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PHARMACOLOGIA.

OR

THE HISTORY

OF

Medicinal Substances.

IN ORDER TO ENABLE

THE PRACTITIONER TO PRESCRIBE THEM WITH EFFICACY,
AND ELEGANCE, AND TO DISPENSE THEM
WITH ACCURACY.

BY

JOHN AYRTON PARIS, M.B. F.L.S.

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PHYSICIAN TO THE WESTMINSTER HOSPITAL, AND
LECTURER ON PHARMACEUTIC CHEMISTRY.

Quis Pharmacopœo dabit leges, ignarus ipse agendorum?—Vix profecto
dici potest, quantum hæc ignorantia rei medicæ inferat detrimentum.

GAUB: METHOD: CONCINN: FORMUL.

SECOND EDITION.

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1812.

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William George Maton, M.D. F.R.S.

PHYSICIAN EXTRAORDINARY TO HER
MAJESTY,

&c. &c. &c.

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P R E F A C E.

IN an age which is inundated with a profusion of volumes in every department of medical study, a new work must possess more than slender claims to originality, or the publication will be at once blighted by indifference, and its author very justly consigned to public reprehension; the discovery of new facts in chemical science, can be alone anticipated from those, whose sole life is devoted to its research, but the arrangement, and application of what is already known, for improving the medical profession, may be reasonably expected from the pen of the Practical Physician; it is exclusively in the attainment of

such an object, that the present work grounds its claims to public notice. Many compendiums, and epitomes, of plausible pretensions, have been already published, with a view of directing the practice of the junior, or relieving the occasional embarrassments of the more experienced prescriber, it is not my wish to disparage their merits, or depreciate their utility, but it must be acknowledged, that their views are far too limited, and their objects too confined, to be extensively useful; they rather furnish a catalogue of formulæ, than teach the principles, upon which they may be constructed: they offer the shadow, instead of the substance, and inculcate a spirit of empiricism, in preference to that of philosophical induction. To attain the art of prescribing with elegance, and success, an extensive range of information is required, and this I have endeavoured

to comprise under the history of each article, with as much conciseness, as was consonant with perspicuity; thus are noticed, 1. *Its Sensible Qualities.* 2. *Its Chemical Composition*, or the constituents in which its medicinal activity resides. 3. *Its Relative Solubility in Different Menstrua*, or the Proportions in which it should be combined with different bodies, in order to produce Suspension, or Saturation. 4. *The Incompatible Substances.* i. e. all those which are capable of destroying its properties, or rendering its flavour, or aspect, unpleasant, or disgusting. 5. *The Best Forms in which it can be exhibited.* 6. *Its Specific Doses.* 7. *Its Medicinal Effects.* 8. *Its Officinal Preparations.* 9. *Its Adulterations.* The indispensable necessity of such information must be sufficiently apparent; for the changes, and modifications

of which remedies are susceptible, by being submitted to various operations, or mutually combined with each other, are not imaginary, nor are they, as some have supposed, the mere suggestions of theoretical refinement; thus, for instance, every practitioner may easily prove, that vegetable tonics lose their astringent character by combination with alkalies; or, that the efficacy of antimonial preparations is destroyed, by vegetable infusions; in the hands therefore of empiricism, and ignorance, valuable remedies may become impotent; and inert medicines be converted into powerful poisons. “*Unda dabit flammæ, et dabit ignis aquas,*” may we not to such a cause, ascribe the various revolutions which medicinal substances have undergone in the opinions, and faith of men; and explain by it, the ephemeral reputation of many of those reme-

dies, which, like passing spectres, have glared only for a time, and vanished? The adulterations to which drugs are liable, being another circumstance of considerable importance, as capable of distorting their medicinal operations, I have offered, under the history of each article, the most prompt and satisfactory method of detecting its impurities. As a knowledge of the nature of the most celebrated *Quack Medicines may be also a desideratum, I have subjoined the formulæ for their preparation; indeed the medical practitioner should be always acquainted with their composition, for he may be called upon to superintend the boasted panacea of some fashionable quack, or what is more probable, to

* The word QUACK is derived from *Quacksalber*, the German appellation of *Quicksilver*; since it is the remedy which irregular practitioners have most frequently employed.

counteract the effects of its baneful influence ; for it may be safely affirmed, that such medicines kill more patients than the diseases which they are intended to cure ; “ *flying to quackery for relief,*” observes a medical writer, “ *is like praying for length of days while we are swallowing poison, or destroying the right eye, by weeping for the loss of the left.*” I have not added any extemporaneous formulæ, because I regard them as a useless source of prolixity, and a refuge only for ignorance, and indolence ; for when the chemical and medicinal nature of a remedy is known, its form of exhibition is easily adjusted. In the execution of the work, the great object has been, to economize the time, labour, and expence of its purchaser ; many errors have, doubtless, escaped detection, but should its plan entitle it to notice, it will, in

PREFACE.

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a future edition, be its author's care, to amend its present faults, supply its defects, and extend its views.

St. James's Street, May 1812.

AN
ANALYSIS
OF THE ART OF
Forming Medicinal Combinations.

THE great objects designed to be accomplished, by combining together medicinal substances, may be comprehended under the following heads.

I.

To promote the action of the principal medicine.

II.

To correct its operation, by obviating any unpleasant effects it may be likely to occasion.

III.

To obtain the joint operation of two medicines which have different powers, and which are required to obviate different symptoms.

IV.

To obtain a new remedy not afforded by nature, by combining together those which are capable of changing or modifying the action of each other.

V.

To afford a convenient and agreeable form.

The accomplishment of these several ends are exemplified by the well known operation of many cathartic combinations. It should, however, be remembered, that unless it be with a view of attaining such objects, SIMPLICITY should be the desideratum of every practitioner.

“ Quod uno vales efficere, ne tentes pluribus.”

A prescription has been divided into four constituent parts, a division evidently suggested with a

view of accomplishing the objects just enumerated; or, in other words, enabling the remedy to act quickly, safely, and pleasantly. “*Cito, tuto, et jucunde.*”—Thus:

I. The BASIS; or principal remedy.

II. The ADJUVANS; that which promotes its operation, (“*Cito.*”)

III, The CORRIGENS; that which corrects its operation, (“*tuto.*”)

IV. The CONSTITUENS; That which gives an agreeable form, (“*jucunde.*”)

All these parts are, however, not necessarily present in every prescription, for many medicines require no addition to promote their operation, and the mildness of others supersedes the use of a corrective; it also sometimes occurs, that one part of the prescription is capable of fulfilling the intention of the others; the *adjuvans*, for instance, may at the same time act as the *corrigens*, or *constituens*: thus the addition of *soap* to *aloes*, or *extract of jalap*, mitigates their acrimony, and at the same time quickens their operation; this coin-

cidence should, if possible, be always attained, for it simplifies the formula, and, by decreasing the bulk of the remedy, renders it less nauseous and more elegant.

This division affords also, the best general rule for placing the ingredients of a prescription in proper order, for the order should correspond to that of the arrangement; the chemical nature of the substances however, often afford exceptions to this general rule, the volatile ingredients should be those last added; and, if any substance require decoction or infusion, a question arises, determinable only by chemical laws, whether the remaining ingredients should be joined previously or subsequently to the operation.

COMPOUND MEDICINES have been divided into two classes, viz.

I. OFFICINAL PREPARATIONS,

Are those which are ordered in the pharmacopœias, and are kept ready compounded in the

shops; no uniform class of medicines however, can answer the indications of every case, and hence the necessity of .

II. MAGISTRAL, or EXTEMPORANEOUS FORMULÆ.

These are constructed by the practitioner at the moment, and may be either arrangements altogether new, or officinal preparations, with additions or modifications; *extemporaneous* are also preferable to *officinal* formulæ, whenever the powers of the compounds can be injured by keeping, e. g. *vid. Mist. Ferri. comp.*

The errors which arise in composing *extemporaneous* prescriptions, are referable to the following sources.

I. Substances are added together which are incapable of mixing.

II. Substances are added together, which mutually decompose each other, and hence their original virtues are changed or destroyed.

III. The methods directed for the preparation of the ingredients are either inadequate to the accomplishment of the object, or they destroy the efficacy of the substances.

IV. The forms of exhibition prescribed, are inconvenient or inefficient.

These errors may in every case be avoided, by referring to the different articles in this volume, which the practitioner may wish to combine in prescription, where every necessary precaution will be found enumerated.

THE FORM under which a medicine is given, must be adapted to the nature of the remedy, and as far as can be attained, to the caprice of the patient, *vid. Decocta, Infusa, Tincturæ, Misturæ, Pilulæ, &c. &c. &c.*

THE DOSES are specific with respect to each substance, and can therefore be only learnt from experience; the young and eager practitioner however, is too often betrayed into the error of supposing, that the powers of a remedy always in-

crease in an equal ratio with its dose, whereas the dose of a remedy very often alone determines its specific action. "*Medicines*," says Linnæus, "*differ from poisons, not in their nature, but their dose.*" Thus, five grains of camphor act as a mild sedative, and slight diaphoretic, but twenty grains induce nausea, and act as a stimulant. So again, opium, in too large doses, instead of promoting, prevents sleep, and rather stimulates the bowels than acts as a narcotic.

The operation of medicines is influenced by certain general circumstances, which the practitioner should always keep in mind when he appor- tions their dose, e. g. *Age, Sex, Temperament, Habit, and Disease.*

Women in general require smaller doses than men. *Habit*, or the protracted use of a medicine generally diminishes its power, although saline cathartics afford an exception to the law;* for, when long continued, their activity is proportion-

* The operation of Cheltenham waters, affords a familiar illustration of this fact.

ally increased, and their doses, therefore require to be diminished.

The following popular scheme, by Gaubius, exhibits the relative doses adapted to different ages.

Ages.	Proportional Quantities.	Doses.
For an adult	Suppose the Dose . . . 1	or ʒj
under 1 year	Will require only 1-12th	Grs
2	..... 1-8th	vij.
3	..... 1-16th	x.
4	..... 1-4th	xv.
7	..... 1-3rd.	ʒj.
14	..... 1-half	ʒss
20	..... 2-3rds	ʒij.
above 21	The common Dose.	ʒj.
60	The inverse gradation of the above.	

PHARMACOLOGIA.

ABI.

ABIETIS RESINA. (Pinus Abies, *Resina concreta.*) *Resin of the Spruce Fir.*

Olim, Thus.—Frankincense.

QUALITIES, *Form*, tears, or small brittle masses: *Odour*, very fragrant when burning; it has all the chemical properties of a resin, but is used only for external purposes. OFFICINAL PREPARATIONS. *Emplast: Aromat: D. Emplast: Galbani, comp. L. Emplast: Opii L. Emplast: Thuris. D.*

ABSINTHIUM. (Artemisia Absinthium) *Worm-wood.*

QUALITIES. *Odour*, strong and peculiar : *Taste*, intensely bitter, slightly pungent and nauseous :
CHEMICAL COMPOSITION. Extractive, a small portion of resin, and an essential oil, in which its narcotic powers reside. SOLUBILITY, its virtues are alike extracted by water and alcohol; but decoction dissipates its narcotic principle, although its tonic and anthelmintic properties are not impaired by it; INCOMPATIBLE SUBSTANCES: *Sulphates of Iron and Zinc; super-acetate of Lead.*

NOTE. *Purl is an infusion of wormwood in ale.*

ACACIÆ GUMMI, L. (*Acaciæ vera.*) *Gum-arabic.* *Mimosa Nilotica*, E.

QUALITIES. It is dry, brittle and insipid, and undergoes no other change by exposure to the air than loss of colour. SOLUBILITY: it is soluble in water in every proportion, forming a viscid solution, (*mucilage*) one part dissolved in six of water, affords a fluid of the consistence of syrup, and in two parts, a medium well calculated for the union of dry

powders; gum is also soluble in pure alkalies, lime water and vegetable acids, vid. *Mucilago Acaciæ*.

OFFICINAL PREPARATIONS: *Mucilago Acaciæ* L. E. D. *Emulsio mimosæ niloticæ*. E. *Emulsio Arabica*. D. *Mist. Corn. ust.* L. D. *Mist. Cret.* L. D. *Mist. Mosch.* L. *Confect. Amygdal.* L. *Pulv. Cret. co.* L. *Pulv. Trag. co.* L. *Trochisci Carbonat. calcis* E. *Troch. Glycyrrh. Glab.* E. *Troch. Glycyrrh. c opio.* E. *Troch. Gummos* E.

ACETICA. Medicated Vinegars.

Vinegar is capable of dissolving all those vegetable principles which are soluble in water, and in some cases, its acid appears farther to increase its solvent powers, but at the same time it often modifies or destroys the medicinal virtues of the substances, a circumstance which very considerably limits its application in pharmacy; when, however, it is employed, a portion of spirit should be always added, in order to counteract the spontaneous decomposition to which vinegar is liable, and the compound should be preserved in stopped bottles. OFFICINAL PREPARATIONS. *Acidum Colchici*. L. *Acctum Scill.* L. E. D.

ACETIS HYDRARGYRI. E. *Acetite of Mercury.*

QUALITIES. *Form*, small flaky crystals: *Colour*, silvery white: *Taste*, acrid. CHEMICAL COMPOSITION. Acetic acid and oxyd of mercury. SOLUBILITY, it is soluble in hot, but very sparingly so in cold water, and quite insoluble in alcohol. FORMS OF EXHIBITION, it should be always given in pills. DOSE, gr. 1. CAUTION, this salt should be always preserved in opaque bottles, for it is partially reduced by the action of light, and rendered black.

ACETOSÆ FOLIA. L. (*Rumex Acetosa*) *Sorrel leaves.* *Folia.*

QUALITIES. *Taste*, grateful, austere and acidulous. CHEMICAL COMPOSITION, all its qualities depend upon the presence of *Super-oxalate of potass.*

ACETUM. (*Acidum Aceticum*) *Vinegar*, L.
Impurum.

Acidum Acetosum. E. *Acetum Vini*. D.

QUALITIES. *Odour*, agreeable and pungent; *Taste*, acid; *Colour*, varies from a pale yellow to a deep red. CHEMICAL COMPOSITION: Acetic acid, largely diluted with water, vegetable gluten, mucilage, sugar, extractive matter, and frequently malic and tartaric acids; its composition however varies according to the fermented liquor from which it is obtained, e. g. wine yields a paler, purer, and stronger acid than fermented malt liquors, or solutions of sugar. Vinegar is liable to spontaneous decomposition, or to become mouldy, hence for the purposes of pharmacy, it should be distilled; as however the change depends upon the presence of gluten, it may, if previously boiled, be kept for a much longer time, and if powdered charcoal be added, the acid becomes colourless: vid. *Acidum Aceticum*.

ACIDUM ACETICUM. L. Acidum Acetosum Distillatum. E. Acetum Distillatum. D.

QUALITIES. *Odour*, fainter and less agreeable than common vinegar; *Taste*, less acid; *Colour*, none. SPECIFIC GRAVITY, varying from 1.006, to 1.0095. CHEMICAL COMPOSITION. Acetic acid

more largely diluted than that in vinegar,* with very minute portions of uncombined mucilage and extractive. SOLVENT POWERS, *vid. Acetica*. ADULTERATIONS. *Sulphuric Acid*, may be detected by a precipitate being produced on the addition of a solution of acetate of barytes; *Copper*, by its assuming a blue colour when super-saturated with ammonia, and *Lead*, by a solution of sulphureted hydrogen, forming a dark coloured precipitate.

ACIDUM CITRICUM. L. *Citric Acid*.

QUALITIES. *Form*, crystals which are rhomboidal prisms; white, semi-transparent and persistent: *Taste*, extremely acid, almost caustic. SOLUBILITY, fʒj of cold water dissolves 5x, and of boiling ʒij; ʒj of the crystals dissolved in a pint of water is equivalent to one pint of lemon juice; the solution, if long kept, is liable to undergo spontaneous decomposition.

* Acetic acid can be obtained in a concentrated form (radical vinegar) from the decomposition of an acetic salt, a process for this purpose is directed in the Edinburgh and Dublin Pharmacopœias, but the London college has rejected it, as distilled vinegar is sufficiently strong for every pharmaceutical purpose.

PROPORTIONS NECESSARY FOR THE NEUTRALIZATION OF ALKALIES.

Citric Acid.	Lemon Juice.	A Scruple of Alkalies.
grs. x.	℥viij.	Carbonate of Potass
grs. xv.	℥ʒʒ	Sub-carbonate of Potass.
grs. xxv.	℥ʒviij	Carbonate of Ammonia

Citric acid decomposes the following substances, *Alkaline and earthy carbonates; Tartarized soda; Sulphate of Potass; Sub-acetate of Copper; Superacetate of Lead; the Sulphurets of earths and alkalies; and Alkaline soaps.*

ACIDUM MURIATICUM, L. E. D. *Muriatic Acid.*

QUALITIES. *Form*, a liquid of the specific gravity 1.170, or ℥ʒj weighs about 533 grains, and

ought to saturate of pure limestone ʒss ; *Odour*, strong and pungent: *Taste*, intensely sour, but it is the weakest of the mineral acids. FORMS OF EXHIBITION, diluted with any bland fluid. Dose, mx to xx-fʒj added to a pint of barley water, affords a most grateful and valuable febrifuge; but we should be cautious never to apportion its dose in a leaden or pewter spoon. ADULTERATIONS, *Sulphuric Acid* is detected by diluting the acid, and adding a few drops of the muriate of barytes, which is precipitated white: *Iron*, by a blue precipitate with prussiate of potass. *Copper*, by the production of a blue colour when super-saturated with ammonia; the yellow tinge of the acid either depends upon the presence of iron, or of extractive matter.

ACIDUM NITRICUM. L. E. *Nitric Acid*.

QUALITIES. *Form*, a limpid fluid of the specific gravity 1.500, or fʒj weighs 682 grains, and ought to saturate of pure lime stone ʒvij ; *Colour*, none; *Odour*, suffocating; *Taste*, extremely acid; it is highly corrosive, and tinges the skin indelibly

yellow. CHEMICAL COMPOSITION. Its constituents, independently of water, which imparts to it the fluid form, are azote 29·5. oxygen 70·5. It is decomposed with violent action by all combustibles.

USE. It is employed for pharmaceutical purposes only. ADULTERATIONS. *Sulphuric acid* may be detected by a precipitate being produced, on the addition of nitrate of barytes; *Muriatic acid*, by nitrate of silver, which affords a sediment at first, white, but which becomes coloured by exposure to light.

ACIDUM NITRICUM DILUTUM. L.

Acidum Nitrosum Dilutum. E. D.

The proportions of water directed for the dilution of this acid, vary considerably in the different pharmacopœias, that prepared according to the Edinburgh, Dublin, and former London formulæ, being in strength to that of the present pharmacopœia of London, as 4 to 1. Dose, mx to xxx in fʒij of water.

ACIDUM NITROSUM. E.D. *Nitrous Acid.*

QUALITIES. It is a yellow, or orange coloured liquid, emitting deep orange coloured fumes.

CHEMICAL COMPOSITION. Nitric acid, holding nitric oxide loosely combined. **SOLUBILITY.** By dilution the nitric oxide is disengaged, and it is thus at once converted into nitric acid, vid. *Acid. Nitric.*

ACIDUM SULPHURICUM. L.E.D. *Sulphuric Acid.*

Olim—Vitriolic Acid; Oil of Vitriol.

QUALITIES. *Form,* a thick oily fluid of the specific gravity 1·850, or fʒj weighs a fraction of a grain more than ʒxiv. *Colour,* none; but it is rendered brown by the smallest addition of carbonaceous matter. **CHEMICAL COMPOSITION.** Its constituents, independently of water, are sulphur 61·51, oxygen 38·51. **SOLUBILITY.** It has a very powerful affinity for water, and a very considerable increase of temperature is produced during their combination; when exposed to the atmosphere it will imbibe seven times its weight of water, and so

rapidly, as to double its weight in a month. OFFICIAL PREPARATIONS. *Acid: Sulphuric: dilut: L.E.D. Acid: Sulphuric: Aromat: E.*

ACIDUM SULPHURICUM DILUTUM. L.E.D.

Diluted Sulphuric Acid.

By the dilution of this acid two objects are accomplished. 1. *The acid is purified from sulphate of lead, and from sulphate of potass which are precipitated.* 2. *The dose of the acid is more easily apportioned.* The strength of this preparation, however, varies very materially in the different pharmacopœias; and, as this circumstance often confuses the prescriber, and leads him into error, I have constructed the following scheme, which although it affords approximations only to truth, will be found sufficiently accurate for every practical purpose.

A TABLE, exhibiting the Relative Proportions of Water and Acid, contained in the Diluted Sulphuric Acid of the different Pharmacopœias.

Pharmacopœia	Proportions by Weight.		Proportions by Measure.		Relative Strength.	Specific Gravity.
	Acid.	Water.	Acid.	Water.		
P. L. 1810	1	$5\frac{1}{2}$	1	$9\frac{1}{2}$	Minims. 10	1.110
Pharm. E. D.	1	7	1	$12\frac{1}{2}$	13	1.090
P. L. 1787	1	8	1	$14\frac{1}{2}$	15	

ADEPS. L. (Sus Scrofa.) Adeps, *vulgo*
Adeps.

Axungia Porcina, E.

Fat—Hog's lard.

QUALITIES. *Consistence*, soft, or nearly semi-fluid. *Odour* and *Taste*, none; at 97° it melts. CHEMICAL COMPOSITION, oxygen, hydrogen, and carbon in unknown proportions. SOLUBILITY, it is insoluble in water, and alcohol, but it unites with the alkalies, and forms soaps. INCOMPATIBLE SUBSTANCES. *Extracts, Spirituous preparations, and Tinctures, &c.* are incapable of uniting perfectly with lard, without some intermedium: the following substances, on the contrary, are capable of contracting with it a most intimate union. 1. *All dry powders*, whether of a vegetable, or mineral nature. 2. *Fixed and volatile oils.* 3. *Balsams.* 4. *Camphor.* 5. *Soaps.* USE: It is principally employed in the formation of ointments.

ÆRUGO. L. D. (Sub-acetas Cupri.) Sub-
Impura.
acetis Cupri. E.

Verdegris, or Sub-acetate of Copper.

QUALITIES. *Form*, a dry mass, not deliquescent. *Colour*, bluish green. It is seldom employed except as an external application.

ÆTHER SULPHURICUS. L.E.D. *Sulphuric Ether.*

QUALITIES. *Form*, a liquid of the specific gravity .732; *Colour*, none; *Odour*, pungent and fragrant; it is highly volatile and inflammable. CHEMICAL COMPOSITION. Oxygen, hydrogen and carbon in unknown proportions. SOLUBILITY, one part requires for its solution, ten of water; with alcohol and ammonia it unites in every proportion. SOLVENT POWERS. It is one of the most powerful solvents known in chemistry, it dissolves balsams, resins, gum resins, wax, camphor, and extractive. FORMS OF EXHIBITION. In any liquid vehicle, if in decoctions or infusions, they must be previously cooled. DOSE, fʒss to fʒij. OFFICIAL PREPARATIONS. *Spirit Æther: Sulph:* ADULTERATIONS. Its specific gravity affords the best test of its purity: *Sulphuric Acid* may be detected by a precipitation on the addition of barytes, and by its reddening the colour of litmus; *Alcohol*, by its

forming a milky instead of a limpid solution with phosphorus.

ALCOHOL, L. D. *Alcohol*,*

QUALITIES. A liquid of the specific gravity .815; Colour, none; Odour, pungent. CHEMICAL COMPOSITION. Alcohol in a state of complete purity consists of carbon, hydrogen and oxygen; this preparation, however, contains 7 per cent of water. USE. It is employed only in a diluted form.

The following proportions of pure alcohol and water constitute the "*Spirits*" of the pharmacopœias.

Pure Alcohol.	Water.	Specific Gravities.	Pharmacopœias.
85 parts,	15	835	{ Rect. Spirit L. Alcohol E.
83	17	840	Rect. Spirit D.
44	56	930	Proof Spirit L.D.
42	58	935	Do. E.

* The Edinburgh pharmacopœia has no process for the preparation of alcohol, but it most incorrectly assigns the title to that which is the "*Rectified Spirit*," of the other pharmacopœias.

ALOES EXTRACTUM. *Aloes.*

There are three species met with in the shops, viz.

1. ALÖE SPICATA. L. Socoto- { *Socotorine Aloes.*
rina E. { *Cape Aloes.*
2. Alöe Vulgaris. L. Hepa- { *Common, or*
tica. E. D. { *Barbadoes Aloes*
3. Aloe Cabalina. Horse { *Employed only by*
Aloes { *Farriers.*

QUALITIES. All kinds of aloes have an intensely bitter taste, and a strong aromatic odour. CHEMICAL COMPOSITION. Resin, gum and extractive, the proportions of which vary in the different species, but their peculiar virtues reside in the extractive matter, of this, the *socotorine aloes* have the largest share, and hence their superiority. SOLUBILITY. they are dissolved by boiling water, but the resin is deposited on cooling; by long decoction they become insoluble and inert; proof spirit is a more perfect solvent. SUBSTANCES INCOMPATIBLE WITH THE DECOCTION. *All strong acids; oxymuriate of mercury; tartarized antimony; sulphate of zinc; and superacetate of lead.*

Alkaline salts destroy its bitterness, and impair its purgative qualities, but, they render aloes much more soluble.*

FORMS OF EXHIBITION. The form of Pill should be always preferred, on account of their bitterness.

OFFICINAL PREPARATIONS. *Pulv: Aloes comp.* L. *Pil: Aloës c Myrrha:* L.E.D. *Pil: Aloes c Asafætid:* E. *Pil: Aloë, c Colocynth:* E. *Pil: Cambogiæ comp:* L. *Pil: Rhei comp:* E. *Pil: Scammon: c Aloe* D. *Decoct: Aloes comp:* L. *Extract: Aloës.* L.D. *Extract: Colocynth: co.* L.D. *Tinct: Aloës.* L.E.D. *Tinct. Aloës comp:* L.E.D. *Tinct. Aloëæ Etheræa.* E. *Tinct. Benzoin: co.* L.E.D. *Tinct. Rhei et Aloës.* E. *Vinum Aloës.* L.E.D.†

ALUMEN, (*Super-sulphas Aluminæ.*) *Sulphas et Potassæ.* L.

Aluminæ. E. *Alumen.* D. *Alum.*

QUALITIES. *Form,* irregular crystalline masses which are slightly efflorescent; *Taste,* sweet, rough

* The operation of aloes is principally confined to the large intestines; a circumstance which depends altogether upon their insolubility in the "*primæ viæ,*" hence their specific action upon the rectum, may be prevented by uniting them with substances capable of accelerating their decomposition, their combination with alkalies may therefore in some cases, be very judicious.

† ANDERSON'S PILLS consist of Aloes, and Oil of Aniseed. HOOPER'S PILLS are composed of the *Pil. Aloës c Myrrh (Pil: Rufi)* and Ferri Sulphas.

and acidulous; exposed to the fire it melts, loses one third of its weight, and becomes a white and spongy substance; (“*älumen exsiccatum*.”.) CHEMICAL COMPOSITION. It is a ternary compound of alumina, potass, and sulphuric acid, the acid being in excess; it generally contains also ammonia, and a minute portion of iron. SOLUBILITY, f̄ij of cold water dissolves grs. xxx; and, at 212° 3iv of it. INCOMPATIBLE SUBSTANCES. *Alkalies and alkaline salts; the muriates of lime, magnesia and potass; the nitrate, and tartrate of potass; magnesia and its salts; lime water; vegetable astringents, especially galls and kino; super-acetate of lead; and the salts of mercury.* OBSERV: As sulphate of lime does not decompose this salt, hard water may be safely used for its solution.— FORMS OF EXHIBITION. It may be exhibited either in solution, or in substance made into pills with extract; it is sometimes administered in whey, (“*alum whey*”) made by boiling 3ij in a pint of milk and then straining. DOSE, grs. v to ʒj; of the whey f̄ij. OFFICINAL PREPARATIONS. *Alumen exsiccatum*. L.E.D. *Liquor: alum: comp: L. Pulv: sulphat: alum: comp: E. Solutio sulphat: cupri comp: E.*

AMMONIACUM. (*Heracleum*) *Ammoniac*. L. E. D.
(*gummiferum*)

QUALITIES. *Form.* Masses composed of fragments, or tears; *Taste*, bitter, nauseous and sweet. *Odour*, faint, but, not unpleasant. CHEMICAL COMPOSITION. Gum and resin, in the former of which its properties reside; SOLUBILITY. It is partly soluble in water, alcohol, æther, and the solutions of alcalies; when triturated with water, a milky liquor is formed, which is a solution of gum holding the resin suspended, and if the yolk of egg be employed, the mixture is more permanent. INCOMPATIBLE SUBSTANCES. The mixture is slightly curdled by *vinegar*, *oxymels*, *æther*, and *oxymuriate of mercury*, a circumstance of but little practical import. FORMS OF EXHIBITION. Suspended in water, or *mist: amygd:* vinegar has the power of rendering it perfectly soft, and rubbed with camphor, a mass is produced suitable for pills. DOSE. grs. x to xxx. OFFICINAL PREPARATIONS. *Mist: Ammoniac:* L. D. *Pilule Scill: comp:* L. E. *Emplast: Ammoniac:* L. *Emplast: Gummos:* E. *Emplast: Ammoniac, c Hydrargyro* L. ADULTERATIONS, it is often adulterated with common resin, from

which it may be purified by softening it in a bladder, which is immersed in boiling water, and straining it while fluid; the white, clear, dry, and large pieces are the best.

AMMONIÆ CARBONAS. L. Carbonas

AMMONIÆ. E.D. Carbonate of Ammonia.

QUALITIES. *Form*, white, semi transparent, hard masses, which effloresce on exposure to air; *Odour*, pungent and ammoniacal; *Taste*, slightly acrid, but cooling. CHEMICAL COMPOSITION, notwithstanding its nomenclature, it is a *subcarbonate* only, although the quantity of alkali varies according to the temperature that has been employed for its preparation. SOLUBILITY. f̄j of water dissolves 3ij*; it is quite insoluble in alcohol, and hence on the addition of spirit to a strong solution of it, a dense coagulum is produced; INCOMPATIBLE SUBSTANCES. *All acids; the fixed al-*

* It is therefore very evident, that for the preparation of the *Liquor ammoniæ carbonatis*, the London pharmacopœia directs a larger quantity of the salt than the water can dissolve.

calies; lime; magnesia; alum; sulphate of magnesia; acetate, sub-muriate, and oxy-muriate of mercury; super-acetate of lead; tartarized iron; the sulphates of iron, and zinc. FORMS OF EXHIBITION. Since its qualities are impaired by exposure to the air it should never be exhibited in powder; in the form of pill, however, it is preserved much longer, and more especially if it be combined with some extract; it may be also administered in any aqueous vehicle; when in decoctions, and infusions, they ought to be first cooled. DOSE, grs. v, to ʒj. OFFICINAL PREPARATIONS. *Liquor ammon: subcarb: L. Cuprum ammoniatum. L.E.D.* ADULTERATIONS. This salt ought to be entirely volatilized by heat, if any thing remain, it may be considered impure

AMMONIÆ MURIAS. L. Murias Ammoniaë E.

Sal Ammoniacum. D. *vulgo. Sal Ammoniac.*

QUALITIES. *Form*, dense, striated cakes, which are persistent in the air; *Taste*, bitter, acrid and cool. CHEMICAL COMPOSITION, ammonia 28, muriatic acid 43, water 30. SOLUBILITY, fʒj of water dissolves about ʒiiss, it is also soluble in 4½

AMYGDALÆ DULCES.	{ Varieties of 'Amyg'dalus, Communis." }	{ Sweet & Bitter Almonds }
AMYGDALÆ AMARÆ.		

QUALITIES. *The sweet almond* is inodorous, and has a sweet, bland taste; the *bitter almond*, when triturated with water, has the odour of the peach, and a pleasant bitter flavour. CHEMICAL COMPOSITION. The *sweet almond* consists of fixed oil, mucilage, sugar, and fecula; the *bitter almond*, in addition to these constituents, contains prussic

acid, upon which its narcotic properties depend. SOLUBILITY, by trituration with water a milky mixture is produced—(*an emulsion*) for this purpose the sweet almonds should be previously freed from their cuticle, (*blanched*) and this ought to be performed by infusing them in cold water, for, when hot, it separates a portion of their oil, and the emulsion is more liable to ferment: $\mathfrak{z}\text{ij}$ of almonds saturate $\mathfrak{f}\mathfrak{z}\text{vj}$ of water; since, however, this extemporaneous preparation is tedious, the London pharmacopœia directs a confection to be ready kept, $\mathfrak{z}\text{j}$ of which, when triturated with $\mathfrak{f}\mathfrak{z}\text{viij}$ of water, immediately forms an elegant emulsion. INCOMPATIBLE SUBSTANCES. These emulsions are decomposed by *acids*, *oxymel*, *syrup of squill*, *spirits*, and *tinctures*, (unless they be in small quantity) *tartaric and supertartrate of potass*, *super-sulphate of potass*, and *oxy-muriate of mercury*. DOSE, $\mathfrak{f}\mathfrak{z}\text{ij}$ frequently repeated.

Almonds form a good intermedium for uniting with water several substances, which are, of themselves not miscible with it; e. g. one, or two almonds are sufficient to mix five, or six grains of camphor, or resin.

Bitter Almonds are very seldom used medicinally.

AMYLUM. (*Triticum hybernum.*) *Starch.*
amylum.

QUALITIES. *Form*, white, columnar masses ;
Odour and Taste, none. CHEMICAL COMPOSITION.
Fecula is one of the proximate principles of vegetable matter, and starch is the fecula of wheat.*
SOLUBILITY, it is soluble in hot water, and insoluble in cold water, alcohol, and ether. FORM OF EXHIBITION. It is generally employed as a vehicle for the exhibition of opium in the form of enema. OFFICINAL PREPARATIONS. *Mucilago Amyli*: L.E.D. *Pulv: Tragacant: comp*: L. *Pil: Hydrarg*: E. *Trochisc: gummos*: E.

ANTHEMIDIS FLORES, (*Anthemis Nobilis*. L.E.)

Chamæmelum. D. *Chamomile Flowers.*

* The fecula of various grains is employed as the diet of the sick, e. g. *Sago*, (*Cycas Circinalis*). *Salop*, (*Orchis Masculula*). *Arrow root*, (*Maranta Arundinacea*). The arrow root however, usually sold, is the fecula of potatoes, or of some indigenous plant.

QUALITIES. *Odour*, strong and fragrant; *Taste*, bitter and aromatic. CHEMICAL COMPOSITION, bitter extractive, resin, and essential oil. SOLUBILITY. Both water and alcohol take up the active parts of the flowers; hot water, by infusion, dissolves nearly one fourth of their weight; but boiling dissipates its essential oil, on which account, they should never be ordered in decoctions. INCOMPATIBLE SUBSTANCES. *Solution of isinglass*; *infusion of yellow cinchona bark*; *sulphate of iron*; *tincture of the muriate of iron*; *nitrate of silver*; *oxymuriate of mercury*; *acetate and super-acetate of lead*. FORMS OF EXHIBITION. In substance, or in infusion, the infusion made with cold water is most grateful, that with hot is nauseous, and acts as an emetic. DOSE, in substance ʒss; of infusion fʒj to fʒij. OFFICINAL PREPARATIONS. *Decoctum anthemid; nobilis*. E.D. *Decoct. malvæ comp.* L. *Infus.: anthemid:* L. *Extract: anthemid:* L.E. *Oleum anthemid:* L.

ANTIMONII SULPHURETUM. L. Sulphuretum Antimonii. E.D.

Sulphuret of Antimony.

QUALITIES. *Form.* It is usually sold in loaves, which are dark grey externally, but internally have a striated structure, and considerable brilliancy. CHEMICAL COMPOSITION. Antimony 74, Sulphur 26. USE. Its chief use is for the preparation of the other antimonial remedies. ADULTERATIONS. *Lead* is discovered by its structure, being more foliated, and its volatility diminished; *Arsenic*, by the garlic odour emitted when it is thrown on live coals; *Manganese* and *Iron*, by its not being volatilized when it is exposed to a red heat.

ANTIMONII OXYDUM. L. Oxydum Antimonii Nitro-Muriaticum. D. *Oxide of Antimony.*

This substance, although termed an oxide, is, in the strict language of chemical nomenclature, a *sub-muriate of antimony*. USE; it is only designed for the preparation of other antimonials.

ANTIMONII SULPHURETUM PRÆCIPITATUM. L.

Sulphuretum Antimonii Precipitatum. E.

Sulphur Antimoniatum Fuscum. D.

QUALITIES. *Form*, an orange-coloured powder; *Taste*, slightly styptic. CHEMICAL COMPOSITION. It is a sulphuretted hydro-sulphuret of oxide of antimony. SOLUBILITY. It is quite insoluble in water. FORMS OF EXHIBITION. Made into pills by means of mucilage or extract. DOSE, from gr. 1 to grs. iv. OFFICINAL PREPARATION. *Pil. Hydrarg: sub muriat: L.*

ANTIMONIUM TARTARIZATUM. L. Tartaris Antimonii. E. Tartarum Antimoniatum. D. *Vulgo, Tartar Emetic.*

QUALITIES. *Form*, crystals, which are triedral pyramids: *Colour*, white; *Taste and Odour*, scarcely perceptible: on exposure to the air, it effloresces. CHEMICAL COMPOSITION. It is a triple salt, composed of tartaric acid 34, potass 16, oxide of antimony 38, and water 8. SOLUBILITY, f3j of water dissolves grs. x, but if kept in solution it undergoes spontaneous decomposition, unless a

considerable portion of spirit be added. INCOMPATIBLE SUBSTANCES. *Mineral acids; alkalies, and their carbonates; earths; soaps; hydro-sulphurets; and many vegetable infusions and decoctions;* (e. g. f3j of the decoction of bark is capable of completely decomposing and rendering inert 9j of this salt) and also *tincture of rhubarb.* FORMS OF EXHIBITION. It may be given either in substance or in solution. DOSE, as a *diaphoretic, or expectorant,* gr $\frac{1}{8}$ to grss. as an *emetic* gr j to grs. iij—3iſs triturated with 3i of lard, forms a very powerful rubefacient. OFFICINAL PREPARATIONS, gr. j is contained in f3ſs of *Liquor antimon: tart: L.* and *vin: tart: antimon: E.* ADULTERATIONS. It ought to be always purchased in its crystalline form; a solution of it should afford with acetate of lead a precipitate, soluble in nitric acid, and the sulphuret of ammonia ought to precipitate a gold coloured powder.

AQUA *Water.*

Water, as it occurs in nature, is always more, or less contaminated with earthy and saline matters: when muddy, it may be cleared by filtration

through alternate layers of charcoal and sand, or by adding to each pint, two, or three grains of alum, by which the water is not injured :* since, however, for many pharmaceutical purposes, it is necessary that it should be absolutely free from every foreign ingredient, distilled water is an indispensable article.

AQUA DISTILLATA. *Distilled Water.*

QUALITIES. *Taste*, vapid, and slightly empyreumatic† f3j weighs $454\frac{1}{2}$ grains, or f3xvi a little more than 3xv. MEDICINAL APPLICATIONS. In extemporaneous prescriptions distilled water should be always ordered, if the formula contain any of the following substances. *Acidum citricum; antimonium tartarizatum; argenti nitras; cuprum ammoniatum ferrum tartarizatum; hydrargyri oxy-murias; liquor ammoniæ; liquor plumbi acetatis; liquor potassæ; plumbi*

* I am informed by a respectable chemist in this town, that he sells a great quantity of alum to the publicans, for the purpose of clearing their spirituous liquors.

† I suspect that this depends upon the presence of a small quantity of extractive matter, which is decomposed by the process of distillation.

superacetas; solutio muriatis barytæ; vinum ferri; Zinci sulphas; unless, however, some of these substances be present, common water, purified by filtration, is always preferable, since the air which it contains imparts to it a pleasant and sprightly flavour; in making infusions, or decoctions, we should be careful that the water is very soft, for when hard, it is a far less powerful solvent of vegetable matter; nor can resinous substances be mixed with water, containing calcereous matter, even by the intermedium of mucilage; on which account, in prescribing emulsions, it is generally prudent to direct the employment of distilled water. **TESTS OF ITS PURITY.** It ought to remain transparent, after adding the muriate of barytes and the nitrate of silver.

AQUÆ DISTILLATÆ. L.E.D. *Distilled Waters.*

These are water impregnated with the essential oils of vegetables, and are merely designed as vehicles for the exhibition of more active remedies; they may be extemporaneously made by rubbing the essential oils with ten times their weight of sugar, and then dissolving them in any portion of distilled water.

ARGENTI NITRAS. L. Nitras Argenti. E.D.

Fused Nitrate of Silver, formerly, *Lunar Caustic*.

QUALITIES. *Form*, small cylinders of dark grey colour; *Taste*, intensely bitter, metallic, and caustic; it tinges the skin indelibly black, and is not deliquescent. CHEMICAL COMPOSITION. Nitric acid, and oxide of silver. SOLUBILITY, it is soluble in an equal weight of water, and is also soluble in alcohol. INCOMPATIBLE SUBSTANCES. *Alkalies, and alkaline earths; the strong acids; all neutral salts which contain the muriatic, sulphuric, boracic, or tartaric acids; soaps; and astringent vegetable infusions; undistilled water.* FORMS OF EXHIBITION. In pills made with crumb of bread, or in solution. DOSE, gr. one eighth, gradually increased to gr. j. ADULTERATIONS. *Copper* may be suspected when it deliquesces, or detected by its solution assuming a blue colour when supersaturated with ammonia.

ARMORACIÆ RADIX. L.E. (Cochlearia)
(Armoracia)

Raphanus Rusticanus. D. *Horse-radish root.*

QUALITIES. *Taste* hot and acrid; *Odour*, pungent. CHEMICAL COMPOSITION. All its virtues depend upon an essential oil. SOLUBILITY: both water, and alcohol extract its active principles; but its acrimony is entirely destroyed by decoction. INCOMPATIBLE SUBSTANCES. *Carbonates of alkalies, oxy-muriate of mercury, nitrate of silver, the infusion of galls, and of yellow cinchona bark*, produce precipitates with the infusion of this substance. FORMS OF EXHIBITION. It may be given in substance, scraped, or swallowed whole, or in infusion. DOSE, of the substance $\mathfrak{z}\text{j}$, of an infusion $\mathfrak{f}\mathfrak{z}\text{ij}$ to $\mathfrak{f}\mathfrak{z}\text{iiij}$. OFFICIAL PREPARATIONS. *Infus: armoraciæ comp: L. Spiritus armoraciæ comp: L.D.*

ARSENICI OXYDUM. L. Oxydum.
Arsenici. E. Arsenicum. D. *White Arsenic.*

QUALITIES. *Form*, shining semivitreous lumps. *Taste*, acrid and corrosive. CHEMICAL COMPOSITION. Arsenic 75·2, oxygen 24·8; it possesses some of the characteristic properties of an acid, and hence it has been termed *arsenous acid*. SOLUBILITY: it is very sparingly soluble in water alcohol, and oil. FORMS OF EXHIBITION. In pills by rubbing one grain with ten of sugar, and then

beating the mixture with a sufficient quantity of crumb of bread, so as to form ten pills, one of which is a dose ; it is, however, most manageable in solution, vid: *Liquor Arsenicalis*. ADULTERATIONS. It is often sophisticated with chalk, which may be detected by the substance not being entirely volatilized by heat.

METHOD OF DISCOVERING ITS PRESENCE.—Dissolve one part of the suspected powder, and three parts of subcarbonate of potass in boiling distilled water, and then slightly touch the surface of the solution with a piece of nitrate of silver, if any arsenic be present, a beautiful yellow precipitate will immediately proceed from the point of contact.

ASSAFŒTIDA. L.E.D. (Ferula Assafœtida)
Assafœtida Gummi Resina.

QUALITIES. *Form*, small masses adhering together, of a variegated texture. *Taste*, bitter and sub-acrid; *Odour*, fœtid and alliaceous; these properties are much impaired by age. CHEMICAL COMPOSITION. Gum 60, resin 30, and essential oil 10 parts; its smell and taste reside in the resinous portion. SOLUBILITY; it yields all its virtues to alcohol, and if triturated with water, it forms

a milky mixture, which, however, is not permanent, unless some intermede be employed for the suspension of the gum resin; for this purpose egg may be added in the proportion of one yolk to a drachm of assafætida. FORMS OF EXHIBITION—In pills, or diffused in water. Dose, grs. v to ʒj. OFFICINAL PREPARATIONS. *Mist: Assafætid: L.D. Tinct: Assafætid: L.E.D. Spir: Ammon: fætid: L.E.D. Tinct: Castorei comp: E. Pil: Aloes cum Assafætid: E. Pil: Galban: comp: L. Enem: fætid: D.*

NOTE. If ʒss of camphor be well rubbed with ʒvj of assafætida, a substance is produced of proper consistence for a plaster.

BALSAMUM PERUVIANUM. (Myroxylon Peruiferum). *Peruvian Balsam.*

QUALITIES. *Form*, a thick and viscid liquid: *Colour*, reddish brown: *Odour*, fragrant and aromatic: *Taste*, warm and bitter. CHEMICAL COMPOSITION. Resin, volatile oil, and benzoic acid. SOLUBILITY. Water, when boiled upon it, dissolves only a portion of benzoic acid; alcohol dissolves

the balsam completely, but the quantity of menstruum must be considerable. FORMS OF EXHIBITION. It may be given diffused in water by mucilage, or made into pills by any vegetable powder. DOSE, grs. v. to xv. OFFICINAL PREPARATIONS, *Pil: Guaic: cum aloe: D.* ADULTERATIONS, a mixture of resin and some volatile oil, with benzoin is often sold for peruvian balsam, and the fraud is not easily detected.

BALSAMUM TOLUTANUM. (Toluiifera Balsamum). *Balsam of Tolu.*

QUALITIES. *Form*, a thick tenacious liquid, becoming by age concrete, in which state it is usually found in the shops: *Taste*, warm and sweetish. CHEMICAL COMPOSITION. Volatile oil, resin, and benzoic acid. SOLUBILITY. With spirit it forms a tincture which is decomposed by water. FORMS OF EXHIBITION. It may be suspended in water by mucilage, or yolk of egg, but it is very rarely employed. OFFICINAL PREPARATIONS.—*Tinct: Benzoini comp: L.E.D. Tinct: Toluiifera Balsam: E.D. Syrup: Tolutan: L.*

BENZOINUM. (Styrax Benzoin). *Benzoin, or Benjamin.*

QUALITIES. *Form*, brittle masses, composed of white and brown fragments: *Odour*, fragrant: *Taste*, scarcely perceptible. CHEMICAL COMPOSITION. Resin, and a very large proportion of benzoic acid. SOLUBILITY. It imparts to water by digestion much of its fragrance and pungency, and in spirit is entirely soluble, OFFICINAL PREPARATIONS. *Acid: Benzoin. Tinct: Benzoin: comp: L.E.D.**

CALAMI RADIX. (Acorus Calamus) *Sweet Flag.*

QUALITIES. *Odour*, fragrant and aromatic: *Taste*, bitter and pungent, CHEMICAL COMPOSITION. Its qualities depend upon an essential oil, and bitter extract; the root contains, also, fecula,

* FRIAR'S BALSAM is composed of the Compound Tincture of Benzoin, and Balsam of Peru.

PECTORAL BALSAM OF HONEY. The preparation sold under this title, is nothing more than Tincture of Benzoin, or Tincture of Tolu.

which is copiously precipitated from its infusion by acetate and superacetate of lead. SOLUBILITY. Watery infusion extracts all its virtues, but decoction impairs them. DOSE. Of the substance ʒj to ʒj— of the infusion, a cup full three or four times a day.

CALUMBÆ RADIX. (*Plantæ adhuc.*) Co-
lomba. E. (*Anonymæ.*)

Colombo. D. *Calumba Root.*

QUALITIES. *Odour*, slightly aromatic: *Taste*, bitter. CHEMICAL COMPOSITION. Cinchonin, a bitter resin, and gum. SOLUBILITY. Boiling water takes up one-third of its weight, but proof spirit is its most complete menstruum. INCOMPATIBLE SUBSTANCES. No change is occasioned in the infusion by the solutions of nitrate of silver, sulphate of iron, muriate of mercury, or tartarized antimony; but precipitates are produced by the infusions of galls; and yellow cinchona bark; by acetate and superacetate of lead; oxymuriate of mercury; and lime water. OBSERV: This infusion very soon spoils, DOSE. Of the powdered root grs.

xv to ʒss. of the infusion fʒjss to fʒij. OFFICIAL PREPARATIONS. *Infus: Calumb: L. Tinct: Calumb: L.E.D.**

CAMBOGIA. L. (Stalagmites) Gambo-
gia E.D. Gamboge. (Cambogioides)

QUALITIES. *Odour and Taste*, none: *Colour*, yellow. CHEMICAL COMPOSITION. It consists of one part of gum, and of four parts of a brittle resin. SOLUBILITY. When triturated with water, two thirds are dissolved, and a turbid solution is produced; alcohol dissolves nine tenths, and forms a yellow transparent tincture; it is also soluble in alcalies. INCOMPATIBLE SUBSTANCES. Its efficacy is not impaired by any substance with which we can combine it. FORMS OF EXHIBITION. The best form is that of pills. Dose, grs. ij to grs. vi. OFFICIAL PREPARATIONS. *Pil: Cambog: co. L.* Of which grs. v, contain of gamboge gr. j.

* BRODUM'S "NERVOUS CORDIAL" consists of the tinctures of Calumba, Gentian, Cardamom, Bark, the compound Spirit of Lavender, and Wine of Iron.

CAMPHORA. L.E.D. (Laurus Camphora).
Camphor.

QUALITIES. *Form*, a white brittle substance: *Odour*, fragrant and penetrating: *Taste*, acrid and aromatic; it is so volatile, that, during warm weather, it evaporates completely in an open vessel.

CHEMICAL COMPOSITION. It is a proximate vegetable principle, which approaches very nearly to the character of an essential oil. SOLUBILITY.

f3j of water dissolves only grfs, but its solubility may be increased by impregnating the water with carbonic acid; it is soluble in an equal weight of alcohol; but, on the addition of water, it is again precipitated; it is also soluble in oils, both fixed and volatile, but alkalies scarcely exert any action upon it. INCOMPATIBLE SUBSTANCES. It is affected by no salt, with which we can combine it.

FORMS OF EXHIBITION. Camphor ought to be generally administered in the form of mixture, since in the solid state it is very liable to excite nausea; it may be suspended in water by means of sugar, almonds, the yolk of egg, or mucilage, for this purpose three times its weight of gum arabic is necessary: camphor has also the property of uniting

with gum resins, and of converting them into soft and uniform masses, hence they may be often conveniently applied for diffusing it in water: in order to reduce it to powder it should be triturated with spirit, or with a few grains of magnesia; it may be formed into a mass suitable for pills by stiff mucilage, or by the conserve of hips, which last substance best disguises its flavour. Dose, grs. ij to ℥j. OFFICINAL PREPARATIONS. *Mist: Camph: L.D. Emulsio Camphor: E. Spirit: Camphor: L.E.D. Tinct: Camphor: comp: L.E.D. Acidum acetosum Camphorat: E.D. Liniment: Camphor: L.E.D. Liniment, Camphor: comp: L. Liniment: Hydrarg: L. Liniment: Sapon: L.E. Liniment: Sapon: cum Opis: E.D.* ADULTERATIONS. Camphor is known to be good, if when it is placed upon hot bread, it turns moist, if it becomes dry it is adulterated.

CANELLÆ CORTEX. L.E.D. (Canella Alba)
cortex.

Canella Bark.

QUALITIES. *Odour*, resembling that of cloves: *Taste*, warm, pungent, and slightly bitter. CHEMICAL COMPOSITION. Its virtues depend upon an

essential oil, and a bitter resin. SOLUBILITY. Water extracts only the bitterness, but proof spirit both the bitterness and aroma. Dose, of the powdered bark, grs x to 3℥. OFFICINAL PREPARATIONS. *Tinct: Gentian: comp. E. Vinum Alöes. L.*

CAPSICI BACCÆ. L.E.D. (*Capsicum Annuum*). *Berries of the Capsicum, or Cayenne Pepper.*

QUALITIES. *Odour*, aromatic and pungent; *Taste*, acrimonious. CHEMICAL COMPOSITION. Cinchonin, a resin in which the acrimony resides, and mucilage. SOLUBILITY. Its qualities are partially extracted by water, but completely by spirit. INCOMPATIBLE SUBSTANCES. *Infusion of galls; nitrate of silver; oxymuriate of mercury; acetate of lead; the sulphates of iron, copper, and zinc; and alkaline subcarbonates.* FORMS OF EXHIBITION. It may be given in pills, or in the form of tincture; for the purpose of a gargle, a simple infusion in the proportion of gr. j to f℥j of boiling water, or f3vj of the tincture to half a pint of water, answer very well. Dose, of the substance grs. vj to x; of the tincture f℥j to f℥ij in a glass full of water. ADULTERATIONS. Cayenne pepper is often adulte-

rated with red lead; the fraud may be discovered by digesting it in acetic acid, and adding to the solution, sulphuret of ammonia, which produces, if lead be present, a dark coloured precipitate.

CARBO LIGNI. L.E.D. *Charcoal.*

This substance is very useful in pharmacy, in consequence of the property which it possesses, of correcting the fetid odour of putrifying substances, and of destroying the odour, taste, and colour of others, particularly of mucilage, oil, and extractive matter.*

CARDAMOMI SEMINA. L.D. (*Elettaria Cardamomum.*) *Amomum Repens.* E. *Cardamom Seeds.*

QUALITIES. *Odour*, aromatic, and agreeable: *Taste*, warm and spicy. CHEMICAL COMPOSITION. *Fecula*, essential oil, and mucilage. SOLUBILITY. Water, and alcohol extract their virtues, but the latter most completely. FORMS OF EXHIBITION.

* LARDNER'S "PREPARED CHARCOAL" consists of cretaceous powder, or chalk, rendered grey by the addition of charcoal or ivory black.

In powder, or in the form of tincture. Dose. Of the powder grs. vi to ℥j. OFFICIAL PREPARATIONS. *Extract: Colocynth: comp: L.D. Tinct: Cardam: L.E.D. Tinct: Cardamom: co. L.D. Tinct: Cinnamom: co. L.E. Tinct: Gentian: co. L. Tinct: Rhei: L.E.D. Tinct: Rhei cum Aloe. E. Tinct: Sennæ. L.D. Spirit: Ether: aromat; L. Vin: Aloes, socot: E. Confect: Aromat: L. Elect: Aromat: D. Pulv: Cinnamom: co. L.E.D. Pil: Scill: maritim: E. Infus: Sennæ. D. Infus: Sennæ cum Tamarind: D.**

CASCARILLÆ CORTEX. L. D. (Croton Cascarilla). Croton Eleutheria. E.

Cascarilla Bark.

QUALITIES. *Odour*, aromatic; when burning, it emits a smell resembling that of musk; *Taste*, bitter and warm. CHEMICAL COMPOSITION. Mucilage, extractive, resin, volatile oil, and a large proportion of woody fibre. SOLUBILITY. Its active constituents are partially extracted by alco-

* SOLOMON'S "BALM OF GILEAD"—This notorious nostrum is nothing more than cardamom seeds, and lemon peel infused in brandy.

hol, and by water, and completely by proof spirit.

FORMS OF EXHIBITION. In the form of powder, or decoction. Dose, of the powder grs. x to 3ß.

OFFICINAL PREPARATIONS. *Infus: Cascarill: L.*
Tinct: Cascarill: L.D. Extract: Cascarill: D.

CASSIÆ PULPA. L.E.D. (Cassia Fistula.
Lomentorum Pulpa)

Cassia Pulp.

The composition of this substance appears to be sugar, gelatin, gum, a small portion of resin, extractive, and colouring matter. It is very rarely employed.

CASTOREUM. L.E.D. (Castor Fiber (Roscius)
(Concretum sui generis.)

Castor.

QUALITIES. *Odour*, strong and aromatic; *Taste*, bitter, sub-acrid, and nauseous; *Colour*, reddish brown. CHEMICAL COMPOSITION. Volatile oil, resin, mucilage, extract, iron, and small portions of the carbonates of potass, lime, and ammonia. SOLUBILITY. Its active matter is dissolved by alcohol, proof spirit, and partially by water; the tincture with alcohol is the least nauseous; the

spirit of ammonia is also an excellent menstruum, and in many cases improves its virtues. FORMS OF EXHIBITION. It may be exhibited in substance, as a bolus; or in the form of tincture. DOSE, grs. x to ℥j. OFFICINAL PREPARATION. *Tinct: Castorei*. L.E.D.* ADULTERATIONS. It is sometimes counterfeited by a mixture of dried blood, gum ammoniacum, and a little real castor, stuffed into the scrotum of the goat; the fraud is detected by comparing the smell and taste with those of real castor; and, by the deficiency of the sebaceous follicles, which are always attached to genuine specimens.

CATECHU EXTRACTUM. L.E.D. (*Acacia Catechu*). *Catechu*, olim, *Terra Japonica*.

QUALITIES. Two kinds of catechu are met with in the shops, the one of a light yellowish, the other of a chocolate colour; they differ only in the latter having a more austere and bitter taste. CHEMICAL COMPOSITION. Tannin, gallic acid, ex-

BATEMAN'S PECTORAL DROPS consist principally of the Tincture of Castor, with portions of camphor, and opium.

tractive matter, mucilage, earthy impurities. SOLUBILITY. It is almost totally dissolved both by water, and spirit. INCOMPATIBLE SUBSTANCES. Its astringency is destroyed by alkaline salts; and precipitates are produced by metallic salts, especially by those of iron. FORMS OF EXHIBITION. It may be given in the form of infusion, tincture, or powder. DOSE, grs x to ʒj. OFFICIAL PREPARATIONS. *Infus.: Catechu: Tinct.: Catechu: E. D. Electuarium mimosæ catechu. E. D.*

CERA. L.E.D. *Wax.*

It is admitted into the list of the materia medica under two forms.—viz.

1. CERA FLAVA. *Yellow, or Unbleached Wax.* CHEMICAL COMPOSITION. It is probably a fixed oil, in combination with oxygen; it contains a portion of pollen, which imparts to it its colour, and increases its fusibility. SOLUBILITY. It is insoluble in water, and nearly so in alcohol; it dissolves in the fixed oils, forming the basis of *cerates*, and *ointments*: if boiled with alkalies, it unites with them, and forms soap. USE. It is

chiefly employed in the composition of external applications. ADULTERATIONS. *Earth*, or *Peas Meal*, may be suspected, when the cake is very brittle, and the colour inclines to grey; *Resin* is detected by putting it in cold alcohol, which will dissolve the resinous part without acting on the wax; *Tallow* is discovered by the greater softness and unctuousity of the cake, and by its suffocating smell when melted.

2. CERA ALBA. *White*, or *Bleached Wax*.—QUALITIES. This substance differs only from the former, by being colourless, harder, heavier, and less fusible. FORMS OF EXHIBITION. It may be formed into a mixture by melting it with one-third of its weight of soap, and then gradually adding to it, any mucilaginous liquid. ADULTERATIONS. *White Lead* may be detected, by melting the wax in water, when the oxide falls to the bottom of the vessel; *Tallow* may be suspected, when the cake wants its usual translucency.

CETACEUM. L. (Physeter Macrocephalus.)
Concretum sui generis.
Spermaceti. E.D. *Spermaceti*.

QUALITIES. *Form*, Flakes, which are unctuous, friable; and white; *Odour*, and *Taste*, none. **CHEMICAL COMPOSITION.** It is a peculiar modification of fatty matter. **SOLUBILITY.** It is insoluble in water, and alcohol, but completely soluble in the fixed oils; at 112° it melts. **FORMS OF EXHIBITION.** It may be suspended in water, by means of mucilage, or the yolk of egg; ʒijj by trituration with one-fourth of the yolk of egg, form with fʒviij of water an elegant emulsion. **OFFICINAL PREPARATIONS.** *Ceratum simplex.* E. *Ceratum Cetacei.* L. *Unguent: Cetacei.* L. D. **OBSERV:** From exposure to hot air, it becomes rancid; but it may be again purified, by being washed in a warm solution of potass.

CINCHONA. *Bark.*

Three different species of this genus are employed, viz.

I. CINCHONÆ CORDIFOLIÆ CORTEX. L.
Cinchonæ Officinalis, Cortex. (*a. communis.*) E.
Cortex Peruvianus. D.

Yellow Bark.

II. CINCHONÆ LANCIFOLIÆ CORTEX. L.
Cinchonæ Officinalis (*b. flavus*) E. Cortex Peruvianus. D.

Common Quilled Bark.

III. CINCHONÆ OBLONGIFOLIÆ CORTEX. L. Cinchonæ Officinalis Cortex. (*c. ruber*) E. Cortex Peruvianus. D.

Red Bark.

QUALITIES. The *Odour* and *Taste* of these three species are essentially the same, although they differ in intensity, e. g. they are all bitter, sub-astringent, and aromatic; but the flavour of the *yellow bark* is incomparably the most bitter, although less austere and astringent, whilst the *red bark* has a taste much less bitter, but more austere than either of the species. CHEMICAL COMPOSITION. The basis of all the species is ligneous fibre, to which are attached resin, extractive matter, gluten, tannin, cinchonin, a very small portion of volatile oil, and some salts, whose base is lime. Upon which of these principles its tonic, and febrifuge virtues depend, is extremely doubtful. SOLUBILITY. Cold water extracts its bitter taste, with some share of its odour; when assisted by a mode-

rate heat, the infusion is stronger, but becomes turbid as it cools; by decoction, its active matter is more completely extracted, but if the process be protracted, it becomes insoluble, and as a medicine, inert; alcohol and solutions of ammonia are more powerful solvents, but vinegar is less so than water; the active matter of bark is rendered more soluble by acids, by the earths, especially lime, and magnesia, and by the alkalies, these last however, destroy its astringent qualities. INCOMPATIBLE SUBSTANCES. *The salts of iron; sulphate of zinc; nitrate of silver; oxy-muriate of mercury; tartarized antimony; solution of arsenic; and (if its astringency be desired) alkaline salts.* Any considerable portion of *tinctures* produce precipitates, some of which do not immediately take place; its medicinal virtue is probably not impaired by them, but the mixtures are certainly rendered inelegant. FORMS OF EXHIBITION. It is administered in a variety of forms, viz. in that of *powder, tincture, decoction, infusion, and extract.* Dose, of the powder grs v to 3ij or more; and of the extract grs x to 3ss. made into pills, or dissolved in water. OFFICINAL PREPARATIONS. *Infus: Cinchon: L.E.D. Decoct: Cinchon: L.E.D. Extract: Cinchon: L.E.*

Extract : Cinchon : resinos : L.D. Tinct : Cinchon : L.E.D. Tinct : Cinchon : comp : L.E.D. Vinum : Gent : comp : E.

CINNAMOMI CORTEX. L.E.D. (Laurus Cinnamomum) *Cinnamon.*

All the qualities of cinnamon depend upon the presence of an essential oil. It is principally employed to cover the taste of nauseous remedies.

COCCUS. L.E. (Coccus Cacti). Coccinella. D. *Cochineal.*

It is an insect imported from Mexico, and New Spain, and has the appearance of wrinkled berries. **USES.** It is employed only for the sake of its colouring matter; its watery solution is of a violet crimson, its alcoholic of a deep crimson, and its alkaline of a purple hue. **IMCOMPATIBLE SUBSTANCES.** The colouring matter is precipitated by *sulphate of iron; sulphate of zinc; and acetate of lead.* **OFFICIAL PREPARATIONS.** *Tinct : Cardamom : comp : L.D. Tinct : Cinchon : comp : L.D. Tinct : Gent : comp : E. Tinct : Cantharid : D.*

COLCHICI RADIX. L.E.D. (Colchicum
Autumnale.) *Meadow Saffron*

QUALITIES. When recent, it is extremely acrid, bitter, and hot; these qualities depend upon an essential oil, which by decoction and exsiccation is dissipated. SOLUBILITY. Vinegar is its best menstruum. FORMS OF EXHIBITION. In pills. Dose, gr f3 to grs iij. OFFICINAL PREPARATIONS. *Acetum Colchici*. L. *Oxymel Colchici*. D. *Syrup Colchici autumnal*. E.

COLOCYNTHIDIS PULPA. L.E.D. (Cucumis Colocynthis) *Colocynth*, or *Bitter Cucumber*.

QUALITIES. *Taste*, intensely bitter, and nauseous; *Odour*, when dry, none. CHEMICAL COMPOSITION. Mucilage, resin, bitter extractive, and gallic acid. SOLUBILITY. Alcohol, and water alike extract its virtues. INCOMPATIBLE SUBSTANCES. The solutions are precipitated by *acetate*, and *super-acetate of lead*; *nitrate of silver*; *sulphate of iron*; and by *potass*. FORMS OF EXHIBITION. The form of pill is preferable, for which purpose an extract is kept. Dose. Of the pulp

grs iv, to grs. x; of the extract grs. v to 3℥. OF-
FICIAL PREPARATIONS. *Extract: Colocynth: L.*
Extract: Colocynth: comp: L.D. *Pil. Aloës cum*
*Colocynth: E.D.**

CONFECTIONES. L. *Confections.*

Under this title, the London college comprehends the "*Conserves* and *Electuaries*" of other pharmacopœias; the distinction, however, is attended with practical convenience, and is therefore retained in this work, vid: *Conservæ, Electuaria.*

CONII. FOLIA. L.E. (*Conium Maculatum*).
Cicuta. D. *Hemlock.*

* BARCLAY'S ANTIBILIOUS PILLS. The following is a copy of the proprietor's specification, as obtained from the Patent Office.—Take of the Extract of Colocynth 3ij, Resin of Jalap 3j, Almond Soap 3i℥, Guaicum 3iij, Tartarized Antimony grs viij, the essential oils of Juniper, Carraway, and Rosemary, of each, gtt. iv, of Syrup of Buckthorn, as much as will be sufficient to form a mass, which is to be divided into 64 pills. We may safely conclude, that the *Reverend* Patentee understood very little of chemistry, or he would not have prescribed tartar emetic and soap in the same formula.

QUALITIES. The leaves, when properly dried, have a strong, and narcotic odour, and a slightly bitter, and nauseous taste; by exsiccation, their narcotic principle suffers no change. CHEMICAL COMPOSITION. The medicinal activity of the plant resides in a resin. SOLUBILITY. Spirit extracts its virtues. INCOMPATIBLE SUBSTANCES. Its energies are much diminished by vegetable acids; hence vinegar is the best antidote, when an over dose is taken. FORMS OF EXHIBITION. The dry leaves powdered, and made into pills with any extract. DOSE, of the leaves, or extract, grs iij, gradually increased to ℥j. CAUTION. The power of the extract is much impaired by being kept, and when a saline efflorescence appears on its surface, it should be always rejected as inefficacious. OFFICINAL PREPARATION. *Extract: Conii. L.E.D.*

CONTRAJERVÆ RADIX. L.E. (*Dorstenia Contrajerva*). *Contrajerva Root.*

The virtues of this plant are alike extracted by spirit, and water, the watery decoction, however, is very mucilaginous; as it contains no astringent matter, the salts of iron affect in it no change.

Dose, of the powdered root grs v to 3℥s, but it is rarely used. OFFICINAL PREPARATION. *Pulv: Contrajerv: comp. L.*

COPAIBA. L.E. (*Copaifera Officinalis*). Balsamum Copaibæ. D. *Copaiba Balsam.*

QUALITIES. *Consistence*, that of oil; *Odour*, fragrant, and peculiar; *Taste*, aromatic, bitter, and sharp. CHEMICAL COMPOSITION. It is improperly denominated a balsam, for it contains no benzoic acid, but consists of resin, and essential oil. SOLUBILITY. It is insoluble in water, but soluble in 10 parts of alcohol, and in expressed and essential oils; with the pure alkalies it forms white, saponaceous compounds. FORMS OF EXHIBITION. Diffused in soft, or distilled water, by yolk of egg, or by twice its weight of mucilage; f℥ss suspended in f℥viij of water, forms an elegant mixture. ADULTERATIONS. It is occasionally adulterated with turpentine, but its virtue is not greatly impaired by the fraud.

CORNUA. L.E.D. (*Cervus Elaphas*.) *Harts' Horns.*

The horns of the stag differ only from bone in containing less of the phosphate of lime, and a larger proportion of gelatine; by boiling, they yield a clear, transparent, and flavourless jelly, in quantity, about one fourth of the weight of the shavings employed: to obtain this, we should boil ʒiv in fʒviij of water, until reduced to fʒvj . ADULTERATIONS. This article is often sophisticated with the shavings of mutton bone; the fraud is detected by their greater degree of brittleness.

CRETA PRÆPARATA. L.D. Carbonas Calcis-Præparatus. E. *Prepared Chalk.*

This substance is a carbonate of lime, with various earthy impurities; it should be never conjoined with *acids*, or *acidulous salts*. Dose, 3ss to 3iss . OFFICINAL PREPARATIONS. *Mist: Cret: L.E. Hydrarg: cum Creta. L. Pulv: Cret: comp. L.E. Pulv: Opiat: E. Trochis: carbonat: calc. E.*

CROCI STIGMATA. L.E.D. (Crocus Sativus)
Saffron. *Anglicus.*

QUALITIES. *Form.* cakes, consisting of the stigmata of the flower, closely pressed together

Odour, sweet, and diffusive; *Taste*, warm, and bitterish; *Colour*, deep orange. **CHEMICAL COMPOSITION.** One hundred parts consist of sixty-two of the extractive principle; the remaining parts are chiefly ligneous fibre, with small portions of resin, and essential oil. **SOLUBILITY.** It yields its colour, and active principles to water, alcohol, proof spirit, wine, and vinegar; the watery infusion, and the vinous tincture, soon grow sour, and lose their colour, and virtue, and the solution in vinegar becomes quickly colourless. **FORMS OF EXHIBITION.** It is never employed but as an adjunct to other remedies. **OFFICIAL PREPARATIONS** *Syrup: Croc: L. Tinct: Croc: Anglic: E. Confect: Aromat: L.D. Pil: Aloës: cum Myrrh: L. Tinct: Aloës comp: L.E.D. Tinct: Cinchon: comp: L.D. Tinct: Rhei. L. Tinct: Rhei comp: L.* **ADULTERATIONS.** It is often sophisticated with the fibres of smoked beef, or the petals of other flowers; the former of these fraudulent ingredients is indicated by the unpleasant odour which arises when the saffron is thrown upon live coals; the latter by infusing the specimen in hot water, when the expanded stigmata may be easily distinguished from the petals of other flowers.—The saffron imported

from Spain is generally spoiled with oil, in which it is dipt, with the intention of preserving it.

CUPRI SULPHAS. L.E.D. *Vulgo, Blue Vitriol; Blue Copperas.*

QUALITIES. *Form*, Crystals, which are rhomboidal prisms; *Colour*, rich blue; *Taste*, styptic; they slightly effloresce. CHEMICAL COMPOSITION. This salt is a *super-sulphate*, consisting of sulphuric acid 33, oxide of copper 32, and water 35. SOLUBILITY. $\text{f}\overline{3}\text{j}$ of water dissolves about 100 grains; in alcohol it is insoluble. INCOMPATIBLE SUBSTANCES. *Alkalies and their Carbonates; sub-borate of soda; acetate of ammonia; tartrate of potass; muriate of lime; nitrate of silver; acetate, and super-acetate of lead; oxy-muriate of mercury; all astringent vegetable infusions, and tinctures. Iron, also precipitates the copper in a metallic form.* FORMS*

* Mr. Todd Thomson ingeniously proposes the exhibition of the filings of iron, as an antidote to the salts of copper; which, he conceives, might precipitate the metal, and thus destroy the poison; it is very certain, that copper, in its metallic form exerts no action upon the system.

OF EXHIBITION. In solution, or in the form of pill. Dose, as an emetic, grs ij, to xv, in fʒij of water; as a tonic, gr. $\frac{1}{4}$, gradually encreased to grs ij. OFFICINAL PREPARATIONS. *Solut: Cupri sulphat: comp: E. Cuprum Ammoniatum. L.E.D.*

CUPRUM AMMONIATUM. L.D. Ammonia-retum Cupri. E. *Ammoniated Copper.*

QUALITIES. *Form*, a violet coloured mass, which, on exposure to air, becomes green; *Taste*, styptic, and metalline; *Odour*, ammoniacal. CHEMICAL COMPOSITION. It is a sub-sulphate of oxide of copper, and ammonia. SOLUBILITY. fʒj of water dissolves ʒj of this salt. FORMS OF EXHIBITION. It may be formed into pills, with bread; and, by the addition of an equal quantity of sugar, they are prevented from becoming hard. Dose, gr. $\frac{1}{4}$ cautiously increased to grs. v. OFFICINAL PREPARATIONS. *Liquor cupri Ammoniat: L. fʒij*, of which contains about gr.j of the salt.

CUSPARIÆ CORTEX. L. (*Cusparia febrifuga*). Angustura. E. D. *Cusparia*, or *Angustura Bark.*

QUALITIES. *Odour*, peculiar; *Taste*, bitter and aromatic. CHEMICAL COMPOSITION. Cinchonin, resin, extractive, carbonate of ammonia, and essential oil. SOLUBILITY. Its active matter is taken up by cold, and hot water, and is not injured by long decoction; alcohol dissolves its bitter, and aromatic parts, but proof spirit appears to be its most complete menstruum. INCOMPATIBLE SUBSTANCES. *Sulphate of iron; sulphate of copper; acetate, and super-acetate of lead; tartarized antimony; oxy-muriate of mercury; potass.* FORMS OF EXHIBITION. It may be administered in the forms of substance, infusion, decoction, tincture, or extract; its nauseous taste is best disguised by cinnamon. DOSE; of the powder, grs. v to xx, of the infusion, decoction, or tincture, f3j; of the aqueous extract, grs. x. In large doses all the forms are liable to excite nausea. OFFICIAL PREPARATIONS. *Infus: Cuspar: L. Tinct: Angust: D.*

CYDONIÆ SEMINA. L. (*Pyrus Cydonia*).
Quince Seeds.

The inner coats of these seeds yield a very large proportion of mucilage; since, however, hot water extracts, also, from them, fecula, and other

principles, the decoction very soon spoils. INCOMPATIBLE SUBSTANCES. *Alcohol, acids, and metallic salts* coagulate the mucilage.

DATURA STRAMONIUM. E. Stramonium.
D. *Thorn Apple.*

This plant consists of gum, resin, carbonate of ammonia, and the narcotic principle. Its root, smoked in the manner of tobacco, has been lately much extolled as a remedy in the paroxysm of spasmodic asthma; it is, however, a dangerous application, especially in an apoplectic habit: the same transient feelings of relief may be procured by smoaking a mixture of tobacco and opium.

DECOCTA. L.E.D. *Decoctions.*

These are solutions of the active principles of vegetables, obtained by boiling them in water. In conducting the operation, the following rules should be observed, *viz.*

- I. Those substances, only, should be decocted, whose medicinal powers reside in principles, which are soluble in water.

- II. If the active principle be volatile, decoction is an injurious process; and, if it consist of extractive matter, long boiling renders it insoluble, and inert.
- III. The substance to be decocted, should be previously bruised, or sliced, so as to expose an extended surface to the action of the water.
- IV. The substance should be completely covered with water, and the vessel be slightly closed, in order to prevent, as much as possible, the access of the air.
- V. The decoction should be always filtered through linen, while hot, as portions of the dissolved matter are frequently deposited on cooling.
- VI. A decoction should be prepared in small quantities only, and never employed, especially in summer, 48 hours after it has been made.

DIGITALIS FOLIA. L.E.D. (*Digitalis Purpurea*). *Foxglove*.

QUALITIES. The dried leaves have a narcotic odour, and a bitter nauseous taste. **CHEMICAL COMPOSITION.** Extractive matter ; and resin, in which their narcotic properties reside ; they appear to contain, also, ammonia. **SOLUBILITY.** Both water and alcohol extract their virtues. **INCOMPATIBLE SUBSTANCES.** The solutions are precipitated by *oxy-muriate of mercury* ; *nitrate of silver* ; *superacetate of lead* ; and the *decoction or infusion of yellow cinchona bark*. **FORMS OF EXHIBITION.** As a narcotic, it is generally given in the form of tincture ; as a diuretic, in that of infusion ; the decoction is an improper form, as being variable in strength ; when given in substance its effects are less certain. **DOSE,** of the powdered leaves gr ſß ; of the infusion fʒß ; of the tincture m x ; the augmentation of the dose should proceed at the rate of one fourth of the original quantity every second day, until its operation becomes apparent. The effects of an over dose are best obviated by stimulants. **OFFICINAL PREPARATIONS.** *Infus : Digital : L.E.* *Tinct : Digital : L.E.D.* *Decoct : Digital : D.*

DULCAMARÆ CAULES. L. D. (Solanum Dulcamara). *Woody Night-shade.*

The virtues of this plant are extracted by boiling water, but long coction destroys them ; the usual form in which it is administered is that of decoction, or infusion. OFFICINAL PREPARATIONS.

Decoct : Dulcam : L.

ELATERII POMA. L.E.D. (Momordica Elaterium). *Wild Cucumber.*

The juice of this fruit, obtained by expression, deposits by rest a considerable sediment, which forms, when inspissated, the elaterium of the shops. This substance is neither an extract, nor an inspissated juice, but a peculiar modification of fecula, combined with some very active principle, which is deposited with it. FORMS OF EXHIBITION. This substance should be always given in the form of pill. Dose, gr. $\frac{1}{2}$, repeated every three hours, until it operates ; it may, however, be given to the extent of gr iij, for a dose.

ELECTUARIA. *Electuaries.*

Electuaries are, in general, extemporaneous preparations, composed of dry powders, formed

into a proper consistence by the addition of syrup, honey, or mucilage; when, however, the latter substance is employed, the electuary very soon becomes dry, and hard. In selecting, and prescribing this form of exhibition, the following general rules should be observed.

I. Those substances, which are nauseous, deliquescent, which require to be given in large doses, or which are incapable of forming an intimate union with syrup, as fixed oils, balsams, &c. should never be prescribed in the form of electuary.

II. The quantity of syrup employed for forming electuaries, must be regulated by the nature of the substances which enter into their composition, viz.

1. *Dry Vegetable Powders* require twice their weight of syrup.

2. *Gummy and Resinous Powders* require an equal weight of syrup.

3. *Hard Mineral Substances* should be formed into an electuary with some conserve, as they are too ponderous to remain suspended in syrup.

ELEMI. L.D. (Amyris Elemifera.) *Elemi.*
Resina

This substance consists of gum, resin, and essential oil: when powdered, it mixes with any unguent; it also combines with balsams, and oils, and by the aid of heat with turpentine. *USE.* It is only employed for forming the mild digestive ointment: i. e. *unguent elemi.*

EMPLASTRA. L.E.D. *Plasters.*

These are solid, and tenacious compounds, adhesive in the ordinary heat of the human body; they generally owe their consistence to wax, or to the combination of metallic oxides, particularly those of lead, with oily, or fatty matter. In prescribing an extemporaneous plaster, the simple plaster (*emplast: ceræ*) should be selected as its basis. *OBSERV:* Vinegar and camphor have the property of reducing many of the gum-resins to a consistence, suitable for plasters.*

* *COURT PLASTER* is made as follows: dissolve ℥xij of gum benzoin in f℥xij of rectified spirit: in a separate vessel dissolve lbj of isinglass in ov of boiling water; strain each solution, mix them, and let them rest, that the grosser

EUPHORBIAE GUMMI - RESINA. L. (Euphorbia Officinarum.) *Euphorbium*.

QUALITIES. This substance is imported from Barbary in drops, or tears; it is inodorous, but gives a very acrid, burning impression to the tongue. CHEMICAL COMPOSITION. It is a gum-resin; but its acrimony resides in the resinous portion. SOLUBILITY. Water, by trituration, is rendered milky, but dissolves only 1-7th part: alcohol 1-4th of it. USES. It is principally employed as an errhine, cautiously diluted with starch, or some inert powder.

EXTRACTA. L.E.D. *Extracts*.

These preparations consist of vegetable principles, and are obtained by evaporating the watery, or spirituous solutions of vegetables, to masses of stiff consistence, or by exposing their juices to the action of heat; the chemical nature of the extract will depend upon the menstruum employed for its

parts may subside; when the clear liquor is cold, it will form a jelly, which warm, and spread upon silk; the spreading must be repeated 10 or 12 times.

preparation, and receives its generic appellation from it : viz.

I. WATERY, or SIMPLE EXTRACTS, may contain those principles which are soluble in water, viz. gum, extractive, tannin, cinchonin, sugar, and the salts which the vegetable contained.

OFFICINAL EXTRACTS. *Extract: Aloes.* L. *Anthemid:* L.E.D. *Cinchonæ.* L. *Colocynthid:* L. *Cololocynthid: comp.* L.D. *Genist:* D. *Gentian.* L.E.D. *Glycyrrhiz.* L.D. *Hæmatoxyli.* L.E.D. *Hellebori nigri.* E.D. *Humuli:* L. *Rad: Jalap:* D. *Opii.* L.D. *Papaveris.* L.D. *Rutæ.* D. *Sabinæ.* D. *Sarsaparill:* L. *Sennæ.* E. *Taraxaci.* L.D. *Valerian:* D. *Corticis Quercus.* D.

II. SPIRITUOUS, or RESINOUS EXTRACTS, may consist of resin; and, except gum, of any of those substances which enter into the composition of watery extracts. OFFICINAL EXTRACTS. *Extract: Cascarill: Resinos:* D. *Cinchon: Resinos:* L.E.D. *Jalapæ.* L.E.D. *Rhei.* L.

III. INSPISSATED JUICES. These are prepared by simply evaporating the juices of vegetables,

which are obtained from them by expression ; the London college does not admit the nominal distinction, but classes them all under the general appellation of *Extracts*. OFFICIAL PREPARATIONS. *Succi Spissati Aconiti Napelli* L.E. *Atropæ Belladonæ*. L.E. *Conii Maculat* : L.E.D. *Hyoscyam: nigri*. L.E.D. *Lactucæ Viros*: E. *Sambuci nigræ*. E.D.

By all these operations, the medicinal efficacy of the substances is generally impaired ; the volatile parts are dissipated, and some of the fixed are decomposed, hence, with the exception of pure bitters, and saccharine vegetables, there is no medicine, perhaps, but what may be more successfully exhibited under some other form than that of extract.

FERRI CARBONAS. L. Carbonas Ferri Præcipitatus. E. Carbonas Ferri. D.

QUALITIES. *Form*, a brown powder ; *Odour*, none ; *Taste*, styptic. CHEMICAL COMPOSITION. It is a *sub-carbonate* of iron. SOLUBILITY. It is insoluble in water, and is decomposed by acids. FORMS OF EXHIBITION. It is best given in the

form of powder, or in that of pills. Dose. grs iv to xxx.

FERRI RAMENTA ET FILA. L. Limatura.
E. Scobs. D. *Iron Filings, and Wire.*

The best mode of exhibiting metallic iron, is in the form of powder, combined with some aromatic, or made into an electuary, with honey, or conserve. It should be never administered in liquid vehicles. Dose, ʒj to ʒj, or more. IMPURITIES. Iron filings should be carefully purified by the application of the magnet, since those obtained from the work-shops are generally mixed with copper, and other metals.

FERRI SULPHAS. L. Sulphas Ferri. E.D.
Sulphate of Iron, formerly, Green Vitriol.

QUALITIES. *Form*, crystals, which are rhomboidal prisms, transparent, and of a fine green colour, when exposed to the air, they effloresce, and at the same time, assume a yellow hue, owing to the attraction of oxygen. CHEMICAL COMPOSITION. Oxide of iron 28·3, sulphuric acid 26·7, water 45. SOLUBILITY. fʒj of water dissolves

more than ʒij of this salt; but it is insoluble in alcohol. INCOMPATIBLE SUBSTANCES. *All alkaline salts; tarturic acid; borate of soda; nitrate of potass; muriate of ammonia; tartrate of potass and soda; acetate of ammonia; tartrate of potass; muriate of lime, and of barytes; lime water; magnesia; and most earthy bodies; nitrate of silver; acetate and super-acetate of lead; and almost every salt whose base forms an insoluble compound with sulphuric acid; soaps; sulphurets of potass, and antimony; and astringent vegetables.* FORMS OF EXHIBITION. It may be administered in solution, or in the form of pill, *vid. Mist. Ferri.* DOSE, grs. ij to x or more.*

FERRUM AMMONIATUM. L. Murias Ammoniae et Ferri. E.D. (olim, Flores Martiales.)

QUALITIES. *Form*, crystalline grains, of an orange colour; slightly deliquescent; *Odour*, resembling that of saffron; *Taste*, styptic. CHEMICAL COMPOSITION. It is a triple salt, composed

* AROMATIC LOZENGES OF STEEL. These consist principally of the sulphate of iron, with *Cantharides*.

of muriatic acid, iron, and ammonia, but the proportion of these ingredients varies with the temperature which has been employed for its preparation, and hence it is an uncertain medicine. SOLUBILITY: f̄j of water dissolves 3iv of it; it is also very soluble in alcohol. INCOMPATIBLE SUBSTANCES. *All vegetable astringents; fixed alkalis; lime water; nitrate of silver; sulphurets of antimony, and potass; acetate of mercury; oxy-nitrate of mercury; super-acetate of lead; tartrate of potass, and soda; tartrate of potass; acetate of potass; alkaline soaps; the nitric and sulphuric acids.* DOSE, grs iij to ʒj. OFFICINAL PREPARATION. *Tinct: Ferri Ammon: L.* IMPURITIES. The impurity of this salt is indicated by its dull, and pale yellow colour; it may be purified by sublimation.

FERRUM TARTARIZATUM. L. Tartarum Ferri. D.

QUALITIES. *Form*, a powder of a brownish green colour; *Taste*, slightly styptic; it attracts humidity from the atmosphere, but does not deliquesce. CHEMICAL COMPOSITION. It is a triple salt, and should have been denominated, the tar-

trate of potass and iron. SOLUBILITY. It is very soluble in water, and the solution remains for a great length of time, without undergoing any change.* INCOMPATIBLE SUBSTANCES. *All strong acids ; lime water ; Hydro-sulphuret of potass ; and astringent vegetables ;* the fixed alkalies, and their carbonates decompose the solution very slowly, unless heated ; but ammonia, and its subcarbonate produce upon it no effect, whether it be hot or cold. FORMS OF EXHIBITION. Solution is by far the most preferable form. DOSE, grs. x to 3ß.

FILICIS RADIX. L.E.D. (Aspidium Filix.)
Root of the Male Fern. Mas

QUALITIES. This root is nearly inodorous ; its taste slightly bitter, sweetish, subastringent, and mucilaginous ; as it contains no volatile ingredient, it may be given in the form of decoction ; on account, however, of its astringency, it should

* A considerable precipitation from the solution often occurs, but this is merely tartrate of lime, derived from the supertartrate of potass, which usually contains it.

be conjoined with no chalybeate. Dose; as an anthelmintic, ʒj to ʒiij, followed by a brisk cathartic.

FCENICULI SEMINA. (Anethum Feniculum)
Fennel Seeds.

As the qualities of these seeds depend upon an essential oil, they are lost by decoction.

GALBANI GUMMI RESINA. L.E.D.

QUALITIES. *Form*, variegated masses of a yellowish brown colour; *Odour*, foetid; *Taste*, bitter, and acrid. CHEMICAL COMPOSITION. Resin; gum; volatile oil; and extractive. SOLUBILITY. Water, vinegar, and alcohol, by trituration, take up $\frac{1}{4}$ of its weight, and form a milky mixture, but by rest it is again deposited; a permanent suspension, however, may be effected by the intermedium of egg, or gum-arabic, for which purpose the galbanum will require half its weight of gum. FORMS OF EXHIBITION. No form is preferable to that of pill. OFFICINAL PREPARATIONS. *Pil: Galb: comp: L. Tinct: Galban: D. Emplast:*

Galban; D. *Emp*: *Galban*: *comp*: L. *Pil*: *Myrrh*:
comp: D. *Pil*: *Assafætid*: *comp*: E. *Emplast*:
Assafætid: E. *Emplast*: *Gummos*: E.

GALLÆ. L. E. D. (Cynips *Quercus folii*.)
Nidus
Gall Nuts.

QUALITIES. *Odour*, none; *Taste*, bitter, and very astringent. CHEMICAL COMPOSITION. This is not perfectly ascertained, but they contain tannin, gallic acid, extractive, and gum. SOLUBILITY. All their qualities are extracted by boiling water, and by alcohol. INCOMPATIBLE SUBSTANCES. Their astringency is impaired by the following substances:—*Alkalies*, *lime water*, *carbonate of lime*, *metallic salts*, (especially those of iron.) FORMS OF EXHIBITION. The powder is the best form. DOSE, grs. x to 3ß. OFFICINAL PREPARATION. *Tinct: Gallar*: D. OBSERV: Those which are small, protuberant, blueish, and heavy, are the best; a white, or a red hue indicates an inferior quality.

GENTIANÆ RADIX. L. E. D. *Gentian Root*.

QUALITIES. *Taste*, intensely bitter, but not nauseous. CHEMICAL COMPOSITION. Bitter resin,

extractive, mucilage, and a small portion of tannin.

SOLUBILITY. Its virtues are extracted both by water and alcohol. **INCOMPATIBLE SUBSTANCES.**

Super-acetate of lead throws down a copious precipitate from the infusion; and *sulphate of iron* strikes a brown colour, but no precipitate takes place for several hours. **FORMS OF EXHIBITION.** It is exhibited in infusion, or tincture. **OFFICINAL PREPARATIONS.**

Extract: Gent: Infus: Gent: comp: Tinct: Gent: comp: L.E.D. Vinum: Gent: comp: E.

GLYCYRRHIZÆ RADIX. L.E.D. (Glycyrrhiza Glabra.) *Liquorice Root.*

QUALITIES. *Taste,* sweet, and mucilaginous.

CHEMICAL COMPOSITION. Saccharine matter, mucilage, and woody fibre. **SOLUBILITY.** Water

dissolves both its principles, but by long decoction it becomes bitter; alcohol extracts only its saccharine matter. **FORMS OF EXHIBITION.** It is principally employed as a demulcent, in combination

with other mucilaginous vegetables: there is a watery extract of it, which is admitted into the list of the materia medica. **OFFICINAL PREPARATIONS.**

Decoct: Sarsaparill: comp: L.D. Infus: Lini. L. Extract: Glycyrrhiz: L.E.D. Confect:

Sennæ. L.E.* ADULTERATIONS. The powdered root is often sophisticated with flour, and other substances more deleterious; the fraud may be detected by its colour being a fine pale, instead of a brownish yellow; the extract is usually adulterated with the pulp of prunes.

GRANATI CORTEX. L.E.D. (*Punica Granatum*)
Pomorum Cortex)
Pomegranate Bark.

What has been said of galls, applies with equal truth to this substance.

GUAIACI RESINA ET LIGNUM. L.E.D.
 (Guaicum Officinale). *The resin and wood of*
Guaiaicum.

A. THE WOOD.

QUALITIES. This wood is heavier than water, and emits, when heated, an aromatic odour; to extract its virtues very long decoction is required.

OFFICINAL PREPARATIONS. *Decoct: Guaiac: comp:*
E. (vulgo Decoct: Lignorum) Decoct: Sarsaparill:
comp: L.D.

* PECTORAL BALSAM OF LIQUORICE. The Proprietor of this nostrum gravely affirms, that $\frac{1}{3}$ contains the virtues of a whole pound of stick liquorice; when, lo! upon inves-

B. *The GUAIAAC, or RESIN.*

QUALITIES. *Form*, It has the aspect of a resin; *Colour*, greenish brown; *CHEMICAL COMPOSITION*. It has been long regarded as a *gum resin*, but recent experiments have ascertained it to be a substance, "*sui generis*," differing both from gum and resin. *SOLUBILITY*. It is insoluble in water, but alcohol and ammonia, are its most perfect menstrua; f3j of liquor ammoniæ dissolves grs. xijss. *INCOMPATIBLE SUBSTANCES*. *The mineral acids*. *FORMS OF EXHIBITION*. It is administered either in the form of bolus, or diffused in water by means of one half its weight of gum arabic. *Dose*, of the substance grs x to 3ss, of the tinctures f3j to f3iij; larger doses purge. *OFFICINAL PREPARATIONS*. *Mist: Guaiac. L.* *Tinct: Guaiac: L.E.D.* *Tinct: Guaiac: Ammoniat. L.E.D.* *Pulv: Alöes comp: L.D.* *ADULTERATIONS*. *Common Resin* may be detected by the turpentine emitted when the guaiac is thrown on hot coals; *Manchinal Gum*, by adding to the tincture a few drops of sweet spirit of nitre, and diluting with water, the guaiac is

tigation, not a single grain of it can be discovered; it proves to be *Paregoric Elixir* very longly impregnated with the oil of aniseeds.

precipitated, but the adulteration floats in white striæ.

HÆMATOXYLI LIGNUM. L.E.D. (Hæmatoxylon Campechianum). *Logwood*.

QUALITIES. *Taste*, sweet, and astringent; *Odour*, none; *Colour*, deep red. CHEMICAL COMPOSITION. Volatile oil, tannin, a yellow colouring matter, and acetates of lime, and potass, attached to a large proportion of ligneous fibre. SOLUBILITY. It yields its colouring matter both to water, and alcohol; but to neither with much facility; the infusion has a reddish purple colour, which is deepened by alkalies, and changed to yellow by acids. INCOMPATIBLE SUBSTANCES. *Solutions of gelatine; alum; sulphates of iron, and of copper; acetate of lead; and tartarized antimony*, produce precipitates; and its astringency is destroyed by *alkalies, lime-water, &c.* FORMS OF EXHIBITION. It may be administered in the form of decoction, but the extract is more usually ordered, either in pills, or dissolved in cinnamon water. Dose, of the decoction fʒij, of the extract gr. x, to ʒʒ. OFFICINAL PREPARATION. *Extract: Hæmatox:* L.E.D.

HELLEBORI FÆTIDI FOLIA. L. (Helleborus Fætidus). Helleboraster. D. *The Leaves of Fætid Hellebore.*

QUALITIES. *Odour*, fætid; *Taste*, bitter and acrid; FORMS OF EXHIBITION. The leaves may be dried, and given in the form of powder, or in that of a decoction, made by boiling ʒij of the recent leaves, or ʒss of the dried, in oʒs of water, for fifteen minutes. Dose, of the powder grs. vj to ʒj, of the decoction fʒj.

HELLEBORI NIGRI RADIX. L.E.D. *The Root of Black Hellebore.*

QUALITIES. The fibres of the root are the parts employed; they are about the thickness of a straw, corrugated, externally of a deep brown, but internally, of a white, or yellow colour. *Odour*, unpleasant; *Taste*, bitter, and acrid. CHEMICAL COMPOSITION. Its qualities appear to depend upon volatile oil, gum, and resin. SOLUBILITY. Both water, and alcohol extract its virtues, but the spirituous solution is the most active; long coction decreases its powers; hence the watery extract acts

more mildly than the root. FORMS OF EXHIBITION. It may be given either in tincture, in extract, or in a decoction, made by boiling 3ij of the root in oj of water. Dose, of the powdered root grs x to ʒj, of the decoction fʒj; of the tincture f3j to f3ij; of the extract grs x to ʒj. OFFICIAL PREPARATIONS. *Tinct: Hellebor: nigr: L.E.D.* *Extract: Hellebor: nigr: E.D.* ADULTERATIONS. The roots of the poisonous aconites are often fraudulently substituted; this is easily discovered, for the aconite is lighter coloured than the palest specimens of black hellebore; it is safe therefore to choose the darkest.

HORDEI SEMINA. L.E.D. (Hordeum Distichon)
Semina, tunicis
 Pearl Barley. *nudata*

These granules consist principally of fecula, with portions of mucilage, gluten, and sugar, which, water extracts by decoction; the solution soon passes into the acetous fermentation. OFFICIAL PREPARATIONS. *Decoct: Hordei: L.E.D.* *Decoct: Hord. comp. L.D.*

HUMULI STROBILI. L. (*Humulus Lupulus.*)
Strobili Siccati.
The Srobiles of the Hop.

CHEMICAL COMPOSITION. Resin, extractive, gum, volatile oil, tannin, an ammoniacal salt, and the bitter principle. SOLUBILITY. Boiling water, and alcohol, extract their virtues; but by decoction their aromatic flavour is lost; like most bitters, the cold is more grateful than the warm infusion; its colour is deepened by alkalies, and rendered turbid by the mineral acids. INCOMPATIBLE SUBSTANCES. Precipitates are produced by *superacetate of lead; nitrate of silver; and tartarized antimony.* FORMS OF EXHIBITION. They may be given in the form of powder, tincture, extract, or of infusion, made with ℥ss of the hops, and oj of boiling water. DOSE. of the powder grs iij , to ℥j , of the tincture f℥ss to f℥ij , of the extract, grs v to ℥j , and of the infusion f℥iſs , with f℥ss of cinnamon water. OFFICINAL PREPARATIONS. *Extract: Humuli: L. Tinct: Humuli, L.*

HYDRARGYRUS. L. E. *Hydrargyrum.* D.
colim, Argentum Vivum. Mercury, or Quicksilver.

Mercury, in its metallic state, is never applied to any medicinal use; but, under various forms of preparation, it affords a series of very active remedies. ADULTERATIONS. Its impurity is indicated by its dull aspect; by its tarnishing, and becoming covered with a grey film; by its diminished mobility, or by its adhesion to the surface of glass. *Lead* is discovered by dissolving it in nitric acid, and adding to the solution, water impregnated with sulphurated hydrogen, when, if any be present, a dark brown precipitate will ensue. *Bismuth*, by pouring the nitric solution into distilled water, when it will appear as a white precipitate. *Zinc*, by exposing the mercury to heat. *Tin* is detected by a dilute solution of nitro-muriate of gold, which throws down a purple sediment.

HYDRARGYRUS PRÆCIPITATUS ALBUS. L.
Sub-Murias Hydrargyri Ammoniatum. D. *White Precipitate*,

QUALITIES. *Form*, an impalpable powder, of a snowy whiteness; *Odour*, and *Taste*, none. CHEMICAL COMPOSITION. It is a triple salt, composed of oxide of mercury 81, muriatic acid 16, ammonia 3 parts. SOLUBILITY. It is insoluble in water,

and in alcohol; when triturated with lime water, it does not become black. FORMS OF EXHIBITION. It is only used in combination with lard, as an ointment. OFFICINAL PREPARATION. *Unguent: Hydrarg: Præcipitat: Alb: L.D.* ADULTERATIONS. *White Lead* may be detected by digesting it in acetic acid, and adding to the solution sulphuret of ammonia, which will indicate its presence, by a dark precepsitate. *Chalk*, by adding to the dilute solution a little oxalic acid, which will produce a white and copious cloud.

HYDRARGYRUS CUM CRETA. L.D. *Mercury with Chalk.*

This is mercury slightly oxidized by trituration, and mixed with chalk, grs. viij contain of mercury grs. jjj. Dose, grs. v to 3ß, in pills.

HYDRARGYRI NITRICO - OXYDUM. L. Oxydum Hydrargyri Rubrum Per Acidum Nitricum. E. Oxydum Hydrargyri Nitricum. D. *Nitric Oxide of Mercury.* Vulgo, *Red Precipitate.*

QUALITIES. *Form*, small scales, of a bright red colour; *Taste*, acrid, and corrosive. CHEMICAL

COMPOSITION. It is, strictly speaking, a *sub-nitrate* of mercury. SOLUBILITY. It is quite insoluble in water. FORMS OF EXHIBITION. It is an external application only. OFFICINAL PREPARATION. *Unguent: Hydrarg: Nitrico-oxid: L.E D.* ADULTERATIONS. *Red Lead* may be detected by digesting it in acetic acid, and adding sulphuret of ammonia: it should be totally volatilized by heat.

HYDRARGYRI OXYDUM RUBRUM. L.
Oxydum Hydrarg. D. *Red Oxide of Mercury.*

QUALITIES. *Form*, minute crystalline scales, of a deep red colour, acrid, and caustic. It is very rarely employed, except as an external stimulant. ADULTERATIONS. It is seldom found adulterated, as it would be difficult to find a substance well suited to this purpose. If well prepared, it may be totally volatilized by heat.

HYDRARGYRI OXYDUM CINEREUM. L.E.
Pulv: Hydrargyri Cinereus. D.

QUALITIES. *Form*, an impalpable, grey coloured powder, which becomes paler from exposure, to air, and light. *Odour*, and *Taste*, none. CHE-

MICAL COMPOSITION. When prepared according to the London formula, the product is, strictly, a sub-muriate; whereas, by following the directions of the Edinburgh, or Dublin College, a pure grey oxide is obtained. SOLUBILITY. It is insoluble in water and alcohol. USES. This preparation is nearly analagous to the oxide, prepared by the trituration of the metal, and may be exhibited internally in the form of pill, or applied externally in ointments, or by fumigations. DOSE, grs. j to grs iij. OFFICIAL PREPARATIONS. *Unguent: Oxid: Hydrarg: Ciner: E.*

HYDRARGYRI OXYMURIAS. L. Murias Hydrargyri. Olim, *Mercurius Sublimatus, Corrosivus*. E. Murias Hydrargyri Corrosivum. D.

Oxy-Muriate of Mercury, vulgo, Corrosive Sublimate.

QUALITIES. *Form*, a crystalline mass, which is easily pulverized, and undergoes no alteration on exposure to the air; *Odour*, none; *Taste*, very acrid, and metallic. CHEMICAL COMPOSITION. Mercury 69·7, oxygen 12·3, Muriatic acid 15. SOLUBILITY. It is soluble in 20 parts of cold, in 3 of boiling water, and in 4 parts of alcohol. It

changes to a green, several vegetable blues. INCOMPATIBLE SUBSTANCES. *Alkalies, and alkaline earths ; tartrate of potass and antimony ; superacetate of lead ; sulphur ; sulphuret of potass ; and soaps.* Iron, lead, copper, and bismuth, in their metallic state, decompose it, hence mortars of glass should be employed for dispensing this article. The following vegetable infusions also produce precipitates, viz. *The infusions, and decoctions of chamomile flowers, horse-radish root, calumba root, catechu, cinchona bark, rhubarb, senna, simaruba bark, and oak bark.* When triturated with olive oil, the oil becomes white ; and, when boiled with it, calomel is precipitated ; the volatile oils reduce it. FORMS OF EXHIBITION. It may be administered either in solution, or in substance, formed into pills with bread, and if half their weight of sugar be added, their solubility is decreased ; when added to lime-water, it is decomposed : the result was formerly called *Aqua Phagadenica*, and employed as a lotion to ill-conditioned ulcers : (f3j of lime water decomposes exactly 2 grains of the salt). DOSE, gr. $\frac{1}{8}$ to $\frac{1}{2}$. OFFICINAL PREPARATIONS.* *Liquor Hydrarg :*

* As this salt arrests the progress of syphilis more rapidly than any other preparation of mercury, and at the same

Oxymuriat : L. CAUTION. It is partially decomposed by light, and should therefore be kept in opaque bottles.

time does not excite salivation, it generally forms the basis of those fraudulent and dangerous nostrums which are advertised for the cure of syphilis, without mercury. The contrivers hope to elude detection by the density and colour of the preparation; the metal may, however, be discovered, by inspissating a large quantity, and adding ammonia; in this state, the mercury will, by rubbing, whiten bright copper: in the minute portion employed it eludes every other test.

The following quack medicines contain *Corrosive Sublimate*, as their principal ingredient, *viz.*

GOWLAND'S LOTION, is a solution of sublimate in an emulsion formed from bitter almonds, in the proportion of gr. jſſ to fſj. A weak solution of this salt in spirit of rosemary is also often sold as an empirical cosmetic.

NORTON'S DROPS, and WARD'S WHITE DROPS, are disguised solutions of sublimate.

SPILSBURY'S ANTISCORBUTIC DROPS, are a combination of sublimate and antimony.

VELNO'S VEGETABLE SYRUP has been supposed to consist of sublimate, rubbed up with honey and mucilage of gum-arabic; but I am strongly inclined to believe that the preparation does not contain a grain of mercury, but consists of the "*Tinctura Antimonii Acris*," of the old Pharmacopœias, and Syrup of Marsh Mallows; at all events, I will venture to pronounce, that it has never yet cured the venereal disease.

HYDRARGYRI SUB-MURIAS. L. Sub-Murias Hydrargyri, *sive Calomelas*. E. Sub-Murias Hydrargyri Sublimatum. D. *Sub-Muriate of Mercury, or Calomel*.

QUALITIES. *Form*, a semi-transparent mass, consisting of short prismatic crystals; inodorous, insipid, and of an ivory colour, which deepens by exposure to light. CHEMICAL COMPOSITION. It is very improperly denominated a *sub* salt, for it is a muriate, and differs only from corrosive sublimate, in the metal being in a lower state of oxidation, and combined with a smaller quantity of muriatic acid; its ultimate principles are mercury 79, oxygen 9.5, acid 11.5. SOLUBILITY. It is nearly insoluble in water. INCOMPATIBLE SUBSTANCES. *Alkalies*, and *lime water* instantly turn it black; it is also decomposed by *soaps*, *sulphurets of potass*, and *antimony*, and by *iron*, *lead*, and *copper*; hence no metallic mortar should be employed for dispensing medicines which contain it. FORMS OF EXHIBITION. From its insolubility, and great specific gravity, it ought always to be given in the form of bolus, or pill. DOSE, as an alterative, grs. j to ij, conjoined with opium, and given night

and morning; as a purgative, from grs. iij to grs. viij. OFFICIAL PREPARATIONS. One grain of calomel is contained in *Pil: Hydrarg: sub-muriat:* gr. v. IMPURITIES. *Corrosive sublimate* may be detected by a precipitation being produced by carbonate of potass; it should also, when rubbed with pure ammonia, become intensely black, and exhibit nothing of an orange hue. In order to obtain the preparation in the form of an impalpable powder, as well as to free it from the presence of corrosive sublimate, Mr. Howard has proposed to receive the sublimed vapour in water, and the product is named *hydrosublimate*.*

* All the nostrums advertised, for the cure of worms, consist of calomel, combined with scammony, jalap, gamboge, or some drastic purgative, and are most dangerous medicines; the method of exhibiting them in the form of lozenges (*Worm Cakes*) is attended also with danger, on account of the sugar and gum generating an acid, by being kept in damp places, which considerably increases the acrimony of the mercury: to which it may be added, that the mercury is frequently diffused unequally through the mass, one lozenge may therefore contain a poisonous dose, while others may contain but little active matter.

CHING'S WORM LOZENGES. The following is a copy of the specification as inrolled in the high court of chancery.

HYDRARGYRI SULPHURETUM RUBRUM.
L. Sulphuratum Hydrargyri Rubrum. D. *Red Sulphuret of Mercury.* Olim, *Factitious Cinnabar.*

QUALITIES. *Form*, a red crystalline cake, inodorous, insipid, and insoluble in water, alcohol, and acids. CHEMICAL COMPOSITION. Unoxidized mercury 85, sulphur 15. USES. Its principal medicinal application is for mercurial fumigation; when it is internally administered as an alterative, it may be made into an electuary or bolus. DOSE. grs. x to ʒʒ. ADULTERATIONS. *Red lead* may be discovered by digesting it in acetic acid, and adding sulphuret of ammonia, which will produce

The Yellow Lozenges.—Take of white panacea of mercury lbj, (this is merely calomel washed in spirit) white sugar lbij, English saffron ʒʒ, spring water oj; boil the saffron for ten minutes in the water, then strain, and beat the whole into a mass, which roll out of an exact thickness, and divide into lozenges; so that each may contain one grain of calomel. Dose, from one to six of these lozenges the last thing at night, and a like number of the following lozenges the next morning, viz.

The Brown Lozenges.—Take of extract of jalap lbiiiʒ, white panacea of mercury ʒvij, white sugar lbjx, spring water a sufficient quantity.

a black precipitate; *Dragon's Blood*, by its giving a colour to alcohol when digested in it; *Chalk*, by an effervescence on the addition of acetic acid.

HYDRO - SULPHURETUM AMMONIÆ. E.D.
Hydro-Sulphuret of Ammonia. Hepatized Ammonia of Rollo.

QUALITIES. *Form*, a liquid of a dark green colour; *Odour*, horribly fetid; *Taste*, acrid, and disagreeable. CHEMICAL COMPOSITION. Sulphuretted hydrogen, ammonia, and water. INCOMPATIBLE SUBSTANCES. *Acids, acidulous, and metallic salts.* FORMS OF EXHIBITION. In water:—
DOSE. As this is the most certain, and direct sedative we possess, great caution is required in its exhibition; iij to iv m may be given, and the dose gradually increased, till a slight degree of vertigo comes on.

HYOSCYAMI FOLIA, ET SEMINA. L.E.D.
(*Hyoscyamus niger.*) *Henbane.*

QUALITIES. This plant, when recent, has a strong, fetid, and narcotic odour; properties, which are nearly lost by exsiccation. CHEMICAL COMPOSITION. Resin, mucilage, extractive mat-

ter, and gallic acid. SOLUBILITY. Water feebly extracts its narcotic powers, and decoction destroys them; diluted alcohol is its best menstruum. INCOMPATIBLE SUBSTANCES. Precipitates are produced by *superacetate of lead*, *nitrate of silver*, and *sulphate of iron*; vegetable acids weaken its narcotic properties. FORMS OF EXHIBITION. It may be administered in the form of extract, or tincture, and its leaves or herb applied as anodyne cataplasms. Dose, of the extract grs. iij to ʒj in pills; of the tincture m x to x l. OFFICINAL PREPARATIONS. *Extract: Hyoscyam: Tinct: Hyoscyam: L.E.D.*

ICHTHYOCOLLA. D. (Acipenser Huso, and Ruthemus). *Isinglass.*

This substance is insipid, and inodorous; 98 parts in 100 are pure gelatine, and are soluble in water, the remaining 2 parts consist of the phosphates of soda, and lime; it is also soluble in acids, and alkalies; and although it is insoluble in alcohol, yet it is not precipitated by it, from its watery solutions, unless when added in a very considerable quantity. It is coagulated by the infusions, and

decoctions of vegetable astringents, which are therefore *incompatible* with it.—Its solutions soon putrefy.

INFUSA. L.E.D. *Infusions.*

These are watery solutions of vegetable matter, obtained by maceration either in cold, or boiling water. In selecting, or conducting the operation, the following general rules should be observed.

- I. Infusion should be always preferred to decoction, when the medicinal virtues of the substances reside in volatile oil, or in principles which are easily soluble; whereas if they depend upon resino-mucilaginous particles, long *decoction* is an indispensable operation.
- II. The duration of the process must, in every case, be regulated by the nature of the substances, or the intention of the prescriber, for the infusion will differ according to the time in which the water has been digested on the materials; thus the aroma of the plant is first taken up, and then in succession, the colouring, astringent, and gummy parts.

III. The temperature employed must likewise be varied according to the circumstances of each case; an infusion made in the cold, is in general more grateful but less active, than one made with heat.

OBSERV: The specific properties of the different officinal infusions are enumerated under the history of the plants, whence they are obtained.

IPECACUANHÆ RADIX. L.E.D. (*Callicocca Ipecacuanha*.) *Ipecacuan*.

QUALITIES. This root, when powdered, has a faint, disagreeable odour, and a bitter, sub-acrid, and nauseous taste. CHEMICAL COMPOSITION. Resin, extractive, cinchonin, and caoutchouc; its emetic property appears to reside in its two first principles. SOLUBILITY. Alcohol takes up 4 parts in 20; proof spirit $6\frac{1}{2}$; and boiling water rather more than 8 parts.—One pint of sherry wine dissolves grs. 100. The emetic property of this root is destroyed by decoction. INCOMPATIBLE SUBSTANCES. All vegetable acids, but more especially vinegar, weaken its power. Dr. Irvine found that grs. xxx administered in fʒij of vinegar produced

only some loose stools. FORMS OF EXHIBITION. The form of powder is the most preferable ; its solution in wine (*Vinum Ipecacuanhæ*) is also active and convenient. DOSES. The specific action of Ipecacuan varies with its dose—grs. x to ʒss act as an emetic, grs. i to ʒij as an expectorant, and in smaller doses combined with iron as a stomachic; when administered with opium, it proves a powerful diaphoretic.—The dose of Ipecacuan Wine, as an emetic, is fʒj. OFFICIAL PREPARATIONS. *Vinum Ipecacuan.* L.E.D. *Pulv: Ipecac: comp:* (Pulv: Doveri.) L.E.D. CAUTION. The powder is liable to become inert, by exposure to air, and light.

JALAPÆ RADIX. L.E.D. (*Convolvulus Jalapa.*) *Jalap.*

QUALITIES. This root is pulverulent; *Odour*, peculiar; *Taste*, sweetish, and slightly pungent. CHEMICAL COMPOSITION. Resin, gum, and extractive matter; the combination of all these principles appears requisite for the production of its full cathartic effect. SOLUBILITY. Proof spirit is its proper menstruum. FORMS OF EXHIBITION. It is best administered in powder, with a drop or

two of essential oil to prevent griping. Dose, grs. x to 3ß. Pulverization increases its activity. OFFICIAL PREPARATIONS. *Pulv: Jalap: comp: E. Extract: Jalap: L.E.D. Tinct: Jalap: L.E.D. Tinct: Sennæ comp: E.* ADULTERATIONS. Briony root is sometimes mixed with that of jalap, but may be easily distinguished by its paler colour, and less compact texture, and by not easily burning at the flame of a candle.

JUNIPERI BACCÆ ET CACUMINA. L.E.D.
(*Juniperus Communis.*) *Juniper Berries and Tops.*

The principal constituents of these berries are mucilage, sugar, and volatile oil; in the latter of which their virtues reside. FORMS OF EXHIBITION. The bruised berries may be triturated with sugar, or some neutral salt, and exhibited in substance; or in an infusion made by boiling ʒij of the berries for ten minutes in oj of water. Dose; of the berries in substance ʒj to ʒij; of the infusion fʒj, or more. OFFICIAL PREPARATIONS. *Oleum Juniperi. L.E.D. Spirit: Juniper: comp: L.E.D.*

KINO. L.E.D.

(*Arboris nondum descriptæ. Gummi Resina. L.*
Eucalypti Resiniferi. Succ: concret: E.
Butea Frondosa. D.)

There is considerable obscurity with regard, both to the natural history, and chemical constitution of this substance. Three varieties of it are met with in the shops, viz. 1, *African Kino*, which bears the highest price, has all the appearance of a natural production, slender twigs being often intermixed in its substance, it is of a reddish brown colour, and has a bitterish astringent taste. 2, *Botany Bay Kino*, has also the appearance of a natural production, it is in more solid masses than the former species, is less brittle, (for it contains a very small proportion of resin) and with its astringency, has a disagreeable sweetish taste. 3, *Jamaica Kino*; this is the one most commonly met with, it has the appearance of a dry extract, is in small fragments, of a colour, more nearly approaching to black than the others, and has an astringent and slightly bitter taste. **CHEMICAL COMPOSITION.** In all the varieties the predominant principles are tannin, and extractive. **SOLUBILITY.** The best menstruum is diluted alcohol. **INCOMPATIBLE SUBSTANCES.** *Sulphate of iron; nitrate of silver; oxymuriate of mercury; superacetate of lead; tartarized antimony; solutions of isinglass; and all alkalis.* **FORMS OF EXHIBITION.** Either in sub-

stance, or in the form of watery infusion, or of tincture. Dose, grs. x to 3ß. OFFICINAL PREPARATIONS. *Tinct: Kino: L.E.D. Elect: Catechu. E.D.*

LAVANDULÆ FLORES. L.E.D. (*Lavandula Spica.*) *Lavender Flowers.*

All the properties of this plant depend upon an essential oil, which enters into several compositions. OFFICINAL PREPARATIONS. *Oleum Lavandulæ. L.E.D. Spirit: Lavand: L.E.D. Spirit: Lavand: comp: L.E.D. Pulv: Asari comp: E.D.*

LAURI BACCÆ ET FOLIA. L.E. (*Laurus Nobilis.*) *Bay Berries, and Leaves.*

This vegetable owes all its properties to an essential oil; and is principally used as an external application; its berries enter into the *Empl: Cumin*; the leaves are applied in fomentations; and the oil, obtained from the berries, is employed as a rubefacient.

LICHEN. L.D. (*Lichen Islandicus.*) *Iceland Liverwort.*

This substance is composed of mucilage, and bitter extractive; which last principle may be removed by maceration in cold water, and then, by decoction in water, or milk, an insipid gelatinous solution may be procured. If $\bar{3}j$ of moss be boiled for 15 minutes in $f\bar{3}vj$ of water, we shall obtain a mucilage of similar consistence to that composed of 1 part of gum arabic, and 3 of water. INCOMPATIBLE SUBSTANCES. Its exhibition requires the same precaution as that of *Mucilago Acaciæ*. OFFICINAL PREPARATIONS. *Decoct : Lichen : L.D.*

LIMONES. L.E.D. (*Citrus Medica*) *Lemons.*
Baccæ

SUCCUS.—THE JUICE consists of citric acid, mucilage, extractive matter, and small portions of sugar, and water. It is principally employed for forming saline draughts, vid : *Acid: Citric:* OFFICINAL PREPARATION. *Syrup: Limon: L.E.D.*

CORTEX.—THE RIND, or PEEL, is composed of two distinct parts, the *Exterior*, which contains glands, filled with a fragrant, and volatile oil, upon which all its properties depend, and the *Interior Coat*, which is tasteless, and indigestible:

the peel of the lemon is less warm, and aromatic than that of the orange, and more perishable; it is principally employed as a grateful adjunct to bitter infusions; by decoction its oil is dissipated.

OFFICIAL PREPARATIONS. *Infus: Aurantii comp: L. Infus: Gent: comp: L. Aq: Citr: Medic: E.*

LINIMENTA. L.E.D. *Liniments.*

These are external applications, having the consistence of oil, or balsam. The following are the principal liniments introduced into our pharmacopœias. LINIMENTUM ÆRUGINIS. L. An escharotic. AMMONIÆ FORTIUS. L.D. Oleum Ammoniatum. E. Consists of *liquor ammoniæ j part, olive oil ij parts, (oil viij parts. E.D.)* AMMONIÆ CARBONATIS. L. *Liquor ammoniæ carbonatis j part, olive oil jv parts*; this is much less stimulating than the preceding. CALCIS. E.D. *Oil, and lime-water equal parts.* CAMPHORÆ. L. *Camphor j, olive oil jv parts.* CAMPHORÆ COMPOSITUM. L. *Camphor ij, liquor ammoniæ vj, spirit of lavender xvj parts.* HYDRARGYRI. L. *A pound of this liniment contains nearly ℥iv of mercury, it affects the mouth more rapidly than mercurial ointment, and hence its*

application requires caution. SAPONIS COMPOSITUM.* *Hard soap* iij, *camphor* j, *spirit of rosemary* xvj parts. SIMPLEX. E. *Oil* iv, *wax* j part. TEREBINTHINÆ. L. *Ol: terebinth* j, *resin cerate* ij parts.

These liniments, if we except the *Lin: Ærug*: are all decomposed by the substances which are incompatible with soaps, vid: *Sapones*.

LINUM CATHARTICUM. L.D. *Purging Flax.*

The qualities of this plant reside in extractive matter, hence water extracts them, but long decoction injures them. FORMS OF EXHIBITION. ʒij of the dried herb infused in oj of boiling water. Dose, fʒij.

LINI USITATISSIMI SEMINA. L.E.D. *Linseed, or Common Flax Seed.*

These seeds contain a large proportion of mucilage, and 1-6th of their weight of oil; by infusion

* STEERS'S OPODELDOC. This celebrated liniment consists of white soap ʒvij, rectified spirit oij, camphor ʒij, liquor: ammon: fʒiv. oil of rosemary fʒss.

in water, a clear, colourless, inodorous, and nearly insipid mucilage is obtained; $\overline{3}\overline{6}$ of the unbruised seeds is sufficient for $\overline{o}\overline{j}$ of water; the farina of the seed is well adapted for cataplasms. INCOMPATIBLE SUBSTANCES. *Superacetate of lead* throws down a dense precipitate. OFFICIAL PREPARATIONS. *Infus: Lini: L. Oleum Lini. L.E.D.*

LIQUOR AMMONIÆ. L. Aqua Ammoniaë. E. Aqua Ammoniaë Causticæ. D. *Solution of Ammonia.*

QUALITIES. *Form*, a limpid, colourless fluid; specific gravity $\cdot9040$, or $\overline{f}\overline{3}\overline{j}$, weighs about grs. 438. *Odour*, strong, and pungent; *Taste*, extremely caustic. CHEMICAL COMPOSITION. A solution of ammoniacal gas in water: when prepared according to the London, and Edinburgh Pharmacopœias, it contains nearly 25 of ammonia, but if procured by the Dublin process, only 16 parts in 100, i.e. $\overline{m}\overline{iv}$ of the former, is about equivalent to $\overline{m}\overline{vj}$ of the latter preparation. SOLVENT POWERS. It is an active solvent of many vegetable principles, e.g. *oils, resins, &c.* with alcohol it unites in every proportion; it assists the oxid-

izement of copper, and zinc; and dissolves many of the metallic oxides. INCOMPATIBLE SUBSTANCES. *All acids; alum; metallic salts.* FORMS OF EXHIBITION. In milk, or any liquid vehicle; if in decoctions, or infusions, they must be previously cooled, for at 130° the ammonia separates in the form of gas. DOSE, m x, to xxx. OFFICIAL PREPARATIONS. *Linimentum Ammoniacæ. L. D. Oleum Ammon: E. Spirit. Ammon: L. Spirit. Ammon: comp. L. Spir: Ammon: Succinat: L. Liniment: Camph: co. L.* ADULTERATIONS. The presence of other salts in the solution may be discovered by saturating a portion, with pure nitric acid, and adding the tests for sulphuric acid (*Barytes*) and muriatic acid (*Nitrate of Silver*). Carbonic acid is detected by its effervescing with acids; it ought to be free from any fætor; its strength can be alone determined by its specific gravity. It should be preserved in well closed bottles.

LIQUOR AMMONIÆ ACETATIS. L. Aqua Acetitis Ammoniacæ. E.D. vulgo, *Spiritus Mindereri. Acetate of Ammonia.*

This preparation is a solution of the neutral acetate of ammonia, with a portion of carbonic

acid diffused through it; it is made by saturating the sub-carbonate of ammonia, with distilled vinegar; for which purpose, it will generally be found, that ʒij of the alkali will saturate oiij of the acid; the exact point, however, of neutralization should be ascertained by a chemical test, since, if it be not accurately saturated, some of the metallic salts, especially those of antimony, which are often prescribed in conjunction with it, are decomposed, and rendered inefficacious, and on this account, an excess of alkali is always to be more feared than that of acid. INCOMPATIBLE SUBSTANCES. *Acids; fixed alkalies; lime water; alum; sulphate of magnesia; oxy-muriate of mercury; nitrate of silver; and sulphates of zinc, copper, and iron: super acetate of lead produces also a copious precipitation, but this depends upon the presence of carbonic acid, diffused through the solution, which decomposes the salt, and forms an insoluble carbonate of lead.* Dose; ʒiv , to ʒxij .

LIQUOR ANTIMONII TARTARIZATI. L.
Vinum Tartritis Antimonii, Olim, Vinum Antimoniale. E. *Solution of Tartarized Antimony. Antimonial Wine.*

These solutions, when fresh, are equal in point of strength, f3j contains grs. ij of tartarized antimony; but the London preparation soon becomes weaker, in consequence of the dilution of the wine favouring the decomposition of the salt. INCOMPATIBLE SUBSTANCES, vid: *Antimonium Tartarizatum*. The aromatic electuary of the Dublin, and the confection of the London college, on account of the carbonate of lime which they contain, should never enter into a prescription with antimonial wine; to the Edinburgh preparation there can be no such objection. DOSE; as a diaphoretic mix to f3j, emetic f3ij, to f3vj. In apportioning the dose of this remedy, the practitioner should recollect, that the strength of the present preparation is only half as great as that of the former pharmacopœia of London.

LIQUOR ARSENICALIS. L.

This is, correctly speaking, a solution of the *Arsenite of Potass*; f3j contains gr. ß of the oxide of arsenic. It was introduced into practice by Dr. Fowler, as a substitute for the empirical remedy, known by the name of "*The Tasteless Ague*

Drop." INCOMPATIBLE SUBSTANCES. *Lime water; nitrate of silver; hydrosulphuret of potass; infusions, or decoctions of bark.* Dose, m iv. gradually increased to m xxx, given twice a day, vid: *Arsenici Oxydum.*

LIQUOR CALCIS. L. Aqua Calcis. E. D.
Lime Water.

CHEMICAL COMPOSITION. It is a saturated solution of lime in water; fʒj contains about $\frac{3}{4}$ of a grain. INCOMPATIBLE SUBSTANCES. *All alkaline and metallic salts; phosphates; borates; tartrates; and citrates; acids; sulphur; spirituous preparations; the infusions of orange peel, calumba, cinchona, rhubarb, senna, and of all vegetable astringents.* It should be kept in close vessels, for when exposed to the air, the lime attracts carbonic acid, and becomes an insoluble carbonate. FORMS OF EXHIBITION. It may be administered in milk, which disguises its nauseous flavour, without impairing its virtues: combined with oil, it has been found a useful application in burns. Dose, fʒj to fʒvj. OFFICIAL PREPARATIONS. *Oleum, Lini cum calce.* E. D. *Aq: calc: comp: D.*

LIQUOR FERRI ALKALINI. L. *Solution of Alkaline Iron.*

This preparation is nearly the same with Stahl's *Tinctura Martis Alkalina*. CHEMICAL COMPOSITION. Is by no means ascertained; it seems to consist of iron, nitric acid, and potass. INCOMPATIBLE SUBSTANCES. *Pure alkalis; acids; alcohol; water, and consequently all infusions, and decoctions,* decompose it, and precipitate the metal; it is therefore a very injudicious preparation, since it cannot be exhibited in any form without decomposition.

LIQUOR HYDRARGYRI OXYMURIATIS. L.

This solution of corrosive sublimate is intended to facilitate the exhibition of minute doses of the salt; $\text{f}\overline{\text{z}}\text{j}$ contains gr. $\text{f}\overline{\text{ss}}$; when long kept, or exposed to light, the oxymuriate is decomposed, and calomel precipitated; a small portion of muriate of ammonia in the solution, prevents this precipitation. INCOMPATIBLE SUBSTANCES. See *Hydrarg: Oxymurias*. DOSE, $\text{f}\overline{\text{ss}}$ to $\text{f}\overline{\text{z}}\text{ij}$, in $\text{f}\overline{\text{z}}\text{ij}$ of linseed infusion.

LIQUOR PLUMBI ACETATIS. L. *Liquor*
Subacetatis Lithargyri. D.

This preparation has been long known by the name of *Goulard's Extract*. QUALITIES. It is of a greenish straw colour; and has an austere, and sweetish taste; when kept, it deposits a quantity of oxide, and becomes lighter coloured. CHEMICAL COMPOSITION. It is a solution of the neutral acetate of lead in water. INCOMPATIBLE SUBSTANCES. *Undistilled water; alkalies, and their carbonates; alkaline sulphates; mucilage.* USES. It is used only externally, diluted with water. OBSERV: The proportion of litharge ordered for its preparation by the colleges, is unnecessarily great, for a pint of distilled vinegar can dissolve but 3 x. of litharge.

LYTTA. L. (*Lytta Vesicatoria.*) *Meloe Vesicatorius.* E. *Cantharis.* D. *Spanish, or Blistering Fly.*

The chemical history of cantharidès is involved in much obscurity; they appear, from recent experiments, to consist of $\frac{1}{2}$ of parenchyma, $\frac{3}{8}$ of bit-

ter extractive, 1-10th of concrete, waxy, green oil, and 1-50th of concrete yellow oil, which is probably the colouring matter; the vesicatory properties reside essentially in the extractive, and green oil, but the extractive exclusively acts on the urinary organs; their active constituents are soluble both in water, and in alcohol. FORMS OF EXHIBITION. As an internal remedy, the tincture, given in some demulcent infusion, affords the safest, and most convenient form. DOSE, m x to f3j. OFFICIAL PREPARATIONS. *Tinct: Lytt: L.E.D. Emplast: Lytt: L.E.D. Emplast: Meloës vesicat: comp: E. Cerat: Lytt: L. Unguent: Infus: Meloës vesicat: E. Unguent: Canth: D.* OBSERV: The flies do not lose their virtues, even in a powdered state, by keeping.

MAGNESIA. L.E. Magnesia Usta. D. *Calcined Magnesia.**

QUALITIES. *Form*, a white, light powder, nearly insoluble in water. CHEMICAL COMPOSITION. It

* Magnesia was a general term given to all substances, which had the power of attracting any principle from the air; from Magnes, the Loadstone.

is a compound of a peculiar metal, (*Magnium*) and oxygen. Dose, grs. x to ʒj taken in water, or milk. ADULTERATIONS. It should be assayed by the same tests as the carbonate. It ought not to effervesce with acids, nor should its solution in sulphuric acid, when largely diluted, afford any precipitation with oxalate of ammonia. It should be preserved in well closed bottles.

MAGNESIÆ CARBONAS. L. Carbonas Magnesiae, *olim*, Magnesia Alba. E. Magnesia. D. *Carbonate of Magnesia.**

This preparation is a *sub-carbonate* of magnesia. INCOMPATIBLE SUBSTANCES. *Acids; alkalies; alum; nitrate of silver; acetate of mercury; oxymuriate of mercury; super-acetate of lead; sulphates of zinc, copper, and iron.* Dose, ʒj to ʒij. OFFI-

* By employing the *Sub-carbonate of Soda*, instead of the *Sub-carbonate of Potass*, for the preparation of this medicine, it is obtained in a much lighter, and purer form; this circumstance probably depends upon the great insolubility of the Sulphate of Potass preventing its entire separation from the precipitate, by ablution.

CINAL PREPARATION.* *Hydrarg: c Magnesia. D.*

ADULTERATIONS. Chalk may be detected by adding to a suspected portion, diluted sulphuric acid, when, should any be present, the solution will be loaded with a white, and insoluble precipitate.

MAGNESIÆ SULPHAS. L. Sulphas Magnesiae. *Magnesia Vitriolata, Sal Catharticus Amarus.* E. Sulphas Magnesiae, *Olim, Sal Catharticum Amarum.* D. *Sulphate of Magnesia. Bitter Purg-ing Salt.*

QUALITIES. *Form*, small needle-like crystals; *Taste*, bitter, and nauseous; when pure it effloresces. CHEMICAL COMPOSITION. Sulphuric acid 29.35, magnesia 17, water 53.65. As found in the shops, it generally contains some muriate of magnesia, which renders it deliquescent. SOLUBILITY. f3j of water dissolves 3j, and the solution

* DALBY'S CARMINATIVE, consists of Carbonate of Magnesia ʒij, the Oils of Peppermint mʒ, of Nutmeg mij, of Aniseed m iij, Tinctures of Castor mxxx, of Assafoetida mxv, Spirit of Pennyroyal mxv, of the Compound Tincture of Cardamom m xxx, Peppermint Water f3ij.

measures $\text{f}\text{3xj}\frac{1}{4}$; it is insoluble in alcohol. INCOMPATIBLE SUBSTANCES. *Alkalies, and their carbonates; lime water; muriates of ammonia; barytes, and lime; nitrate of silver; acetate, and superacetate of lead.* FORMS OF EXHIBITION. Dissolved in the infusion of roses, or in any aqueous vehicle; its cathartic property is increased by dilution; a little magnesia renders the taste of its solution less nauseous; and the addition of a few grains of tartarized antimony is capable of quickening its operation. DOSE, $\text{f}\text{3j}$, to $\text{f}\text{3ij}$, taken either at once, or in divided doses. OFFICINAL PREPARATION. *Enema Catharticum; Enema Fætid: D.* ADULTERATIONS. Sulphate of Soda is often substituted for this salt, which it may be made to resemble by stirring it briskly at the moment when it is about to crystalize; the fraud is detected by a precipitation not ensuing on adding carbonate of potass; if only a part of the salt be sulphate of soda, the degree of sophistication can be learnt only by the quantity of the precipitate formed, 100 parts of sulphate of Magnesia, if pure, will yield between 30 and 40 of the dry Carbonate.

MALVA. L.E. (*Malva Sylvestris.*) Common Mallow.

MASTICHE. L. Pistachia Lentiscus. E. *Mastic.*

The only use of this resinous substance is to fill the cavities of carious teeth; a solution in *oil of turpentine*, is sold as an odontalgic.

MEL. L.E.D. Honey.

CHEMICAL COMPOSITION. Sugar, mucilage, and an acid: it seems to be a substance merely collected from the flowers, and not elaborated by the internal economy of the insect.—*Virgin Honey* is that wrought by young bees, and permitted to run from the comb without heat or pressure. SOLUBILITY. It is soluble in water, and partially in alcohol.

USES. It is principally employed for forming those officinal preparations into which honey enters; as it is liable to induce cholic, especially if new, syrup should be always preferred for internal use.

OFFICINAL PREPARATIONS. Mellita. e. g. *Mel Boracis*. L. *Mel Ros.* L.D. Oxymellita.*—Oxy-

* "GODBOLD'S VEGETABLE BALSAM." This well known medicine is certainly one of the most absurd, and wretched compositions which we have noticed; forty-two different

mel. L.D. *Oxymel Calchici.* D. *Oxymel Scillæ.*
L.D.

MELISSA. E. *Balm.*

An infusion of the fresh leaves, or young shoots, acidulated with lemon juice, forms an agreeable antiseptic drink. INCOMPATIBLE SUBSTANCES. *Precipitates* are produced by *Oxy-sulphate of iron*; *nitrate of silver*, and *superacetate of lead*.

vegetables are directed to be distilled, “*for the purpose of extracting their essences, which are to be preserved separately, and apart from each other, in syrups, and are to be mixed with the following gums, and drugs, viz: Gum Dragon, Gum Guaiacum, Gum Arabic, and Gum Canada, these being dissolved in double distilled vinegar, with a quantity of Storax dissolved in Spirits of Wine, and Oil of Cinnamon, it is to be bottled off, and kept three years, before it is fit to be administered as a medicine, for the CURE of Consumption, or ANY Asthmatic complaint !!!* Notwithstanding this pompous display of profundity; upon investigating the properties of the medicine, it will be found to be nothing more than *simple oxymel*, slightly disguised; nor is the fraud of much consequence, for if we admit that the plants enumerated, do actually possess any virtues, their treatment with distilled vinegar would probably destroy them.

MENTHA PIPERITA. L.E. *Mentha Peperitis*. D. *Peppermint*.

All the qualities of this plant depend upon an essential oil, and camphor; it readily, and strongly impregnates either water, or spirit by infusion. Its infusion, and the water distilled from it, are principally employed as vehicles for other medicines, or to disguise their nauseous flavour. OFFICIAL PREPARATIONS. *Aq: Menth: Piperit: L.E.D.* *Spir: Menth: Pip: L.D.* *Ol: Menth: Pip: L.E.D.**

MENTHA VIRIDIS. L. *Mentha Sativa*. D. *Spearmint*.

Cold water extracts the more agreeable, and active parts of mint in a few hours, a longer maceration extracts the grosser, and less agreeable portions, hot water more quickly extracts its virtues, but boiling dissipates the aroma. Infusions, and tinctures contain the whole virtue of the mint, the oil, and distilled water only the aroma. OFFI-

* ESSENCE OF PEPPERMINT. The article sold under this name, is the essential oil of peppermint in rectified spirit.

CINAL PREPARATIONS. *Aq: Menth: Virid: L.D.*
Infus: Menth: comp: D. Ol: Menth: Virid: L.D.
Spir: Menth: Virid: L.

MEZEREI CORTEX. L.E.D. (*Daphne Mezereum*)
Radicis Cortex.
Mezereon.

The inner bark of this plant, when fresh, is corrosive, and even vesicatory; the fruit is equally so, grs. x act as a poison; its virulence is counteracted by camphor. It is now seldom used except in decoction, as an antivenereal remedy. OFFICINAL PREPARATIONS. *Decoct: Sarsaparill: comp: L.*
Decoct: Daphnes Mezerei. E.

MISTURÆ. *Mixtures.*

These are preparations (generally *extemporaneous*) in which different ingredients are mingled together in the liquid form, or in which, solid substances are diffused through liquids, by the medium of mucilage, or sugar. For prescribing extemporaneous mixtures, the following general rules may be laid down.

I. Substances which are capable of entering into chemical combination, or of decomposing each other, ought not to be mixed together, unless it be with a view of obtaining the new product as a remedy.

II. Transparency is not a necessary condition, and hence insoluble powders may be advantageously introduced into mixtures, if the following precautions be observed.

1. They must be divisible, and mechanically miscible in the fluid.

2. They must not possess too great a specific gravity.

3. They must not render the fluid too mucilaginous, or thick; *thus, fʒj should seldom contain more than ʒss of a vegetable powder, ʒij of an electuary, and conserve; or grs. xv, or ʒj of an extract, or inspissated juice.*

III. The taste, the smell, and the general appearance of the mixture should be rendered as pleasant as possible; *thus, milk covers the taste of bark, of the tinctures of guaiacum and vale-*

rian, and of lime water ; and a light decoction of the liquorice root disguises a bitter taste, more effectually than sugar ; the physician should also produce occasional changes in the appearance of his mixture, to inspire confidence, or to reconcile a delicate taste to its continuance ; he never ought, however, to alter the essential parts of plans, which he finds advantageous. DRAUGHTS differ only from mixtures in the quantity sent, as the draught is usually taken at once, and should not exceed $\text{f}\overline{\text{3}}\text{i}\overline{\text{ss}}$; this form should be always preferred when

1. The medicine is to be taken in a precise dose ;
2. When it is liable to undergo spontaneous changes by being kept, as Emulsions ; or, 3. When the action of the air occasions decompositions, on which account, the latter part of a mixture would differ greatly in strength from the former, e. g. *Liquor Ammonia*, *Liquor Arsenicalis*, &c.

CLYSTERS. *Enemata*. In prescribing, and dispensing active substances, for this purpose, some care is requisite, in mixing them ; thus, Camphor, unless it be carefully divided, will adhere to the

rectum, and produce unpleasant consequences; in general, the dose given in clysters is allowed to be triple that taken by the mouth.

EMULSIONS are now classed by the London college under the general appellation of *Mixtures*. They consist of oils, united with watery fluids by means of mucilage, egg, or alkalies, vid: *Oleum Amygdal*: In apportioning the dose of mixtures, the following proportions are admissible, although not perfectly accurate.—A TABLE SPOON full (*Cochleare Amplum*) $\text{f}\overline{\text{z}}\text{ss}$.—DESERT SPOON (*Cochl: Mediocre*) more than $\text{f}\overline{\text{z}}\text{ij}$.—TEA SPOON (*Cochl: Minimum*) $\text{f}\overline{\text{z}}\text{j}$.—A WINE GLASS (*Cyathus*), although very variable, is estimated as containing $\text{f}\overline{\text{z}}\text{iss}$; the custom of apportioning the dose of a liquid by dropping it from the mouth of a phial is very erroneous, it will therefore be proper to dilute an active medicine with at least a triple quantity of water, that its real dose may not be essentially altered, by any slight variation in the quantity.

MISTURA FERRI COMPOSITA. L. Compound Mixture of Iron.

This combination is nearly the same as the cele-

brated *Antihectic mixture* of Dr. Griffith. **CHEMICAL COMPOSITION.** It affords a striking example of a new and powerful remedy being produced by the mutual action of the ingredients of a prescription upon each other; the new products are *sulphate of potass*, which is dissolved, and *sub-carbonate of iron*, which is diffused through the mixture, and suspended by the myrrh, which forms a saponaceous compound with the excess of alkali.—Its great superiority depends upon the iron being at its *minimum* of oxidation, which renders it more active than the common carbonate, and less irritating than the sulphate; hence its ingredients should be quickly mixed together, and to preserve its virtues it should be kept in bottles closely stopt, it is however preferable, that it should be extemporaneously made. Its change of colour will generally indicate its loss of efficacy. Dose, $\text{f}\overline{\text{3}}\text{i}$, to $\text{f}\overline{\text{3}}\text{ij}$, twice, to thrice a day.

MOSCHUS. L.E.D. *Musk.*

QUALITIES. *Form*, grains concreted together, dry, yet slightly unctuous; *Colour* deep brown, with a shade of red; *Odour* aromatic, and pecu-

liar, diffusive, and durable. *Taste* bitterish, and heavy. **CHEMICAL COMPOSITION.** Resin combined with a volatile oil, and a mucilaginous extractive matter, with small portions of albumen, gelatine, muriate of ammonia, phosphate of soda, and an uncombined acid. **SOLUBILITY.** Boiling water dissolves it partially; rectified spirit takes up most of its active parts, although the odour is only discovered upon dilution: sulphuric æther is its most complete menstruum. **INCOMPATIBLE SUBSTANCES.** The solutions are decomposed by *oxy-muriate of mercury; sulphate of iron; nitrate of silver; the infusion of yellow cinchona bark.* **FORMS OF EXHIBITION.** The best form is that of bolus, combined with *Carb: of Ammon:* or some other stimulant; it may be also exhibited in a mixture, for which purpose, it requires five times its weight of mucilage: by previously triturating it with sugar, its minute division is much facilitated. **Dose,** grs. x to xxx. **OFFICINAL PREPARATIONS.** *Mist: Mosch: L. Tinct: Mosch: D.* **ADULTERATIONS.** The bag containing the musk should have no appearance of having been opened: the presence of *dried blood* may be suspected, by its emitting, as it inflames, a fœtid smoke; *Asphaltum* is discovered

by its melting, and running, before it inflames. The artificial bags are known by the inner membrane which lines the real musk bags, being deficient. An artificial musk strongly resembling the real, may be formed by digesting fʒss of *Nitric Acid* for ten days upon ʒj of *fætid animal oil*, obtained by distillation; to this is to be next gradually added, oj of *Rectified Spirit*, and the whole left to digest for one month.

MYRISTICÆ NUCLEI. L.E. Nux Moschata.
D. *Nutmeg*.

All the properties of this substance depend upon an essential oil, which fills the dark coloured veins which run through its substance, and is consequently dissipated by decoction.—*Mace* is the involucrum of the nut.

MYRRHA. L.E.D.
(*Arboris nondum descriptæ.*) *Myrrh.*
Gummi Resina.

QUALITIES. *Form*, irregularly shaped pieces; translucent, of a reddish yellow colour. *Odour* peculiar, and fragrant; *Taste* bitter, and aromatic.

CHEMICAL COMPOSITION. Resin, gum, essential oil, and some extractive matter. SOLUBILITY. When triturated with soft, or distilled water, nearly the whole appears to be dissolved, forming an opaque, yellowish solution, but by rest the greater part is deposited, and not more than $\frac{1}{3}$ is actually dissolved; its solubility in water may be increased by trituration with camphor, or an alkali; rectified spirit dissolves it, and the tincture when diluted becomes turbid, although no precipitate occurs, hence by following the directions of the London college a turbid solution can be only obtained, for the spirit ordered is more dilute even than proof. FORMS OF EXHIBITION, in that of powder, watery infusion, or diluted tincture. DOSE, grs. x to 3j. OFFICINAL PREPARATIONS. *Tinct: Myrrh.* L.E.D. *Tinct: Aloës, et Myrrh.* E. *Tinct: Aloës Ætherea.* E. *Mist: Ferri comp:* L. *Pil: Aloës c Myrrh:* L.E.D. *Pil: Ferri c Myrrh:* L. *Pil: Galb: comp:* L.D. *Pil: Assafætida: comp:* E. *Pil: Rhei comp:* E. ADULTERATIONS. This drug is subject to a variety of frauds, it is mixed with various gums, which are discovered by their disagreeable odour, their white or dark colour, or by their opacity.

MUCILAGO ACACIÆ. L. Mucilago Mimosæ Niloticæ. E. Mucilago Gummi Arabici. D. *Mucilage of Gum Arabic.*

This preparation consists of one part of gum, and two of water; in preparing it, the dispenser is particularly recommended to pulverize the gum himself, and never to employ that which is purchased in the state of powder, as it is always impure, and incapable of forming a pellucid and elegant solution. INCOMPATIBLE SUBSTANCES. Neither the *strong acids*, or *alcohol*, when diluted, occasion any change in it; but the *tincture of muriated iron*, and *acetate of lead*, produce very dense precipitates: the *superacetate of lead* only occasions decomposition when an alkaline salt is present in the formula. In the pharmaceutical application of this mucilage, it should be remembered, that it contains in its composition the astringent principle, which perhaps is but of little consequence, except in the exhibition of some few metallic salts, which are certainly decomposed by it (grs. x of *nitrate of mercury* are decomposed by ʒij of gum arabic).
-USES. fʒij of the mucilage when added to fʒviij of water, form a mixture of a consistence suit-

able for a demulcent; it is also of great pharmaceutical use, by affording a medium to suspend oils, resins, and other insoluble substances in water; the proportions of mucilage necessary for this purpose vary according to the nature of the substance, but may be learnt by referring in this work to the different articles in question; thus you will generally find that *Oils* require about $\frac{3}{4}$ ths their weight, *Balsams* and *Spermaceti* an equal part, *Resins* a double quantity, *Camphor* and *Musk* five times as much.

MUCILAGO ASTRAGALI TRAGACANTHÆ.
E.D.

This mucilage consists of one part of gum, and eight of water (thirty-two parts of water. D.) The proportion of the gum to the water is large in the Edinburgh Pharmacopœia, but it is designed to form a stiff mucilage, and to be used principally in making *Troches*.

OLEA DISTILLATA. L. Volatilia. E. Essentialia. D. *Distilled, Volatile, or Essential Oils.*

QUALITIES. *Odour*, penetrating; *Taste*, acrid;

they are volatilized by a gentle heat. **CHEMICAL COMPOSITION.** Oxygen, carbon, and a large proportion of hydrogen. **SOLUBILITY.** They are very sparingly soluble in water, *vid: Aquæ Distillatæ*, but are soluble in alcohol, æther, and the fixed oils; when, digested with ammonia, some of the less odorous acquire a considerable degree of fragrance, while fixed alkalies universally impair their odour. **FORMS OF EXHIBITION.** They may be administered with powders, pills, boluses, or electuaries, or combined with water by means of sugar, or mucilage. **OBSERV:** These oils, from continued exposure to air, become thick, and resinous and lose their volatility, fragrance, and pungency; hence they should be preserved in small, opaque phials, completely full, and well corked. **ADULTERATIONS.** *Fixed oils* may be detected by moistening a little writing paper with the suspected oil, and holding it before the fire; if the oil be entirely essential, no stain will remain on the paper; *Alcohol*, by adding water, which if it be present, occasions a milkiness, and an increase of temperature; *Cheaper* oils, as oil of turpentine, by their peculiar odour, which may be rendered distinct, by rubbing a drop upon the hand, and holding it to the fire. The fol-

lowing is a list of those admitted into our Pharmacopœias ; those marked in *Italics* are principally for internal use. OLEUM **Anisi*,—*Anthemid*:—*Carui*.—*Juniperi*,—LAVANDULÆ.—*Menthæ Piperit*:—*et Viridis*.—ORIGANI,—PIMENTÆ.—*Pulegii*.—RORIS-MARINI.† L. OLEUM *Juniperi*—*Pimento*—COR-TICIS ET LIGNI SASSAFRAS.—e SEMINIBUS *Anisi*—*Carui*, et *Fœniculi dulcis*—FLORUM LAVANDULÆ.—FOLIORUM SABINÆ—HERBÆ FLORESCENTIS *Menthæ Piperitidis et Sativæ*.—ORIGANI—*Pulegii*—RORIS-MARINI—*Rutæ*. D. OLEUM VOLATILE *Juniperi communis* et SABINÆ.—LAVANDULÆ SPICÆ.—LAURI SASSAFRAS.—*Menthæ Piperitæ*.—*Myrtæ Pimentæ*.—*Pimpinellæ Anisi*.—RORISMARINI OFFICINALIS. E.

OLEA EXPRESSA. L.D. Fixa, sive Expressa. E. *Expressed or Fixed Oils.*

* The *Oils of Aniseed*. This oil crystallizes at 50°—camphor is therefore frequently employed for its sophistication. The fraud is detected by warming the oil, when the crystals, if genuine, will dissolve.

† The oils of Rosemary, and Juniper are generally found adulterated with the oil of Turpentine, this is at once indicated by the dense, black smoke with which they burn.

QUALITIES. *Odour*, none; *Taste*, mild. Their boiling point is usually above 600°: as they do not unite with the gummy mucilaginous parts of vegetables, they are similar, whatever may be their source. SOLUBILITY. They are insoluble both in water, and alcohol; with alkalies, they combine, and form soaps; they unite also readily with each other, with volatile oils, and with resinous substances. CHEMICAL COMPOSITION, differs only from that of *volatile* oils, in having a much less proportion of hydrogen. CAUTION. They must be preserved in close vessels, for by exposure to the air, they absorb oxygen, and become *rancid*.

OLEUM AMYGDALÆ. L. Oleum Amygdalæ Communis. E. Oleum Amygdalarum. D. *Oil of Almonds*.

QUALITIES. This oil, whether procured from the *sweet*, or *bitter* almond, has the same properties, for the bitterness resides only in the mucilage. FORMS OF EXHIBITION. It may be formed into an *Emulsion* by the intermedium of *Mucilage*, the yolk of the egg, or of an *Alkali*.

1. BY MUCILAGE. This is in general a more convenient medium than the yolk of an egg; one part of gum, made into mucilage, will be sufficient for the diffusion of four parts of oil; the oil and mucilage must be well triturated together, and the water then gradually added; the *emulsion* thus formed, is permanent, and the addition of a moderate quantity of acid, spirit, or of tincture, produces no decomposition.

2. BY ALKALIES. This oil, by uniting with alkalies, and water, forms a most elegant, and grateful mixture; for which purpose every $\text{f}\text{̄}\text{3j}$ of oil requires $\text{m}\text{v}\text{ij}$ of "*liquor potass.*" and $\text{f}\text{̄}\text{3i}\text{f}\text{̄}\text{3}$ of distilled water. INCOMPATIBLE SUBSTANCES. *Acids; oxymel; syrups of poppies, and squills; tartrate, and supertartrate of potass; super-sulphate of potass; oxy-muriate of mercury; resins; hard water.*

OLIBANUM. L.E.D.

(*Juniperus Lycia.*) *Olibanum.*
(*Gummi Resina.*)

QUALITIES. *Odour, fragrant; Taste, bitterish.*

CHEMICAL COMPOSITION. Resin, gum, and volatile oil. SOLUBILITY. Alcohol dissolves $\frac{2}{3}$ ths of it; water, by trituration, produces a milky mixture, but $\frac{1}{3}$ ths only remain dissolved. FORMS OF EXHIBITION. It may be formed into an emulsion with water, by triturating it with three times its weight of gum arabic.

OPIUM. L.E.D.

Papaver Somniferum.
 (*Cap. ularum immaturarum succus concretus.* (Turcicus.)) Turkey Opium.

QUALITIES. It is imported in flat pieces, of a dark, reddish brown colour. *Texture*, compact and uniform; *Odour*, peculiar, strong, heavy, and narcotic; *Taste*, bitter, and slightly acrid; by long exposure to the air, it becomes hard, and pulverulent. CHEMICAL COMPOSITION. Resin, gum, bitter extractive, a peculiar crystallizable salt, sulphate of lime, and gluten. SOLUBILITY. It is partially soluble in water, alcohol, and æther; when triturated with hot water, 5 parts in 12 are dissolved, 6 suspended, and 1 part remains perfectly insoluble: by long boiling, its soporific pow-

ers are impaired, and ultimately destroyed: the alcoholic is more highly charged with its narcotic principle, than the aqueous solution, but proof spirit is its best menstruum: vinegar is likewise capable of dissolving it, but it impairs its powers, for which reason, wine, liable to become acetous, is an injudicious solvent. INCOMPATIBLE SUBSTANCES. *Vegetable acids; coffee*, and, in the opinion of many practitioners, *alkaline salts* diminish the soporific power of opium; its sedative effects are also, as Dr. Currie very justly remarks, frequently counteracted by the stimulus of heat, a circumstance which should be never overlooked in practice. FORMS OF EXHIBITION. Either in substance as a pill, or in the form of tincture. DOSE. This must be varied according to the nature of the disease, and the peculiar intention for which it is ordered; gr. j is generally a sufficient dose, grs. iij can be scarcely taken with impunity. OBSERV: In apportioning the dose of the tincture, it should be known, that in consequence of the employment of *purified* instead of *crude* opium, the strength of the London tincture, as formerly prepared, is to that of the present tincture, as 3 to 2, or m xiv. to m xix, which contain gr j of opium. The Dub-

lin preparation is the same as the former tincture, but that of Edinburgh is similar to the present tincture of London.

EAST INDIA OPIUM, is an inferior species; it differs from *Turkey Opium*, in its texture being less compact, and softer, its colour darker, and its odour fainter; when triturated with water, it is taken up without any residuum; hence it contains no gluten, but the sulphate of lime is more abundant. ADULTERATIONS. Opium is frequently adulterated with the extract of liquorice: it should be regarded as bad, when it is very soft, or friable, of an intensely black colour, or mixed with many impurities, or when it has a sweetish taste, or marks paper, with a brown streak, when drawn across it. OFFICINAL PREPARATIONS. Gr. j of opium is contained in *Confect: Opii* L. grs. 36. *Elect: Opii* E. grs. 43. *Elect: Catechu.* E. grs. 193. *Elect: Catechu comp: D.* grs. 199. *Pil: Sapons: cum Opio.* L. grs. 5. *Pil: Opiat: E.* grs. 10. *Pil: e Styrace.* D. grs. 5. *Pulv: Corn: ust: cum Opio.* L. grs. 10. *Pulv: Cret: comp: cum Opio.* L. grs. 40. *Pulv: Ipecac: comp: L.E.* grs. 10. *Pulv: Kino comp: L.* grs. 20. *Tinct: Opii: L.*

min: 19. *Tinct: Camph: comp: L.* f3℥. *Tinct: Opii Ammoniat: E.* f3j. *Troch: Glycy: cum Opio. E.* 3j. *Vinum Opii L.* m xvij.*

* Opium is the Quack's sheet anchor; indeed, two-thirds of the quack medicines consist either of opium, or mercury. The various nostrums advertised as cough drops, for the cure of colds, asthmas, catarrhs, &c. are preparations of opium similar to paregoric elixir. PECTORAL BALSAM OF LIQUORICE, and ESSENCE OF COLTSFOOT, are preparations of this kind. GRINDLE'S COUGH DROPS, consist of the same ingredients as Paregoric Elixir, with the substitution of the gum Benzoin, for its Acid, and Rectified for Proof Spirit. "The mischief," observes Dr. Fothergill, "that has proceeded from the *healing* anodynes of quacks, can be scarcely imagined, for in coughs, arising from suppressed perspiration, or an inflammatory diathesis, opiates generally do harm."

THE BLACK DROP. This secret preparation of Opium is much more active than laudanum, and probably less injurious; one drop of it is about equal to two and a half of the tincture of opium. It is generally supposed to be a solution of opium in a vegetable acid, combined with various aromatics; this, however, is an erroneous conjecture. "It is most probably," observes the author of the *London Medical Dictionary*, "a tincture made with a weak spirit, with a proportion of watery extract; at least, in this way, a medicine of very similar powers may be procured. We have uni-

OPOPONAX. L.

(*Pastinaca Opoponax.*) *Opoponax*, or *Rough*
Gummi Resina.) *Parsnip.*

This substance is similar to the fetid gums, but less disagreeable; it is very seldom employed.
 DOSE, grs. x to xxx.

OVUM. L.

(*Phasianus Gallus.*) *The Egg of the Domestic*
Ovum.) *Fowl.*

VITELLUS, the *Yolk*, is principally employed in pharmaceutical operations, for rendering oils, and balsams miscible with water.

formerly found, that, with a diminished portion of the uncombined resin, the anodyne effects of opium were best secured, without the subsequent inconveniences of head-ach, nausea, &c."

GODFREY'S CORDIAL. The following receipt for making this celebrated nostrum I obtained from a wholesale druggist, who prepares, and sells many dozen bottles of it, in a month. Boil ℥ix of Sassafras: and of the seeds of Carraway, Coriander, and Anise, of each ℥j, in six pints of water, until reduced to three pints; then add ℔vj of treacle, and boil again for a few minutes; when the decoction is cold, add f℥ij of the Tincture of Opium.

ALBUMEN, the *White*. This is used for clarifying turbid liquors, *vid: Vinum*.

TESTA. The *Shell*, is similar to other absorbents, but is said to be less astringent.*

PAPAVERIS CAPSULÆ. L.E.D.

(*Papaver Somniferum.*) *Poppy Heads.*
(*Capsulæ Maturæ.*)

These are principally employed in anodyne fomentations, for which purpose ʒiv of the capsules are added to ovj of water, and reduced by boiling, to oij .

PILULÆ. *Pills.*

These are masses of a consistence sufficient to preserve the globular form, and yet not so hard as to be of too difficult solution in the stomach. The following general rules will enable the practitioner to select those substances, to which the form of pills

* For the Chemical, and Physiological history of the Egg, see Paris's Memoir. *Linnean Transactions*.

is adapted, and to reject those to which it is not suitable; as well as to direct the judicious preparation of them.

I. THE SELECTION OF SUBSTANCES.

1. *Suitable Substances* are, 1. All remedies which operate in small doses, especially if they be nauseous, as *gum resins*, *metallic salts*, &c. 2. Those which are designed to act slowly. 3. Those whose specific gravity is too great to allow their suspension in aqueous vehicles: *efflorescent* salts may be also exhibited in this form, but they ought to be first deprived of their water of crystallization, or the pills, composed of them, will fall into powder as they dry.

2. *Unsuitable Substances* are, 1. Those which operate only in large doses. 2. Which deliquesce. 3. Whose consistence is such as to require a very large proportion of dry powders, to afford them a suitable tenacity, as *Oils*, *Balsams*, &c. Many remedies which are incompatible with each other in solution, may be combined in pills, unless their medicinal powers be adverse, or their divellent af-

finities sufficiently powerful to overcome their state of aggregation.

II. THEIR FORMATION INTO MASSES.

The methods to be employed for reducing the ingredients of a pill to a mass of proper consistence, must depend altogether upon their nature, viz.

1. *Extracts* may be formed into pills, without any addition. Some *Gum-resins* become sufficiently soft by beating, or by adding a few drops of spirit, or *Liquor Potassæ*, and many *Resinous substances* may be reduced to a proper consistence by soap, although in prescribing this substance, its levity should be attended to, or otherwise the pills will be too bulky; in general, it will combine with an equal portion of any resinous powder, as *Rhubarb*, *Jalap*, &c.—*Light Vegetable Powders*, when beat up with syrup, form a mass not sufficiently coherent to roll out; hence, for this purpose, an extract is better adapted. *Metallic Preparations* may be formed into pills, by any extract, or conserve, by aromatic confection, or stiff mucilage; the crumb

of bread affords also a convenient *constituent* for those salts which are heavy, active in very small doses, or which are liable to be decomposed by other vehicles.

In selecting a *Constituent*, we should always endeavour to employ one, whose effects will best correspond with our curative indications.

2. Many dry substances react upon each other, and produce, without any addition, soft and appropriate masses; in prescribing pills, it is highly necessary to be acquainted with this chemical change, thus gum resins are softened by alkaline salts, or by camphor; and many salts, when rubbed together, produce liquid compounds. e. g. *Super-acetate of Lead* with *Sulphate of Zinc*; *Muriate of Ammonia* with *Sulphate of Soda*; *Super-acetate of Lead* with *Sulphate of Iron*; and *Sub-carbonate of Soda* with *Sulphate of Iron*, &c. The "*Pilulæ Ferri cum Myrrha*" of the London College afford a very striking example of this peculiar change of consistence, which the mutual reaction of the ingredients produce by simple triture.

3. In the formation of pills, their ingredients

should be hastily rubbed together, whenever they are liable to be injured by long exposure to the air; thus for example, in the formation of *Plummer's Pills* the calomel is rendered less active by too long continued triture.

III. THEIR FORM OF PRESCRIPTION.

In prescribing pills, it is necessary that the practitioner should accurately apportion the quantity of active materials, which he may wish them individually to contain; and since the proportion of the *constituens* can in no case be exactly known, and prescribed, the equable division of the whole mass into a given number of pills should be directed, and not the weight of each defined—e. g.

R. Pulv: Aloes comp ʒj—*Basis*.

Pulv: Jalap: ʒij—*Adjuvans*.

Olei Carui. in x.—*Corrigens*.

Syrup: q. s.—*Constituens*.

fiant pil: xxx, quarum sumat duas, vel tres, adstricta alvo.

OBSERV: A pill ought not to exceed grs. v in

weight, or xij may be formed from 3j of the mass. They ought not to be prepared in too large a quantity at a time, for if long kept, they become so hard as to be scarcely acted on in the stomach, especially when they contain mucilage.

PIMENTÆ BACCÆ. L.E. (Myrtus Pimenta.)
Baccæ.

Pimento. D. *Pimenta Berries*—*Jamaica Pepper*.
All-spice.

QUALITIES. *Odour*, aromatic, and agreeable; *Taste*, warm and pungent. These qualities reside principally in the cortical part of the berry. CHEMICAL COMPOSITION. It contains a volatile oil, resin, extractive, tannin, and gallic acid. SOLUBILITY. Water, alcohol, and ether, extract its virtues. INCOMPATIBLE SUBSTANCES. *Sulphate of Iron, nitrate of silver, and superacetate of lead*, produce precipitates with its infusion. USES. It is principally employed to cover the disagreeable taste of other remedies; it is also a very useful adjunct to bitters, in dyspepsia. DOSE. grs. v to ʒij in powder, or infusion. OFFICIAL PREPARA-

TIONS. *Aq: Piment: L.E.D. Ol: Piment: L.E.D.*
*Pil: Opiat: E. Syrup: Rhamni. L.**

PIPERIS LONGI BACCÆ. L.E.D. *Long*
Pepper.

The chemical and medicinal properties of this substance are similar to those of black pepper, *which see.*

PIPERIS NIGRI BACCÆ. L.E.D. *Black* *Pep-*
per.

CHEMICAL COMPOSITION. An oily matter, which appears to be the source of its odour, and taste; fecula, and extractive. SOLUBILITY. Its virtues are entirely extracted by æther, and alcohol, and partially by water. Uses. It appears to be a more general and permanent stimulus than other spices of equal pungency on the palate; it may be combined with bitters, and exhibited in nausea, retrocedent gout, or as a stimulant in paralysis; it is also a valuable coadjutor to bark in obstinate in-

* RYMER'S CARDIAC TINCTURE. This is nothing else than a spirituous tincture of *Allspice*.

mittents. DOSE. grs. v, to ʒj or more. OFFICINAL PREPARATIONS. *Emplast Meloes vesicat: comp: E. Unguent: Piper: nigr: D.**

PIX ARIDA. L. (Pinus Abies
Resina Concreta.)

Pix Burgundica. E.D. *Burgundy Pitch.*

This substance is procured by making incisions through the bark of the fir, whereas *frankincense* is a spontaneous exudation from it. USES. It is now entirely confined to external use, as a rubefacient spread upon leather. OFFICINAL PREPARATIONS. *Emplast: Pic: Burgund: D.* ADULTERATIONS. A factitious sort is made in England, which may be distinguished by its friability, want of viscidness, and unctuousity; and the odour which characterizes the genuine specimens.

PIX LIQUIDA. L.E.D. (Pinus Sylvestris.
Resina Præparata.)

Tar.

* WARD'S PASTE. The following is the receipt for preparing this celebrated composition.—Take of Black Pepper, and Elecampane powdered, equal parts, lbj; of the seeds of Fennel, lbij; of Honey, and Sugar, equal parts, lbij; beat, and well mix together all the ingredients, in a mortar.

CHEMICAL COMPOSITION. Empyreumatic oil, resin, and acetic acid; its black colour is derived from the charring of the wood during its formation. SOLUBILITY. Water readily dissolves a portion of it, the solution has the colour of Madeira wine, and a sharp empyreumatic taste; it was first recommended by Bishop Berkley as an useful remedy in cutaneous affections, and humoral asthma. Dose, *oj* to *oij* daily. OFFICINAL PREPARATION. *Aq: Pic: Liquid: D.*

PLUMBI CARBONAS. L. (Sub-carbonas Plumbi.) Oxydum Plumbi album. E. Cerussa, Sub-acetas Plumbi. D. *White Lead.*

CHEMICAL COMPOSITION. The composition of this substance is not exactly understood, and hence the different appellations which it has received from the colleges. SOLUBILITY. It is insoluble in water, but soluble in pure potess. USES. It is only employed externally. OBSERV: This substance may be economically prepared as follows: dissolve litharge in weak nitric acid, and precipitate the lead by means of an alkaline carbonate; afterwards wash the precipitate till all the acid is re-

moved. OFFICINAL PREPARATIONS. *Unguent: Ceruss: D. Ung: Oxid: Plumb: alb: E.* ADULTERATIONS. *Chalk* may be detected by cold acetic acid, and by adding, to this solution, oxalic acid; *Carbonate of Barytes* by sulphate of soda added to the same solution, very largely diluted with distilled water; and *Sulphate of Barytes*, or *Sulphate of Lead*, by the insolubility of the *cerusse* in boiling distilled vinegar.

PLUMBI OXYDUM SEMI-VITREUM. L.E. *Lithargyrum. D. Litharge.* This substance is employed only in forming the other preparations of lead, and the following officinal plasters, *Emplast: Plumb: L.E.D. Cerat: Sapon: L.*

PLUMBI SUPER-ACETAS, olim *Cerussa Acetata. L. Acetis Plumbi, olim Saccharum Saturni. E. Acetas Plumbi. D. Vulgo, Sugar of Lead.*

QUALITIES. *Form*, irregular masses, composed of acicular prisms, which slightly effloresce; *Taste*, sweet, and astringent. CHEMICAL COMPOSITION. Oxide of lead 58, acetic acid 26, water 16, as the acid is in excess, the salt reddens vegetable blues.

SOLUBILITY. It is dissolved by 25 parts of water, but in consequence of the very powerful affinity of the water for its acid, a slight decomposition ensues, and the solution therefore is not transparent; this, however, may be prevented by the addition of a few drops of acetic acid; it is soluble also in alcohol. **INCOMPATIBLE SUBSTANCES.** *The alkalies; alkaline earths, and their carbonates; most of the acids; alum; borax; super-tartrate of potass; sulphate of magnesia; soaps; all sulphurets; ammoniated, and tartarized iron; tartarized antimony; sulphates of zinc, copper, and iron; hard water: the solution of acetate of ammonia, in consequence of the carbonic acid which is diffused through it, decomposes also this salt.* **FORMS OF EXHIBITION.** It is best administered in the form of pill, conjoined with opium; externally, it is employed in cataplasms, collyria, injections, lotions, powders, and unguents. **DOSE;** when internally exhibited, it should not exceed grs.; as a collyrium, or lotion, ℥j may be dissolved in fʒviij of distilled water, and a few drops of distilled vinegar added, to prevent decomposition. **OFFICINAL PREPARATIONS.** *Cerat: Plumb: super-acetat: L.E.D.* **ADULTERATIONS.**

Acetate of Lime may be detected by adding to a dilute solution the oxalic acid.

PORRI RADIX. L. (*Allium Porrum.*) *Leek Root, or Bulb.*

The acrimony of this remedy, and consequently much of its virtue, is lost by heat, or by decoction, not however by simple exsiccation: its expressed juice, which consists of an acrid volatile oil, combined with a large proportion of mucilage, is mixed with sugar, and often successfully exhibited as a diuretic in dropsy, and humoral asthma.

POTASSA CUM CALCE. L.E. Kali Cauticum cum Calce. D. *Potass with Lime.*

The addition of lime to potass renders it less deliquescent, and more manageable as an escharotic.

POTASSA FUSA. L. Potassa. E. Kali Cauticum. D.

* "ROYAL PREVENTITIVE." This pretended prophylactic against the contagion of gonorrhea, is a solution of *superacetate of Lead.*

QUALITIES. *Form*, a white brittle substance, extremely caustic, and deliquescent. SOLUBILITY. f̄j of water dissolves ʒvj; it is soluble also in alcohol. It is a most powerful caustic, (*causticum commune acerrimum*) and is frequently employed to establish an ulcer, or, instead of incision, to open a tumour; it has been also recommended, in preference to other escharotics, to prevent the effects from the bite of a rabid animal: as an internal remedy, it is employed only in solution. LIQUOR POTASSÆ, L.E.D. as prepared, is not a simple solution, but contains small portions of muriate, and sulphate of potass, silica, and lime. INCOMPATIBLE SUBSTANCES. *Acids*, and *acidulous salts*. USES. It adds very considerably to the power of different menstrua, and corrects the drastic acrimony of many resinous purgatives; combined with the infusions of vegetable bitters, it often improves their anti-dyspeptic virtues, although it weakens their astringency; it also deepens their colour, and by rendering them transparent, contributes much to their elegance: its lithontriptic powers have also been much extolled, but a chemical enquiry has furnished some formidable arguments against its employment. 1. *Its agency is confined to those cal-*

culi which are combinations of uric acid, and since these bodies are generally composed of a variety of ingredients, the action of alkalies is often liable, from a partial solution, to convert a smooth calculus, into a rough and highly irritating body.

II. *The phosphates of lime, and magnesia, which exist in the urine, are retained in solution, by an excess of acid*, on this account, the exhibition of alkalies, instead of dissolving the existing calculus, may favour the deposition of fresh materials: to determine whether the calculus contains *uric acid*, Fourcroy advises us, after having previously evacuated the bladder, to inject into it a tepid, and extremely dilute solution of potass, which after remaining about an hour, should be drawn off, and allowed to subside; if upon the addition of muriatic acid, a precipitate appears, we may conclude that the calculus contains *uric acid*, and has been acted upon by the alkaline solution. Dose of the solution may be from $\text{m}\times$ to $\text{f}\mathfrak{z}\mathfrak{ss}$, administered in milk, chicken broth, vegetable infusion, or in the almond mixture. IMPURITIES. *Carbonic Acid* is detected by an effervescence, on adding diluted sulphuric acid; an exact wine pint of it ought to weigh $\mathfrak{z}\text{xviiij}$ troy.

POTASSÆ ACETAS. L. Acetis Potessæ. E.
Acetas Kali. D. *Acetate of Potass.*

QUALITIES. *Form*, white masses of a foliated, soft texture, and extremely deliquescent; *Odour* slight, and peculiar; *Taste* warm, and sharp. CHEMICAL COMPOSITION. Acetic Acid 38.5. Potass 61.5. SOLUBILITY. $\text{f}\overline{3}\text{j}$ of water dissolves grs. 504; it is soluble in twice its weight of alcohol: its watery solution is spontaneously decomposed. INCOMPATIBLE SUBSTANCES. It is decomposed by *tamarinds*, sub-acid fruits, and almost every acid, as well as every variety of neutral salt, whether *alkaline*, *earthy*, or *metallic*. FORMS OF EXHIBITION. It is not adapted for either powder, or pills, but should be always given in solution. Dose, as a diuretic, ʒj to $\overline{3}\text{j}$ — $\overline{3}\text{ij}$ or ʒiij act as an aperient. OBSERV: By putting $\overline{3}\text{j}$ of this salt into a phial with a few drops of some fragrant oil, and mxx of concentrated sulphuric acid; a preparation is extemporaneously formed, very similar in its odour, and effects, to *aromatic vinegar*.

POTASSÆ CARBONAS. L. *Carbonate of Potass.*

QUALITIES.. *Form*, small tetrahedral, rhomboidal prisms, which are permanent in the air; *Taste* slightly alkaline, without acrimony. CHEMICAL COMPOSITION. Potass 40, carbonic acid 40, water 20, notwithstanding the name of the salt, the alkali always predominates. SOLUBILITY. It is soluble in 4 parts of cold, and in 5-6ths of its weight of boiling water, in which it is decomposed, carbonic acid gas being emitted during its solution: it is quite insoluble in alcohol. USES. It is only employed for forming effervescing draughts, for which purpose, it is preferable to the sub-carbonate, on account of the increased quantity of carbonic acid which it contains: *vid: Acidum Citricum, and Potassæ Supertatras.* INCOMPATIBLE SUBSTANCES. *Acids, and acidulous salts; borax; muriate, and acetate of ammonia; alum; muriate of lime; sulphate of magnesia; lime water; nitrate of silver; ammoniated copper; muriate of iron; acetite, sub-muriate, and oxy-muriate of mercury; super-acetate of lead; tartarized iron; tartarized antimony; sulphates of zinc, copper, and iron.*

POTASSÆ NITRAS. L. Nitras Potassæ. E.
Nitrum. D. Nitre, or Salt Petre.

QUALITIES. *Form* hexahedral prisms, which are permanent; *Odour* none; *Taste* bitter, and sharp. CHEMICAL COMPOSITION. Potass 57·8, nitric acid 44, water 4·2. SOLUBILITY. f3j of water dissolves 3iſs, and great cold is produced during the solution: it is insoluble in alcohol. INCOMPATIBLE SUBSTANCES. *Alum; sulphate of magnesia; sulphuric acid; sulphates of zinc, copper, and iron:* from the usual laws of affinity, it should be also decomposed by *sulphate of soda*, this however only takes place at the temperature of 32°, and then but slightly. FORMS OF EXHIBITION. It may be either given in solution, in substance, or in a bolus. Dose, grs x to xv, as a diuretic, or refrigerant; grs. xxv to xl are aperient: a solution of 3j of nitre in f3vj of rose water, forms a good detergent gargle. In large doses, it excites vomiting, and bloody stools, in which case opium, and aromatics are the best antidotes. IMPURITIES. As it occurs from the hand of nature it is far from pure, and even by art it is freed with difficulty from sea salt; the quantity of this impurity in any specimen, may be learnt by adding nitrate of silver to its solution as long as any sediment is produced, every 100 grs. of which will, when dried, indicate 42½ of muriate of soda.

POTASSÆ SUB-CARBONAS. L. Carbonas Potassæ. E. Sub-carbonas Kali. D.

QUALITIES. Coarse white grains, very deliquescent. CHEMICAL COMPOSITION. Potass 60, carbonic acid 30, water 6, *sulphate of potass, muriate of potass, siliceous earth, and alumina* 4 parts. SOLUBILITY. It is dissolved by twice its weight of water; it is insoluble in alcohol; with oils it combines, and forms soaps. INCOMPATIBLE SUBSTANCES are already enumerated under the history of Carbonate of Potass, *which see*. USES. It is employed for making effervescing mixtures. *vid: Acid: Citric:* when exhibited as an antacid, its taste is best covered with milk. DOSE. grs. x to ʒʒ: externally, it is employed as a lotion in cutaneous affections, and in *Rachitis*, in the proportion of ʒij, to fʒviiij of water.

POTASSÆ SULPHAS. L. Sulphas Potassæ, olim *Tartarum Vitriolatum*. E. Sulphas Kali. D.

QUALITIES. *Form*, small, transparent crystals, which are very variable in their figure, they slightly effloresce, and when heated, decrepitate. SOLUBI-

LITY. f3j of water dissolves only grs 24: it is insoluble in alcohol. INCOMPATIBLE SUBSTANCES. *Nitric, and muriatic acids; muriate of barytes; muriate of lime; lime-water; nitrate of silver; acetate, and super-acetate of lead.* FORMS OF EXHIBITION. On account of its very sparing solubility, it should be given in the form of powder. Dose; from grs. x to 3vj, according as it is intended to act as a deobstruent, or purgative. OFFICIAL PREPARATIONS. *Pulv: Ipecacuan: comp: L.E.D. Pulv: Scammon: comp: L.*

POTASSÆ SUPERSULPHAS. L. *Sal Enixum* of commerce.

CHEMICAL COMPOSITION. Sulphate of potass 37, excess of acid 33. SOLUBILITY. It is soluble in twice its weight of water, and also in alcohol. USES. To afford a convenient mode of exhibiting sulphuric acid, combined with a saline purgative, in a solid form. DOSES. ʒj to 3ij.

POTASSÆ SULPHERETUM. L.E. Sulphuretum Kali. D. *Sulphuret of Potass, olim Hepar Sulphuris.*

QUALITIES. *Form*, a hard brittle mass; *colour*, liver brown; *Taste*, acrid and bitter; *Odour*, none, when dry, but if moistened, it yields the stench of sulphuretted hydrogen. CHEMICAL COMPOSITION. Sulphur, potass, and a portion of carbonic acid. SOLUBILITY. This substance, although soluble in water, is decomposed during its solution, the greatest portion is converted into an *hydroguretted sulphuret*, and a part into *sulphate of potass*. INCOMPATIBLE SUBSTANCES. *Acids; acidulous, earthy, and metallic salts*. FORMS OF EXHIBITION. Combined with soap, in the form of pills; as an antidote to arsenic, corrosive sublimate, and other metallic poisons, it should be exhibited in solution, in the proportion of 3j to f̄viiij of water. OFFICIAL PREPARATION. *Aqua Sulphureti Kali*. D.

POTASSÆ SUPERTARTRAS. L.E. Tartarum, Crystalli. D. *Supertartrate of Potass*. vulgo, *Cream of Tartar*.

QUALITIES. *Form*, small, irregular crystals; *Taste*, harsh, and acid. CHEMICAL COMPOSITION. Potass 33, tartaric acid 57, water 2: the acid is greatly in excess. SOLUBILITY. f̄3j of cold water

does not dissolve more than grs. $7\frac{1}{2}$, when boiling, grs. 15; it has been a pharmaceutical problem to render cream of tartar more soluble in water, and borax has been employed for this purpose; but the latter is by this means decomposed; the watery solution of this salt is spontaneously decomposed, and a mucus matter deposited. fʒj of alcohol dissolves grs. 7.

INCOMPATIBLE SUBSTANCES. *Alkalies; and alkaline earths.* FORMS OF EXHIBITION.

As a purgative, or hydragogue, it is best administered in substance, made into an electuary with syrup, or conserve; as a refrigerant, it should be given in solution; ʒj in oʒ of boiling water, flavoured with lemon peel and sugar, forms when cold, an agreeable cooling beverage, well known by the name of *Imperial*. DOSE of the substance ʒiv, to ʒvj; of the solution, a glass-full occasionally. As it decomposes the carbonate of potass, the union of the two salts afford an elegant effervescing draught; and since in the dry state their affinities are passive, they may be safely kept mixt in powder, and called into action by simple solution, e. g. R. *Potass: supertart: ʒj, Potass: carbonat: ʒiʒ, sacchari purificat: ʒij, tere simul, et sumat cum aquæ distillat: ʒx.*

OFFICINAL PREPARATIONS. *Pulv: Jalap: comp:*

E. *Pulv: Scammon: comp:* E. *Pulv: Sennæ comp:**

E. ADULTERATIONS. *Sulphate of Potass*, is the only substance with which this salt is likely to be adulterated, and may be detected by its greater degree of solubility, and by the solution affording with muriate of barytes, a precipitate which will be insoluble in muriatic acid.

POTASSÆ TARTRAS. L. *Tartras Potassæ olim, Tartarum Solubile.* E. *Tartaras Kali.* D. *vulgo Soluble Tartar.*

QUALITIES. This salt, although ordered to be crystallized, is generally kept in its granular form. *Taste*, bitter, and cool. SOLUBILITY. fssj of water dissolves 3ij : but when long kept in solution, its acid is decomposed, and its alkali remains in the state of a *sub-carbonate*: it is also readily soluble in alcohol. INCOMPATIBLE SUBSTANCES. *All acids, and acidulous salts; tamarinds, and other sub-acid vegetables, reduce it to the state of supertartrate.* It is decomposed also by *magnesia, barytes, and lime; acetate, and superacetate of lead; and ni-*

* SALT OF LEMONS consists of equal parts of cream of tartar, and superoxalate of potess.

trate of silver. FORMS OF EXHIBITION. It is usually exhibited with resinous purgatives, or senna, the griping properties of which, it corrects. Dose, 3j to ʒj.

PULVERES. L.E.D. *Powders.*

This is by far the most simple form of composition, and is more particularly adapted to those remedies which require the combination of all their principles in order to insure their full effects, as *jalap: uva ursi; ipecacuan,* &c. in prescribing it, the following general rules must be attended to.

I. The medicines which cannot be administered in this form are, I. Those which are nauseous, bitter, or acrid; II. require to be given in large doses; III. which deliquesce, as many salts, or soften, and become cohesive, by exposure to a warm air, as some gum-resins; IV. which contain in their composition much inactive matter.

II. In combining together medicinal substances, it should be remembered, that there are some, which even, in the dry state of powder, decom-

pose each other, or at least render each other inert; thus sulphur destroys the activity of mercurial salts; and alkali, or alkaline earths decompose the muriate of ammonia, whilst others again become liquid by simple contrition: *vid. Pilulæ.*

III. The degree of fineness to which different substances should be reduced, is a circumstance of very considerable importance: it is a curious fact, that the impalpable form is injurious, and even destructive to the efficacy of many medicines, as *cinchona*, *rhubarb*, *ipecacuan*, and *guaiac*; whilst to others, it imparts additional activity, as to *jalap*, and in general to compound powders, as *Dover's powder*.

IV. The disintegration of a substance is much accelerated by the addition of other materials; "*celerior atque facilius succedat composita quam simplex pulverisatio.*" Thus camphor is more easily powdered when moistened by spirit. Many vegetable substances by their mixture with sugar, as *musk*, &c. and several gum resins, as *assafætida*, *sagapenum*, *opoponax*, *scammony*, &c. by the addition of a few drops of almond oil.

V. The Dose of a powder should not exceed ʒj; when taken, it should be diffused in water, wine, or any other convenient vehicle.

OBSERV: All powders should be kept in opaque, or green bottles, as they are affected by the agency of light, and air.

PULVIS ANTIMONIALIS. L.D. Oxidum Antimonii cum Phosphate Calcis. E. *Antimonial Powder.*

CHEMICAL COMPOSITION. This preparation is intended as the succedaneum of *Dr. James's Fever Powder*, both of which consist of the phosphate of lime, mixed, or perhaps chemically combined with an oxide of antimony, of which, a portion is vitrified, and it is probable, that the difference of the two remedies depends only upon the quantity of oxide which is vitrified: the specification of the original medicine is worded with all the ambiguity of an ancient oracle, and cannot be prepared by the process described. James's powder is less active than its imitation in the ratio of 3 to 4; it affects the bowels, and stomach very slightly, and passes off more readily by perspiration, in general,

however, the difference is so inconsiderable, that we need not regret the want of the real receipt of the inventor. FORMS OF EXHIBITION. As it is quite insoluble in water, it should be given in powder, or made into pills. Dose. grs. iij to viij.*

PULVIS IPECACUANHÆ COMPOSITUS.

L. D. Pulvis Ipecacuanhæ et Opii; olim *Pulvis Doveri*. E.

This compound affords one of the best examples of the power which one medicine has of modifying the action of another. CHEMICAL COMPOSITION. 1 part of ipecacuan, 1 of opium, and 8 of sulphate of potass; the activity of the remedy appears to depend very much upon its being finely powdered, hence the use of the sulphate of potass, which divides the particles of the opium and ipecacuan, and mixes them more intimately. Dose, grs. x to ʒj.

QUASSIA. L.E.D. (Quassia Excelsa). *Quassia*.
Lignum.

* JAMES'S ANALEPTIC PILLS. These are composed of James's powder, gum ammoniacum, and pill of aloes with myrrh, equal parts; Tincture of Castor Q. S.

QUALITIES. *Odour*, none; *Taste*, intensely bitter, CHEMICAL COMPOSITION is very obscure, it contains a principle very analogous to resin, and the name of *bitter principle* has been sometimes given to it. SOLUBILITY. Its bitterness is equally extracted by water, and by alcohol. INCOMPATIBLE SUBSTANCES. *Nitrate of silver*, and *acetate of lead* throw down precipitates from its infusions, but the salts of iron produce no change in them. FORMS OF EXHIBITION. Infusion is the most efficient form; ʒij infused in fʒviiij of water during the night, will furnish a fully saturated infusion. OFFICIAL PREPARATION. *Infus: Quassiae. L.* Tinct: Quassiae. D.*

QUERCUS CORTEX. L.E.D.
(*Quercus Pedunculata.*) *Oak Bark.*
Cortex.

QUALITIES. *Odour*, none; *Taste*, rough and astringent. CHEMICAL COMPOSITION. Gallic acid,

* An infusion of quassia is a most active poison to flies: I have repeatedly witnessed the fact; and several friends to whom I have communicated it, have experienced a similar result: whether it proves equally deleterious to other insects, I have never ascertained.

tannin, and extractive. SOLUBILITY. Its virtues are alike extracted by alcohol, and by water. INCOMPATIBLE SUBSTANCES. *Solution of isinglass; infusion of yellow cinchona bark; acetate, and superacetate of lead; the preparations of iron:* Precipitates are also occasioned by *oxymuriate of mercury, and sulphate of zinc*, but they take place very slowly; all *alkaline substances* destroy the astringency of oak bark, and are consequently incompatible with it. FORMS OF EXHIBITION. Decoction is the most usual and best form; on account of the difficulty with which it is pulverized, it is rarely exhibited in substance. OFFICINAL PREPARATIONS. *Decoct: Querc: L.*

RESINA FLAVA. L. Resina Pini. E. Resina Alba. D. *Common Yellow Resin.*

This is the residue of the distillation of turpentine: it is used only in the composition of cerates and plasters.

RHEI RADIX. L.E.D. *Rhubarb.*

There are two varieties of rhubarb known in the shops, viz. *Turkey or Russian, and East Indian or Chinese.*

1. TURKEY, or RUSSIAN, (*Rheum Palmatum*.)

QUALITIES. *Form*, small round pieces, perforated in the middle; *colour*, lively yellow, with streaks of white; it is easily pulverized, and affords a powder of a bright buff colour. CHEMICAL COMPOSITION. Gum, resin, extractive, tannin, and gallic acid: the white streaks consist of sulphate, and oxalate of lime: the extractive matter is the chief repository of its virtues; but its aroma apparently consists in the resin; and when rhubarb has lost the aroma, its purgative powers are greatly diminished. SOLUBILITY. Water at 212° takes up 24 parts in 60, but by long decoction, it loses its purgative qualities, and becomes bitter and astringent; alcohol extracts 2·7 from 10 parts, and the tincture is more astringent and aromatic, but less purgative than the infusion; the watery extract, therefore, is less powerful than the powder, but the spirituous extract is nearly of the same strength. INCOMPATIBLE SUBSTANCES. *Salts of iron* strike a black with its infusion: *alkalies, alkaline earths*, and *neutral salts*, change its yellow colour to red, and render it more quick and mild as a cathartic, but less powerful as an astringent. FORMS OF EXHIBIT.

TION. Its cathartic property is most efficient when given in substance. Toasting rhubarb was supposed to add to its astringency, but it only diminishes its purgative power, so that a larger dose may be taken. Dose, ℥j to 3℥s as a purgative; from grs. vj to x as a tonic: sprinkled upon ulcers, it promotes their healthy granulation. OFFICINAE PREPARATIONS. *Infus: Rhei.* L.E. *Vinum Rhei Balmati.* E. *Tinct: Rhei.* L.E.D. *Tinct: Rhei comp:* L. *Tinc: Rhei cum Aloë.* E. *Tinct: Rhei cum Gentian:* E. *Pil: Rhei comp:* E.

2. EAST INDIAN, or CHINESE. (*Rheum Undulatum?*)

QUALITIES. *Odour*, stronger; *Taste*, more nauseous; white streaks are less numerous; and it affords a powder of a redder shade than the *Turkey* rhubarb. CHEMICAL COMPOSITION. It differs from the *Turkey* in containing less tannin, oxalate of lime, and resin, but more extractive, and gallic acid: its medicinal powers are similar to those of the *Turkey*, except that it is more active as a purgative, and less powerful as an astringent.

RICINI OLEUM. L.E.D. (*Ricinus Communis.*) *Castor Oil.*

This oil has all the chemical characters, and affinities of the other expressed oils, except that it is almost completely soluble in sulphuric æther, and is the only one which possesses any medicinal activity. FORMS OF EXHIBITION. The most efficacious method of administering it is floating upon peppermint, or some other spirituous water; it is also sometimes taken in coffee, or mutton broth; or suspended in water, by the intermedium of the yolk of egg, or by an equal weight of the mucilage of gum arabic; *gum tragacanth* is incapable of producing an elegant mixture; alkalies, although they form an emulsion with it, convert it into a saponaceous compound, and impair its cathartic powers. Dose, fʒʒs or more.

ROSA GALLICA, L.E. Rosa Rubra, D. Red Rose.

This is principally employed in the form of infusion, combined with sulphuric acid; (*Infus: Ros:*) it owes little else than colour, and a pleasant flavour, to the petals of the rose; the astringency depending almost entirely on the sulphuric acid. INCOMPATIBLE SUBSTANCES. All those remedies

which are decomposed by the *sulphuric acid*; the *sulphates of iron and of zinc* do not immediately alter the infusion, but they slowly produce dark-coloured precipitates. NOTE. The acidity of the present "infusion of roses" is to that of the former pharmacopœia as 3 to 2.*

SACCHARUM. L.E.D. *Sugar.*

Sugar as a pharmaceutical agent is employed for accelerating the pulverization of various resinous substances, and when exhibited with the most acrid of them, prevents their adhesion to the coats of the intestines, by which they irritate and inflame them. Vide *Syrupi*.

SAGAPENUM. L.E.D.

(*Plantæ nondum*
descriptæ, gummi resina.) *Sagapenum.*

* MADDEN'S VEGETABLE ESSENCE is little more than the "*Infusum Rosæ*" of our Pharmacopœias. The proprietor, in terming this the *Essence of Vegetables*, forgets that *Sulphuric Acid* is a mineral production.

MILK OF ROSES. This empirical cosmetic is composed of rosewater oj, olive oil fʒiſs, sub-carbonate of potass ʒiſ.

QUALITIES. *Form*, masses of a brownish yellow colour; *Odour*, slightly foetid; *Taste*, pungent, and nauseous. CHEMICAL COMPOSITION. Gum and resin, and an essential oil on which its virtues depend. SOLUBILITY. Boiling water dissolves about $\frac{3}{4}$ ths of it, rectified spirit $\frac{1}{2}$, and in proof spirit it is almost completely soluble. FORMS OF EXHIBITION. It is usually given in substance, made into pills; it may also be diffused in water by triturating it with twice its weight of gum arabic. DOSE, grs. x to 3j. OFFICINAL PREPARATIONS. *Pil: Galban: comp: L.*

SALIX. L. (*Salix Caprea*) *Willow Bark.*
Cortex.

QUALITIES. *Odour*, none; *Taste*, bitter, and astringent. CHEMICAL COMPOSITION. Tannin, extractive, bitter resin, and gluten. SOLUBILITY. Water extracts its virtues; alcohol also affords an active tincture, but by the addition of water it becomes turbid. INCOMPATIBLE SUBSTANCES. *Carbonates of potass, and ammonia; lime water; isinglass; the salts of iron.* FORMS OF EXHIBITION. It should be always given in decoction: \mathfrak{zj} of the

root, boiled with f \bar{z} xij of water until reduced to f \bar{z} vj, will furnish a fully saturated solution.

SAPO. L.E.D. *Soap.*

1. DURUS. (*Hispanicus.*) *Hard, or Spanish Soap.*

CHEMICAL COMPOSITION. Oil 60.94, soda 8.56, water 30.50, the water is partially dissipated by being kept, and the soap therefore becomes lighter.

SOLUBILITY. Water dissolves about 1-3rd of its weight of genuine soap, and forms a milky solution, alcohol also dissolves it, and affords a solution, nearly transparent, although somewhat gelatinous.

INCOMPATIBLE SUBSTANCES. 1. All acids, and acidulous salts; e. g. *Sulphuric acid, acetic acid; supertartrate of potass.* 2. Earthy salts. *Alum, muriate, and sulphate of lime; sulphate of magnesia.* 3. Metallic salts. *Nitrate of silver; ammoniated copper; tincture of muriated iron; ammoniated iron; acetite, submuriate, and oxy-muriate of mercury; superacetate of lead; tartarized iron; tartarized antimony; sulphates of zinc, copper, and iron.* 4. All astringent vegetables. 5. Hard water. FORMS OF EXHIBITION. When intended to act as an antidote to

metallic poisons, it should be always given in solution in distilled water; in all other cases the form of pill is to be preferred. As a pharmaceutical agent it is sometimes employed as an intermede for mixing oily fluids, but in this respect it is inferior to the pure alcali, or even mucilage; it is also used in making pills. See *Pilulæ*. OFFICIAL PREPARATIONS. *Pil: Sapon: cum opio.* L. *Pil: Scill: comp:* L. *Pil: Aloëtic:* E. *Pil: Aloës, et Assafætid:* E. *Pil: Aloës cum zinzib:* D. *Pil: Colocynth: co.* D. *Emplast: Sapon:* L.E. *Cerat: Sapon:* L. *Liniment: Sapon: co.* L. *Liniment: Sapon: cum Opio.* L.

II. SAPO MOLLIS. *Soft Soap.*

This differs from *hard soap*, chiefly in its consistence; the alcali employed for its formation is potass instead of soda.

SARSAPARILLA. L.E.D.

(*Smilax Sarsaparilla.*) *Sarsaparilla.*
Radix.

QUALITIES. *Odour* none; *Taste* mucilaginous, and slightly bitter. CHEMICAL COMPOSITION. Its

virtues appear to reside in fecula. SOLUBILITY. It communicates its active matter to boiling water, and partially to spirit. INCOMPATIBLE SUBSTANCES. It is precipitated by *lime water*, *nitrate of mercury*, and *super-acetate of lead*, but by no other metallic preparation. FORMS OF EXHIBITION. It is usually given in decoction. OFFICINAL PREPARATIONS. *Decoct: Sarsaparill: L.E.D. Decoct: Sarsaparill: comp: D. Extract: Sarsaparill: L.*

SASSAFRAS. L.E.D. (*Laurus Sassafras.*
(Lignum, Radix, et Cortex.))

The Wood, Root, and Bark of Sassafras.

QUALITIES. *Odour* fragrant; *Taste* sweet, and aromatic. CHEMICAL COMPOSITION. The qualities of this plant depend upon an essential oil, and resin. SOLUBILITY. Its active parts are soluble in water, and spirit. FORMS OF EXHIBITION. It is often given in decoction, but the infusion is its best form, since by boiling, much of its oil is dissipated. OFFICINAL PREPARATIONS. *Oleum Sassafras. L.E.D. Decoct: Sarsaparill: comp: L.D. Decoct: Guaiac: L.E.D. Aq: Calcis comp: D.*

SCAMMONIA. L.E. (Convolvulus Scammonia.)
Gummi-Resina.*Scammonium.* D. *Scammony.*

QUALITIES. *Form*, blackish grey cakes; *Taste* bitter, and subacrid; *Odour* heavy, and peculiar. CHEMICAL COMPOSITION. This inspissated juice is composed of gum, resin, and a peculiar extractive matter. SOLUBILITY. Water, by trituration, takes up $\frac{1}{4}$ th, alcohol 2-3ds, and proof spirit dissolves all except the impurities. INCOMPATIBLE SUBSTANCES. Neither acids, metallic salts, nor ammonia, produce any change in its solutions, but the *fixed alkalies* occasion yellow precipitates. FORMS OF EXHIBITION. As it is highly irritating to the fauces, the form of pill is the best; it may however be exhibited in mixtures, and its operation is mitigated by trituration with almonds, camphor, or sugar. DOSE, grs. iij to xv. OFFICINAL PREPARATIONS. *Confect: Scammon: L.D. Pulv: Scammon: co. L.E. Extract: Colocynth: comp: L. Pulv: Sennæ co. L.* ADULTERATIONS. It is often sophisticated with *flour, sand, or ashes*; their presence may be discovered by dissolving the scammony in water, when the impurities will sink, and remain undis-

solved: those specimens which are friable, and become white when wetted, are the purest.

SCILLÆ RADIX. L.E.D. (*Scilla Maritima*.)
Squill Root. (Bulb.)

QUALITIES. *Odour* none; *Taste* bitter, nauseous, and acrid. CHEMICAL COMPOSITION. Extractive, albumen, bitter gum, a small proportion of resin, fecula, carbonate of ammonia, and oxalate of lime. SOLUBILITY. Water, wine, rectified, and proof spirit, and vinegar extract the virtues both of recent, and dried squills. INCOMPATIBLE SUBSTANCES. *Alkalies* diminish their acrimony, and bitterness; *vegetable acids*, produce no effect upon their sensible qualities, but are supposed to increase their expectorant power. FORMS OF EXHIBITION. To produce its expectorant, and diuretic effects, the form of pill is best adapted; but to excite vomiting, its infusion in vinegar, or the *oxymel* is more efficacious; its emetic tendency is counteracted by any aromatic addition. Dose of the dried root gr. j to iv, which are equivalent to grs. xx of the fresh root; of the *oxymel* ʒijj or more, when intended to act as an emetic. OFFICIAL

PREPARATIONS. *Acet: Scill: L.E.D. Oxymel: Scill: L.D. Pil: Scill: comp: L.E.D. Pulv: Scill: E.D. Syrup: Scill: maritim: E. Tinct: Scill: L.D.*

SENNÆ FOLIA. L.E.D. (*Cassia Senna.*)
Senna Leaves.

QUALITIES. *Odour*, faint, and sickly; *Taste* slightly bitter, sweetish, and nauseous. CHEMICAL COMPOSITION. Extractive matter, which is very oxidizable, in which its purgative power exists, and resin, upon which its griping property depends, mucilage, and some saline matter. INCOMPATIBLE SUBSTANCES. The infusion is precipitated by *strong acids, alkaline carbonates, lime water, nitrate of silver, oxy-muriate of mercury, super-acetate of lead, tartarized antimony, and an infusion of yellow cinchona bark*: in consequence of the powerful affinity of its extractive matter for oxygen, a yellow precipitate of oxidized extractive takes place even by simple exposure to the air for a few hours, which is not purgative, but gripes most violently, hence infusions of senna should be always extemporaneously made. FORMS OF EXHIBITION. Infusion is its

most usual form : as its griping property depends upon resin, it acts much more mildly when made with cold water ; by decoction, the extractive matter is oxidized, and consequently the purgative effect is diminished, and its exhibition is accompanied with severe tormina : if the senna be infused with bohea tea its nauseous quality is covered, and if in a decoction of guaiacum, its purgative quality is encreased, and the usual griping prevented ; it generally requires an *Adjuvans* to quicken its operation, as jalap ; or scammony : the addition of tamarinds renders the infusion more grateful, but diminishes its power. Dose of the infusion ʒj or more. OFFICINAL PREPARATIONS. *Confectio Sennæ*. L.E.D. *Extract Cassiæ Sennæ*. E. *Infus : Sennæ*. L.D. *Infus : Tamarind : cum Senna*. E.D. *Pulv : Sennæ, comp :* L. *Tinct : Sennæ*. L.D. *Tinct : Sennæ comp :* E* *Syrrip : Sennæ*. L.D. ADULTERATIONS. Those which appear bright, fresh, free from stalks, and spots, that are well, and strongly scented, smooth, and soft to the touch, thoroughly dry, sharp pointed, bitterish, and somewhat nause-

* DAFY'S ELIXIR. This is the *compound tincture of Senna* of the Edinburgh pharmacopœia, with the substitution of treacle for sugar candy, and an addition of aniseeds.

ous to the taste, are to be preferred. There are inferior sorts, but they are generally distinguished by their not being pointed, but more or less broad at the end.

SERPENTARIÆ RADIX. L.E.D. (Aristolochia Serpentaria.) *Virginia Snake Root.*

QUALITIES. *Odour* aromatic; *Taste* warm, and bitter. CHEMICAL COMPOSITION. The active principle resides in a bitter resin, and an essential oil. SOLUBILITY. Water, and alcohol extract all its virtues, but decoction dissipates them—the infusion even should be carefully performed in covered vessels, and when added to decoctions they should be previously cooled. INCOMPATIBLE SUBSTANCES. *Super-acetate of lead* throws down a precipitate, but no other salt affects it. FORMS OF EXHIBITION. It may be given in substance, but the powder soon loses its properties by being kept. Its infusion and tincture are the most usual forms. OFFICIAL PREPARATIONS. *Tinct: Serpent:* L.E.D. *Tinct: Cinchon: comp:* L.D. *Elect: Opiat:* E. ADULTERATIONS. The *Virginian asarum* is sometimes

sold for the snake root, but may be distinguished by its darker colour.

SIMAROUBÆ CORTEX. L.E.D.

(*Quassia Simarouba.*) *Simaruba Bark.*
Cortex.

QUALITIES. *Odour* none; *Taste* bitter, but not disagreeable. CHEMICAL COMPOSITION. Resin, extractive, and gum. SOLUBILITY. Cold water takes up all its active matter by a simple maceration; alcohol is a less perfect solvent. FORMS OF EXHIBITION. The powder is sometimes given in the dose of ℥j, but the infusion is by far its best form. OFFICINAL PREPARATION. *Infus: Simaroub: L.* DOSE, fʒij, in a larger dose it acts as an emetic.

SINAPIS SEMINA. (*Sinapis Nigra. L.*)
(*Sinapis Alba. E.D.*)

Mustard Seeds.

CHEMICAL COMPOSITION. Fecula, mucilage, a bland fixed oil, an acrid volatile oil, and an ammoniacal salt. SOLUBILITY. Unbruised mustard

seeds, when macerated in boiling water, yield only an insipid mucilage, which like that of linseed resides in the skin; but, when bruised, water takes up all their active matter, although it is scarcely imparted to alcohol. Uses. A table spoon-full of the unbruised seeds is given as a stimulant in dyspepsia, chlorosis, and paralysis, the best mode of exhibiting mustard, however, is in the form of *whey*, made by boiling a table spoon-full of the bruised seeds in oj of milk, and straining. Dose, fʒiv. The farina made into a paste, with crumbs of bread, and vinegar, is applied to the feet in the delirium of typhus, and in comatose affections. (*Sinapisms*.) If a table spoon-full or two of mustard be added to oj of tepid water, it operates as an emetic. OFFICINAL PREPARATIONS. *Cataplasm: Sinap: L. D. Emplast. Meloës: comp: E.**

* "WHITEHEAD'S ESSENCE OF MUSTARD," This nostrum, notwithstanding its name. is only composed of *oil of turpentine, camphor*, and a little *spirit of rosemary*.

WHITEHEAD'S ESSENCE OF MUSTARD PILLS. This consists of *balsam of tolu, and resin!*

SODÆ BORAS. L.E.D. (Sub-boras Sodæ.)
Borax.

QUALITIES. *Form* irregular, crystalline masses, approaching to the form of hexangular prisms; exposed to the air, it effloresces slowly, and slightly. CHEMICAL COMPOSITION. Boracic acid 39, soda 17, water 44, the acid, however, is not sufficient to saturate the alkali, and consequently the salt is a *sub-borate*. SOLUBILITY. f3j of water dissolves grs. xxiv; it is insoluble in alcohol. INCOMPATIBLE SUBSTANCES. It is decomposed by *Acids, potass*, and the *sulphates, muriates*, and *phosphates of the earths*, and of *ammonia*. FORMS OF EXHIBITION. It is not given internally, but is employed in the form of powder, mixed with 8 or 10 parts of honey, as a linctus in aphthæ, &c. OFFICIAL PREPARATION. *Mel Boracis*. L.

SODÆ SUB-CARBONAS. L. Carbonas Sodæ.
E.D.

QUALITIES. *Form*, large transparent crystals, which effloresce; *Taste* mild, but alkalescent.

CHEMICAL COMPOSITION. Soda 20, carbonic acid 16, water 64. SOLUBILITY. It is soluble in 2 parts of cold, and in considerably less than its weight of boiling water; it is insoluble in alcohol. INCOMPATIBLE SUBSTANCES. It is affected by the same substances which decompose the sub-carbonate of potass. FORMS OF EXHIBITION. It may be administered in solution, in an electuary, or in pills; when exhibited in the latter form, the salt should be deprived of its water of crystallization, (*Sodæ Sub-carbonas exsiccata*,) or the pills will fall into powder as they dry. This salt is more mild in its action than the sub-carbonate of potass, and is therefore preferable to it for internal use, it requires for its neutralization $\frac{1}{3}$ d less acid. DOSE, grs. x to ʒss. ADULTERATIONS. The same as those described under *sub-carbonate of potass*.

SODÆ CARBONAS. L. *Carbonate of Soda.*

What has been said under the history of *Carbonate of Potass*, applies with equal force to this article.*

* BURKITT'S SODAIC POWDER. This is prepared by triturating together ʒvj of *Tartaric Acid*, and ʒj of the Carbo-

SODÆ SULPHAS. L. Sulphas Sodæ. E.D.
Sulphate of Soda, vulgo. Glauber's Salt.

QUALITIES. *Form*, transparent, prismatic crystals, which effloresce; *Taste* saline, and bitter.
 CHEMICAL COMPOSITION. Soda 15, sulphuric acid 27, water 58. SOLUBILITY. fʒj of cold water dissolves ʒiiifs; in alcohol it is quite insoluble. INCOMPATIBLE SUBSTANCES. It is affected by the same salts which decompose the *sulphate of magnesia*. FORMS OF EXHIBITION. Like those of the *sulphate of magnesia*. OBSERV: The salt in an effloresced state is just equal in efficacy to double its weight of that which is in a crystalline form.*

nate of Soda. It is very evident that a solution of this powder is by no means similar to *Soda water*, for the *Soda* in the *Soda water* is not neutralized, but is a solution supersaturated with fixed air, whereas, the *sodaic powder* during its solution becomes a neutral salt, and in fact, is nothing more than *tartarized Soda* taken in a state of effervescence.

* CHELTENHAM SALTS. This popular purgative is made by triturating together the following salts. *Sulphate of Soda* grs. 120. *Sulphate of Magnesia* grs. 66. *Muriate of Soda* grs. 10. *Sulphate of Iron* grs. 2.

SODA TARTARIZATA. L. Tartris Potassæ et Soda. E. Tartarus Sodæ, et Kali. D. *Tartrate of Potass, and Soda, vulgo Rochelle Salt.*

QUALITIES. *Form*, crystals which are transparent, hard, large, rhomboidal, six-sided prisms; slightly efflorescent; *Taste* bitter, and saline. CHEMICAL COMPOSITION. Potass 14·3, soda 13·3, tartaric acid 41·3, water 31·1. SOLUBILITY. It is dissolved by 5 parts of cold water; in alcohol it is insoluble. INCOMPATIBLE SUBSTANCES. *Strong acids; vinegar; tamarinds; sulphate of magnesia; alum; super-acetate of lead; sulphates of zinc, copper, and iron; muriates of baryta, and lime.* DOSE, ʒj dissolved in any convenient vehicle, acts as a purgative: 3j acts as a diuretic.

SOLUTIO ACETITIS ZINCI. E. *Solution of Acetite of Zinc.*

This preparation is formed by adding 3 parts of the *sulphate of zinc* to 4 of the *superacetate of lead*, and dissolving them; the two salts exchange their principles, and the *acetate of zinc*, and *sulphate of*

lead are formed, the latter of which, being insoluble, may be separated by filtration, and a pure solution of the acetate of zinc, be thus obtained; it is however the opinion of my friend, and colleague Mr. Anthony White, that the great efficacy of this combination, as an injection in gonorrhœa, depends altogether upon the action of the insoluble sulphate of lead, which becomes entangled in the mucus of the urethra, and thereby produces a permanent, and salutary stimulus; if these views be just, the precipitate should be never removed from the solution, except probably when it is intended to act as a collyrium.

SOLUTIO MURIATIS BARYTÆ. E. *A Solution of Muriate of Barytes.*

This is a saturated solution, and possesses all the properties of the muriate; it was introduced into practice by Dr. Crawford, as a remedy in scrophulous affections, its virtues however are equivocal, and its extreme virulence renders it a very hazardous remedy; it was also formerly exhibited in the veterinary school of Paris, but its employment was soon suspended, upon discovering that it

produced the sudden death of several horses. INCOMPATIBLE SUBSTANCES. *Sulphuric acid; all alkaline phosphates, borates, and carbonates; and earthy, metallic, and alkaline sulphates, and nitrates.* DOSE, m v gradually increased to m xx twice a day.

SOLUTIO MURIATIS CALCIS. E. Aqua Muriatis Calcis. D. *Solution of Muriate of Lime.*

This preparation was introduced by Fourcroy as a substitute for the *muriate of barytes*, and it certainly acts more mildly, and more uniformly. INCOMPATIBLE SUBSTANCES. The lime is precipitated by the *sulphuric, nitric, phosphoric, and boracic acids; as well as by the neutral salts into which these enter: and by the alkalies, and alkaline carbonates.* DOSE. m xx to f3j in water, twice or thrice a day.

SPARTIUM. L.E. (Spartii Cacumina. L.)
 ——— Summitas. E.)
 Genista. D. *The Tops of Broom.*

SOLUBILITY. Water, and alcohol alike extract the virtues of this plant. It is one of the best diuretics, with which we are acquainted; a decoction of it, made by boiling ʒj of the green tops in

oj of water, until reduced to oʒss, affords the best method of administering it. Dose, fʒj often repeated. OFFICINAL PREPARATION. *Extract: Cacus: Genist: D.*

SPIRITUS AMMONIÆ. L.D. Alcohol Ammoniatum. E. *Spirit of Ammonia.*

This is a solution of ammoniacal gas in rectified spirit: it has the pungent odour, and acrid taste of ammonia, with which it coincides in its medicinal properties. OBSERV: This preparation when obtained by the present process contains 3 times as much ammonia as that procured according to the former pharmacopœia, and it is also much more acrid, and powerful, since its ammonia is not combined with any carbonic acid. Dose, fʒss. OFFICINAL PREPARATIONS. *Spirit: Ammon: comp: L.E.D. Spirit: Ammon: fœtid: L.E.D. Tinct: Castor: comp: E. Tinct: Guaiac: comp: E. Tinct: Opii ammoniat: E.*

SPIRITUS. L. Spiritus Stillatitii. E.D.

These are solutions of the essential oils of plants

in spirit. They are obtained by distilling spirit with the recent vegetables; sometimes however they are extemporaneously made, by at once dissolving the oils in the spirit, but when thus prepared, they become turbid on the addition of water.

USES. Like "*distilled waters*," they serve as vehicles for the exhibition of more active remedies, they are also occasionally employed as grateful stimulants. OFFICINAL PREPARATIONS. *Spirit: Anisi. L. Anisi comp: D. Armoracæ comp: L. Carui. L.E.D. Cinnamomi. L.E.D. Juniperi comp: L.D. Lavendulæ. L.E.D. Lavandulæ comp: L.E.D. Menth: Piperit: L.D. Menth: Virid: L. Myristic: L.E.D. Piment: L.D. Pulegii. L. Raphani comp: D. Rosmarini. L.E.D.*

SPIRITUS ÆTHERIS COMPOSITUS. L.
Compound Spirit of Æther.

This is intended as a substitute for the "*Anodyne Liquor of Hoffman*," although its composition was never revealed by him. Dose, fʒiʒ to fʒij.

SPIRITUS ÆTHERIS NITRICI. L. Ætheris Nitrosi. E. Æthereus Nitrosus. D. *Spirit of Nitric Æther, vulgo, Sweet Spirit of Nitre.*

QUALITIES. *Specific gravity*, 850; *Odour*, extremely fragrant; *Taste*, pungent, and acidulous; it is very volatile, and inflammable. **CHEMICAL COMPOSITION.** A portion of nitric ether, and nitric acid combined with alcohol. **SOLUBILITY.** It is soluble both in water, and alcohol; with a solution of green sulphate of iron, it strikes a deep olive colour. The Dublin preparation, in consequence of its distillation with alkali, must differ from the product obtained by the London, or Edinburgh process. **DOSE**, mxx, to xl, in any aqueous vehicle. **NOTE.** A small quantity added to malt spirits, is said to give them a flavour resembling that of *French Brandy*.

SPIRITUS RECTIFICATUS. L. Alcohol. E. Spiritus Vinosus Rectificatus. D. *Rectified Spirit*.

This is alcohol, nearly in the highest state of concentration, in which it can be easily prepared in the large way, for the purpose of trade; its specific gravity varies in the different pharmacopœias: *vid: Alcohol*: f3j of the London preparation weighs grs 390. **USES.** It is the proper solvent of the greater number of the proximate principles of vegetables:

in its undiluted state, it is never employed as a remedy.

SPIRITUS TENUIOR. L. Alcohol Dilutum.
E. Spiritus Vinosus Tenuior. D. *Weaker, or Proof Spirit.*

This is rectified spirit, diluted with a certain proportion of water: the *proof spirit* of the London and Dublin colleges, consists of 4 parts of rectified spirit, and 3 of water, by measure; whereas that of the Edinburgh college may be obtained by adding together equal parts of rectified spirit, and water. $\frac{f\text{ij}}$ of the London preparation weighs grs. 424. USES. It is generally better adapted for taking up the principles of vegetables than rectified spirit. *vid. Tincturæ.*

SUB-MURIAS HYDRARGYRI PRÆCIPITATUS. E. Sub-murias Hydrargyri Præcipitatum. D. *Præcipitated Sub-muriate of Mercury.*

This product, which is obtained by precipitation, is in the state of a very fine powder, whiter, and of much less specific gravity than the muriate, pre-

pared by sublimation, in other respects, it agrees with it, both in its chemical qualities, and medicinal effects. vid: *Hydrarg: Sub-murius*.

SULPHURETUM HYDRARGYRI NIGRUM.
E.D. *Black Sulphuret of Mercury, olim, Ethiop's Mineral.*

QUALITIES. *Form*, a black, impalpable, inodorous, and insipid powder. CHEMICAL COMPOSITION. Sulphur, and mercury slightly oxidized. SOLUBILITY. It is insoluble in acids, and water, but soluble in alkaline solutions. USES. As sulphur abates the power of all active metals, this medicine is the least active of all the mercurial preparations: as an anthelmintic, or alterative, it is given in a dose of grs. v or x. ADULTERATIONS. The mercury and sulphur should be so intimately combined, that no globules of the metal can be discovered by a magnifier; and that when rubbed on gold, no white stain may be communicated: the admixture of *ivory-black* may be detected by its not being wholly volatilized by heat.

STANNI LIMATURA. L.E.D. *The Filings of Tin.*

The anthelmintic properties of Tin have been explained by three different hypotheses. viz. 1. *That it acts mechanically, by dislodging the mucus from the intestines*: if this be true, it is difficult to explain why the activity of the metal should be increased by minute pulverization. 2. *That its efficacy depends upon the presence of arsenic*; if so, why should the purest specimens act with equal effect? 3. *That it operates by generating hydrogen gas in the intestinal canal*. This is the most plausible opinion, and we accordingly find that its combination with sulphur encreases its activity, a circumstance which probably depends upon the evolution of *sulphuretted hydrogen*. Dose. ʒj, or ʒj, mixed with honey, treacle, or conserve, and exhibited for several successive mornings; a mercurial purgative, being occasionally interposed. OFFICINAL PREPARATION. *Pulv: Stanni: D.*

SULPHUR SUBLIMATUM. L.E.D. *Sublimed Sulphur. Flowers of Sulphur.*

CHEMICAL COMPOSITION. It is, probably, a triple compound of oxygen, hydrogen, and some un-

known, and peculiar base. SOLUBILITY. It is insoluble in water, and alcohol; but is soluble in oils, especially in that of linseed, which is a powerful solvent of all sulphureous substances. USES. From its great insolubility in the stomach, its action as a laxative is slow, and is principally confined to the large intestines, hence it is a useful medicine in hemorrhoidal affections; when combined with metallic remedies, it generally diminishes their activity; thus *mercury*, *antimony*, and *arsenic* are rendered nearly inert by it: it is a specific in psora, and several other cutaneous affections; it transpires through the skin in the state of sulphuretted hydrogen, and blackens the silver in the pockets of those who take it. FORMS OF EXHIBITION. It should be given in substance mixed into an electuary with syrup, mucilage, or treacle, or in milk: its solution in oil (*Oleum Sulphuratum*) is also employed, but the preparation is both acrid, and nauseous: the precipitated sulphur, (*Sulphur Præcipitatum*. L.) differs in no other respect from sublimed sulphur, than in its superior whiteness, which it owes to the presence of a little water. DOSE ʒj to ʒiij. OFFICINAL PREPARA-

TIONS. *Sulphur Lotum.* L.E.D. *Sulphur Præcipitatum.* L. *Unguent: Sulphur:* L.E.D. *Unguent: Sulphur: comp:* L.

SYRUPI. L.E.D. *Syrups.*

These are solutions of sugar in water, watery infusions, or in vegetable juices: the proportion of sugar is, generally, two parts to one of the fluid; if it is more than this, the solution will crystallize, if less, ferment, and become acescent. They may be arranged according to the medicinal purposes which they are intended to answer, *viz.*

I. *To correct or disguise the flavour of disagreeable remedies.* Syrup: *Aurantii.* L.D.—*Rosæ.* L.E. *Simplex.* L.E. — *Tolatanus.* L.E. — *Zinziberis.* L.E.D. NOTE. *Bitter infusions, and saline solutions are rendered more nauseous by the addition of syrups.*

II. *To produce Medicinal Effects.* Syrup: *Allii.* D.—*Altheæ.* L.E.—*Acidi Acetosi.* E.—*Colchici.* E. — *Sennæ.* L.D.—*Scillæ Maritimæ.* E.—*Rhamni.* L.—*Papaveris.* L.E.D.—*Limonis.* L.E.D.

III. *To communicate peculiar Forms to Remedies.*
All the syrups answer this purpose

IV. *To communicate an agreeable Colour.* Syrup:
Crocī: L.—Rhæados. L.D. Caryophylli Rubri.
D.—Violæ. E. These are rendered green by alkalies, and red by acids. NOTE. The syrups which are printed in Italics, are very susceptible of decomposition.

TABACI FOLIA. L.E.

(Nicotiana Tabacum. Nicotianæ Folia.
Folia Siccata (*Virginiana.*)) D. *Tobacco Leaves.*

QUALITIES. *Odour*, strong, narcotic, and fœtid; *Taste* bitter, and extremely acrid; *Colour* yellowish green (its brown appearance is artificial, being produced by the action of *sulphate of Iron.*) CHEMICAL COMPOSITION. Mucilage, extractive, the bitter principle, an essential oil, on which its properties depend, nitrate of potass, which occasions its deflagration, and muriate of potass. SOLUBILITY. It yields its active matter both to water, and spirit, but most perfectly to the latter; long decoction weakens its powers. USES. This pro-

duction of a little island, or a little district in America, has fascinated the whole world; the Arab cultivates it in the burning desert; the Laplanders and Esquimaux risk their lives to procure this delicious refreshment; the seaman while he can enjoy this luxury, willingly endures every privation, and defies the fury of the raging elements, while the financier collects from it a copious revenue: yet its fame has suffered occasional diminution, for it has been opposed by physicians, and proscribed by governments. From its narcotic property arise all its medicinal virtues, as well as its fascination. An infusion of 3j to oj of water, wine, or spirit, will afford a solution which may be given in doses of m lx. The leaves, when applied in the form of cataplasm to the *scrobiculus cordis*, produce an emetic operation: in cases of obstinate constipation, especially when the result of spasm, clysters of the smoke of tobacco produce almost instantaneous relief; vomiting is not an unusual attendant upon this practice, which is peculiarly useful in *ileus*, and *hernia*; the watery infusion of the strength of 3j of the dried leaves to oj of tepid water, affords a more convenient form than the smoke. The well known errhine, called *Snuff*, is

prepared from the dried leaves; in the manufacture of it, however, numerous additions are made, which are kept secret, salt is added for the purpose of increasing its weight, and urine to heighten its acrimony; the varied flavour of different *snuffs* is owing to the leaf being in greater, or less perfection; or to its having undergone some fermentation. In *smoking*, the oil is separated, rendered empyreumatic by heat, and thus applied to the fauces, and lungs in its most active state. OFFICIAL PREPARATIONS. *Vin: Nicotian: Tabac: E. Infus: Tabac: L.*

TAMARINDI PULPA. L. Fructus Conditus. E.D. *The Pulp, or preserved Fruit of the Tamarind.*

QUALITIES. *Taste*, sweetish acid; *Odour* none. CHEMICAL COMPOSITION. $\bar{3}$ j of tamarinds is composed of citric acid grs. 45, malic acid grs. 2, super-tartrate of potass grs. 15, together with sugar, gum, jelly, fecula, and woody fibre. USES. A pleasant febrifuge may be formed by infusing 1 part of tamarinds with 3 of water, or milk. OFFICIAL PREPARATIONS. *Confect: Cassia. L.E.D. Infus:*

Tamarind: cum Senna. E.D. CAUTION. Copper vessels should be never employed for the preparation of any compound which contains *Tamarinds*.

TARAXACI RADIX. L.E. (Leontodon Taraxacum.) *Dandelion.*

QUALITIES. *Odour* none; *Taste* bitter, and somewhat sweet, and acidulous. CHEMICAL COMPOSITION. The active principles consist of extractive, gluten, a bitter principle, (*not resinous*) and tartaric acid. SOLUBILITY. Water extracts its virtues much better than spirit. INCOMPATIBLE SUBSTANCES. *Infusion of galls; nitrate of silver; muriate of mercury; super-acetate of lead; sulphate of iron.* FORMS OF EXHIBITION. The watery extract is the most convenient form, and it may be either given in solution, or in pills; a decoction may be made by boiling ʒij of the root in oij of water, down to oj .* Dose of the extract grs. x to ʒi ; of the decoction fʒij . OFFICINAL PREPARATION. *Extract: Tarax: L.D.*

* The roots are roasted, and used at Gottingen, by the poorer people, for coffee, from which, a decoction of them, properly prepared, can hardly be distinguished.

TEREBINTHINA. *Turpentine.*

CHEMICAL COMPOSITION. Resin, and an essential oil: its qualities vary according to the species of Pine from which it is obtained, but they all possess the same medicinal and chemical properties. QUALITIES. *Consistence* semifluid, and tenacious; *Odour* aromatic; *Taste* pungent. They are inflammable; combine with fixed oils, and are entirely soluble in rectified spirit, but not at all in water. TEREBINTHINA CANADENSIS. *Canada Turpentine*, or *Canada Balsam* is obtained from the *Pinus Balsamea*. TEREBINTHINA CHIA. *Chian*, or *Cyprus Turpentine*, from the *Pistachia Terebinthinus*. TEREBINTHINA VULGARIS, from the *Pinus Sylvestris*; and TEREBINTHINA VENETA, *Venice Turpentine*, from the *Pinus Larix*. FORMS OF EXHIBITION. The turpentines may be either made into Pills with liquorice root, or suspended in water, by the intermedium of egg, or mucilage, for which purpose, 3j requires the yolk of an egg, or 3iss of gum arabic. DOSE. grs. x to 3j. They are however seldom employed, except as external applications.

TEREBINTHINÆ OLEUM. L.E.D. *Oil of Turpentine.*

QUALITIES. *Form* a limpid, and colourless liquid; *Odour* strong, penetrating, and peculiar; *Taste* hot, bitter, and pungent. SOLUBILITY. It is almost entirely insoluble in alcohol; in 6 parts of sulphuric ether, it dissolves completely; in all other respects it agrees with the other volatile oils. FORMS OF EXHIBITION. Mixed with four times its bulk of honey; its use communicates a strong violet odour to the urine: a mixture of mx l with $\text{f}\text{z}\text{iv}$ of almond oil, introduced upon cotton into the ears, is serviceable in cases of deafness, resulting from a diseased action of the ceruminiferous glands; as an anthelmintic it differs in its action from the other remedies which have been employed against the tape worm, by killing it before it expels it. Dose, mx to 3j to produce its diuretic effects; as an anthelmintic, $\text{f}\text{z}\text{ss}$ to $\text{f}\text{z}\text{ij}$, repeated every 8 hours till the worm is ejected; in these large doses, it is more easily taken, when exhibited uncombined. OFFICIAL PREPARATION. *Liniment: Terebinth: L.**

* DUTCH OF HAERLEM DROPS, consist of *Oil of Turpen-*

TINCTURÆ. L.E.D. *Tinctures*

These are solutions of such proximate principles of vegetable or animal matter, as are soluble in alcohol, and proof spirit. e.g. *sugar, resin, gum resin, extractive, tannin, cinchonin, camphor, volatile oils, several acids, and the narcotic principle*. Many tinctures, especially if made with rectified spirit, are decomposed, and precipitated by the addition of water, in which case, when added to aqueous vehicles, they will require trituration with mucilage, in order to suspend the resinous precipitate; those tinctures which are printed in italics become turbid by the affusion of water, but those only require the intermedium of mucilage, before which, a star is prefixed.—TINCTURES PREPARED WITH RECTIFIED

SPIRIT. **Tinct: Assafætid: L.E.*—**Benzoin: comp: L.E.D.*—**Castorei. L.E.*—**Guaiac: L.E.D.*—**Guaiac: Ammoniat. L.E.D.*—**TOLU. E.*—ABOVE PROOF. *Tinct: Aloës comp:—PROOF SPIRIT. Tinct: Angusturæ. D.*—*Aurantii. L.D.*—*Calumbæ. L.E.*—*Camphor: comp: L.E.*—*Capsici. L.*—*Carda-*

tine, guaiacum, spirit of nitric ether, and the oils of amber, and cloves.

mom: L.E.—Cascarill: L.D.—*Castorei*. D.—Catechu. L.E.D.—*Cinchonæ*. L.E.D.—*Cinchonæ*: comp: L.D. — Cinnamom: L.D. — Cinnamom: comp: L.E.D.—*Croci*. E.—*Digitalis*. L.E.D.—*Gent*: L.—*Hyoscyam*: L.E.D.—*JALAPÆ*. L.E.D.—*Kino*. L.E.D.—*Lyttæ*. L.E.D.—*Opii*. L.E.D.—*Scillæ*. L.D.—*Sennæ*. L.D.—*Sennæ* comp. E.—*Serpentariæ*. L.E.D.—*Valerian*: L.D.—*Valerian Ammoniat*: L.D.—*Tinct*: *Veratri alb*: E.—*Zinzib*. L.D.
 BELOW PROOF. *Tinct*: *Aloes*. L.E.D.—*Rhei* comp:
 OBSERV: Tinctures are not of very extensive use as remedies, except in cases where stimulants are indicated, for in general, the solvent acts more powerfully upon the living system, than the principles which it holds in solution, and, when continued for any length of time, lays the foundation of the custom of dram drinking. As the tinctures derive their names from the substances which constitute their bases, the different circumstances connected with their exhibition may be found under their specific appellations: the following however is the only form in which the salt is exhibited.

TINCTURA FERRI MURIATIS. L.E.D. *Tincture of Muriate of Iron.*

QUALITIES. *Colour*, brownish yellow; *Taste* styptic; *Odour* peculiar. CHEMICAL COMPOSITION. It is an alcoholic solution of muriate of iron, the iron being in the state of *oxymuriate*. INCOMPATIBLE SUBSTANCES. *Alkalies*, and *their carbonates*, *the infusions of astringent vegetables*; *mucilage of gum arabic*. USES. It is a preparation well adapted for all the diseases, in which chalybeates prove serviceable. Mr. Cline informs us, that *mx*, given every ten minutes till some sensible effect is produced, afford, in dysuria, speedy relief; externally, it is very efficacious in destroying venereal warts, either used alone, or diluted with a small proportion of water.

TORMENTILLÆ RADIX. L.E.D. (*Tormentilla Officinalis*.) *Tormentil Root*.

QUALITIES. *Odour* slightly aromatic; *Taste* austere, and styptic. CHEMICAL COMPOSITION. Its active matter is chiefly tannin. SOLUBILITY. Boiling water extracts all its virtues, so also does spirit. INCOMPATIBLE SUBSTANCES. *Solution of isinglass*; *the salts of iron*; *alkalies*, and *alkaline earths* destroy its astringency. FORMS OF EXHIBI-

TION. It may be given in substance, or in decoction, made by boiling ℥j of the root, in ovi of water, until reduced to oiv. Dose of the substance, grs. xx to xl; of the decoction, f℥j, thrice a day.

OFFICIAL PREPARATION. *Pulv: Cret: comp: L.*

TOXICODENDRI FOLIA. L.E. (*Rhus Toxicodendron*.) *Sumach Leaves, or, Poison Oak.*

QUALITIES. *Odour* none; *Taste* sub-acrid. CHEMICAL COMPOSITION. Gallic acid, tannin, and the narcotic principle, upon which its properties depend. INCOMPATIBLE SUBSTANCES. *The salts of iron.* FORMS OF EXHIBITION. The leaves are highly acrimonious, and require the greatest caution in their exhibition; they have been commended in paralysis by Dr. Alderson, who employed an infusion of grs vj, powdered, in f℥viij of boiling water; of which, he gave f℥iv, thrice daily. Dose of the leaves powdered, grs. iv, in the form of bolus.

TRAGACANTHA.

(*Astragalus Verus*. L. *Tragacanth*.
 ——— *Tragacantha*. E.)

QUALITIES. *Form* small wrinkled lumps, or vermicular pieces, semi-transparent, and brittle; *Odour*, and *Taste* none. SOLUBILITY. It is, strictly speaking, not soluble in water, it imbibes a large proportion of it, and swells into a considerable bulk, and forms a soft, but not liquid mucilage; on the farther addition of water, a fluid solution may be obtained by agitation, but the liquor is turbid; and, on standing, the mucilage subsides, the limpid water on the surface retaining little of the gum; it differs from all other gums in giving a thick consistence to a larger quantity of water, its power, in this respect, being to that of gum arabic as 20 to 1; one part converts 20 of hot water into a stiff mucilage. OFFICINAL PREPARATIONS. *Mucilag: Astrag: Tragacanth: E.D. Pulv: Trag: comp: L.*

TUSSILAGO. L.E.D. (Tussilago Farfora.)
Folia. Flores.)

Coltsfoot.

This plant is alone valued for the mucilage which it affords; a handful of the leaves boiled in oij, until reduced to oj, will furnish, by the addition of a little sugar candy, a very grateful decoction.

VALERIANÆ RADIX. L.E.D.

(*Valeriana Officinalis.*) *Valerian Root.*
Sylvestris.

QUALITIES. *Odour* strong, peculiar, and unpleasant; *Taste* warm, bitter, and sub-acrid. CHEMICAL COMPOSITION. Extractive, gum, resin, fecula, tannin, and a peculiar essential oil, which seems to contain camphor, and on which its virtues probably depend. SOLUBILITY. Its active matter is extracted by boiling water, alcohol, and solutions of the pure alkalies. INCOMPATIBLE SUBSTANCES. *The salts of iron.* FORMS OF EXHIBITION. The form of powder is most effectual, and next to this, a strong tincture made with proof spirit; when the flavour disgusts, a little mace renders it more grateful; by decoction, its powers are considerably impaired, and consequently the extract is an inefficient preparation. Dose of the powder ʒj, to ʒj; its powers appear to be increased by combination with bark. OFFICINAL PREPARATIONS. *Infus: Valerian: D. Tinct: Valerian: L.D. Tinct: Valerian: Ammoniat: L.D.* ADULTERATIONS. The roots of a species of crowfoot are sometimes mixed with those of valerian, they

may be discovered by a caustic taste on chewing; the roots have often also a disagreeable smell, from the urine of cats; and if not taken up at a proper season, and properly preserved, they become inert.

VERATRI RADIX. L.E. (*Veratrum Album*.)
Helleborus Albus. D. *White Hellebore Root*.

QUALITIES. *Odour* strong, and disagreeable; *Taste* bitter, and very acrid; the odour is dissipated by drying. FORMS OF EXHIBITION. Its great activity requires that extreme caution should be used in its exhibition; it is best exhibited in substance. DOSE. grs. iij to v: as an *errhine*, it should be diluted with at least six times its weight of starch. OFFICIAL PREPARATIONS. *Decoct: Veratri*. L. *Tinct: Verat: alb:* E.* *Unguent ve-*

* EAU MEDICINALE D'HUSSON. The effect of the *veratrum*, as detailed by Pliny, induced Mr. James Moore to believe, that a vinous infusion of the root of that plant constitutes the active ingredient in this celebrated medicine, and he accordingly found, that a mixture of three parts of a *vinous infusion of white hellebore root*, and one part of *Sydenham's vinous infusion of opium*, resembled, in sensible qualities, the medicine of Husson; the following is the formula for

rat: L.* Unguent: Sulphur: comp: L.

VINUM. *Wine.*

The fermented juice of the grape generally contains extractive, super-tartrate of potass, some portion of unchanged saccharine matter, the colouring matter, (which is resin soluble in alcohol, and which is therefore deposited as the quality of the wine is detereorated by age,) ardent spirit, vegetable acids and the aroma of the fruit; upon the proportions of the first, and the different quality of the last ingredient, all the variety of wine depends. Wines may be arranged in two classes. I. THE

its preparation. "Take of *White Hellebore Root* ℥viij, *White Wine* oij℥." The root is to be cut in thin slices, and infused for ten days, occasionally shaking the bottle; let the infusion be then filtered through paper. Dose. f℥j to f℥iij.—I am inclined to think that Mr. Moore is nearly correct in his opinion; at least I am satisfied that his preparation will cure the gout, a fact, which I have most fully, and unequivocally ascertained in the Westminster Hospital; the operation however of the remedy is certainly rendered more certain, and more like that of the genuine medicine, by the addition of about gr ℥ss, of *elaterium* to f℥j.

* BARCLAY'S OINTMENT *for the cure of the itch* is composed of *white hellebore, and lard.*

SWEET WINES, which contain the greatest proportion of extractive, and saccharine matter, and generally the least of the ardent spirit, though, this is often rather disguised, than absent; of this kind are *Malmsey Madeira*; *Canary Wine*; *Tokay*; *Constantia*; *Vino Tinto* (Tent of Hungary); *Frontignac*; *Florence*; and many of the Spanish white wines, as the *Pacherotti*, &c. II. THE DRY WINES, are *Hock* (Falernian or Massic;) *Vin de Grave*; *Madeira*; *Vidonia*, *Port*, (Rubrum Lusitense,) *Mountain*; *Sherry*, (Album Hispanicum,) *Claret*; *Burgundy*, *Hermitage*, &c. these wines differ very materially in their salubrity; the astringency of some counteract their narcotic powers, as *Port*; while *Claret*, *Burgundy* and *Hermitage* contain a very inconsiderable degree of ardent spirit, and combine with it the effect of an acid. ADULTERATIONS. By the sophistication of wines three principal objects are attempted, viz. 1. *To Give them Strength*, which is effected by adding any ardent spirit. 2. *To perfect or Change their Colour*. It is very usual to change *white* wines, when they grow brown and rough, into *red* wines, by means of sloes, or other colouring matter. 3. *To Lessen or Remove their Acidity*, for which purpose, super-acetate of lead is usually em-

ployed; the following is the best test for the detection of the fraud. *Expose sulphur, and powdered oyster shells, aa ʒij, for 15 minutes, to a white heat; when cold, add ʒij of super-tartrate of potass, put the whole into a flask, with oij of water, boil for an hour, and decant the clear solution, when cold, into phials, capable of holding fʒij, adding to each mxx of muriatic acid.* A few drops of this solution, added to the suspected wine, will precipitate *lead*, if contained in it, under the form of a blackish powder. Turbid wine may be clarified by the *white of Eggs*,* or by the *mucilage of linseed*. **USES.** As a pharmaceutical agent, wine is employed to extract several of the proximate principles of vegetables, and the solutions are denominated *Medicated Wines*; as a solvent, however, it is liable to the objection of inequality of strength; and owing to the spontaneous decomposition which it undergoes from exposure to air, it is still more objectionable; ac-

* The method of refining wine with eggs was known to the ancients.

“ Surrentina Vafer qui miscet sæce Falerna
Vina, columbino limum bene colligit ovo;
Quatenus ima petit volens aliena vitellus.”

Horat: Satir: 4. Lib. 2.

cordingly, few of the *medicated wines* are now employed.

ULMI CORTEX. L.E.D. (*Ulmus Campestris*.)
Elm Bark.

QUALITIES. *Odour* none; *Taste* bitter. CHEMICAL COMPOSITION. Gum, extractive, gallic acid, super-tartrate of potass. SOLUBILITY. Water, and alcohol extract its virtues. INCOMPATIBLE SUBSTANCES. *Alkalies, alkaline salts, and lime water*, destroy its astringency; the *salts of iron*, and many other *metallic salts* are also inadmissible in formulæ with it; and tinctures, in any considerable quantity, produce flaky precipitates. FORMS OF EXHIBITION. It is generally given in that of decoction. DOSE. fʒiv. OFFICINAL PREPARATIONS. *Decoct: Ulmi.* L.D.

UVÆ URSI FOLIA. L.E.D. (*Arbutus Uva Ursi*.) *Uva Ursi*, or *Bear-berry*.

QUALITIES. *Odour* none; *Taste* bitterish; and astringent. FORMS OF EXHIBITION. It should be always given in powder; its decoction, and infu-

sion being trifling, and inert. Dose. ʒj to ʒj thrice a day.

ZINCI OXYDUM. L.E.D. *Oxyd of Zinc.*

This is occasionally used as a tonic, and may be exhibited in the form of pill. Dose. grs. j to iv. It is however principally employed as an external application. OFFICIAL PREPARATION. *Unguent: Zinc: L.E.D.* ADULTERATIONS. *Chalk* may be detected by sulphuric acid exciting an effervescence, and *White Lead* by its forming an insoluble sulphate of lead.

ZINCI SULPHAS. L.E.D. *Sulphate of Zinc.*

QUALITIES. *Form* prismatic crystals, which are slightly efflorescent. CHEMICAL COMPOSITION. Oxide of zinc 28·2, acid 25·8, water 46. SOLUBILITY. fj of cold water dissolves 3iiss; in boiling water, it is soluble in less than its own weight, but quite insoluble in alcohol. INCOMPATIBLE SUBSTANCES. *Alkalies; earths; hydro-sulphurets, and astringent vegetable infusions.* USES. From grs. x to xx dissolved in water it operates quickly

as an emetic, and is consequently very useful where an immediate discharge from the stomach is required, particularly in cases of poison. In spasmodic coughs* it is administered with the best effects, especially when combined with camphor, in doses from grs. to gr. j: dissolved in water, in the proportion of 3j f3j, it forms a useful injection in *fluor albus*, &c.

ZINGIBERIS RADIX. L.E.D. (Zinziber Official.) *Ginger Root*.

CHEMICAL COMPOSITION. A volatile oil, upon which its odour depends; and fecula, with which a resin-extractive matter is combined, and in which the pungency resides. SOLUBILITY. Water, alcohol, and æther, extract its virtues. USES. It is often beneficial in flatulent cholic; it is however principally employed as an adjunct to other remedies to promote their efficacy, and give them warmth, and being free from an essential oil, it

* The various quack remedies advertised for the cure of the *hooping cough* are either *opiates*, or are composed of *sulphate of zinc*.

does not produce the ill effects of those spices, whose virtues reside in acrid oil. Dose of the powder, grs. x ℥j. OFFICINAL PREPARATIONS. *Syrup: Zinzib: L.E.D. Syrup: Rhamni: L. Tinct: Zinzib: L.D.* Tinct: Cinnamom: comp: L. Acid: Sulphuric: aromat: E. Confect: Opii. L. Confect: Scammon: L.D. Infus: Sennæ. L. Pulv: Cinnamom: comp: L.E.D. Pulv: Scammon: co. L.D. Pulv: Sennæ comp: L. Pilulæ Aloës. D. Pilulæ Scillæ comp: L.D. Vinum Aloës. L.E.D.*

* OXLEY'S CONCENTRATED ESSENCE OF JAMAICA GINGER. This is a solution of Ginger in Rectified Spirit.

FINIS.

T. BAYLEY, Printer, Devonshire Street, Bishopsgate.

A COMPARATIVE VIEW OF THOSE OFFICINAL PREPARATIONS,

Which vary in Strength in the Different Pharmacopæias of London, Edinburgh, and Dublin, together with their relative Activity, and Equivalent Doses.

OFFICINAL PREPARATIONS.				PROPORTION OF ACTIVE INGREDIENTS.				Equivalent Doses.	OFFICINAL PREPARATIONS.				PROPORTION OF ACTIVE INGREDIENTS.				Equivalent Doses.						
Acida.	ACIDUM SULPHURICUM DILUTUM. L.				Acid	1.	Water	95.	By Measure.	Minims.	XX.	SPIRITUS TENUIOR. (Proof Spirit.) L.D.				Rectified Spirit....	4.	Water....	3.	fviij.			
	Do. Do. Do. F.D. ....				.....	1.	Do.	12½.		XXVI.	Do. Do. E. ....				.....	Do.	4.	Do.	4.	fij.
	Do. Do. Do. L. 1787. ....				.....	1.	Do.	14½.		XXX.	SPIRITUS AMMONIÆ. L.E.				} All these Ammoniacal Preparations contain three times more Ammonia, than the same Compounds in the former Pharmacopœia of London.				fij.	
	ACIDUM NITRICUM DILUTUM. L. ....				.....	1.	Do.	9.		XX.	SPIRIT: AMMONIÆ AROMAT. L.									
Do. Do. Do. E.D. & L. 1787. ....				.....	1.	Do.	1½.	V.	SPIRIT: AMMON: FETIDUS. L.											
										SPIRIT: AMMON: SUCCINATUS. L.				Do. Do. Do. L. 1787.								fij.	
Alkalia.	LIQUOR AMMONIÆ. L.E.				Ammonia				25 Parts.	Minims.	VI.												
	Aqua Ammoniac. D.				Do.				16	VIII.													
	Do. Do. L. 1787.				Do.				7	XX.													
Stimula, et ex his preparata.	Er Antimonio.									Minims.	XX.												
	LIQUOR ANTIMONII TARTARIZATI. L.E.				Tartarized Antimony				gr ½	Grains.	X.	TINCTURA GUAIACI. L.				Guaiaac	5ij.	} Contained in fʒij.		fʒij.			
	Vinum Antimonii Tart. L. 1787.				Do. Do.				gr ½		IV.	Do. Do. E.				Do.	5ij.			fʒij.			
	PULVIS ANTIMONIALIS. L.E.D.				} The difference of these preparations depends upon the different quantity of vitrified oxide which they relatively contain.				III.		TINCTURA JALAPÆ. L.				The Virtues of	Gr. 120	fʒij.						
	Dr. James's Powder.												III.	Do. Do. E.						Do.	96.	fʒij.	
	Er Hydrargyro.									Grains.	XII.	TINCTURA GUAIACI AMMONIATA. L.E.				} These Preparations have the same accession of power in the present Pharmacopœia of London as the Spirits of Ammonia.				fʒij.			
	HYDRARGYRUS CUM CRETA. L.				Mercury				grs 33.	X.	TINCTURA VALERIANÆ AMMONIATA. L.				} The difference depends upon the employment of Crude instead of Purified Opium.					XIX.			
	Do. Do. D.				Do.				40.	VIII.	Do. Do. Do. D. & L. 1787.												XIV.
	PILULÆ HYDRARGYRI. L.D.				Do.				15.	VI.	TINCTURA OPII. L.E.												
	Do. Do. E.				Do.				20.	3j.													
	UNGUENTUM HYDRARG: FORT. L.D.				Do.				30.	3iij.	LINIMENTUM AMMONIÆ Fortis. L.				Ammonia	1.	Oil	2.	Employed only as External Application.				
	Unguentum Hydrargyri. E.				Do.				12.	3iij.	Oleum Ammoniatum. E.D.				Do.	1.	Do.	8.					
UNGUENT: HYDRARG: Mitius. L.				Do.				10.	3iij.	Liniment. Ammon: Fort. L. 1787.				Less Caustic than the present Preparation.									
Do. Do. Do. D.				Do.				20.	3iij.	LINIMENT: CAMPHOR: COMP. L.				Do. Do. Do. L. 1787.				Less Caustic than the present one.					
	Er Cupro.									Used only Externally.													
	LIQUOR CUPRI AMMONIATI. L.				The Least Powerful.						PULVIS SCAMMONIÆ COMP. L.				Scammony and Jalap aa.			Most Active					
	Aqua Cupri Ammoniac. D.										Do. Do. Do. E.				Do. and Cream of Tartar aa.								
Stimula.	INFUSUM ROSÆ. L.				Contains more Acid.					fʒij.					Mucilago Astragali Tragacanthæ. E.				Gum	1.	Water	8.	3j.
	Do. Do. L. 1787.									fʒij.					Do. Gummi Tragacanthæ. D.				Do.	1.	Do.	32.	3ß.
	INFUSUM RHEI. L.				Rhubarb Si.				Water fʒviij.	3j.													
	Do. Do. E.				Do. 3ß.				Do. fʒviij.	3ß.													

NOTE.—In order to prevent, as far as possible, the serious mistakes which may arise in consequence of so great a difference in the strength of these preparations, it should be a constant rule with the dispenser to employ the new, or old medicines, according to the terms, in which they are prescribed.

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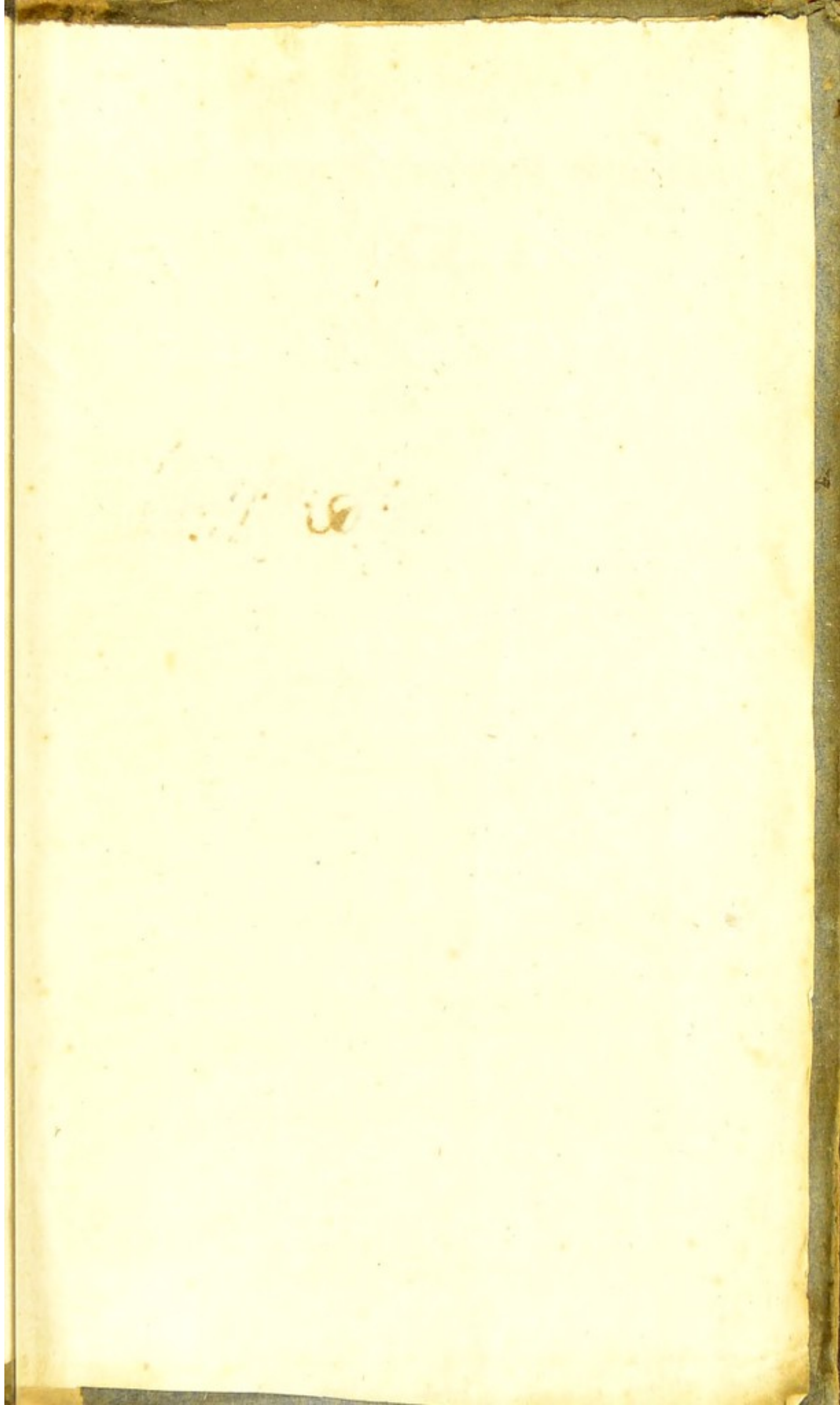
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