Boiling Water a pint.

Macerate for an hour in a covered vessel, and strain.

Infusum Serpentariæ.

Infusion of Virginia Snakeroot.

Take of Virginia Snakeroot half an ounce;
Boiling Water a pint.

Macerate for two hours in a covered vessel, and strain.

IODINIUM.

Liquor Iodinii Compositus.

Compound Solution of Iodine.

Liquor Iodini Compositus, *U. S. Ph.*, 1840.

Take of Iodine six drachms;
Iodide of Potassium an ounce and a half;
Distilled Water a pint.

Dissolve the Iodine and Iodide of Potassium in the Water.

LINIMENTA.

Linimentum Ammoniæ.

Liniment of Ammonia.

Take of Solution of Ammonia a fluidounce;
Olive Oil two fluidounces.

Mix them.

Linimentum Calcis.

Lime Liniment.

Take of Lime-water,
Flaxseed Oil, each, two fluidounces.
Mix them.

Linimentum Camphoræ.

Camphor Liniment.

Take of Camphor half an ounce;
Olive Oil two fluidounces.
Dissolve the Camphor in the Oil.

Linimentum Cantharidis.

Liniment of Spanish Flies.

Take of Spanish Flies, in powder, an ounce;
Oil of Turpentine half a pint.
Digest for three hours, in a close vessel, by means of a water-bath, and strain.

Linimentum Saponis Camphoratum.

Camphorated Soap Liniment.

(*Opodeldoc.*)

Take of Common Soap, sliced, three ounces;
Camphor an ounce;
Oil of Rosemary,
Oil of Origanum, each, a fluidrachm;
Alcohol a pint.

Digest the Soap with the Alcohol, by means of a sand-bath, till it is dissolved; then add the Camphor and Oils, and, when they are dissolved, pour the liquor into broad-mouthed bottles.

This Liniment has, when cold, the consistence of a soft ointment.

Linimentum Terebinthinæ.

Liniment of Turpentine.

Take of Oil of Turpentine half a pint;
Resin Cerate a pound.

Add the Oil of Turpentine to the Cerate previously melted, and mix them.

MAGNESIA.

Magnesia.

Magnesia.

Take of Carbonate of Magnesia any quantity.

Put it into an earthen vessel, and expose it to a red heat for two hours, or till the carbonic acid is wholly expelled.

Magnesia is wholly dissolved, without effervescence, by dilute chlorohydric acid; and the solution yields no precipitate with oxalate of ammonia or chloride of barium.

Liquor Magnesiæ Citratis.

Solution of Citrate of Magnesia.

Take of Carbonate of Magnesia five drachms;
Citric Acid seven drachms and a half;
Syrup of Citric Acid two fluidounces;
Water a sufficient quantity.

Dissolve the Citric Acid in four fluidounces of Water, and add to the solution four drachms of the Carbonate of Magnesia, previously rubbed with three fluidounces of Water. When the reaction has ceased, filter the solution into a strong glass bottle, of the capacity of twelve fluidounces, into which

the Syrup of Citric Acid has been previously introduced. Rub the remaining Carbonate of Magnesia with two fluidounces of Water, and pour the mixture into the bottle, which is then to be tightly corked, and secured with twine. Lastly, shake the mixture occasionally until it becomes transparent.

MELLITA.

Mel Despumatum.

Clarified Honey.

Take of Honey any quantity.

Melt it by means of a water-bath, and then remove the scum.

Mel Rosæ.

Honey of Roses.

Take of Red Roses, in coarse powder, two ounces;
Clarified Honey twenty fluidounces;
Boiling Water twelve fluidounces.

Macerate the Roses in eight fluidounces of boiling Water for four hours, in a glass or earthen

vessel; then, with strong pressure, remove as much as possible of the infusion, and set it aside. Macerate the residue in four fluidounces of boiling Water for half an hour, and again express. Reserving four fluidounces of the first infusion, mix the remainder with the infusion last obtained, add the Honey, and by means of a water-bath evaporate to a pint. Lastly, add the reserved infusion, and strain.

Oxymel Scillæ.

Oxymel of Squill.

Take of Vinegar of Squill two pints;
Clarified Honey a pint and a half.

Mix them, and evaporate by means of a water-bath to the proper consistence. The specific gravity of the Oxymel of Squill should be 1·32.

MISTURÆ.

Mistura Ammoniaci.

Ammoniac Mixture.

Take of Ammoniac two drachms;
Water half a pint.

Rub the Ammoniac with the Water gradually added, until they are thoroughly mixed.

Mistura Amygdalæ.

Almond Mixture.

Take of Sweet Almonds half an ounce;
Gum Arabic, in powder, half a drachm;
Sugar twodrachms;
Distilled Water eight fluidounces.

Macerate the Almonds in water, and, having removed their external coat, beat them with the Gum Arabic and Sugar, in a marble mortar, till they are thoroughly mixed; then rub the mixture with the Distilled Water gradually added, and strain.

Mistura Assafœtidæ.

Assafetida Mixture.

Take of Assafetida two drachms;
Water half a pint.

Rub the Assafetida with the Water gradually added, until they are thoroughly mixed.

Mistura Cretæ.

Chalk Mixture.

Take of Prepared Chalk half an ounce;
Sugar,
Gum Arabic, in powder, each, two drachms;
Cinnamon Water,
Water, each, four fluidounces.

Rub them together till they are thoroughly mixed.

Mistura Ferri Composita.

Compound Mixture of Iron.

Take of Myrrh a drachm;
Carbonate of Potassa twenty-five grains;
Sulphate of Iron, in powder, a scruple;
Spirit of Lavender half a fluidounce;
Sugar a drachm;

Rose Water seven fluidounces and a half.

Rub the Myrrh with the Rose Water gradually added; then mix with these the Spirit of Lavender, Sugar, and Carbonate of Potassa, and, lastly, the Sulphate of Iron. Pour the mixture immediately into a glass bottle, which is to be well stopped.

Mistura Glycyrrhizæ Composita.

Compound Mixture of Liquorice.

(*Brown Mixture.*)

Take of Liquorice, in powder,
Gum Arabic, in powder,
Sugar, each, half an ounce;
Camphorated Tincture of Opium two fluidounces;
Antimonial Wine a fluidounce;
Spirit of Nitric Ether half a fluidounce;
Water twelve fluidounces.

Rub the Liquorice, Gum Arabic, and Sugar with the Water gradually poured upon them; then add the other ingredients, and mix.

MORPHIA.

Morphia.

Morphia.

Take of Opium, sliced, a pound;
Solution of Ammonia six fluidounces;
Distilled Water,
Alcohol,
Animal Charcoal, each, a sufficient quantity.

Macerate the Opium with four pints of Distilled Water for twenty-four hours, and, having worked it with the hand, digest for twenty-four hours, and strain. In like manner, macerate the residue twice successively with the same quantity of Distilled Water, and strain. Mix the infusions, evaporate to six pints, and filter; then add first five pints of Alcohol, and afterwards three fluidounces of the Solution of Ammonia, previously mixed with half a pint of Alcohol. After twenty-four hours, pour in the remainder of the Solution of Ammonia, mixed, as before, with half a pint of Alcohol; and set the liquor aside for twenty-four hours, that crystals may form. To purify these, boil them

with two pints of Alcohol till they are dissolved, filter the solution, while hot, through Animal Charcoal, and set it aside to crystallize.

Morphia is in colourless crystals, which are inflammable, and wholly dissipated by a red heat. It is scarcely soluble in cold water or in ether, is very slightly so in boiling water, and is readily dissolved by boiling alcohol. Nitric acid first reddens it and afterwards renders it yellow. With solution of sesquichloride of iron it assumes a deep blue colour. Its solution restores the colour of litmus, previously reddened by an acid.

Morphiæ Acetas.

Acetate of Morphia.

Take of Morphia, in powder, freed from narcotina by boiling with Ether, an ounce;
Distilled Water half a pint;
Acetic Acid a sufficient quantity.

Mix the Morphia with the Water; then carefully drop in the Acid, constantly stirring, until the Morphia is saturated and dissolved. Evaporate the solution, by means of a water-bath, to the consistence of syrup. Lastly, dry the Acetate with a gentle heat, and rub it into powder.

Acetate of Morphia is wholly soluble in water, or in water acidulated with acetic acid. It is also soluble in alcohol. From

its solution, potassa throws down a precipitate which is dissolved by an excess of the alkali. It is affected by heat, nitric acid, and sesquichloride of iron, in the same manner as Morphia. When sulphuric acid is added to the salt, acetous vapours are evolved.

Morphiæ Murias.

Muriate of Morphia.

Take of Morphia, in powder, an ounce;
Distilled Water half a pint;
Muriatic Acid a sufficient quantity.

Mix the Morphia with the Water; then carefully drop in the Acid, constantly stirring, till the Morphia is saturated and dissolved. Evaporate the solution by means of a water-bath, so that it may crystallize upon cooling. Dry the crystals upon bibulous paper.

Muriate of Morphia is in snow-white feathery crystals, wholly soluble in water and alcohol. Potassa affects its solution in the same manner as the solution of Acetate of Morphia. With nitrate of silver the solution yields a precipitate insoluble in nitric or chlorohydric acid, but soluble in an excess of ammonia. It is affected by heat, nitric acid, and sesquichloride of iron in the same manner as Morphia.

Morphiæ Sulphas.

Sulphate of Morphia.

Take of Morphia, in powder, an ounce;
Distilled Water half a pint;
Diluted Sulphuric Acid a sufficient quantity.

Mix the Morphia with the Water; then carefully drop in the Acid, constantly stirring, till the Morphia is saturated and dissolved. Evaporate the solution by means of a water-bath, so that it may crystallize upon cooling. Dry the crystals upon bibulous paper.

Sulphate of Morphia is in snow-white feathery crystals, which are wholly soluble in water. Its solution is affected by potassa in the same manner as the solution of Acetate of Morphia. With chloride of barium it yields a white precipitate insoluble in nitric acid. It is affected by heat, nitric acid, and sesquichloride of iron in the same manner as Morphia.

Liquor Morphiæ Sulphatis.

Solution of Sulphate of Morphia.

Take of Sulphate of Morphia eight grains;
Distilled Water half a pint.

Dissolve the Sulphate of Morphia in the Water.

MUCILAGINES.

Mucilago Acaciæ.

Mucilage of Gum Arabic.

Take of Gum Arabic, in powder, four ounces;
Boiling Water half a pint.

Add the Water gradually to the Gum, rubbing them together till the mucilage is formed.

Mucilago Tragacanthæ.

Mucilage of Tragacanth.

Take of Tragacanth an ounce;
Boiling Water a pint.

Macerate the Tragacanth in the Water for twenty-four hours, occasionally stirring; then triturate it so as to render the mucilage uniform, and strain forcibly through linen.

OLEA DESTILLATA.

In the preparation of the Distilled Oils, put the substance from which the oil is to be extracted into a retort, or other vessel suitable for distilla-

tion, and add enough water to cover it; then distil into a large refrigeratory. Separate the Distilled Oil from the water which comes over with it.

In this manner prepare

OLEUM ANISI,
Oil of Anise,

From Anise;

OLEUM CARI,
Oil of Caraway,

From Caraway;

OLEUM CARYOPHYLLI,
Oil of Cloves,

From Cloves;

OLEUM CHENOPODII,
Oil of Wormseed,

From Wormseed;

OLEUM CUBEBÆ,
Oil of Cubebs,

From Cubebs;

OLEUM FŒNICULI,
Oil of Fennel,

From Fennel-seed;

OLEUM GAULTHERIÆ,
Oil of Partridge-berry,
From Partridge-berry;

OLEUM HEDEOMÆ,
Oil of Pennyroyal,
From Pennyroyal;

OLEUM JUNIPERI,
Oil of Juniper,
From Juniper;

OLEUM LAVANDULÆ,
Oil of Lavender,
From Lavender;

OLEUM MENTHÆ PIPERITÆ,
Oil of Peppermint,
From Peppermint;

OLEUM MENTHÆ VIRIDIS,
Oil of Spearmint,
From Spearmint;

OLEUM MONARDÆ,
Oil of Horsemint,
From Horsemint;

OLEUM ORIGANI,
Oil of Origanum,
From Origanum;

Oleum Pimentæ,
Oil of Pimento,

From Pimento;

Oleum Rosmarini,
Oil of Rosemary,

From Rosemary;

Oleum Sabinæ,
Oil of Savine,

From Savine;

Oleum Sassafras,
Oil of Sassafras,

From Bark of Sassafras Root; and

Oleum Valerianæ,
Oil of Valerian,

From Valerian.

Oleum Copaibæ.
Oil of Copaiba.

Take of Copaiba two pounds;
Water four gallons.

Add the Copaiba to the Water in a tinned still, and, having adapted a proper refrigeratory, distil three gallons. Separate the Oil which comes over

from the water, return the latter to the Copaiba, and again distil three gallons. Lastly, separate the Oil obtained in the second distillation, add it to that first obtained, and keep the whole in a well stopped bottle.

Oleum Succini.

Oil of Amber.

Take of Amber, in powder, any quantity.

Put the Amber, previously mixed with an equal weight of sand, into a glass retort, which is to be only half filled; then distil by means of a sand-bath, with a gradually increasing heat, an acid liquor, an oil, and a concrete acid impregnated with oil. Separate the Oil from the other matters, and keep it in well stopped bottles.

Oleum Succini Rectificatum.

Rectified Oil of Amber.

Take of Oil of Amber a pint;
Water six pints.

Mix them in a glass retort, and distil until four pints of the Water have passed with the oil into the receiver; then separate the Oil from the water, and keep it in well stopped bottles.

Oleum Tabaci.

Oil of Tobacco.

Take of Tobacco, in coarse powder, a pound.

Put the Tobacco into a retort of green glass, connected with a refrigeratory, to which a tube is attached for the escape of the incondensible products; then, by means of a sand-bath, heat the retort gradually to dull redness, and maintain that temperature until empyreumatic oil ceases to come over. Lastly, separate the dark oily liquid in the receiver from the watery portion, and keep it for use.

PILULÆ.

Pilulæ Aloës.

Aloetic Pills.

Take of Aloes, in powder,
Soap, each, an ounce.

Beat them with water so as to form a mass, to be divided into two hundred and forty pills.

Pilulæ Aloës et Assafœtidæ.

Pills of Aloes and Assafetida.

Take of Aloes, in powder,
Assafetida,
Soap, each, half an ounce.

Beat them with water so as to form a mass, to be divided into one hundred and eighty pills.

Pilulæ Aloës et Myrrhæ.

Pills of Aloes and Myrrh.

Take of Aloes, in powder, two ounces;
Myrrh, in powder, an ounce;
Saffron half an ounce;
Syrup a sufficient quantity.

Beat the whole together so as to form a mass to be divided into four hundred and eighty pills.

Pilulæ Assafœtidæ.

Assafetida Pills.

Take of Assafetida an ounce and a half;
Soap half an ounce.

Beat them with water so as to form a mass, to be divided into two hundred and forty pills.

Pilulæ Catharticæ Compositæ.

Compound Cathartic Pills.

Take of Compound Extract of Colocynth, in powder, half an ounce;
Extract of Jalap,
Mild Chloride of Mercury, each, three drachms;
Gamboge, in powder, two scruples.

Mix them together; then with water form a mass, to be divided into one hundred and eighty pills.

Pilulæ Copaibæ.

Copaiba Pills.

Take of Copaiba two ounces;
Magnesia, recently prepared, a drachm.

Mix them, and set the mixture aside till it concretes into a pilular mass, which is to be divided into two hundred pills.

Pilulæ Ferri Carbonatis.

Pills of Carbonate of Iron.

(*Vallet's Ferruginous Pills.*)

Take of Sulphate of Iron eight ounces;
Carbonate of Soda ten ounces;
Clarified Honey three ounces;

Sugar, in powder, two ounces;
Boiling Water two pints;
Syrup a sufficient quantity.

Dissolve the Sulphate of Iron and Carbonate of Soda, each, in a pint of the Water, a fluidounce of Syrup having been previously added to each pint; then mix the two solutions, when cold, in a bottle just large enough to hold them, close it accurately with a stopper, and set it by that the carbonate of iron may subside. Pour off the supernatant liquid, and, having washed the precipitate with water sweetened with Syrup, in the proportion of a fluidounce of the latter to a pint of the former, until the washings no longer have a saline taste, place it upon a flannel cloth to drain, and afterwards express as much of the water as possible; then immediately mix the precipitate with the Honey and Sugar, and by means of a water-bath evaporate the mixture, constantly stirring, until it is so far concentrated as to have a pilular consistence on cooling.

Pilulæ Ferri Compositæ.

Compound Pills of Iron.

Take of Myrrh, in powder, two drachms;
Carbonate of Soda,
Sulphate of Iron, each, a drachm;
Syrup a sufficient quantity.

Rub the Myrrh with the Carbonate of Soda; then add the Sulphate of Iron, and again rub them; lastly, beat them with the Syrup so as to form a mass, to be divided into eighty pills.

Pilulæ Ferri Iodidi.

Pills of Iodide of Iron.

Take of Sulphate of Iron a drachm;
Iodide of Potassium four scruples;
Tragacanth, in powder, ten grains;
Sugar, in powder, half a drachm.

Beat them with Syrup so as to form a mass, to be divided into forty pills.

Pilulæ Galbani Compositæ.

Compound Galbanum Pills.

Take of Galbanum,
Myrrh, each, six drachms;
Assafetida two drachms;
Syrup a sufficient quantity.

Beat them together so as to form a mass, to be divided into two hundred and forty pills.

Pilulæ Hydrargyri.

Mercurial Pills.

(*Blue Pills.*)

Take of Mercury an ounce;

Confection of Roses an ounce and a half;

Liquorice Root, in powder, half an ounce.

Rub the Mercury with the Confection till all the globules disappear; then add the Liquorice Root, and beat the whole into a mass, to be divided into four hundred and eighty pills.

Pilulæ Hydrargyri Chloridi Mitis.

Pills of Mild Chloride of Mercury.

(*Calomel Pills.*)

Take of Mild Chloride of Mercury half an ounce;

Gum Arabic, in powder, a drachm;

Syrup a sufficient quantity.

Mix together the Chloride of Mercury and the Gum; then beat them with the Syrup so as to form a mass, to be divided into two hundred and forty pills.

Pilulæ Opii.

Opium Pills.

Take of Opium, in powder, a drachm;
Soap twelve grains.

Beat them with water so as to form a mass, to be divided into sixty pills.

Pilulæ Quiniæ Sulphatis.

Pills of Sulphate of Quinia.

Take of Sulphate of Quinia an ounce;
Gum Arabic, in powder, two drachms;
Honey a sufficient quantity.

ix together the Sulphate of Quinia and the Gum; then beat them with the Honey so as to form a mass, to be divided into four hundred and eighty pills.

Pilulæ Rhei.

Rhubarb Pills.

Take of Rhubarb, in powder, six drachms;
Soap two drachms.

Beat them with water so as to form a mass, to be divided into one hundred and twenty pills.

Pilulæ Rhei Compositæ.

Compound Rhubarb Pills.

Take of Rhubarb, in powder, an ounce;
Aloes, in powder, six drachms;
Myrrh, in powder, half an ounce;
Oil of Peppermint half a fluidrachm.

Beat them with water so as to form a mass, to be divided into two hundred and forty pills.

Pilulæ Saponis Compositæ.

Compound Pills of Soap.

Take of Opium, in powder, half an ounce;
Soap two ounces.

Beat them with water so as to form a pilular mass.

Pilulæ Scillæ Compositæ.

Compound Pills of Squill.

Take of Squill, in powder, a drachm;
Ginger, in powder,
Ammoniac, in powder, each, two drachms;
Soap three drachms;
Syrup a sufficient quantity.

Mix the powders together; then beat them

with the Soap, and add the Syrup so as to form a mass, to be divided into one hundred and twenty pills.

PLUMBUM.

Plumbi Iodidum.

Iodide of Lead.

Take of Nitrate of Lead,
Iodide of Potassium, each, four ounces;
Distilled Water a sufficient quantity.

With the aid of heat, dissolve the Nitrate of Lead in a pint and a half, and the Iodide of Potassium in half a pint of Distilled Water, and mix the solutions. Having allowed the insoluble matter to subside, pour off the supernatant liquid, wash the precipitate with Distilled Water, and dry it with a gentle heat.

Iodide of Lead is a bright-yellow, heavy, inodorous powder, fusible and volatilizable by heat, soluble in 1235 parts of cold, and 194 parts of boiling water, and deposited from its hot solution, on cooling, in brilliant gold-coloured scales.

Liquor Plumbi Subacetatis.

Solution of Subacetate of Lead.

Take of Acetate of Lead sixteen ounces;
Semivitrified Oxide of Lead, in fine powder, nine ounces and a half;
Distilled Water four pints.

Boil them together in a glass or porcelain vessel for half an hour, occasionally adding Distilled Water so as to preserve the measure, and filter through paper. Keep the solution in closely stopped bottles.

Solution of Subacetate of Lead is a colourless liquid, of the specific gravity 1·267. It is decomposed on exposure to the air, with the formation of insoluble carbonate of lead, and occasions a dense white precipitate when added to a solution of gum. In other respects, it possesses the properties of an aqueous solution of Acetate of Lead. (See *Plumbi Acetas.*)

Liquor Plumbi Subacetatis Dilutus.

Diluted Solution of Subacetate of Lead.

(*Lead-water.*)

Take of Solution of Subacetate of Lead two fluidrachms;
Distilled Water a pint.

Mix them.

POTASSA.

Potassa.

Potassa.

Take of Solution of Potassa a gallon.

Evaporate the Solution rapidly, in a clean iron vessel, over the fire, till ebullition ceases, and the Potassa melts. Pour this into suitable moulds, and keep it, when cold, in well stopped bottles.

Potassa is very deliquescent, and, when dissolved in water or alcohol, leaves but a slight residuum. Its aqueous solution has the properties mentioned under *Solution of Potassa.*

Potassa cum Calce.

Potassa with Lime.

Take of Potassa,

Lime, each, an ounce.

Rub them together, and keep the mixture in a well stopped bottle.

When mixed with water, Potassa with Lime does not effervesce on the addition of an acid.

Liquor Potassæ.

Solution of Potassa.

Take of Carbonate of Potassa a pound;

Lime half a pound;

Boiling Distilled Water a gallon.

Dissolve the Carbonate of Potassa in half a gallon of the Water. Pour a little of the Water on the Lime, and, when it is slaked, add the remainder. Mix the hot liquors, and boil for ten minutes, stirring constantly; then set the mixture aside, in a covered vessel, until it becomes clear. Lastly, pour off the supernatant liquor, and keep it in well stopped bottles of green glass.

The specific gravity of this solution is 1·056. It changes the colour of turmeric to brown, yields a yellow precipitate with chloride of platinum, and effervesces very slightly or not at all with acids. When saturated with dilute nitric acid, it gives little or no precipitate with carbonate of soda, chloride of barium, or nitrate of silver.

Potassæ Acetas.

Acetate of Potassa.

Take of Acetic Acid a pint;

Carbonate of Potassa a sufficient quantity.

Add the Carbonate of Potassa gradually to the Acetic Acid till it is saturated; then filter, and evaporate cautiously, by means of a sand-bath, until a dry salt remains. Keep this in closely stopped bottles.

Acetate of Potassa is deliquescent, and wholly soluble in water and alcohol. The solution does not change the colour of litmus or turmeric, and yields no precipitate with chloride of barium or ferrocyanuret of potassium. If dilute, it is not precipitated by nitrate of silver; but, if concentrated, it gives with that salt a precipitate which is redissolved by dilute nitric acid or water. Chloride of platinum occasions a yellow precipitate, and sulphuric acid, a copious disengagement of acetous vapours.

Potassæ Bicarbonas.

Bicarbonate of Potassa.

Take of Carbonate of Potassa four pounds;
Distilled Water ten pints.

Dissolve the Carbonate of Potassa in the Water, and pass carbonic acid through the solution till it is fully saturated. Then filter, and evaporate the filtered liquor that crystals may form, taking care that the heat does not exceed 160°. Pour off the supernatant liquid, and dry the crystals upon bibulous paper.

Carbonic acid is obtained from Marble by the addition of dilute sulphuric acid.

Bicarbonate of Potassa is in white crystals, wholly soluble in water. It has a slightly alkaline taste, and feebly affects the colour of turmeric. The solution, unless heated, does not yield a precipitate with sulphate of magnesia. When super-

saturated with nitric acid, it yields little or no precipitate with nitrate of silver. The crystals lose 30.7 per cent. at a red heat. Its other properties are the same as those mentioned under *Pure Carbonate of Potassa.*

Potassæ Carbonas.

Carbonate of Potassa.

Take of Impure Carbonate of Potassa three pounds;

Water two pints and a half.

Dissolve the Impure Carbonate of Potassa in the Water, and filter the solution; then pour it into a clean iron vessel, and evaporate over a gentle fire till the solution thickens; lastly, remove it from the fire, and stir it constantly with an iron spatula till the salt granulates.

An aqueous solution of Carbonate of Potassa slowly deposites a slightly gelatinous precipitate when saturated with an acid. When supersaturated with nitric acid, it exhibits a faint cloudiness with chloride of barium, and affords a very slight precipitate with nitrate of silver. In other respects it corresponds with *Pure Carbonate of Potassa.*

Liquor Potassæ Carbonatis.

Solution of Carbonate of Potassa.

Take of Carbonate of Potassa a pound;

Distilled Water twelve fluidounces.

Dissolve the Carbonate of Potassa in the Water, and filter the solution.

Potassæ Carbonas Purus.

Pure Carbonate of Potassa.

Take of Bicarbonate of Potassa a pound.

Put the Bicarbonate, previously powdered, into a capacious iron crucible, heat gradually until the water of crystallization is driven off, then raise the heat to redness, and maintain that temperature for half an hour. Having taken the crucible from the fire, and allowed it to cool, remove its contents, dissolve them in distilled water, filter the solution, and complete the process by evaporating and granulating as directed for Carbonate of Potassa.

Pure Carbonate of Potassa is a white, deliquescent salt, effervescing with acids, and wholly soluble in water. It has an alkaline taste, and changes the colour of turmeric to brown. Its solution yields with chloride of platinum a yellow precipitate, and with sulphate of magnesia a precipitate which effervesces with acids. When saturated with an acid, it deposites nothing upon standing, and, when supersaturated with nitric acid, is not precipitated by carbonate of soda, chloride of barium, or nitrate of silver. Of pure Carbonate of Potassa 100 grains lose 16 grains by a red heat.

Potassæ Citras.

Citrate of Potassa.

Take of Citric Acid ten ounces;
Bicarbonate of Potassa fourteen ounces;
Water a sufficient quantity.

Dissolve the Citric Acid in two pints of Water, add the Bicarbonate gradually, and, when effervescence has ceased, strain, and evaporate to dryness, stirring constantly, after a pellicle has begun to form, until the salt granulates; then rub it in a mortar, pass it through a coarse sieve, and put it in bottles, which should be kept closely stopped.

Citrate of Potassa is a white, granular salt, deliquescent, and very soluble in water without residue. Its solution does not affect the colour of litmus, yields no precipitate with chlorohydric acid, and, when heated to redness, affords a residue of pure carbonate of potassa.

Liquor Potassæ Citratis.

Solution of Citrate of Potassa.

(*Neutral Mixture.*)

Take of Fresh Lemon-juice half a pint;
Bicarbonate of Potassa a sufficient quantity.

Add the Bicarbonate gradually to the Lemon-juice till it is perfectly saturated; then filter. Or,

Take of Citric Acid half an ounce;
Oil of Lemons two minims;
Water half a pint;
Bicarbonate of Potassa a sufficient quantity.

Rub the Citric Acid with the Oil of Lemons, and afterwards with the Water till it is dissolved; then add the Bicarbonate of Potassa gradually till the acid is perfectly saturated; lastly, filter.

Solution of Citrate of Potassa, prepared according to these formulæ, contains free carbonic acid, which is deemed a desirable ingredient. It may also be prepared by dissolving six drachms of Citrate of Potassa in half a pint of Water; but, made in this way, contains no carbonic acid.

Potassæ Tartras.

Tartrate of Potassa.

Take of Carbonate of Potassa sixteen ounces;
Bitartrate of Potassa, in fine powder, three pounds, or a sufficient quantity;
Boiling Water a gallon.

Dissolve the Carbonate of Potassa in the Water; then gradually add the Bitartrate of Potassa to the solution till it is perfectly saturated, and boil. Filter the liquor, evaporate it until a pellicle forms,

and set it aside to crystallize. Pour off the liquid, and, having dried the crystals on bibulous paper, keep them in closely stopped bottles.

Tartrate of Potassa is in white crystals, which are somewhat deliquescent, and are wholly and readily soluble in four parts of boiling water. The solution yields a crystalline precipitate of bitartrate of potassa, upon the addition of almost any acid. Acetate of lead occasions a white precipitate, wholly soluble in dilute nitric acid.

Potassii Bromidum.

Bromide of Potassium.

Take of Bromine two ounces;
Iron Filings an ounce;
Carbonate of Potassa two ounces and a drachm, or a sufficient quantity;
Distilled Water four pints.

Add first the Iron Filings, and afterwards the Bromine, to a pint and a half of the Distilled Water, stirring the mixture frequently with a spatula for half an hour. Apply a gentle heat, and, when the liquor assumes a greenish colour, add gradually the Carbonate of Potassa, previously dissolved in a pint and a half of the Distilled Water, until it ceases to produce a precipitate. Continue the heat for half an hour, and then filter. Wash the precipitate with the remaining

pint of Distilled Water, boiling hot, and filter. Mix the filtered liquors, and evaporate so that crystals may form. Lastly, pour off the liquid, and dry the crystals on bibulous paper.

Bromide of Potassium is in white crystals, wholly soluble in water, but sparingly so in alcohol. Its aqueous solution does not affect the colour of litmus or turmeric, and is not precipitated by chloride of barium. When mixed with starch and treated with sulphuric acid, it becomes yellow. The salt, when subjected to heat, does not lose weight. Ten grains of it require, for complete precipitation, 14·28 grains of nitrate of silver, and the precipitate formed has a yellowish colour.

Potassii Cyanuretum.

Cyanuret of Potassium.

Take of Ferrocyanuret of Potassium, dried, eight ounces;
Carbonate of Potassa, dried, three ounces.

Mix the salts intimately, and throw the mixture into a deep iron crucible previously heated to redness; maintain the temperature till effervescence ceases, and the fused mass concretes, of a pure white colour, upon a warm glass rod dipped into it; then pour out the liquid carefully into a shallow dish to solidify, stopping before the salt

becomes contaminated with the precipitated iron. Break up the mass while yet warm, and preserve it in well stopped bottles.

Cyanuret of Potassium, thus prepared, is in white, opaque, amorphous masses, having a sharp, somewhat alkaline and bitter-almond taste, and an alkaline reaction. It is deliquescent in moist air, very soluble in water when reduced to powder, and sparingly soluble in alcohol. Its solution exhales the odour of cyanohydric acid when exposed to the air, effervesces on the addition of an acid, and, when added to a solution of nitrate of silver, yields a precipitate wholly soluble in ammonia.

Potassii Iodidum.

Iodide of Potassium.

Take of Potassa six ounces;
Iodine, in powder, sixteen ounces;
Charcoal, in fine powder, two ounces;
Boiling Water three pints.

Dissolve the Potassa in the Water, add the Iodine gradually, stirring after each addition until the solution becomes colourless, and continue the additions until the liquid remains slightly coloured from excess of Iodine. Evaporate the solution to dryness, stirring in the Charcoal towards the close, so that it may be intimately mixed with the dried salt. Rub this to powder, and heat

it to dull redness in an iron crucible, maintaining that temperature for fifteen minutes; then, after it has cooled, dissolve out the saline matter with pure water, filter the solution, evaporate, and set aside to crystallize. An additional quantity of crystals may be obtained from the residual liquid by evaporating and crystallizing as before.

Iodide of Potassium is in white or transparent crystals, wholly soluble in water and alcohol. It produces no alteration in the colour of litmus, and little if any in that of turmeric. Its solution, mixed with diluted sulphuric acid, and afterwards with solution of starch, gradually assumes a purple tint, which at length becomes blue. When tartaric acid is freely added to a strong solution of the iodide, it occasions a white crystalline precipitate; and the supernatant liquid, if mixed with starch, becomes first purple and finally blue. Chloride of platinum colours its solution reddish-brown, without causing a precipitate; chloride of barium but slightly affects it; and sulphate of iron occasions no change. Of the Iodide of Potassium 10 grains yield, with an excess of nitrate of silver, a yellow precipitate, which, when washed and dried, weighs 14·1 grains. If this precipitate be treated with ammonia, and nitric acid be added to the clear liquor, no precipitate is produced. Exposed to a dull red heat, Iodide of Potassium melts, and on cooling concretes into a crystalline pearly mass, without loss of weight; but, at a full red heat, it is slowly volatilized without decomposition.

Potassii Sulphuretum.

Sulphuret of Potassium.

Take of Sulphur an ounce;

Carbonate of Potassa two ounces.

Rub the Carbonate of Potassa, previously dried, with the Sulphur; melt the mixture in a covered crucible over the fire; then pour it out, and, when it is cold, put it into a bottle, which is to be well stopped.

Sulphuret of Potassium is of a brownish-yellow colour when freshly broken. The solution is orange-yellow, and has the odour of sulphohydric acid. Upon the addition of chlorohydric acid, sulphohydric acid is evolved and sulphur deposited. The solution, boiled with an excess of chlorohydric acid and filtered, gives a yellow precipitate with chloride of platinum.

PULPÆ.

Cassiæ Fistulæ Pulpa.

Pulp of Purging Cassia.

Take of Purging Cassia, bruised, a convenient quantity.

Pour boiling water on the pods so that the pulp may be softened; then strain, first through a coarse sieve, and afterwards through a hair one, and evaporate by means of a water-bath to the proper consistence.

Pruni Pulpa.

Pulp of Prunes.

Take of Prunes a convenient quantity.

Soften the Prunes in the vapour of boiling water, and, having separated the stones, beat the remainder in a marble mortar, and press it through a hair sieve.

Tamarindi Pulpa.

Pulp of Tamarinds.

Take of Tamarinds a convenient quantity.

Digest them with a small quantity of water until they become of a uniform consistence; then

separate the seeds and filaments by pressing the pulp through a hair sieve.

PULVERES.

Pulvis Aloës et Canellæ.

Powder of Aloes and Canella.

(*Hiera Picra.*)

Take of Aloes a pound;
Canella three ounces.

Rub them separately into a very fine powder, and mix them.

Pulvis Aromaticus.

Aromatic Powder.

Take of Cinnamon,
Ginger, each, two ounces;
Cardamom, deprived of the capsules,
Nutmeg, grated, each, an ounce.

Rub them together into a very fine powder.

Pulvis Ipecacuanhæ et Opii.

Powder of Ipecacuanha and Opium.

(*Dover's Powder.*)

Take of Ipecacuanha, in powder,
Opium, in powder, each, a drachm;
Sulphate of Potassa an ounce.
Rub them together into a very fine powder.

Pulvis Jalapæ Compositus.

Compound Powder of Jalap.

Take of Jalap, in powder, an ounce;
Bitartrate of Potassa, in powder, two ounces.
Mix them.

QUINIA.

Quiniæ Sulphas.

Sulphate of Quinia.

Take of Yellow Bark, in coarse powder, four pounds;
Muriatic Acid three fluidounces;
Lime, in powder, five ounces;

Water five gallons;
Sulphuric Acid,
Alcohol,
Animal Charcoal, each, a sufficient quantity.

Boil the Bark in one-third of the Water mixed with one-third of the Muriatic Acid, and strain through linen. Boil the residue twice successively with the same quantity of Water and Acid as before, and strain. Mix the decoctions, and, while the liquor is hot, gradually add the Lime, previously mixed with two pints of water, stirring constantly, until the quinia is completely precipitated. Wash the precipitate with distilled water, and, having pressed, dried, and powdered it, digest it in boiling Alcohol. Pour off the liquor, and repeat the digestion several times until the Alcohol is no longer rendered bitter. Mix the liquors, and distil off the Alcohol until a brown viscid mass remains. Upon this substance, removed from the vessel, pour about half a gallon of distilled water, and, having heated the mixture to the boiling point, add as much Sulphuric Acid as may be necessary to dissolve the impure alkali. Then add an ounce and a half of Animal Charcoal, boil for two

minutes, filter the liquor while hot, and set it aside to crystallize. Should the liquor, before filtration, be entirely neutral, acidulate it very slightly with Sulphuric Acid; should it, on the contrary, change the colour of litmus paper to a bright red, add more Animal Charcoal. Separate the crystals from the liquor, dissolve them in boiling water slightly acidulated with Sulphuric Acid, add a little Animal Charcoal, filter, and set aside to crystallize. Wrap the crystals in bibulous paper, and dry them with a gentle heat.

The mother waters may be made to yield an additional quantity of Sulphate of Quinia by precipitating the quinia with Solution of Ammonia, and treating the precipitated alkali with distilled water, Sulphuric Acid, and Animal Charcoal, as before.

Sulphate of Quinia is in white, silky, very light crystals, which are entirely dissolved by about 740 parts of cold, and 30 of boiling water, are very readily soluble in alcohol and in water acidulated with sulphuric acid, and are insoluble in ether. The aqueous solution, upon the addition first of chlorine and afterwards of ammonia, assumes a green colour. By a moderate heat, the crystals lose from eight to ten per cent. of water of crystallization, and at a red heat are wholly dissipated.

SODA.

Sodæ Bicarbonas.

Bicarbonate of Soda.

Take of Carbonate of Soda, in crystals, a convenient quantity.

Break the crystals in pieces, and put them into a wooden box, having a transverse partition near the bottom pierced with numerous small holes, and a cover which can be tightly fitted on. To a bottle having two tubulures, and half filled with water, adapt two tubes, one connected with an apparatus for generating carbonic acid and terminating under the water in the bottle, the other commencing at the tubulure in which it is inserted, and entering the box by an opening near the bottom, beneath the partition. Then lute all the joints, and cause a stream of carbonic acid to pass through the water into the box until the Carbonate of Soda is fully saturated.

Carbonic acid is obtained from Marble by the addition of dilute sulphuric acid.

This salt is white and opaque, and wholly soluble in water. By a strong heat it is converted into anhydrous carbonate of

soda. Its solution slightly affects the colour of turmeric, and is decomposed with effervescence by acids. It does not yield a precipitate with chloride of platinum, nor, unless heated, with sulphate of magnesia. The precipitate produced by chloride of barium is wholly soluble in nitric acid.

Sodæ Carbonas Exsiccatus.

Dried Carbonate of Soda.

Take of Carbonate of Soda a convenient quantity.

Expose it to heat, in a clean iron vessel, until it is thoroughly dried, stirring constantly with an iron spatula; then rub it into powder.

Liquor Sodæ Chlorinatæ.

Solution of Chlorinated Soda.

Take of Chlorinated Lime a pound;
Carbonate of Soda two pounds;
Water a gallon and a half.

Dissolve the Carbonate of Soda in three pints of the Water, with the aid of heat. To the remainder of the Water add, by small portions at a time, the Chlorinated Lime previously well triturated, stirring the mixture after each addition. Set the mixture by for several hours, that the dregs may subside; then decant the clear liquid, and

mix it with the solution of Carbonate of Soda. Lastly, decant the clear liquor from the precipitated carbonate of lime, pass it through a linen cloth, and keep it in bottles secluded from the light.

Solution of Chlorinated Soda is a colourless liquid, having a slight odour of chlorine. With lime-water and solution of baryta it yields a precipitate, which is dissolved with effervescence by nitric acid. It rapidly destroys the colour of a solution of indigo.

Sodæ et Potassæ Tartras.

Tartrate of Potassa and Soda.

(*Rochelle Salt.*)

Take of Carbonate of Soda a pound;
Bitartrate of Potassa, in powder, sixteen ounces;
Boiling Water five pints.

Dissolve the Carbonate of Soda in the Water, and gradually add the Bitartrate of Potassa. Filter the solution, and evaporate until a pellicle forms; then set it aside to crystallize. Pour off the liquor, and dry the crystals on bibulous paper. Lastly, again evaporate the liquor, that it may furnish more crystals.

Tartrate of Potassa and Soda is in colourless, transparent crystals, which effloresce slightly in dry air, and are wholly

and readily dissolved by five parts of boiling water. The solution does not affect the colour of litmus, and yields no precipitate with chloride of barium or a dilute solution of nitrate of silver. From a strong solution the mineral acids throw down a crystalline precipitate of bitartrate of potassa.

Sodæ Phosphas.

Phosphate of Soda.

Take of Bone, burnt to whiteness and powdered, ten pounds;
Sulphuric Acid six pounds;
Carbonate of Soda a sufficient quantity.

Mix the powdered Bone with the Sulphuric Acid in an earthen vessel; then add a gallon of water, and stir them well together. Digest for three days, occasionally adding a little water to replace that which is lost by evaporation, and frequently stirring the mixture. At the expiration of this time, pour in a gallon of boiling water, and strain through linen, gradually adding more boiling water until the liquid passes nearly tasteless. Set by the strained liquor that the dregs may subside, from which pour off the clear solution, and boil it down to a gallon. To this solution, poured off from the dregs and heated in an iron vessel,

add by degrees the Carbonate of Soda previously dissolved in hot water, until effervescence ceases, and the phosphoric acid is completely neutralized; then filter the liquor, and set it aside to crystallize. Having removed the crystals, add, if necessary, a small quantity of Carbonate of Soda to the liquor, so as to render it slightly alkaline; then alternately evaporate and crystallize, so long as crystals are produced. Lastly, preserve the crystals in a well stopped bottle.

Phosphate of Soda is in colourless transparent crystals, which speedily effloresce when exposed to the air. It is wholly soluble in water, and insoluble in alcohol. The solution has an alkaline reaction, and does not effervesce with acids. It yields with nitrate of silver a yellow, and with chloride of barium a white precipitate, both soluble in nitric acid.

SPIRITUS.

Spiritus Juniperi Compositus.

Compound Spirit of Juniper.

Take of Oil of Juniper a fluidrachm and a half;
Oil of Caraway,
Oil of Fennel, each, ten minims;
Diluted Alcohol a gallon.

Dissolve the Oils in the Diluted Alcohol.

Spiritus Lavandulæ.

Spirit of Lavender.

Take of Fresh Lavender two pounds;
Alcohol a gallon;
Water two pints.

Mix them, and with a slow fire distil a gallon.

Spiritus Lavandulæ Compositus.

Compound Spirit of Lavender.

Take of Spirit of Lavender three pints;
Spirit of Rosemary a pint;
Cinnamon, bruised, an ounce;
Cloves, bruised, two drachms;
Nutmeg, bruised, half an ounce;
Red Saunders, rasped, three drachms.

Macerate for fourteen days, and filter through paper.

Spiritus Myristicæ.

Spirit of Nutmeg.

Take of Nutmeg, bruised, two ounces;
Diluted Alcohol a gallon;
Water a pint.

Mix them, and with a slow fire distil a gallon.

Spiritus Pimentæ.

Spirit of Pimento.

Take of Oil of Pimento two fluidrachms;
Diluted Alcohol a gallon.
Dissolve the Oil in the Diluted Alcohol.

Spiritus Rosmarini.

Spirit of Rosemary.

Take of Oil of Rosemary four drachms;
Alcohol a gallon.
Dissolve the Oil in the Alcohol.

SPONGIA.

Spongia Usta.

Burnt Sponge.

Take of Sponge a convenient quantity.

Cut it into pieces, and beat it that any extraneous matters may be separated; then burn it in a close iron vessel until it becomes black and friable; lastly, rub it into very fine powder.

STANNUM.

Stanni Pulvis.

Powder of Tin.

Take of Tin a convenient quantity.

Melt it in an iron vessel over the fire, and, while it is cooling, stir it until it is reduced to a powder, which is to be passed through a sieve.

STRYCHNIA.

Strychnia.

Strychnia.

Take of Nux Vomica, rasped, four pounds;
Lime, in powder, six ounces;
Muriatic Acid three fluidounces;
Alcohol,
Diluted Sulphuric Acid,
Solution of Ammonia,
Purified Animal Charcoal,
Water, each, a sufficient quantity.

Digest the Nux Vomica in two gallons of Water, acidulated with a fluidounce of the Muriatic Acid,

for twenty-four hours; then boil for two hours, and strain with expression through a strong linen bag. Boil the residuum twice successively in the same quantity of acidulated Water, each time straining as before. Mix the decoctions and evaporate to the consistence of thin syrup; then add the Lime previously mixed with a pint of Water, and boil for ten minutes, frequently stirring. Pour the mixture into a double linen bag, and, having washed the precipitate well with water, press, dry, and powder it. Treat the powder repeatedly with boiling Alcohol, until deprived of its bitterness; mix the liquors; and distil off the Alcohol by means of a water-bath. Mix the residue with Water, and, having applied heat, drop in sufficient Diluted Sulphuric Acid to neutralize and dissolve the Strychnia; then add Purified Animal Charcoal, boil for a few minutes, filter, evaporate, and crystallize. Dissolve the crystals in Water, and add sufficient Solution of Ammonia to precipitate the Strychnia. Lastly, dry the precipitate on bibulous paper.

Strychnia, thus obtained, is in the form of a white powder, of an intensely bitter taste, almost insoluble in water, slightly soluble in cold alcohol, and readily soluble in boiling alcohol. When heated it melts, and by a strong heat is wholly dissipated. It is reddened by nitric acid in consequence of the

presence of brucia. Its solution in concentrated sulphuric acid yields, on the addition of a minute quantity of bichromate of potassa, a splendid violet colour.

STYRAX.

Styrax Purificata.

Purified Storax.

Take of Storax,

Alcohol, each, a sufficient quantity.

Dissolve the Storax in the Alcohol, and strain the solution; then distil off the Alcohol with a gentle heat, until the Storax acquires the proper consistence.

SULPHUR.

Sulphur Præcipitatum.

Precipitated Sulphur.

(*Lac Sulphuris.*)

Take of Sulphur a pound;

Lime a pound and a half;

Water two gallons;

Muriatic Acid a sufficient quantity.

Slake the Lime with a small portion of the Water, and, having mixed it with the Sulphur, add the remainder of the Water, boil for two or three hours, occasionally adding water so as to preserve the measure, and filter. Dilute the filtered liquor with an equal bulk of water; then drop into it sufficient Muriatic Acid to precipitate the Sulphur. Lastly, wash the precipitate repeatedly with water till the washings are tasteless, and dry it.

Precipitated Sulphur is entirely dissipated by heat.

Sulphuris Iodidum.

Iodide of Sulphur.

Take of Iodine four ounces;
Sulphur an ounce.

Rub the Iodine and Sulphur together in a glass, porcelain, or marble mortar until they are thoroughly mixed. Put the mixture into a matrass, close the orifice loosely, and apply a gentle heat so as to darken the mass without melting it. When the colour has become uniformly dark throughout, increase the heat so as to melt the Iodide; then incline the matrass in different directions, in order to return into the mass any portions of Iodine

which may have condensed on the inner surface of the vessel; lastly, allow the matrass to cool, break it, and put the Iodide into bottles, which are to be well stopped.

Iodide of Sulphur is entirely dissipated by heat. When it is boiled with water, iodine escapes with the vapour, and sulphur is deposited nearly pure.

SYRUPI.

Syrups whose density is not precisely determined by the process, should have the specific gravity 1·261 when boiling, and about 1·319 at ordinary temperatures.

Syrupus.

Syrup.

Take of Sugar two pounds and a half;
Water a pint.

Dissolve the Sugar in the Water with the aid of heat, remove any scum which may form, and strain the solution while hot.

Syrupus Acaciæ.

Syrup of Gum Arabic.

Take of Gum Arabic two ounces;
Sugar fifteen ounces;
Water eight fluidounces.

Dissolve first the Gum in the Water without heat, then the Sugar with a gentle heat, and strain.

Syrupus Acidi Citrici.

Syrup of Citric Acid.

Take of Citric Acid, in powder, two drachms;
Oil of Lemons four minims;
Syrup two pints.

Rub the Citric Acid and Oil of Lemons with a fluidounce of the Syrup, then add the mixture to the remainder of the Syrup, and dissolve with a gentle heat.

Syrupus Allii.

Syrup of Garlic.

Take of Fresh Garlic, sliced and bruised, six ounces;
Diluted Acetic Acid a pint;
Sugar, in coarse powder, two pounds.

Macerate the Garlic in ten fluidounces of the

Diluted Acetic Acid, in a glass vessel, for four days, and express the liquor. Then mix the residue with what remains of the Acid, and again express until sufficient has passed to make the whole, when filtered, measure a pint. Lastly, pour the filtered liquor on the Sugar contained in a quart bottle, and agitate till it is dissolved.

Syrupus Amygdalæ.

Syrup of Almonds.

(*Syrup of Orgeat.*)

Take of Sweet Almonds a pound;
Bitter Almonds four ounces;
Water three pints;
Sugar six pounds.

Having blanched the Almonds, rub them in a mortar to a very fine paste, adding, during the trituration, three fluidounces of the Water and a pound of the Sugar. Mix the paste thoroughly with the remainder of the Water, strain with strong expression, add the remainder of the Sugar to the strained liquor, and dissolve it with the aid of a gentle heat. Strain the Syrup through fine linen, and, having allowed it to cool, put it into bottles, which must be well stopped, and kept in a cool place.

Syrupus Aurantii Corticis.

Syrup of Orange Peel.

Take of Orange Peel, bruised, two ounces;
Boiling Water a pint;
Sugar two pounds and a half.

Macerate the Orange Peel in the Water, in a covered vessel, for twelve hours, and strain; then add the Sugar, and proceed in the manner directed for Syrup.

Syrupus Ipecacuanhæ.

Syrup of Ipecacuanha.

Take of Ipecacuanha, in coarse powder, an ounce;
Diluted Alcohol a pint;
Sugar two pounds and a half;
Water a sufficient quantity.

Macerate the Ipecacuanha in the Alcohol for fourteen days, and filter. Evaporate the filtered liquor to six fluidounces, again filter, and add sufficient Water to make the liquid measure a pint. Lastly, add the Sugar, and proceed in the manner directed for Syrup.

Syrup of Ipecacuanha may also be prepared by putting the Ipecacuanha, previously moistened

with Diluted Alcohol, into a percolator; pouring upon it gradually Diluted Alcohol until a pint of filtered liquor is obtained; then evaporating to six fluidounces, and completing the process as above directed.

Syrupus Krameriæ.

Syrup of Rhatany.

Take of Rhatany, in coarse powder, a pound;
Sugar two pounds and a half;
Water a sufficient quantity.

Mix the Rhatany with a pint of Water, and, having allowed the mixture to stand for twenty-four hours, introduce it into a percolator, and gradually pour Water upon it, until four pints of filtered liquor are obtained. Evaporate this, by means of a water-bath, to seventeen fluidounces; then add the Sugar, and proceed in the manner directed for Syrup.

This Syrup may also be prepared in the following manner.

Take of Extract of Rhatany two ounces;
Water a pint;
Sugar two pounds and a half.

Dissolve the Extract in the Water and filter;

then add the Sugar, and proceed in the manner directed for Syrup.

Syrupus Limonis.

Lemon Syrup.

Take of Lemon-juice, strained, a pint;
Sugar two pounds.

Add the Sugar to the juice, and proceed in the manner directed for Syrup.

Syrupus Pruni Virginianæ.

Syrup of Wild-cherry Bark.

Take of Wild-cherry Bark, in coarse powder, five ounces;
Sugar two pounds;
Water a sufficient quantity.

Moisten the Bark thoroughly with Water, let it stand for twenty-four hours in a close vessel, then transfer it to a percolator, and pour Water upon it gradually until a pint of filtered liquor is obtained. To this add the Sugar, in a bottle, and agitate occasionally until it is dissolved.

Syrupus Rhei.

Syrup of Rhubarb.

Take of Rhubarb, in coarse powder, two ounces;
Alcohol half a pint;
Water a pint and a half;
Sugar two pounds.

Mix the Alcohol and Water, pour four fluidounces of the liquid on the Rhubarb previously mixed with an equal bulk of sand, and allow the whole to stand four hours; then transfer the mass to a percolator, and gradually pour upon it the remainder of the mixed Alcohol and Water. When the liquor has ceased to pass, evaporate it by means of a water-bath to thirteen fluidounces, and, having added the Sugar, proceed in the manner directed for Syrup.

Syrupus Rhei Aromaticus.

Aromatic Syrup of Rhubarb.

Take of Rhubarb, bruised, two ounces and a half;
Cloves, bruised,
Cinnamon, bruised, each, half an ounce;
Nutmeg, bruised, two drachms;
Diluted Alcohol two pints;
Syrup six pints.

Macerate the Rhubarb and aromatics in the Diluted Alcohol for fourteen days, and strain; then, by means of a water-bath, evaporate the liquor to a pint, and, while it is still hot, mix it with the Syrup previously heated.

Aromatic Syrup of Rhubarb may also be prepared by putting the Rhubarb and aromatics, previously reduced to coarse powder and moistened with Diluted Alcohol, into a percolator; pouring upon them gradually Diluted Alcohol until two pints of filtered liquor are obtained; then evaporating to a pint, and completing the process as above directed.

Syrupus Sarsaparillæ Compositus.

Compound Syrup of Sarsaparilla.

Take of Sarsaparilla, bruised, two pounds;
Guaiacum Wood, rasped, three ounces;
Hundred-leaved Roses,
Senna,
Liquorice Root, bruised, each, two ounces;
Oil of Sassafras,
Oil of Anise, each, five minims;
Oil of Partridge-berry three minims;

Diluted Alcohol ten pints;
Sugar eight pounds.

Macerate the Sarsaparilla, Guaiacum Wood, Roses, Senna, and Liquorice Root in the Diluted Alcohol for fourteen days; then express and filter. Evaporate the tincture by means of a water-bath to four pints, filter, add the Sugar, and proceed in the manner directed for Syrup. Lastly, having rubbed the Oils with a small quantity of the Syrup, mix them thoroughly with the remainder.

Compound Syrup of Sarsaparilla may also be prepared by mixing the solid materials, excepting the Sugar, in coarse powder, with three pints of Diluted Alcohol, allowing the mixture to stand for twenty-four hours, then transferring it to a percolator, gradually pouring upon it Diluted Alcohol until ten pints have passed, and proceeding with the tincture as in the above process.

Syrupus Scillæ.

Syrup of Squill.

Take of Vinegar of Squill a pint;
Sugar two pounds.

Add the Sugar to the Vinegar of Squill, and proceed in the manner directed for Syrup.

Syrupus Scillæ Compositus.

Compound Syrup of Squill.

(*Hive-syrup.*)

Take of Squill, bruised,
Seneka, bruised, each, four ounces;
Tartrate of Antimony and Potassa forty-eight grains;
Water four pints;
Sugar three pounds and a half.

Pour the Water upon the Squill and Seneka, and, having boiled to one-half, strain and add the Sugar; then evaporate to three pints, and, while the Syrup is still hot, dissolve in it the Tartrate of Antimony and Potassa.

Compound Syrup of Squill may be advantageously prepared in the following manner by those familiar with the process of displacement:—

Take of Squill, in coarse powder,
Seneka, in coarse powder, each, four ounces;
Tartrate of Antimony and Potassa forty-eight grains;
Alcohol half a pint;
Water a sufficient quantity;
Sugar three pounds and a half.

Mix the Alcohol with two pints and a half of Water, and macerate the Squill and Seneka in the mixture for twenty-four hours. Put the whole into a percolator, and add as much Water as may be necessary to make the filtered liquor amount to three pints. Boil the liquor for a few minutes, evaporate to one-half, and strain; then add the Sugar, and evaporate until the resulting Syrup measures three pints. Lastly, dissolve the Tartrate of Antimony and Potassa in the Syrup, while it is still hot.

Syrupus Senegæ.

Syrup of Seneka.

Take of Seneka, bruised, four ounces;
Water a pint;
Sugar a pound.

Boil the Water with the Seneka to one-half, and strain; then add the Sugar, and proceed in the manner directed for Syrup.

Syrup of Seneka may also be prepared in the following manner:—

Take of Seneka, in coarse powder, four ounces;
Alcohol half a pint;

Water a pint and a half;
Sugar fifteen ounces.

Mix the Alcohol and Water, pour half a pint of the liquid on the Seneka, and allow the mixture to stand for twelve hours; then transfer it to a percolator, and gradually pour upon it the remainder of the menstruum. When the liquor has ceased to pass, evaporate it by means of a water-bath to half a pint, filter, and, having added the Sugar, proceed in the manner directed for Syrup.

Syrupus Sennæ.

Syrup of Senna.

Take of Senna two ounces;
Fennel-seed, bruised, an ounce;
Boiling Water a pint;
Sugar fifteen ounces.

Digest the Senna and Fennel-seed in the Water, with a gentle heat, for an hour; then strain, add the Sugar, and evaporate to the proper consistence.

Syrupus Tolutanus.

Syrup of Tolu.

Take of Tincture of Tolu a fluidounce and a half;

Water a pint;
Sugar two pounds and a half.

Mix the Tincture with the Sugar in coarse powder; expose the mixture, in a shallow dish, to a gentle heat until the alcohol has evaporated; then pour the Water upon it in a covered vessel, heat gradually till the Sugar is dissolved, and strain.

Syrupus Zingiberis.

Ginger Syrup.

Take of Tincture of Ginger four fluidounces;
Water four pints;
Sugar ten pounds.

Mix the Tincture with four pounds of the Sugar, in coarse powder, and expose the mixture, in a shallow dish, to a gentle heat until the alcohol has evaporated. Add the residue of the Sugar, and subsequently the Water in a covered vessel, heat gradually till the Sugar is dissolved, and strain.

TINCTURÆ.

Tinctures, when prepared by maceration, should be frequently shaken during the process, which should be conducted in glass vessels well stopped. When displacement is employed, great care should be taken to observe the directions given at page 4, so that the substances treated may be, as far as possible, exhausted of their soluble principles, and a perfectly clear tincture obtained. To those not familiar with this process, the plan of maceration is recommended.

Tinctura Aconiti Foliorum.

Tincture of Aconite Leaves.

Tinctura Aconiti, *U. S. Ph.*, 1840.

Take of Aconite Leaves four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Aconite Leaves, in powder, with Diluted Alcohol, allowing the mixture to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted

Alcohol until two pints of filtered liquor are obtained.

Tinctura Aconiti Radicis.

Tincture of Aconite Root.

Take of Aconite Root, well bruised, a pound;
Alcohol two pints.

Macerate for fourteen days, express strongly, and filter through paper.

This Tincture may also be prepared by the process of displacement, in the following manner.

Take of Aconite Root, in powder, a pound;
Alcohol a sufficient quantity.

Mix the Aconite Root with a pint of Alcohol, and allow the mixture to stand for twenty-four hours; then transfer it to a percolator, and pour Alcohol gradually upon it until two pints of filtered liquor are obtained.

Tinctura Aloës.

Tincture of Aloes.

Take of Aloes, in powder, an ounce;
Liquorice three ounces;
Alcohol half a pint;
Distilled Water a pint and a half.

Macerate for fourteen days, and filter through paper.

Tinctura Aloës et Myrrhæ.

Tincture of Aloes and Myrrh.

(Elixir Proprietatis.)

Take of Aloes, in powder, three ounces;
Saffron an ounce;
Tincture of Myrrh two pints.

Macerate for fourteen days, and filter through paper.

Tinctura Assafœtidæ.

Tincture of Assafetida.

Take of Assafetida four ounces;
Alcohol two pints.

Macerate for fourteen days, and filter through paper.

Tinctura Belladonnæ.

Tincture of Belladonna.

Take of Belladonna four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Belladonna, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Benzoini Composita.

Compound Tincture of Benzoin.

Take of Benzoin three ounces;
Purified Storax two ounces;
Balsam of Tolu an ounce;
Aloes, in powder, half an ounce;
Alcohol two pints.

Macerate for fourteen days, and filter through paper.

Tinctura Camphoræ.

Tincture of Camphor.

Take of Camphor four ounces;
Alcohol two pints.

Dissolve the Camphor in the Alcohol.

Tinctura Cantharidis.

Tincture of Spanish Flies.

Take of Spanish Flies, bruised, an ounce;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Flies, in powder, with Diluted Alcohol, allowing them to stand for twenty-four hours, then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Capsici.

Tincture of Cayenne Pepper.

Take of Cayenne Pepper an ounce;
Diluted Alcohol two pints.

Macerate for fourteen days, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Cayenne Pepper, in powder, with Diluted Alcohol, putting it into a percolator, and gradually pouring upon it Diluted

Alcohol until two pints of filtered liquor are obtained.

Tinctura Cardamomi.

Tincture of Cardamom.

Take of Cardamom, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Cardamom, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Cardamomi Composita.

Compound Tincture of Cardamom.

Take of Cardamom, bruised, six drachms;
Caraway, bruised, two drachms;
Cinnamon, bruised, five drachms;
Raisins, deprived of their seeds, five ounces;
Cochineal, bruised, a drachm;
Diluted Alcohol two pints and a half.

Macerate for fourteen days, express, and filter through paper.

Tinctura Castorei.

Tincture of Castor.

Take of Castor, bruised, two ounces;
Alcohol two pints.

Macerate for seven days, express, and filter through paper.

Tinctura Catechu.

Tincture of Catechu.

Take of Catechu three ounces;
Cinnamon, bruised, two ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

Tinctura Cinchonæ.

Tincture of Peruvian Bark.

Take of Yellow Bark, in powder, six ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Bark with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Cinchonæ Composita.

Compound Tincture of Peruvian Bark.

Take of Red Bark, in powder, two ounces;
Orange Peel, bruised, an ounce and a half;
Virginia Snakeroot, bruised, three drachms;
Saffron, cut,
Red Saunders, rasped, each, a drachm;
Diluted Alcohol twenty fluidounces.

Macerate for fourteen days, express, and filter through paper.

Compound Tincture of Peruvian Bark may be prepared from the same dry materials, by beating them well together, moistening them thoroughly with Diluted Alcohol, allowing the mixture to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted

Alcohol until twenty fluidounces of filtered liquor are obtained.

Tinctura Cinnamomi.

Tincture of Cinnamon.

Take of Cinnamon, bruised, three ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Cinnamon, in powder, with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Cinnamomi Composita.

Compound Tincture of Cinnamon.

Take of Cinnamon, bruised, an ounce;
Cardamom, bruised, half an ounce;
Ginger, bruised, three drachms;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

Compound Tincture of Cinnamon may be pre-

pared from the same dry materials, in the state of powder, by moistening them thoroughly with Diluted Alcohol, allowing them to stand for forty-eight hours, then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Colchici Seminis.

Tincture of Colchicum Seed.

Take of Colchicum Seed, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Colchicum Seed, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Colombæ.

Tincture of Columbo.

Take of Columbo, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Columbo, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Conii.

Tincture of Hemlock.

Take of Hemlock Leaves four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Hemlock Leaves, in powder, with Diluted Alcohol, allowing them to stand for twenty-four hours, then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Cubebæ.

Tincture of Cubebs.

Take of Cubebs, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Cubebs, in powder, with Diluted Alcohol, allowing the mixture to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Digitalis.

Tincture of Foxglove.

Take of Foxglove four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Foxglove, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Gallæ.

Tincture of Galls.

Take of Galls, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Galls, in powder, with Diluted Alcohol, allowing them to stand for forty-eight hours, then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Gentianæ Composita.

Compound Tincture of Gentian.

Take of Gentian, bruised, two ounces;
Orange Peel an ounce;
Cardamom, bruised, half an ounce;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared from the same dry materials, in the state of powder, by moistening them thoroughly with Diluted Alcohol, allowing them to stand for forty-eight hours,

then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Guaiaci.

Tincture of Guaiac.

Take of Guaiac, in powder, half a pound;
Alcohol two pints.

Macerate for fourteen days, and filter through paper.

Tinctura Guaiaci Ammoniata.

Ammoniated Tincture of Guaiac.

Take of Guaiac, in powder, four ounces;
Aromatic Spirit of Ammonia a pint and a half.

Macerate for fourteen days, and filter through paper.

Tinctura Hellebori.

Tincture of Black Hellebore.

Take of Black Hellebore, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Black Hellebore, in powder, with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Humuli.

Tincture of Hops.

Take of Hops five ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

Tinctura Hyoscyami.

Tincture of Henbane.

Take of Henbane Leaves four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Henbane Leaves, in powder, with Diluted Alcohol, allowing them to stand for twenty-four hours, then transferring them to

a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Iodinii.

Tincture of Iodine.

Tinctura Iodini, *U. S. Ph.*, 1840.

Take of Iodine an ounce;
Alcohol a pint.

Dissolve the Iodine in the Alcohol.

Tinctura Iodinii Composita.

Compound Tincture of Iodine.

Tinctura Iodini Composita, *U. S. Ph.*, 1840.

Take of Iodine half an ounce;
Iodide of Potassium an ounce;
Alcohol a pint.

Dissolve the Iodine and Iodide of Potassium in the Alcohol.

Tinctura Jalapæ.

Tincture of Jalap.

Take of Jalap, in powder, six ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by moistening the Jalap thoroughly with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Kino.

Tincture of Kino.

Take of Kino, in powder, six drachms;
Diluted Alcohol a sufficient quantity.

Mix the Kino with an equal bulk of sand, and, having introduced it into a percolator, pour Diluted Alcohol gradually upon it until eight fluid-ounces of filtered liquor are obtained.

This Tincture should be renewed frequently, and kept in closely stopped bottles; as it is apt to deteriorate rapidly by exposure.

Tinctura Krameriæ.

Tincture of Rhatany.

Take of Rhatany, in powder, six ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by moist-

ening the Rhatany thoroughly with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Lobeliæ.

Tincture of Lobelia.

Take of Lobelia four ounces;

Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Lobelia, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Lupulinæ.

Tincture of Lupulin.

Take of Lupulin four ounces;

Alcohol two pints.

Macerate for fourteen days, and filter through paper.

Tinctura Myrrhæ.

Tincture of Myrrh.

Take of Myrrh, bruised, four ounces;
Alcohol three pints.

Macerate for fourteen days, and filter through paper.

Tinctura Nucis Vomicæ.

Tincture of Nux Vomica.

Take of Nux Vomica, rasped, eight ounces;
Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by moistening the Nux Vomica thoroughly with Alcohol, allowing it to stand for two days, then transferring it to a percolator, and very gradually pouring Alcohol upon it until two pints of filtered liquor are obtained.

Tinctura Olei Menthæ Piperitæ.

Tincture of Oil of Peppermint.

(*Essence of Peppermint.*)

Take of Oil of Peppermint two fluidounces;
Alcohol a pint.

Dissolve the Oil in the Alcohol.

Tinctura Olei Menthæ Viridis.

Tincture of Oil of Spearmint.

(*Essence of Spearmint.*)

Take of Oil of Spearmint two fluidounces;
Alcohol a pint.

Dissolve the Oil in the Alcohol.

Tinctura Opii.

Tincture of Opium.

(*Laudanum.*)

Take of Opium, in powder, two ounces and a half;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

Tinctura Opii Acetata.

Acetated Tincture of Opium.

Take of Opium, in powder, two ounces;
Vinegar twelve fluidounces;
Alcohol half a pint.

Rub the Opium with the Vinegar; then add the Alcohol, and, having macerated for fourteen days, express, and filter through paper.

Tinctura Opii Camphorata.

Camphorated Tincture of Opium.

(*Paregoric Elixir.*)

Take of Opium, in powder,
Benzoic Acid, each, a drachm;
Oil of Anise a fluidrachm;
Clarified Honey two ounces;
Camphor two scruples;
Diluted Alcohol two pints.

Macerate for fourteen days, and filter through paper.

Tinctura Quassiæ.

Tincture of Quassia.

Take of Quassia, rasped, two ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by moistening the Quassia thoroughly with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Rhei.

Tincture of Rhubarb.

Take of Rhubarb, bruised, three ounces;
Cardamom, bruised, half an ounce;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Rhubarb and Cardamom, in powder, with Diluted Alcohol, allowing them to stand for forty-eight hours, then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Rhei et Aloës.

Tincture of Rhubarb and Aloes.

(Elixir Sacrum.)

Take of Rhubarb, bruised, ten drachms;
Aloes, in powder, six drachms;
Cardamom, bruised, half an ounce;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

Tinctura Rhei et Gentianæ.

Tincture of Rhubarb and Gentian.

Take of Rhubarb, bruised, two ounces;
Gentian, bruised, half an ounce;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Rhubarb and Gentian, in powder, with Diluted Alcohol, allowing them to stand for forty-eight hours, then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Rhei et Sennæ.

Tincture of Rhubarb and Senna.

(*Warner's Gout Cordial.*)

Take of Rhubarb, bruised, an ounce;
Senna two drachms;
Coriander, bruised,
Fennel-seed, bruised, each, a drachm;
Red Saunders, rasped, two drachms;
Saffron,
Liquorice, each, half a drachm;

Raisins, deprived of their seeds, half a pound;

Diluted Alcohol three pints.

Macerate for fourteen days, express, and filter through paper.

Tinctura Sanguinariæ.

Tincture of Bloodroot.

Take of Bloodroot, bruised, four ounces;

Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Bloodroot, in powder, with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Saponis Camphorata.

Camphorated Tincture of Soap.

(*Soap Liniment.*)

Take of Soap, in shavings, four ounces;

Camphor two ounces;

Oil of Rosemary half a fluidounce;
Water four fluidounces;
Alcohol two pints.

Mix the Alcohol and Water, digest the Soap with the mixture by means of a water-bath till it is dissolved, then filter, and add the Camphor and Oil.

Tinctura Scillæ.
Tincture of Squill.

Take of Squill four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Squill, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Sennæ et Jalapæ.

Tincture of Senna and Jalap.

Take of Senna three ounces;
Jalap, in powder, an ounce;
Coriander, bruised,
Caraway, bruised, each, half an ounce;
Cardamom, bruised, two drachms;
Sugar four ounces;
Diluted Alcohol three pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by beating well together the Senna, Jalap, Sugar, and Aromatics, moistening them thoroughly with Diluted Alcohol, allowing them to stand for forty-eight hours, then transferring them to a percolator, and gradually pouring upon them Diluted Alcohol until three pints of filtered liquor are obtained.

Tinctura Serpentariæ.

Tincture of Virginia Snakeroot.

Take of Virginia Snakeroot, bruised, three ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Virginia Snakeroot, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours; then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Stramonii.

Tincture of Stramonium.

Take of Stramonium Seed, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Stramonium Seed, in powder, with Diluted Alcohol, allowing it to stand for forty-eight hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Tolutana.

Tincture of Tolu.

Tinctura Tolutani, *U. S. Ph.*, 1840.

Take of Balsam of Tolu three ounces;
Alcohol two pints.

Macerate until the Balsam is dissolved; then filter through paper.

Tinctura Valerianæ.

Tincture of Valerian.

Take of Valerian, bruised, four ounces;
Diluted Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Valerian, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

Tinctura Valerianæ Ammoniata.

Ammoniated Tincture of Valerian.

Take of Valerian, bruised, four ounces;
Aromatic Spirit of Ammonia two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Valerian, in powder, with Aromatic Spirit of Ammonia, allowing it to stand for twenty-four hours in a covered vessel, then transferring it to a percolator, and gradually pouring upon it Aromatic Spirit of Ammonia until two pints of filtered liquor are obtained.

Tinctura Zingiberis.

Tincture of Ginger.

Take of Ginger, bruised, eight ounces;
Alcohol two pints.

Macerate for fourteen days, express, and filter through paper.

This Tincture may also be prepared by thoroughly moistening the Ginger, in powder, with Diluted Alcohol, allowing it to stand for twenty-four hours, then transferring it to a percolator, and gradually pouring upon it Diluted Alcohol until two pints of filtered liquor are obtained.

TROCHISCI.

Trochisci Cretæ.

Troches of Chalk.

Take of Prepared Chalk four ounces;
Gum Arabic, in powder, an ounce;
Nutmeg, in powder, a drachm;
Sugar, in powder, six ounces.

Rub them together until they are intimately mixed; then with water form them into a mass, to be divided into troches, each weighing ten grains.

Trochisci Glycyrrhizæ et Opii.

Troches of Liquorice and Opium.

Take of Opium, in powder, half an ounce;
Liquorice, in powder,
Sugar, in powder,
Gum Arabic, in powder, each, ten ounces;
Oil of Anise a fluidrachm.

Mix the powders intimately; then add the Oil of Anise, and with water form them into a mass, to be divided into troches, each weighing six grains.

Trochisci Ipecacuanhæ.

Troches of Ipecacuanha.

Take of Ipecacuanha, in powder, half an ounce;
Sugar, in powder, fourteen ounces;
Arrow-root, in powder, four ounces;
Mucilage of Tragacanth a sufficient quantity.

Mix the powders intimately, and with the Mucilage form them into a mass, to be divided into troches, each weighing ten grains.

Trochisci Magnesiæ.

Troches of Magnesia.

Take of Magnesia four ounces;
Sugar a pound;
Nutmeg, in powder, a drachm;
Mucilage of Tragacanth a sufficient quantity.

Rub the Magnesia, Sugar, and Nutmeg together until they are thoroughly mixed; then with the Mucilage form them into a mass, to be divided into Troches, each weighing ten grains.

Trochisci Menthæ Piperitæ.

Troches of Peppermint.

Take of Oil of Peppermint a fluidrachm;
Sugar, in powder, a pound;
Mucilage of Tragacanth a sufficient quantity.

Rub the Oil of Peppermint with the Sugar until they are thoroughly mixed; then with the Mucilage form them into a mass, to be divided into Troches, each weighing ten grains.

Trochisci Sodæ Bicarbonatis.

Troches of Bicarbonate of Soda.

Take of Bicarbonate of Soda four ounces;
Sugar, in powder, a pound;
Mucilage of Tragacanth a sufficient quantity.

Rub the Bicarbonate of Soda with the Sugar until they are thoroughly mixed; then with the Mucilage form them into a mass, to be divided into Troches, each weighing ten grains.

UNGUENTA.

Unguentum Antimonii,
Antimonial Ointment.

Take of Tartrate of Antimony and Potassa, in very fine powder, two drachms;
Lard an ounce.

Rub the Tartrate of Antimony and Potassa with a little of the Lard, then add the remainder, and mix them.

Unguentum Aquæ Rosæ.
Ointment of Rose Water.

Take of Rose Water a fluidounce;
Oil of Almonds two fluidounces;
Spermaceti half an ounce;
White Wax a drachm.

Melt together, by means of a water-bath, the Oil, Spermaceti, and Wax; then add the Rose Water, and stir the mixture constantly until it is cold.

Unguentum Belladonnæ.

Ointment of Belladonna.

Take of Extract of Belladonna a drachm;
Lard an ounce.

Mix them.

Unguentum Cantharidis.

Ointment of Spanish Flies.

Take of Spanish Flies, in powder, two ounces;
Distilled Water half a pint;
Resin Cerate eight ounces.

Boil down the Water with the Spanish Flies to one-half, and strain; then mix the Cerate with the strained liquor, and evaporate to the proper consistence.

Unguentum Creasoti.

Ointment of Creasote.

Take of Creasote half a fluidrachm;
Lard an ounce.

Mix them.

Unguentum Cupri Subacetatis.

Ointment of Subacetate of Copper.

Take of Subacetate of Copper, in fine powder, a drachm;

Simple Ointment fifteen drachms.

Add the Subacetate of Copper to the Ointment previously melted with a moderate heat, and stir them constantly till they are cold.

Unguentum Gallæ.

Ointment of Galls.

Take of Galls, in powder, an ounce;
Lard seven ounces.

Mix them.

Unguentum Hydrargyri.

Mercurial Ointment.

Take of Mercury two pounds;
Lard twenty-three ounces;
Suet an ounce.

Rub the Mercury with the Suet and a small portion of the Lard until the globules disappear; then add the remainder of the Lard, and mix.

Unguentum Hydrargyri Ammoniati.

Ointment of Ammoniated Mercury.

Take of Ammoniated Mercury a drachm;
Simple Ointment an ounce and a half.

Mix them.

Unguentum Hydrargyri Nitratis.

Ointment of Nitrate of Mercury.

(*Citrine Ointment.*)

Take of Mercury an ounce;
Nitric Acid fourteen fluidrachms;
Fresh Neats-foot Oil nine fluidounces;
Lard three ounces.

Dissolve the Mercury in the Acid; then heat together the Oil and Lard, in an earthen vessel, to 200°; lastly, add the mercurial solution, and stir with a wooden spatula constantly so long as effervescence continues, and afterwards occasionally until the ointment stiffens.

Unguentum Hydrargyri Oxidi Rubri.

Ointment of Red Oxide of Mercury.

Take of Red Oxide of Mercury, in very fine powder, a drachm;
Simple Ointment an ounce.

Add the Oxide of Mercury to the Ointment previously softened over a gentle fire, and mix them.

Unguentum Iodinii.

Ointment of Iodine.

Unguentum Iodini, *U. S. Ph.*, 1840.

Take of Iodine a scruple;
Iodide of Potassium four grains;
Water six minims;
Lard an ounce.

Rub the Iodine and Iodide first with the Water until liquefied, and then with the Lard until thoroughly mixed.

Unguentum Iodinii Compositum.

Compound Ointment of Iodine.

Unguentum Iodini Compositum, *U. S. Ph.*, 1840.

Take of Iodine half a drachm;
Iodide of Potassium a drachm;
Alcohol a fluidrachm;
Lard two ounces.

Rub the Iodine and Iodide of Potassium first with the Alcohol, and then with the Lard, until they are thoroughly mixed.

Unguentum Mezerei.

Ointment of Mezereon.

Take of Mezereon, sliced transversely, four ounces;

Lard fourteen ounces;
White Wax two ounces.

Moisten the Mezereon with a little alcohol, and beat it in an iron mortar until reduced to a fibrous mass; then digest it, by means of a salt-water bath, with the Lard and Wax previously melted together, for twelve hours; strain with strong expression, and allow the strained liquid to cool slowly, so that any undissolved matters may subside. From these separate the medicated ointment.

Unguentum Picis Liquidæ.

Tar Ointment.

Take of Tar,
Suet, each, a pound.

Add the Tar to the Suet previously melted with a moderate heat, and stir them constantly till they are cold.

Unguentum Plumbi Carbonatis.

Ointment of Carbonate of Lead.

Take of Carbonate of Lead, in very fine powder, two ounces;
Simple Ointment a pound.

Add the Carbonate of Lead to the Ointment

previously softened over a gentle fire, and mix them.

Unguentum Potassii Iodidi.

Ointment of Iodide of Potassium.

Take of Iodide of Potassium, in fine powder, a drachm;
Boiling Water a fluidrachm;
Lard an ounce.

Dissolve the Iodide of Potassium in the Water, and mix the solution with the Lard.

Unguentum Simplex.

Simple Ointment.

Take of White Wax a pound;
Lard four pounds.

Melt them together with a moderate heat, and stir them constantly till they are cold.

Unguentum Stramonii.

Stramonium Ointment.

Take of Extract of Stramonium Leaves a drachm;
Lard an ounce.

Rub the Extract with a little water until uniformly soft, and then with the Lard.

Unguentum Sulphuris.

Sulphur Ointment.

Take of Sulphur a pound;
Lard two pounds.
Mix them.

Unguentum Sulphuris Compositum.

Compound Sulphur Ointment.

Take of Sulphur an ounce;
Ammoniated Mercury,
Benzoic Acid, each, a drachm;
Oil of Bergamot,
Sulphuric Acid, each, a fluidrachm;
Nitrate of Potassa two drachms;
Lard half a pound.

To the Lard, previously melted with a moderate heat, add the other ingredients, and stir them constantly till they are cold.

Unguentum Sulphuris Iodidi.

Ointment of Iodide of Sulphur.

Take of Iodide of Sulphur half a drachm;
Lard an ounce.

Rub the Iodide with a little of the Lard, then add the remainder, and mix them.

Unguentum Tabaci.

Tobacco Ointment.

Take of Fresh Tobacco, cut in pieces, an ounce;
Lard a pound.

Boil the Tobacco in the Lard over a gentle fire till it becomes friable; then strain through linen.

Unguentum Veratri Albi.

Ointment of White Hellebore.

Take of White Hellebore, in powder, two ounces;
Oil of Lemons twenty minims;
Lard eight ounces.

Mix them.

Unguentum Zinci Oxidi.

Ointment of Oxide of Zinc.

Take of Oxide of Zinc an ounce;
Lard six ounces.

Mix them.

VERATRIA.

Veratria.

Veratria.

Take of Cevadilla, bruised, two pounds;
Alcohol three gallons;
Sulphuric Acid,
Solution of Ammonia,
Purified Animal Charcoal,
Magnesia, each, a sufficient quantity.

Boil the Cevadilla in a gallon of the Alcohol, in a retort with a receiver attached, for an hour, and pour off the liquor. To the residue add another gallon of the Alcohol, together with the portion recently distilled, again boil for an hour, and pour off the liquor. Repeat the boiling a third time with the remaining Alcohol, and with that distilled in the previous operation. Press the Cevadilla, mix and strain the liquors, and by means of a water-bath distil off the Alcohol. Boil the residue three or four times in water acidulated with Sulphuric Acid, mix and strain the liquors, and evaporate to the consistence of syrup. Add Magnesia in slight excess, shake the mixture fre-

quently, then express, and wash what remains. Repeat the expression and washing two or three times, and, having dried the residue, digest it with a gentle heat several times in Alcohol, and strain after each digestion. Distil off the Alcohol from the mixed liquors, boil the residue for fifteen minutes in water with a little Sulphuric Acid and Purified Animal Charcoal, and strain. Having thoroughly washed what remains, mix the washings with the strained liquor, evaporate with a moderate heat to the consistence of syrup, and then drop in as much Solution of Ammonia as may be necessary to precipitate the Veratria. Lastly, separate and dry the precipitate.

Veratria, thus procured, is pulverulent, grayish-white, inodorous but very irritant to the nostrils, and of a bitter acrid taste, causing a sensation of tingling with numbness in the tongue. It is very slightly soluble in water, but is readily and wholly dissolved by alcohol. It has an alkaline reaction, and is entirely dissipated by a red heat. With nitric acid it forms a yellow solution, and, when in contact with concentrated sulphuric acid, becomes intensely red.

VINA MEDICATA.

Vinum Aloës.

Wine of Aloes.

Take of Aloes, in powder, an ounce;
Cardamom, bruised,
Ginger, bruised, each, a drachm;
White Wine a pint.

Macerate for fourteen days, with occasional agitation, and filter through paper.

Vinum Colchici Radicis.

Wine of Colchicum Root.

Take of Colchicum Root, well bruised, a pound;
White Wine two pints.

Macerate for fourteen days with occasional agitation; then express strongly, and filter through paper.

Wine of Colchicum Root may also be prepared by macerating as above, then transferring to a percolator, and, after the liquor has ceased to pass, pouring so much Wine upon the residue that the filtered liquor obtained may measure two pints.

Vinum Colchici Seminis.

Wine of Colchicum Seed.

Take of Colchicum Seed, bruised, four ounces;
White Wine two pints.

Macerate for fourteen days, with occasional agitation; then express, and filter through paper.

Vinum Ergotæ.

Wine of Ergot.

Take of Ergot, bruised, two ounces;
White Wine a pint.

Macerate for fourteen days, with occasional agitation; then express, and filter through paper.

Vinum Ipecacuanhæ.

Wine of Ipecacuanha.

Take of Ipecacuanha, bruised, two ounces;
White Wine two pints.

Macerate for fourteen days, with occasional agitation; then express, and filter through paper.

Wine of Ipecacuanha may also be prepared by moistening the Ipecacuanha, in coarse powder, thoroughly with Wine, allowing it to stand for twenty-four hours, then transferring it to a perco-

lator, and pouring Wine gradually upon it until two pints of filtered liquor are obtained.

Vinum Opii.

Wine of Opium.

(*Sydenham's Laudanum.*)

Take of Opium, in powder, two ounces;
Cinnamon, bruised,
Cloves, bruised, each, a drachm;
White Wine a pint.

Macerate for fourteen days, with occasional agitation; then express, and filter through paper.

Vinum Rhei.

Wine of Rhubarb.

Take of Rhubarb, bruised, two ounces;
Canella, bruised, a drachm;
Diluted Alcohol two fluidounces;
White Wine a pint.

Macerate for fourteen days, with occasional agitation; then express, and filter through paper.

Wine of Rhubarb may also be prepared by mixing the Rhubarb and Canella, in coarse powder, with the Diluted Alcohol, allowing the mixture to stand for twenty-four hours, then trans-

ferring it to a percolator, and pouring Wine gradually upon it until eighteen fluidounces of filtered liquor are obtained.

Vinum Tabaci.

Wine of Tobacco.

Take of Tobacco, cut in pieces, an ounce;
White Wine a pint.

Macerate for fourteen days, with occasional agitation; then express, and filter through paper.

Vinum Veratri Albi.

Wine of White Hellebore.

Take of White Hellebore, bruised, four ounces;
White Wine a pint.

Macerate for fourteen days, with occasional agitation; then express, and filter through paper.

ZINCUM.

Calamina Præparata.

Prepared Calamine.

Zinci Carbonas Præparatus, *U. S. Ph.*, 1840.

Take of Calamine a convenient quantity.

Heat it to redness, and afterwards pulverize it; then reduce it to a very fine powder in the manner directed for Prepared Chalk.

Zinci Acetas.

Acetate of Zinc.

Take of Acetate of Lead a pound;
Zinc, granulated, nine ounces;
Distilled Water three pints.

Dissolve the Acetate of Lead in the Water and filter. Then add the Zinc to the solution, and agitate the mixture occasionally, in a stopped bottle, for five or six hours, or until the liquid yields no precipitate with a solution of iodide of potassium. Filter the liquor, evaporate it with a moderate heat to one-fifth, acidulate it slightly with acetic acid, and set it aside to crystallize. Pour off the liquid, and dry the crystals on bibulous paper.

Should the crystals be coloured, dissolve them in a pint and a half of distilled water, and, having heated the solution to ebullition, drop into it, while boiling, Precipitated Carbonate of Zinc, in successive portions, until a small quantity of the liquid, being filtered, passes colourless. Then filter the liquid, acidulate it slightly with acetic acid, and evaporate that crystals may form.

Acetate of Zinc is in white micaceous crystals, which effloresce in a dry atmosphere, and are very soluble in water. The solution yields white precipitates with ferrocyanuret of potassium and sulphohydrate of ammonia. The salt is decomposed by sulphuric acid and by a strong heat, with the escape of acetous vapours.

Zinci Carbonas Præcipitatus.

Precipitated Carbonate of Zinc.

Take of Sulphate of Zinc,
Carbonate of Soda, each, a pound;
Boiling Water a gallon.

Dissolve the Sulphate of Zinc and Carbonate of Soda, severally, in four pints of the Water. Then mix the solutions, and, having stirred the mixture, set it by that the powder may subside. Lastly, having poured off the supernatant liquid, wash the Precipitated Carbonate of Zinc with hot water until the washings are nearly tasteless, and dry it with a gentle heat.

Zinci Chloridum.

Chloride of Zinc.

Take of Zinc, in small pieces, two ounces and a half;
Nitric Acid,

Prepared Chalk, each, a drachm;
Muriatic Acid a sufficient quantity.

To the Zinc, in a glass or porcelain vessel, add gradually sufficient Muriatic Acid to dissolve it; then strain, add the Nitric Acid, and evaporate to dryness. Dissolve the dry mass in water, add the Chalk, and, having allowed the mixture to stand for twenty-four hours, filter, and again evaporate to dryness.

Chloride of Zinc is whitish, deliquescent, and wholly soluble in water, alcohol, and ether. When exposed to heat, it first melts and then sublimes. The solution yields with nitrate of silver a white precipitate insoluble in nitric acid. It gives also white precipitates with ferrocyanuret of potassium and sulphohydrate of ammonia.

Zinci Oxidum.

Oxide of Zinc.

Take of Precipitated Carbonate of Zinc a pound.

Expose it to a strong heat in a shallow vessel, so as to drive off the carbonic acid.

Oxide of Zinc is a white powder, insoluble in water, but soluble in dilute sulphuric and chlorohydric acids without effervescence. The solutions, when neutral, yield white precipitates with ferrocyanuret of potassium and sulphohydrate of ammonia.

Zinci Sulphas.

Sulphate of Zinc.

Take of Zinc, in small pieces, four ounces;
Sulphuric Acid six ounces;
Distilled Water four pints.

To the Zinc and Water, previously introduced into a glass vessel, add by degrees the Sulphuric Acid, and, when the effervescence has ceased, filter the solution through paper; then boil it down till a pellicle begins to form, and set it aside to crystallize.

Sulphate of Zinc is in colourless crystals which effloresce on exposure to the air. It is wholly dissolved by water, and the solution affords with ammonia a white precipitate, which is redissolved by the alkali in excess. It also yields white precipitates with chloride of barium, ferrocyanuret of potassium, and sulphohydrate of ammonia.

TABLE

OF

MEDICINES INTRODUCED AND DISMISSED.

I. SUBSTANCES INTRODUCED INTO THE MATERIA MEDICA.

Aconiti Radix.	Aconite Root.
Althææ Flores.	Marshmallow Flowers.
Arnica (*flowers*).	Leopard's-bane.
Arsenicum.	Arsenic.
Cydonium.	Quince Seed.
Extractum Cannabis.	Extract of Hemp.
Gossypium.	Cotton.
Helianthemum.	Frostwort.
Lappa.	Burdock.
Macis.	Mace.
Oleum Amygdalæ Amaræ.	Oil of Bitter Almonds.
Oleum Morrhuæ.	Cod-liver Oil.
Ovum.	Egg.
Plumbi Nitras.	Nitrate of Lead.
Potassæ Chloras.	Chlorate of Potassa.
Spiritus Vini Gallici.	Brandy.
Vinum Rubrum.	Red Wine.

II. PREPARATIONS INTRODUCED.

Acidum Gallicum.	Gallic Acid.
Aconitia.	Aconitia.
Aqua Amygdalæ Amaræ.	Bitter Almond Water.
Argenti Nitras (*in crystals*).	Nitrate of Silver.

Argenti Oxidum.	Oxide of Silver.
Arsenici Iodidum.	Iodide of Arsenic.
Calcis Carbonas Præcipitatus.	Precipitated Carbonate of Lime.
Ceratum Zinci Carbonatis.	Cerate of Carbonate of Zinc.
Chloroformum.	Chloroform.
Collodium.	Collodion.
Emplastrum Ammoniaci cum Hydrargyro.	Plaster of Ammoniac with Mercury.
Emplastrum Picis Burgundicæ.	Burgundy Pitch Plaster.
Extractum Colchici Aceticum.	Acetic Extract of Colchicum.
Extractum Cubebæ Fluidum.	Fluid Extract of Cubebs.
Extractum Opii.	Extract of Opium.
Extractum Piperis Fluidum.	Fluid Extract of Black Pepper.
Extractum Rhei.	Extract of Rhubarb.
Extractum Rhei Fluidum.	Fluid Extract of Rhubarb.
Extractum Sarsaparillæ Fluidum.	Fluid Extract of Sarsaparilla.
Extractum Sennæ Fluidum.	Fluid Extract of Senna.
Extractum Spigeliæ et Sennæ Fluidum.	Fluid Extract of Spigelia and Senna.
Extractum Valerianæ Fluidum.	Fluid Extract of Valerian.
Ferri Citras.	Citrate of Iron.
Ferri Pulvis.	Powder of Iron.
Glycerina.	Glycerin.
Infusum Capsici.	Infusion of Cayenne Pepper.
Infusum Sassafras Medullæ.	Infusion of Sassafras Pith.
Infusum Taraxaci.	Infusion of Dandelion.
Infusum Zingiberis.	Infusion of Ginger.
Liquor Arsenici et Hydrargyri Iodidi.	Solution of Iodide of Arsenic and Mercury.
Liquor Ferri Nitratis.	Solution of Nitrate of Iron.
Liquor Magnesiæ Citratis.	Solution of Citrate of Magnesia.
Mistura Glycyrrhizæ Composita.	Compound Mixture of Liquorice.
Oleum Copaibæ.	Oil of Copaiba.
Oleum Tabaci.	Oil of Tobacco.
Oleum Valerianæ.	Oil of Valerian.
Pilulæ Ferri Iodidi.	Pills of Iodide of Iron.
Plumbi Iodidum.	Iodide of Lead.
Potassa cum Calce.	Potassa with Lime.

Potassæ Citras.	Citrate of Potassa.
Potassii Bromidum.	Bromide of Potassium.
Syrupus Acaciæ.	Syrup of Gum Arabic.
Syrupus Acidi Citrici.	Syrup of Citric Acid.
Syrupus Pruni Virginianæ.	Syrup of Wild-cherry Bark.
Tinctura Aconiti Radicis.	Tincture of Aconite Root.
Tinctura Cardamomi Composita.	Compound Tincture of Cardamom.
Tinctura Kino.	Tincture of Kino.
Tinctura Nucis Vomicæ.	Tincture of Nux Vomica.
Trochici Sodæ Bicarbonatis.	Troches of Bicarbonate of Soda.
Unguentum Belladonnæ.	Ointment of Belladonna.
Unguentum Potassii Iodidi.	Ointment of Iodide of Potassium.
Unguentum Sulphuris Iodidi.	Ointment of Iodide of Sulphur.
Zinci Carbonas Præcipitatus.	Precipitated Carbonate of Zinc.

III. SUBSTANCES DISMISSED FROM THE MATERIA MEDICA.

Arnica (*root and herb*).	Leopard's-bane.
Lactuca Elongata.	Wild Lettuce.
Plumbi Oxidum Rubrum.	Red Oxide of Lead.

IV. PREPARATIONS DISMISSED.

Decoctum Taraxaci.	Decoction of Dandelion.
Mel Præparatum.	Prepared Honey.

TABLE

OF

CHANGES OF POSITION.

I. SUBSTANCES TRANSFERRED FROM THE PRIMARY TO THE SECONDARY LIST.

Simaruba.	Simaruba.

II. SUBSTANCES TRANSFERRED FROM THE SECONDARY TO THE PRIMARY LIST.

Brominium.	Bromine.
Chondrus.	Irish Moss.
Statice.	Marsh Rosemary.
Stillingia.	Queen's-root.

III. SUBSTANCES TRANSFERRED FROM THE MATERIA MEDICA TO THE PREPARATIONS.

Oleum Caryophylli.	Oil of Cloves.
Oleum Cubebæ.	Oil of Cubebs.

IV. SUBSTANCES TRANSFERRED FROM THE PREPARATIONS TO THE MATERIA MEDICA.

Acidum Aceticum.	Acetic Acid.

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