NATIONAL LIBRARY OF MEDICINE

Bethesda, Maryland

J. J. Aurd 8
1840.

THE

NEW DISPENSATORY:

CONTAINING,

I. The ELEMENTS of PHARMACY.

II. The MATERIA MEDICA, or an Account of the Substances employed in Medicine; with the Virtues and Uses of each Article, so far as they are warranted by Experience and Observation.

III. The Preparations and Compositions of the new LONDON and EDINBURGH PHARMACOPŒIAS; with some of the most celebrated foreign Medicines; the most useful of those directed in the Hospitals; sundry elegant extemporaneous Forms, &c. digested in such a Method as to compose a regular System of Pharmacy; with Remarks on their Preparation and Uses; the Means of distinguishing Adulterations; of performing the more difficult and dangerous Processes with Ease and Safety, &c.

The Whole interspersed

With Practical Cautions and Observations.

BY W. LEWIS, M. B. F. R. S.

THE SIXTH EDITION,

Carefully revised; in which are inserted the various Improvements that have occurred in Medicine, from the Period of its last publication.

LONDON:

PRINTED FOR F. WINGRAVE (SUCCESSOR TO MR. NOURSE), IN THE STRAND; J. JOHNSON, ST. PAUL'S-CHURCH-YARD; G. G. AND J. ROBINSON, PATERNOSTER ROW; AND W. J. AND J. RICHARDSON, ROYAL EXCHANGE.

NLM

John Chas. Hurst
27th July
1840

THE

AUTHOR'S PREFACE.

THE New Diſpenſatory was intended as a regular book of practical and ſcientific pharmacy; compoſed of principles agreeable to thoſe, on which the colleges of London and Edinburgh have proceeded, in the late reformation of their officinal Pharmacopœias; containing full and clear directions, drawn from actual experience, for the preparation of the ſeveral medicines, particularly where accompanied with any difficulty or danger; and aſſigning every where, as far as poſſible, their real virtues and uſes; intentions, which, though of primary importance in a work of this kind, do not ſeem to have been at all regarded, in the other Diſpenſatories that have hitherto appeared.

The author has had the ſatisfaction of finding that his endeavours have not been in vain; that though the work fell very far ſhort of the perfection which he wiſhed for, it was diſtinguiſhed with approbations even beyond his hopes; with approbations, which have induced the compilers of the other Diſpenſatories to borrow very conſiderable parts of it in their laſt editions; in one of which, beſides many paragraphs and entire pages here and there, the greateſt part of two hundred pages together is illiberally copied from this work.

In this edition, I have made many material corrections and additions; and retrenched ſundry exceptionable particulars, which, in compliance with common prejudices, had been admitted in the firſt attempt.

The firſt part contains the Elements of Pharmacy, or what is commonly called Pharmaceutical Chemiſtry. The general neglect of this intereſting and uſeful ſtudy, as applied to medicinal ſubjects, has engaged me to greatly enlarge this part, and to labour it with more care and preciſion. I have endeavoured to give a conciſe and ſyſtematic view of the general properties and relations of vegetable, animal, and mineral bodies; the different medicinal principles they contain; the means of extracting and ſeparating their native component parts, without making any alteration in their qualities; and the different forms and powers which they aſſume, from different natural or artificial operations, or from the mixture and coalition of one with another; avoiding every where all hypothetical reaſonings, and delivering only the direct reſult of experiment and obſervation. To this hiſtory is added a practical account of the inſtruments and operations of the art, which, it is hoped, will give the reader a full idea of them, without the tedioufneſs of minute details.

The next part contains the Materia Medica, or medicinal ſimples, which, for reaſons aſſigned in the introduction to this part, are all ranged in alphabetic order. Rationales of the operations of medicines, which are at beſt but conjectural and unſatisfactory, have no place in this practical work: but ſome general obſervations, of the ſenſible effects of certain claſſes of medicines, in Cartheuſer's manner, it has been thought expedient to retain, with ſome amendments from the former editions.

In treating of the ſeveral ſimples themſelves, I have given, where neceſſary, a deſcription of the ſimple, with the marks of its genuineneſs and goodneſs; and pointed out the diſtinguiſhing characters of ſuch as, from a reſemblance in external appearance, are liable to be confounded with others of different qualities. With regard to their virtues, particular care has been taken to reject the fabulous ones, which are ſtill preſerved in other books of this kind; and to give only thoſe which have either been confirmed by repeated experience, or may be rationally inferred from the ſenſible qualities of the ſubject, or from its agreement in ſmell, taſte, &c. with others of known virtue. Under each ſimple are mentioned all the preparations made from it, and all the compoſitions in which it is an ingredient, in the London and Edinburgh Pharmacopœias. Many of the capital articles I have examined pharmaceutically, and ſhown in what ſeparable part of the mixt its virtue reſides, by what means the active principle is beſt extracted or preſerved, and in what form the ſubſtance itſelf or its preparations are moſt commodiouſly and advantageouſly exhibited. At the end of this part, the directions for the collection and preſervation of medicinal ſubſtances are re-conſidered.

The third and fourth parts contain the preparations and compoſitions of the new London and Edinburgh Pharmacopœias; with a few of the old ones, which I am informed are ſtill kept in ſome ſhops, and occaſionally called for; ſeveral of the more celebrated medicines which have come into eſteem in France and Germany; many from our hoſpitals; and ſome elegant extemporaneous preſcriptions, ſuch as are directed in practice.

In the diſtribution of theſe materials, it has been found neceſſary to depart from the order hitherto re-

ceived. In other Diſpenſatories, and in a former edition of this, medicines are divided into two general heads, officinal and extemporaneous. This diviſion is apparently faulty: for many of thoſe called officinal are ſtrictly extemporaneous, being made only as they are wanted: and many of thoſe which are called extemporaneous, are very well fitted for keeping: if we ſhould appropriate the term officinal to thoſe which have the ſanction of public colleges, then this abſurdity would follow, that medicines of as tedious preparation as any in the book, even Baumé's extract of opium, which requires ſeveral months' continual boiling, would be extemporaneous preparations.

To avoid this impropriety, and that of repeating the ſame forms, and frequently almoſt the ſame compoſitions, in different parts of the book, I have ranged medicines of ſimilar preparation or compoſition in one claſs, without regard to the ineſſential circumſtances of their being uſed at London or at Edinburgh, at Paris or at Berlin, in the ſhops or in the hoſpitals; and have endeavoured to diſpoſe them in ſuch a manner, as to form, ſo far as could be done with ſuch materials, one regular whole, a connected ſyſtem of practical pharmacy. That the medicines of the London and Edinburgh colleges may be the more readily known from the others, their titles are printed in a larger character. The diſtinction, indeed, between preparations and compoſitions, the former of which make the third part, and the latter the fourth, is not perhaps altogether unexceptionable, conſidering the great multiplicity and diverſity of the ſubjects, many of which partake of the nature of both, though ſome more of one, and others of the other: but this does not at all affect the plan, or produce any diſorder n the ſyſtem, which continues the ſame whether this diſtinction is retained or dropt.

The Edinburgh medicines are taken from the laſt edition of the *Pharmacopœia Edinburgenſis*, publiſhed in the year 1756, a complete tranſlation of which has not before appeared.

In tranſlating the ſeveral preſcriptions, wherever the originals appeared too conciſe or obſcure, the liberty has been taken of expreſſing the directions in a more full and clear manner, with care not to vary the ſenſe. The ingredients in the ſeveral compoſitions are, for the greater diſtinctneſs (a point which throughout the whole has been particularly aimed at), ranged in different lines, as in the originals. For want of ſome method of this kind, there are inſtances of ingredients being confounded, and two articles miſtaken for one.

To the ſeveral medicines is ſubjoined, where it ſeemed requiſite, an account of the principles on which they are built; together with their virtues, uſe, and doſe; and the cautions neceſſary to be obſerved in the exhibition of them. To the more difficult or dangerous operations is added a full deſcription of the method of performing them with advantage and ſafety; and to ſuch medicines as are liable to ſophiſtication, the means of diſtinguiſhing the genuine from the adulterated. In theſe practical remarks on the particular preparations, and on the general claſſes of them at the beginning of the reſpective chapters and ſections, the author has laboured with diligence. If he has ſucceeded in executing his intentions, the directions are ſuch, as may enable every apothecary to prepare, as it is his duty to do, all his own medicines.

The tables, inſerted in a former edition, were ſo well received, that the other Diſpenſatories have copied them entire. One of theſe tables, however, that of ſpecific gravities, appears, on re-examining it, to be exceptionable: great part of it was drawn from Dr. Friend's experiments, in his *Prælectiones Chymi-*

cæ, in which the numbers, by ſome accident, have been ſo faultily ſet down, that no dependence can be had upon them; and few other hydroſtatical experiments have been made on medicinal ſubſtances or their preparations. I have therefore now thrown out that table, but preſerved all that was valuable in it, reduced to a more uſeful form, in the table of the weights of certain meaſures of different fluids. I have likewiſe added ſeveral new ones, greatly enlarged the others, ſo as to render them of more utility in practice, and diſtributed them in the different parts of the work to which they belong. The facts on which they are built, where no authority is mentioned, are in all caſes (except only in the above mentioned table of weights) from my own experience.

The author is ſufficiently ſenſible, that there are ſtill many imperfections in this performance; but hopes it will appear, that he has every where conſulted the dignity of the art, the eaſe and advantage of the operator, and the health of the patient.

ADVERTISEMENT

TO THE

SIXTH EDITION.

SEVERAL years have elapſed ſince Dr. Lewis reviſed this Diſpenſatory, to which he made many additions, and otherwiſe improved it, by inſerting a variety of diſcoveries which were held in eſtimation at that day.

As medicine, however, in all its particular departments, has been ſtill from year to year farther improving, and as many alterations have alſo been made from the reſult of great labour, and repeated experience of medical profeſſors and practitioners; a new edition of this Diſpenſatory could not be given to the public without paying every attention to ſuch matters, as have of late years greatly enriched the repoſitories of medicine, not only in the acquiſition of freſh materials; but in the alterations of many of the old compoſitions; whereby they have been deprived of that uſeleſs farrago of inert or contradictory ingredients, with which they were crowded. Beſides, medical men, as if aſhamed of a variety of names by which medinical ſubſtances were formerly diſtinguiſhed, becauſe they conveyed no uſeful or diſcriminating ideas, have thought proper to alter thoſe terms, and ſupply their places, where neceſſary, with others more ſcientific, and infinitely more advantageous. In the preſent edition, all theſe improvements and alterations have been carefully inſerted; and where any reformations have been preſented, or any preſcriptions of the old ſchools conſidered as uſeful, theſe have been retained: to all which is added a very copious Index, and ſo marked that the old and new names may be at one view diſcovered; and the doſes of a very great variety of articles in preſent uſe are particularly ſpecified, agreeable to the table given in the

London Pharmacopœia. Add to this, that in the account given of the particular articles of the Materia Medica, the medical virtues which are generally attributed to them are concifely fet down, fo that their powers, and the intent for which they are adminiftered, become manifeft and eafily retainable in the memory. On the whole, every attention has been paid in the feveral departments of medicine, fo as to comprife all that is practically ufeful, with refpect to the fpecific nature of each medicine—the modes of their application—their different forms and dofes; with the difeafes and their different ftates, which require different dofes of the fame medicine, to anfwer particular purpofes. With thefe advantages, there can little doubt remain of its being fraught with all the benefit which can be derived from a work of this nature.

CONTENTS.

PART I.

ELEMENTS OF PHARMACY.

CHAP. I. *Definition and division of pharmacy* - Page 1
CHAP. II. *General view of the properties and relations of medicinal substances* - - - 3
Sect. i. *Vegetables* - - - ib.
1. *Productions from vegetables by fermentation* 4
2. *Productions from vegetables by fire* - 5
3. *Substances naturally contained in vegetables, and separable by art without alteration of their native qualities* - - - 9
1. *Gross oils* - - - - 9
2. *Gross sebaceous matter* - - 10
3. *Essential oils* - - - 10
4. *Concrete essential oils* - - 11
5. *Camphor* - - - - 11
6. *Aroma* - - - - 12
7. *Resin* - - - - ib.
8. *Gum* - - - - 13
9. *Gum-resin* - - - 14
10. *Saline matter* - - - ib.
11. *Farina, or flour* - - - 15
12. *Colouring matter of vegetables* - - 16
General observations on the foregoing principles - - - - ib.
Sect. ii. *Animals* - - - 18
Sect. iii. *Minerals* - - - - 21
Oils and bitumens - - ib.
Earths - - - 22
Metals - - - 24
Acids - - - 26

Of the affinities of bodies - - 28
Table of affinities - - - 30
CHAP. III. *Of the pharmaceutical apparatus* - - 32
Furnaces - - - - ib.
Baths - - - - 35
Coating of glasses, and lutes - - 36
Vessels - - - - 37
Weights and measures - - 38-39
Table of the weight of different fluids - 40
CHAP. IV. *Of the pharmaceutical operations* - - 42
Sect. i. *Solution* - - - ib.
Tables of the solubility of fluids - 42-44
Sect. ii. *Extraction* - - - 47
Sect. iii. *Depuration* - - - 48
Sect. iv. *Crystallisation* - - - 49
Sect. v. *Precipitation* - - - 51
Sect. vi. *Evaporation* - - - 52
Sect. vii. *Distillation* - - - 53
Sect. viii. *Sublimation* - - - 55
Sect. ix. *Expression* - - - ib.
Sect. x. *Exsiccation* - - - 56
Sect. xi. *Comminution* - - - 57
Sect. xii. *Fusion* - - - - 59
Sect. xiii. *Calcination, &c.* - - - 60

PART II.

THE MATERIA MEDICA. 63

General observations on the materia medica - - - 63
Dr. Cullen's arrangement - - 64
Acids - - - - 66
Absorbent earths - - - 67
Tables of the powers of different absorbents - 68-69
Indissoluble earths - - - 69
Glutinous and mucilaginous substances - - 70
Unctuous and oily substances - - - 71
Astringents - - - - ib.
Sweets - - - - 72

Acrids - - - - 73
Aromatics - - - - ib.
Bitters - - - - - 74
Emetics and cathartics - - - 75
Account of the particular simples, ranged in alphabetic order 76
General titles, including several simples - - 265
Of the collection and preservation of simples - - 266

PART III.

A SYSTEM OF PHARMACEUTICAL PREPARATIONS, OFFICINAL AND EXTEMPORANEOUS. 271

CHAP. I. *The more simple preparations* - - ib.
CHAP. II. *Substances extracted from vegetables by expression* 277
Sect. i. *Juices* - - - ib.
Sect. ii. *Expressed oils* - - 282
CHAP. III. *Infusions in different menstrua* - - 285
Sect. i. *Infusions and decoctions in water* ib.
Art. 1. *Infusions in cold water* - 286
Art. 2. *Infusions in boiling water* 289
Art. 3. *Decoctions, fomentations, and mucilages* - - 293
Sect. ii. *Wheys* - - - 303
Sect. iii. *Vinegars* - - - 304
Sect. iv. *Medicated wines* - - 306
Sect. v. *Medicated ales* - - - 314
Sect. vi. *Spirituous tinctures, elixirs, essences, balsams* - - - 316
CHAP. IV. *Conservation of recent vegetables, &c. by sugar and honey* - - - 338
Sect. i. *Conserves* - - - ib.
Sect. ii. *Syrups* - - - 341
Sect. iii. *Honeys and oxymels* - - 350
CHAP. V. *Separation and collection of those parts of vegetable and animal substances, which are volatile in the heat of boiling water* - - 353
Sect. i. *Essential oils* - - ib.

CHAP. V. Sect. i. *Table of the quantity of essential oil obtained from different vegetables* 367
Sect. ii. *Simple distilled waters* - - 369
Sect. iii. *Spirituous distilled waters and spirits* 378
Distilled spirits - - - 381
Distilled spirituous waters - 385
CHAP. VI. Sect. i. *Extracts with water* - - 390
Sect. ii. *Extracts with rectified spirit* - 394
Sect. iii. *Extracts with water and spirit* - 397
Sect. iv. *Extracts by long digestion* - 400
CHAP. VII. *Empyreumatic oils* - - - 403
CHAP. VIII. *Salts and saline preparations* - - 405
Sect. i. *Fixt alkaline salts* - - ib.
Sect. ii. *Volatile alkaline salts and spirits* - 412
Sect. iii. *Combination of alkalies with oils and inflammable spirits* - - - 419
Sect. iv. *Acid spirits* - - - 425
Sect. v. *Combination of acid with vinous spirits* 431
Sect. vi. *Neutral salts* - - - 434
Sect. vii. *Anomalous salts* - - - 448
CHAP. IX. *Preparations of sulphur* - - 458
CHAP. X. *Metallic preparations* - - 462
Sect. i. *Preparations of silver* - - ib.
Sect. ii. *Preparations of iron* - - 464
Sect. iii. *Preparations of copper* - - 469
Sect. iv. *Preparations of lead* - - 471
Sect. v. *Preparations of tin* - - 474
Sect vi. *Preparations of zinc* - 475
Sect. vii. *Preparations of mercury* - 476
Sect. viii. *Preparations of antimony* - 499
Sect. ix. *Preparations of bismuth* - - 515
Sect. x. *Compound metallic preparations* - 516

PART IV.

MEDICINAL COMPOSITIONS, OFFICINAL AND EXTEMPORANEOUS.

CHAP. I. *Powders* - - - - 521
CHAP. II. *Troches and lozenges* - - - 532

CHAP. III. *Pills* - - - - 536
CHAP. IV. *Boluses* - - - - 545
CHAP. V. *Electaries* - - - 551
CHAP. VI. *Lohochs* - - - 563
CHAP. VII. *Emulsions, and Syrup* - - - 565
CHAP. VIII. *Juleps, mixtures, draughts* - - 569
CHAP. IX. *Lotions, gargarisms, injections, &c.* - 578
CHAP. X. *Plasters* - - - 582
CHAP. XI. *Ointments, liniments, and cerates* - - 590
CHAP. XII. *Epithems* - - - - 601

J. L. Smith 1840

THE

NEW DISPENSATORY.

PART I.

Elements of Pharmacy.

CHAPTER I.

Definition and Division of Pharmacy.

PHARMACY is the art of preparing, preſerving, and compounding natural and artificial ſubſtances for medicinal purpoſes, in a manner ſuitable to their reſpective properties, and the intentions of cure.

This art has been commonly divided into two branches, GALENICAL and CHEMICAL: but no rational principle of diſtinction between them has as yet been fixed on. For Pharmacy, in its full extent, is no other than a branch of chemiſtry, and the moſt ſimple pharmaceutical preparations are ſo far chemical, as they have any dependence upon the properties or relations of the materials.

PHARMACY, according to our definition, may be divided into THEORETICAL and PRACTICAL. Theoretical Pharmacy teaches the knowledge of the medicinal ſubſtances themſelves, their various properties, qualities, and relations to one another, and their general effects on the human body: Practical pharmacy, the ſkilful performance of the ſeveral proceſſes, or operations, by which they are adapted to particular uſes.

The theory of pharmacy is the direct reſult of experiment and obſervation, or rather a general and comprehenſive view of experiments and facts themſelves; it may be termed SCIENTIFIC PHARMACY, in diſtinction from mere manual labour.

Scientific pharmacy includes all thoſe facts which relate to — the reduction of medicinal ſubſtances into different forms, and the forms in which particular ſubſtances are moſt commodiouſly or advantageouſly uſed—their relations to one another in regard to miſcibility,

and the means by which thoſe, that of themſelves are not miſcible, may be made to unite—the ſeparation of the medicinal from the inactive matter, and of different kinds of medicinal matter from one another when combined together in the ſame ſubject, on the principle of one being diſſoluble in liquors which will not diſſolve the other, of one being exhalable by heat while the other remains fixt, &c.—the alterations which the medicinal parts themſelves undergo, in different circumſtances, and by different methods of treatment—the production of new properties and medicinal powers from the coalition of diſſimilar things—with many other particulars analogous to theſe.

It is obvious, that a perfect acquaintance with pharmacy, conſidered in this light, is eſſentially neceſſary to the due exerciſe of the art of phyſic. Without it, the preſcriber muſt often err in the choice of materials for the different forms of preparation or compoſition, or in adapting a manner of preparation to given materials; and often be deceived alſo in the medicinal effects, which the known powers of the ingredients, ſeparately, gave room to expect.

It would be inconſiſtent with the nature of a Diſpenſatory, to wholly detach the ſcientific part of pharmacy from that which is more directly practical; for the ſcience gradually reſults in the courſe of the practical details. In this firſt part of the work it has been thought expedient to premiſe a ſummary view of the general elements of the art, both practical and ſcientific, that the reader may be the better prepared for the particular ſubjects and proceſſes, which follow in the ſecond and third parts.

CHAPTER II.

A general view of the Properties and Relations of Medicinal Substances.

SECT I.

Vegetables.

VEGETABLES are organised bodies, containing, in certain vessels, different kinds of substances, in which their medicinal virtues consist, and which are found to differ greatly, not only in their quantity, but likewise in their quality, according to the age of the plant, the season of the year, and the soil in which it is produced.

Thus some herbs in their infancy abound most with odoriferous matter; of which others yield little or none till they have attained to a more advanced age. Many fruits, in their immature state, contain an austere acid juice, which by maturation is changed into a sweet: others, as the orange, are first warm and aromatic, and afterwards, by degrees, become filled with a strong acid. The common grain, and sundry other seeds, when beginning to vegetate, are in taste remarkably sweet; yet the kernels of certain fruits prove, at the same period, extremely acrid. The roots of some of our indigenous plants, whose juice is, during summer, thin and watery, if wounded early in the spring, yield rich balsamic juices, which, exposed to a gentle warmth, soon concrete into solid gummy-resins, superior to many of those brought from abroad. In open exposures, dry soils, and fair warm seasons, aromatic plants prove stronger and more fragrant, while those of an opposite nature grow weaker. To these particulars therefore due regard ought to be had in the collecting of plants for medicinal uses.

It may be proper to observe also, that the different parts of one plant are often very different in quality from one another. Thus the bitter herb wormwood rises from an aromatic root; and the narcotic poppy-head includes seeds which have no narcotic power. These differences, though very obvious in the common culinary plants, do not seem to have been sufficiently observed, or attended to, in the medicinal ones.

The medicinal juices of vegetables, and the active parts with which they are impregnated, may, generally, be extracted and separated, by simple operations, without any alteration being made in their native qualities. They may, likewise, be variously altered and transformed, by operations not less simple. By fermentation

and the power of fire, vegetables, and all the ſubſtances that exiſt in them (the pure watery part excepted) totally change, their nature, and are converted or reſolved into products of another order. It will be proper to take a view of theſe productions firſt; ſome of them being ſubſervient to the ſeparation of the native principles, and to the better underſtanding of their properties.

I. *Productions from Vegetables by Fermentation.*

FERMENTATION is a ſpontaneous motion excited in dead vegetables and animals, which is peculiar to thoſe organic ſubſtances in conſequence of the principle of vegetable or animal life.—A certain degree of humidity, a certain degree of heat, and the contact of the air, are circumſtances favouring this proceſs.

The ſweet and acefcent juices of fruits, infuſions of malted grain, and almoſt all vegetable juices or infuſions that are either ſimply ſweet or of a ſweetneſs mixed with acidity, on being kept in a place of temperate warmth, in a veſſel not cloſely ſtopt, ferment, grow turbid, throw off a large quantity of groſs matter, and are converted by degrees into a VINOUS LIQUOR; from which may be ſeparated, by proceſſes hereafter deſcribed, a pure INFLAMMABLE SPIRIT.

Theſe productions are different, in their medicinal as well as their more obvious properties, from the liquors that afforded them. The native juices of fruits attenuate the animal fluids, and relax the ſolids, ſo as to prove in ſome caſes uſeful aperient medicines, and to occaſion, when imprudently taken, dangerous fluxes; whereas the vinous and ſpirituous liquors, produced from them by fermentation, have the oppoſite effects, conſtringing the ſolids, and thickening or coagulating the fluids.

In vinous liquors there are great diverſities, independently of their being more or leſs watery; for ſome of the native qualities of vegetable juices and infuſions, as colour, flavour, viſcidity, &c. often remain in the wine, not being totally ſubduable by that degree of fermentation by which the liquor is rendered vinous: but of theſe diverſities the ſpirit is never found to partake: this, ſeparated from the wine and properly purified, is *always one and the ſame thing*, from whatever kind of vegetable liquor it was produced.

Beſides the groſs matter thrown off during the fermentation, there ſeparates from ſundry wines, after the fermentation is completed, another kind of ſubſtance. The ſides and bottom of the caſk become gradually incruſtated with a ſaline concrete, called TARTAR, of an acid taſte, and of a reddiſh or white colour, according to that of the wine. The colour is adventitious to the ſalt, for the tartar may be purified from it by ſolution in water: when thus purified, the tartar of all wines is found to be the ſame.

There is ſeparated alſo, in fermentation, a ſubſtance of a much more active nature than any of the preceding. When the fermentation is at its height, a ſubtile, pungent, elaſtic, incoercible VA-

POUR called gas is discharged; this gas is the GAS SYLVESTRE of Helmont, and the fixed air, aërial acid, or carbonic acid of modern chemists; which, when copiously accumulated in close rooms, extinguishes fire, and instantaneously suffocates animals, without producing any apparent disease, or any injury that can be perceived upon dissection. Boerhaave says he does not remember that so immediate, mortal, and subtile a poison has been hitherto discovered: that if a large vessel, full of the juice of grapes in high fermentation, should discharge its accumulated vapour through a small orifice, and a strong healthy man should draw in the vapour at his nostrils, he would instantly fall down dead; or if he received but little thereof, become apoplectic; or, if still less, would remain an ideot during life, or become paralytic: and that these accidents befal those who imprudently remain long in close vaults where large quantities are fermenting. It may be observed that this vapour, when not collected in such a quantity as to extinguish a small flame, as that of a candle, is generally not dangerous, or at least not mortal, to animals.

There are several substances, of themselves not susceptible of fermentation, which nevertheless may be brought into it by the admixture of those that are; as by adding to them, along with a proper quantity of water, a portion of the yest or head thrown up to the surface of fermenting liquors. Without this expedient, many vegetables would run immediately into the acetous, and some of them into the putrefactive fermentation. To this therefore recourse is sometimes had for unlocking the texture of certain compact vegetable matters, in order to enable them to give out more readily some of their medicinal principles. In these cases, the fermentation must be continued but for a little time; lest the resolution of the subject should proceed beyond the intended limits, and the principles expected from it be converted into other products.

The fermentable juices of fruits, boiled till they become thick, are found to be indisposed to ferment, and this not only in their thick state, but when diluted again with water; though there appears to be scarcely any other alteration produced in them by the boiling. Hence liquids, prone to fermentation, may thus be preserved. How far this diminution of their fermentability may affect their medical virtues, is not as yet clear.

THE degree or the species of fermentation, by which wines and inflammable spirits are produced, is called *vinous fermentation*. If the process be further protracted, more gross matter is thrown off, and new changes succeed, but in a slower and less tumultuary manner than before. The heating inebriating wine becomes by degree, a cooling acid VINEGAR, which seems to counteract the effects of the other: the more the wine abounded with inflammable spirit, the more does the vinegar abound with uninflammable acid.

There are, however, certain qualities of vegetables, which are not completely subdued even by this second stage of fermentation;

ſome vinegars being apparently more coloured, and containing more of an oily and viſcid matter than others. By adding to the fermentable liquor ſubjects of other kinds, the qualities both of wines and vinegars may be ſtill further diverſified, ſo as to adapt them to particular medicinal uſes.

If the proceſs be ſtill further continued, further changes take place. The matter putrefies: and at length, what little liquor remains unevaporated, is found to be mere water, and the ſolid ſubſtance at the bottom appears to be the ſame with common mould.

This is reckoned by the chemiſts one of the ſtages of fermentation, and diſtinguiſhed by the name of the *putrefactive ſtage*. It is far more general in its object than the other two; every vegetable matter being ſuſceptible of putrefaction, but ſome particular kinds only being adapted to vinous or acetous fermentation.

Putrefaction diſcovers one difference in vegetables, which ſeems worthy of being remarked. The generality of vegetables rot and turn to mould, without yielding any very offenſive ſmell from the beginning to the end of the reſolution: but there are ſome which emit, throughout the whole proceſs, a ſtrong fetor, very nearly of the ſame kind with that which accompanies the putrefaction of animal ſubſtances, which by chemical trials is found to be the volatile alkali.

It is however neceſſary to obſerve, that every vegetable that has ſuffered the vinous, will proceed to the acetous and putrefactive fermentation; yet the ſecond ſtage is not neceſſarily preceded by the firſt—nor the third by the ſecond—or in other words:—the acetous fermentation is not neceſſarily confined to thoſe ſubſtances which have undergone the vinous;—nor the putrefactive to thoſe which have undergone the acetous fermentation.

II. *Productions from Vegetables by Fire.*

FIRE, the other grand agent in the reſolution of bodies, produces in vegetables decompoſitions of a different kind. Its general effects are the following.

VEGETABLE ſubſtances, burnt in the open air, are reduced partly into ASHES, and partly into FLAME and SMOKE; which laſt, condenſed in long canals or otherwiſe, forms a nauſeous bitter black SOOT. In the burning of moſt vegetables, an acid vapour accompanies the ſmoke; but the ſoot is never found to partake of it.

Vegetables, urged with a red heat in cloſe veſſels, (the veſſel containing the ſubject being made to communicate with another placed beyond the action of the fire for receiving the matters forced out by the heat) give over a WATERY LIQUOR called phlegm; an ACID LIQUOR called ſpirit; an elaſtic incoercible vapour, which appears

to be inflammable or fixed airs, very often a compoſition of both, and to which an exit muſt be occaſionally allowed, leſt it burſt the veſſels or blow off the receiver; a *thin* OIL, and, at length, a very *thick dark-coloured oil*, both which are of an acrimonious taſte, and a burnt fetid ſmell, whence they are called *empyreumatic oils*. There remains behind a black COAL, not diſſoluble in any kind of liquors, not ſuſceptible of putrefaction, not alterable by the moſt vehement degree of fire, ſo long as the air is excluded, but which, on admitting air to it, burns without flaming, and with little or no ſmoke, and leaves a very ſmall quantity of white aſhes; this is called charcoal, whoſe chemical properties ſeem always to be the ſame, from whatever vegetable it is procured.

The white aſhes of vegetables, infuſed or boiled in water, impart to it a pungent ſaline ſubſtance, called FIXED ALKALINE SALT, which may be ſeparated in a ſolid form by evaporating the water, from whence is produced pot-aſh uſed in commerce, being this ſaline matter mixed with ferruginous, earthy, and other impurities; and likewiſe with a number of neutral ſalts of different kinds, from which being cleared by different proceſſes, the fixed vegetable alkali remains; but from the aſhes of kali, and other ſea plants, a different alkali is produced, called SODA or NATRON. The remaining part of the aſhes, which is by far the largeſt in quantity, is a pure EARTH, differing from that which is the reſult of putrefaction, in being readily diſſoluble by every acid liquor, while the other is not acted upon by an acid; and from whence ſome iron may be attracted by the magnet. With the vitriolic acid it is ſaid to have formed alum; a kind of ſelenite has been obtained, but ſomewhat different from that produced by the union of the ſame acid with calcareous earth; this reſiduum of burnt vegetables differs from calcareous earth in being ſuſceptible of becoming quick-lime, by calcination; and it has been found, inſtead of an earth, to be a calcareous phoſphoric ſalt, ſimilar to that obtained from the bones of animals.

Such is the general analyſis of vegetables by fire. But there are ſome vegetables, which, as they ſeem to ſhew, during putrefaction, ſome analogy in their matter with that which conſtitutes animal bodies, diſcover alſo a like analogy in the preſent reſolution, yielding little or no acid; and, inſtead of a fixt alkaline ſalt which remains in the aſhes, affording a VOLATILE ALKALINE SALT which ariſes along with the aqueous and oily principles.

ALKALINE ſalts, and acid or ſour ſubſtances, are looked upon as being oppoſite in their nature to one another. Moſt of the bodies which are diſſoluble in alkaline liquors, are precipitated or thrown out from the ſolution on the addition of an acid; and moſt of thoſe which are diſſoluble in acids, are in like manner precipitated by alkalies. If an acid and an alkali be directly mixed together, there generally enſues an effervescence or tumultuary diſcharge of air-bubbles; though alkalies, both fixed and volatile, may be ſo prepared as

to make no effervescence with acids; and in this case they are far more pungent than in their common state.

In all cases, the alkali and acid, uniting together, compose a new body, called a NEUTRAL SALT, which has neither the sourness of the one ingredient, nor the peculiar pungency of the other, and which will not dissolve those substances which either the acid or the alkali separately would dissolve.

To these characters, it may be added, that alkaline salts change the colour of blue flowers or their infusions, as of violets, to a green, and acids to a red, while the neutral compound, formed by the coalition of the two, makes no alteration in the colour.

It must be observed, however, that to change blue flowers to a green, is not universally a mark of alkalies, for some solutions of earthy bodies in acids have the same effect; these last may be distinguished from alkalies, by adding to them a known alkali, which will immediately precipitate the earth, and form a neutral compound with the acid.

FIXED alkaline salts, perfectly purified, appear to be one and the same, from whatever kind of vegetable they were produced; those of some marine plants excepted, of which hereafter. In volatile alkalies, and in the pure earthy part of the ashes, there appears to be, respectively, the like identity.

Empyreumatic oils differ somewhat in the degree of acrimony and fetidness, and the acid spirits differ in degree of strength, or in the quantity of water with which they are diluted; how far they may differ in any other respects, is little known, these preparations having been rarely used or examined.

It has been said, that the alkaline salts, both of the fixed and of the volatile kind, are entirely creatures of the fire, being never found to exist naturally in any vegetable; but late experience contradicts this position, as will be seen when we come to speak of saline substances below: the oil, doubtless, pre-existed in the subject, but owes its acrimony and fetidness to the fire; for the most mild and insipid oils receive the same qualities on being urged with the same degree of heat: the acid, which is likewise naturally contained in vegetable subjects, proves always tainted, in the present process, with the ill smell and taste of the oil that accompanies it; but whether the acid itself suffers any change in its nature, is unknown.

When chemistry began first to be formed into a rational science, and to examine the component parts and internal constitution of bodies, it was imagined, that this resolution of vegetables by fire, discovering to us all their active principles, unclogged and unmixed with one another, would afford the surest means of judging of their medicinal powers. But, on prosecuting these experiments, it was soon found that they were insufficient for that end: that the analyses of poisonous and esculent plants agreed often as nearly with one another as the analyses of one plant: that by the action of a burning heat, two

principles of vegetables are not barely ſeparated, but altered, tranſpoſed, and combined into new forms; inſomuch that it was impoſſible to know in what form they exiſted, and with what qualities they were endowed, before theſe changes and tranſpoſitions happened. If, for example, thirty-two ounces of a certain vegetable ſubſtance be found to yield ten ounces and a half of acid liquor, above one ounce and five drams of oil, and three drams and a half of fixt alkaline ſalt; what idea can this analyſis give of the medicinal qualities of *gum Arabic?*

III. *Subſtances naturally contained in Vegetables, and ſeparable by Art without Alteration of their native Qualities.*

1. *Groſs Oils.*

Gross oils abound chiefly in the kernels of fruits and in certain ſeeds; from which they are commonly extracted by expreſſion, and hence are diſtinguiſhed by the name of *expreſſed oils.* They are contained alſo in all the parts of all vegetables that have been examined, and may be forced out by vehemence of fire; but here their qualities are greatly altered in the proceſs by which they are extracted or diſcovered, as we have ſeen under the foregoing head.

Theſe oils, in their common ſtate, are not diſſoluble either in vinous ſpirits or in water, though, by means of certain intermedia, they may be united both with the one and the other. Thus a ſkilful interpoſition of ſugar renders them miſcible with water into what are called lohochs and oily draughts: by the intervention of gum, mucilage, or the yolk of an egg, they unite with water into a milky fluid: by alkaline ſalts they are changed into a ſoap, which is miſcible both with water and ſpirituous liquors, and is perfectly diſſolved by the latter into an uniform tranſparent fluid. The addition of any acid to the ſoapy ſolution abſorbs the alkaline ſalt; and the oil, which of courſe ſeparates, is found to have undergone this remarkable change, that it now diſſolves without any intermedium, in pure ſpirit of wine.

Expreſſed oils, expoſed to the cold, loſe greatly their fluidity: ſome of them, in a ſmall degree of cold, congeal into a conſiſtent maſs. Kept for ſome time in a warm air, they become thin and highly rancid: their ſoft, lubricating, and relaxing quality is changed into a ſharp acrimonious one: and in this ſtate, inſtead of allaying, they occaſion irritation; inſtead of obtunding corroſive humours, they corrode and inflame. Theſe oils are liable to the ſame noxious alteration while contained in the original ſubject: hence the rancidity which the oily ſeeds and kernels, as almonds and thoſe called the cold ſeeds, are ſo liable to contract in keeping. Nevertheleſs, on triturating theſe ſeeds or kernels with water, the oil, by the intervention of the other matter of the ſubject, unites with the water into an

emulſion or milky liquor, which, inſtead of growing rancid, turns ſour on ſtanding.

It ſeems then that ſome ſort of fermentation goes on in the progreſs of oils in the rancid ſtate, and from ſome experiments it would ſeem that an acid is evolved, which renders them more ſoluble in ſpirits of wine than before.

In the heat of boiling water, and even in a degree of heat as much exceeding this as the heat of boiling water does that of the human body, theſe oils ſuffer little diſſipation of their parts. In a greater heat, they emit a pungent vapour, ſeemingly of the acid kind; and when ſuffered to grow cold again, they are found to have acquired a greater degree of conſiſtence than they had before, together with an acrid taſte. In a heat approaching to ignition, in cloſe veſſels, the greateſt part of the oil ariſes in an empyreumatic ſtate, a black coal remaining behind.

2. *Groſs ſebaceous Matter.*

FROM the kernels of ſome fruits, as that of the chocolate nut, we obtain, inſtead of a fluid oil, a ſubſtance of butyraceous conſiſtence; and from others, as the nutmeg, a ſolid matter as firm as tallow. Theſe concretes are moſt commodiouſly extracted by boiling the ſubject in water; the ſebaceous matter, liquefied by the heat, ſeparates and ariſes to the ſurface, and reſumes its proper conſiſtence as the liquor cools.

The ſubſtances of this claſs have the ſame general properties with expreſſed oils, but are leſs diſpoſed to become rancid in keeping than moſt of the common fluid oils. It is ſuppoſed by the chemiſts, that their thick conſiſtence is owing to a larger admixture of an acid principle: for, in their reſolution by fire, they yield a vapour more ſenſibly acid than the fluid oils; and fluid oils, by the admixture of concentrated acids, are reduced to a thick or ſolid maſs.

3. *Eſſential Oils.*

ESSENTIAL oils are obtained only from thoſe vegetables, or parts of vegetables, that are conſiderably odorous. They are the direct principle, in which the odour, and oftentimes the warmth, pungency, and other active powers of the ſubject, reſide; whence their name of eſſences or eſſential oils.

Eſſential oils unite with rectified ſpirit of wine, and compoſe with it one homogeneous tranſparent fluid; though ſome of them require for this purpoſe a much larger proportion of the ſpirit than others. The difference of this ſolubility perhaps depends on their quantity of diſengaged acid, that being found not only to promote the ſolution of the eſſential oil, but even of thoſe of the unctuous kind. Water alſo, though it does not diſſolve their whole ſubſtances, may be made to imbibe ſome portion of their more ſubtile matter, ſo as to become

considerably impregnated with their flavour: by the admixture of sugar, gum, the yolk of an egg, or alkaline salts, they are made totally dissoluble in water. Digested with volatile alkalies, they undergo various changes of colour, and some of the less odorous acquire considerable degrees of fragrance; whilst fixt alkalies universally impair their odour.

In the heat of boiling water, these oils totally exhale; and on this principle they are commonly extracted from subjects that contain them; for no other fluid, that naturally exists in vegetables, is exhalable by that degree of heat, except the aqueous moisture, from which the greatest part of the oil is easily separated. Some of these oils arise with a much less heat, a heat little greater than that in which water begins visibly to evaporate. In their resolution by a burning heat, they differ little from expressed oils.

Essential oils, exposed for some time to a warm air, suffer an alteration very different from that which the expressed undergo. Instead of growing thin, rancid, and acrimonious, they gradually become thick, and at length harden into a solid brittle concrete; with a remarkable diminution of their volatility, fragrancy, pungency, and warm stimulating quality. In this state, they are found to consist of two kinds of matter; a fluid oil, volatile in the heat of boiling water, and nearly of the same quality with the original oil; and of a grosser substance which remains behind, not exhalable without a burning heat, or such a one as changes its nature, and resolves it into an acid, an empyreumatic oil, and a black coal.

The admixture of a concentrated acid instantly produces, in essential oils, a change nearly similar to that which time effects. In making these kinds of commixtures, the operator ought to be on his guard: for when a strong acid, particularly that of nitre (of which hereafter) is poured hastily into an essential oil, a great heat and ebullition ensue, and often an explosion happens, or the mixture bursts into flame. The union of expressed oils with acids is accompanied with much less conflict.

4. *Concrete essential Oil.*

Some vegetables, as roses and elecampane roots, instead of a fluid essential oil, yield a substance possessing the same general properties, but of a thick or sebaceous consistence. This substance appears to be of as great volatility, and subtility of parts, as the fluid oils: it equally exhales in the heat of boiling water, and concretes upon the surface of the collected vapour. The total exhalation of this matter, and its concreting again into its original consistent state, without any separation of it into a fluid and a solid part, distinguishes it from essential oils that have been thickened or indurated by age or by acids.

5. *Camphor.*

Camphor is a solid concrete, obtained chiefly from the woody

parts of certain Indian trees. It is volatile like eſſential oils, and ſoluble both in oils and inflammable ſpirits: it unites freely with water by the intervention of gum, particularly myrrh, but very ſparingly and imperfectly by the other intermedia that render oils miſcible with watery liquors. It differs from the ſebaceous, as well as fluid eſſential oils, in ſuffering no ſenſible alteration from long keeping; in being totally exhalable, not only by the heat of boiling water, but in a warm air, without any change or ſeparation of its parts, the laſt particle that remains unexhaled appearing to be of the ſame nature with the original camphor; in its receiving no empyreumatic impreſſion, and ſuffering no reſolution, from any degree of fire to which it can be expoſed in cloſe veſſels, though readily combuſtible in the open air; in being diſſolved by concentrated acids into a liquid form; and in ſeveral other properties which it is needleſs to ſpecify in this place.

6. *Aroma,*

Or Spiritus Rector, is the name given to the odorous principle of vegetables. Theſe bodies differ greatly from one another in the quantity, ſtrength, and ſolubility of the odorous principle which they contain. It is generally found united with volatile oils; but it is ſoluble in alchohol and water, as well as in theſe. The ſlighteſt degree of heat is ſufficient to diſengage the aroma of plants. To obtain it, the plant muſt be diſtilled in a balneum Mariæ, and its vapours received into a cold capital — which may condenſe, and afterwards conduct them in a fluid ſtate into the receiver. The product is pure odoriferous water, and is known by the name of eſſential diſtilled water. This liquor is to be conſidered as a ſolution of the aroma or odorous principle in water.—When aromatic water is heated, it loſes its ſmell in conſequence of the odorous principle being more volatile than the fluid in which it was diſſolved. This principle is alſo diſſipated by expoſure to the air. Many facts would induce us to believe that the principle of ſmell is one of the elementary principles of volatile oils; but we are as yet, almoſt completely ignorant of its chemical nature, properties, and combinations.

7. *Reſin.*

Essential oils, indurated by age or acids, are called reſins. When the indurated maſs has been expoſed to the heat of boiling water, till its more ſubtile parts, or the pure eſſential oil that remained in it, has exhaled, the groſs matter, left behind, is likewiſe called reſin. We find, in many vegetables, reſins analogous both to one and the other of theſe concretes; ſome containing a ſubtile oil, ſeparable by the heat of boiling water; others containing nothing that is capable of exhaling in that heat.

Reſins in general diſſolve in rectified ſpirit of wine, though ſome

of them much more difficultly than others: it is chiefly by means of this diſſolvent, that they are extracted from the ſubjects in which they are contained. They diſſolve alſo in oils both expreſſed and eſſential; and may be united with watery liquors by means of the ſame intermedia which render the fluid oils miſcible with water. In a heat leſs than that of boiling water, they melt into an oily fluid, and in this ſtate they may be incorporated one with another. In their reſolution by fire, in cloſe veſſels, they yield a manifeſt acid, and a large quantity of empyreumatic oil.

8. *Gum.*

Gum differs from the foregoing ſubſtances, in being uninflammable: for though it may be burnt to a coal, and thence to aſhes, it never yields any flame. It differs remarkably alſo in the proportion of the principles into which it is reſolved by fire; the quantity of empyreumatic oil being far leſs, and that of acid far greater. In the heat of boiling water, it ſuffers no diſſipation: nor does it liquefy like reſins; but continues unchanged, till the heat is ſo far increaſed as to ſcorch or turn it to a coal.

By a little quantity of water, it is ſoftened into a viſcous adheſive maſs, called *mucilage:* by a larger quantity it is diſſolved into a fluid, which proves more or leſs glutinous, according to the proportion of gum. It does not diſſolve in vinous ſpirits, or in any kind of oil: nevertheleſs, when ſoftened with water into a mucilage, it is eaſily miſcible both with the fluid oils and with reſins, which, by theſe means, become ſoluble in watery liquors, along with the gum, and are thus excellently fitted for medicinal purpoſes.

This elegant method of uniting oils with aqueous liquors, formerly kept a ſecret in few hands, is now univerſally known; and a variety of experiments is related in the firſt volume of the London Medical Obſervations, of rendering oils, both eſſential and expreſſed, and different unctuous and reſinous bodies, ſoluble in water by the mediation of gum. Mucilages have alſo been uſed for ſuſpending crude mercury and ſome other ponderous and indiſſoluble ſubſtances; the mercury is, by this means, not a little divided; but it is found that the particles are apt to run together or ſubſide, if a pretty conſtant agitation be not kept up.

As oily and reſinous ſubſtances are thus united to water by the means of gum, ſo gums may in like manner be united to ſpirit of wine by the intervention of reſins and eſſential oils; though the ſpirit does not take up near ſo much of the gum, as water does of the oil or reſin.

Acid liquors, though they thicken pure oils or render them conſiſtent, do not impede the diſſolution of gum, or of oils blended with gum. Alkaline ſalts, on the contrary, both fixt and volatile, though they render pure oils diſſoluble in water, prevent the ſolution of gum,

and mixtures of gum and oil. If any pure gum be diſſolved in water, the addition of any alkali will occaſion the gum to ſeparate, and fall to the bottom in a conſiſtent form: if any oily or reſinous body was previouſly blended with the gum, this alſo ſeparates, and either ſinks to the bottom, or riſes to the top, according to its gravity.

9. *Gum-reſin.*

By gum-reſin is underſtood a mixture of gum and reſin. Many vegetables contain mixtures of this kind, in which the component parts are ſo intimately united, with the interpoſition perhaps of ſome other matter, that the compound, in a pharmaceutical view, may be conſidered as a diſtinct kind of principle; the whole maſs diſſolving almoſt equally in aqueous and in ſpirituous liquors; and the ſolutions being not turbid or milky, like thoſe of the groſſer mixtures of gum and reſin, but perfectly tranſparent. Such is the aſtringent matter of biſtort root, and the bitter matter of gentian. It were to be wiſhed that we had ſome particular name for this kind of matter; as the term gum-reſin is appropriated to the groſſer mixtures, in which the gummy and reſinous parts are but looſely joined, and eaſily ſeparable from one another.

As the effects of medicines generally depend upon their ſolubility in the ſtomach, it is often neceſſary, to bring their inſoluble parts, ſuch as reſinous oily matters, into the ſtate of gum-reſin; this is done by the mediation of mucilage (See the article above).—Hence theſe matters become more ſoluble in the ſtomach; and the liquor thus prepared is called an emulſion, from its whitiſh colour reſembling milk.

10. *Saline Matter.*

Of the ſaline juices of vegetables there are different kinds, which have hitherto been but little examined: the ſweet and acid ones are the moſt plentiful, and thoſe which are the beſt known.

There have lately, however, been diſcovered a conſiderable variety of ſalts in different vegetables. The *mild fixed alkali*, has been obtained from almoſt all plants by macerating them in acids; the *vegetable alkali* is the moſt common, but the *mineral alkali* is alſo found in the marine plants. Beſides the fixed alkali, ſeveral other ſalts have been detected in different vegetables—ſuch as vitriolated tartar, common ſalt, Glauber's ſalt, nitre, febrifuge ſalt, and ſelenite. From ſome experiments too, the volatile alkali has been ſuppoſed to exiſt ready formed in many plants of the cruciform or tetradynamia tribe.

It is, however, to be underſtood, that though ſome of theſe ſalts are really products of vegetation, others of them are not unfrequently adventitious, being imbibed from the ſoil without any change produced by the functions of the vegetable.

Theſe juices of vegetables, expoſed to heat equal to that of boiling water, ſuffer generally no other change than the evaporation of their watery moiſture; the ſaline matter remaining behind, along with ſuch of the other fixed parts as were blended with it in the juice. From many plants, after the exhalation of great part of the water, the ſaline matter gradually ſeparates in keeping, and concretes into little ſolid maſſes, leaving the other ſubſtances diſſolved or in a moiſt ſtate: from others, no means have yet been found of obtaining a pure concrete ſalt.

The ſweet and ſour ſalts are thoſe peculiarly native and eſſential to vegetables. Theſe two are frequently blended together in the ſame vegetable, and ſometimes paſs into each other at different ages of the plant. Of the ſour plants ſeveral kinds are known in pharmacy, and in the arts—ſuch as thoſe of ſorrel, lemons, oranges, citrons, &c. The ſaccharine ſalts are alſo obtained from a great number of vegetables; they may be generally diſcovered by their ſweet taſte; but the ſugar-cane is the vegetable from which this ſaline matter is procured in the greateſt quantity, and with moſt profit in commerce.

Theſe ſalts diſſolve, not only in water like other ſaline bodies, but many of them, particularly the ſweet, in rectified ſpirit alſo. The groſs oily and gummy matter, with which they are almoſt always accompanied in the ſubject, diſſolves freely along with them in water, but is by ſpirit in great meaſure left behind. Such heterogeneous matters, as the ſpirit takes up, are almoſt completely retained by it, while the ſalt concretes; but of thoſe, which water takes up, a conſiderable part always adheres to the ſalt. Hence eſſential ſalts, as they are called, prepared in the common manner from the watery juices of vegetables, are always found to partake largely of the other ſoluble principles of the ſubject; whilſt thoſe extracted by ſpirit of wine prove far more pure. By means of rectified ſpirit, ſome productions of this kind may be excellently freed from their impurities; and perfect ſaccharine concretions obtained from many of our indigenous ſweets.

There is another kind of ſaline matter, obtained from ſome reſinous bodies, particularly from benzoin, of a different nature from the foregoing, and ſuppoſed by ſome of the chemiſts to be a part of the eſſential oil of the reſin, coagulated by an acid, with the acid more predominant, or more diſengaged, than in the other kinds of coagulated or indurated oils. Theſe concretes diſſolve both in water and in vinous ſpirits, though difficultly and ſparingly in both: they ſhew ſome marks of acidity, have a conſiderable ſhare of ſmell like that of the reſin from which they are obtained, exhale in a heat equal to that of boiling water or a little greater, and prove inflammable in the fire.

11. *Farina, or Flour.*

This ſubſtance partakes of the nature of gum, but has more

taſte, is more fermentable, and much more nutritive. It abounds in very many vegetables, and is generally depoſited in certain parts, ſeemingly for the purpoſe of its being more advantageouſly accommodated to their nouriſhment and growth. Several of the bulbous and other roots, ſuch as thoſe of potatoes, bryony, thoſe from which caſſava is extracted, ſalep, and many others, contain a great quantity of white fæculæ reſembling and really poſſeſſing the properties of farina. The plants of the leguminous tribes, ſuch as peas and beans, are found alſo to abound with this matter; but grains contain the largeſt quantity, which are therefore called farinaceous. Of this kind are wheat, rye, barley, oats, rice, and other ſimilar plants.

The farina is compoſed of three parts, of a glutinous or vegeto-animal part—amylum or ſtarch—and a mucous matter. Wheat affords the farina in the greateſt quantity, and in its moſt perfect ſtate; and hence is conſidered as the moſt nutritious.

12. *The Colouring Matter of Vegetables.*

THIS ſeems to be of an intermediate nature between the gummy and reſinous parts. It is in many plants equally well extracted by water and by rectified ſpirits; it is alſo procurable in the form of a lake, not at all ſoluble in either of theſe menſtrua. However, it is not neceſſary to ſay more on this ſubject, as it has little to do with pharmacy, it is appropriated more to the dyers uſe.

General Obſervations on the foregoing Principles.

1. ESSENTIAL oils, as already obſerved, are obtainable only from a few vegetables, and camphor from a much ſmaller number: but groſs oil, reſin, gum, and ſaline matter, appear to be common, in greater or leſs proportion, to all; ſome abounding more with one, and others with another.

2. The ſeveral principles are in many caſes intimately combined; ſo as to be extracted together from the ſubject, by thoſe diſſolvents, in which ſome of them, ſeparately, could not be diſſolved. Hence watery infuſions and ſpirituous tinctures of a plant contain more ſubſtances than thoſe of which water or ſpirit is the proper diſſolvent.

3. After a plant has been ſufficiently infuſed in water, all that ſpirit extracts from the reſiduum may be looked upon as conſiſting wholly of ſuch matter as directly belongs to the action of ſpirit. And on the contrary, when ſpirit is applied firſt, all that water extracts afterwards may be looked upon as conſiſting only of that matter of which water is the direct diſſolvent.

4. If a vegetable ſubſtance, containing all the principles we have been ſpeaking of, be boiled in water, the eſſential oil, whether fluid

or concrete, and the camphor, and volatile eſſential ſalt, will gradually exhale with the ſteam of the water, and may be collected by receiving the ſteam in proper veſſels, placed beyond the action of the heat. The other principles not being volatile in this degree of heat, remain behind: the groſs oil and ſebaceous matter float on the top: the gummy and ſaline ſubſtance, and a part of the reſin, are diſſolved by the water, and may be obtained in a ſolid form by ſtraining the liquor, and expoſing it to a gentle heat till the water has exhaled. The reſt of the reſin, ſtill retained by the ſubject, may be extracted by ſpirit of wine, and ſeparated in its proper form, by exhaling the ſpirit. On theſe foundations, moſt of the ſubſtances contained in vegetables may be extracted, and obtained in a pure ſtate, however they may be compounded together in the ſubject.

5. Sometimes one or more of the principles is found naturally diſengaged from the others, lying in diſtinct receptacles within the ſubject, or extravaſated and accumulated on the ſurface. Thus, in the dried roots of angelica, cut longitudinally, the microſcope diſcovers veins of reſin. In the flower-cups of hypericum, and the leaves of the orange-tree, tranſparent points are diſtinguiſhed by the naked eye, which, on the firſt view, ſeem to be holes, but, on a cloſer examination, are found to be little veſicles filled with eſſential oil. In the bark of the fir, pine, larch, and ſome other trees, the oily receptacles are extremely numerous, and ſo copiouſly ſupplied with the oily and reſinous fluid, that they frequently burſt, eſpecially in the warm climates, and diſcharge their contents in great quantities. The acacia tree in Egypt, and the plum and cherry among ourſelves, yield almoſt pure gummy exudations. From a ſpecies of aſh is ſecreted the ſaline ſweet ſubſtance, manna; and the only kind of ſugar with which the ancients were acquainted, appears to have been a natural exudation from the cane.

6. The foregoing principles are, ſo far as is known, all that naturally exiſt in vegetables; and all that art can extract from them, without ſuch operations as change their nature, and deſtroy their original qualities. In one or more of theſe principles, the colour, ſmell, taſte, and medicinal virtues of the ſubject, are almoſt always found concentrated.

7. In ſome vegetables, the whole medicinal activity reſides in one principle. Thus, in ſweet almonds, the only medicinal principle is a groſs oil; in horſe-radiſh root, an eſſential oil; in jalap root, a reſin; in marſhmallow root, a gum; in the leaves of ſorrel, a ſaline acid ſubſtance.

8. Others have one kind of virtue reſiding in one principle, and another in another. Thus Peruvian bark has an aſtringent reſin, and a bitter gum; wormwood, a ſtrong flavoured eſſential oil, and a bitter gum-reſin.

9. The groſs inſipid oils and ſebaceous matters, the ſimple inſipid gums, and the ſweet and acid ſaline ſubſtances, appear to agree,

both in their medicinal qualities, as well as in their pharmaceutic properties.

10. But eſſential oils, reſins, and gum-reſins, differ greatly in different ſubjects. As eſſential oils are univerſally the principle of odour in vegetables, it is obvious that they muſt differ in this reſpect, as much as the ſubjects from which they are obtained. Reſins frequently partake of the oil, and conſequently of the differences depending thereon; with this further diverſity, that the groſs reſinous part often contains other powers than thoſe which reſide in oils. Thus from wormwood, a reſin may be prepared, containing not only the ſtrong ſmell and flavour, but likewiſe the whole bitterneſs of the herb; from which laſt quality the oil is entirely free. The bitter, aſtringent, purgative, and emetic virtues of vegetables reſide generally in different ſorts of reſinous matter, either pure, or blended with gummy and ſaline parts; of which kind of combinations, there are many ſo intimate, that the component parts can ſcarcely be ſeparated from one another, the whole compound diſſolving almoſt equally in aqueous and ſpirituous menſtrua.

11. There are ſome ſubſtances alſo, which, from their being totally diſſoluble in water, and not at all in ſpirit, may be judged to be mere gums; but which, nevertheleſs, poſſeſs virtues never to be found in the ſimple gums. Such are the aſtringent gum called acacia, and the purgative gum extracted from aloës.

12. It is ſuppoſed that vegetables contain certain ſubtile principles or preſiding ſpirits, different in different plants, of too great tenuity to be collected in their pure ſtate, and of which oils, gums, and reſins are only the matrices or vehicles. This enquiry is foreign to the purpoſes of pharmacy, which is concerned only about groſſer and more ſenſible objects. When we obtain from an odoriferous plant an eſſential oil, containing in a ſmall compaſs the whole fragrance of a large quantity of the ſubject, our intentions are equally anſwered, whether the ſubſtance of the oil be the direct odorous matter, or whether it have diffuſed through it a fragrant principle more ſubtile than itſelf. And, when this oil, in long keeping, loſes its odour, and becomes a reſin, it is equal in regard to the preſent conſiderations, whether the effect happen from the avolation of a ſubtile principle, or from a change produced in the ſubſtance of the oil itſelf.

SECT. II.

ANIMALS.

IN animal bodies we find certain ſubſtances, which have a great reſemblance, in their general properties, to thoſe of the vegetable kingdom.

Animal oils and fats, like the groſs oils of vegetables, are not, of themſelves, diſſoluble either in water or vinous ſpirits; but they may be united with water, by the intervention of gum or mucilage; and moſt of them may be changed into ſoap, and thus rendered miſcible with ſpirit, as well as water, by fixt alkaline ſalts.

The odorous matter of ſome odoriferous animal ſubſtances, as muſk, civet, caſtor, is, like eſſential oil, ſoluble in ſpirit of wine, and volatile in the heat of boiling water. Cartheuſer relates that from caſtor an actual eſſential oil has been obtained, in a very ſmall quantity, but of an exceedingly ſtrong diffuſive ſmell.

The veſicating matter of cantharides, and thoſe parts of ſundry animal ſubſtances, in which their peculiar taſtes reſide, are diſſolved by rectified ſpirit, and ſeem to have ſome analogy with reſins and gummy reſins.

The gelatinous principle of animals, like the gum of vegetables, diſſolves in water, but not in ſpirit or in oils: like gums alſo, it renders oils and fats miſcible with water into a milky liquor.

Some inſects, particularly the ant, are found to contain an acid juice, which approaches nearly to the nature of vegetable acids.

There are, however, ſundry animal juices, which differ greatly, even in theſe general kinds of properties, from the correſponding ones of vegetables. Thus animal ſerum, which appears analogous to vegetable gummy juices, has this remarkable difference, that though it mingle uniformly with cold or warm water, yet, on conſiderably heating the mixture, the animal matter ſeparates from the watery fluid, and concretes into a ſolid maſs. Some have been apprehenſive, that the heat of the body, in ſome diſtempers, might riſe to ſuch a degree as to produce this dangerous or mortal concretion of the ſerous humours: but the heat requiſite for this effect is greater than the human body appears capable of ſuſtaining; being nearly about the middle point between the greateſt human heat commonly obſerved, and that of boiling water.

The ſoft and fluid parts of animals are ſtrongly diſpoſed to run into putrefaction: they putrefy much ſooner than vegetable matters, and, when corrupted, prove more offenſive.

This proceſs takes place, in ſome degree, in the bodies of living animals, as often as the juices ſtagnate long, or are prevented, by an obſtruction of the natural emunctories, from throwing off their more volatile and corruptible parts.

The doctrine of putrefaction, both in living and in dead animals, has received great light from the curious and intereſting experiments and obſervations of Dr. Pringle. He obſerves, that if the corruption be great and ſudden, a fever or a flux enſues; but that if the accumulation of corrupted matter be ſo ſlow, that the body becomes habituated to the putrefaction, a ſcurvy prevails. Hence the frequency of this laſt diſtemper, in long voyages, on board unventilated ſhips, from corrupted air and proviſions; in marſhy countries, from ſimi-

lar caufes; and, in a lefs degree, in all northern climates, in moift fituations, from a want of due perfpiration.

During putrefaction, a quantity of air is generated; all the humours become gradually thinner, and the fibrous parts more lax and tender. Hence, the tympany, which fucceeds the corruption of any of the vifcera, or the imprudent fuppreffion of dyfenteries by aftringents; and the weaknefs and laxity of the veffels obfervable in fcurvies, &c.

The craffamentum of human blood changes by putrefaction into a dark livid-coloured liquor; a few drops of which tinge the ferum of a tawny hue; like that of the ichor of fores and dyfenteric fluxes, and of the white of the eye, the faliva, the ferum of blood drawn from a vein, and that which oozes from a blifter, in deep fcurvies, and the advanced ftate of malignant fevers.

The putrid craffamentum changes a large quantity of recent urine to a flame-coloured water, fo common in fevers and in the fcurvy. This mixture, after ftanding an hour or two, gathers a cloud, refembling what is feen in the crude water of acute diftempers; with fome oily matter on the furface, like the fcum which floats on fcorbutic urine.

The ferum of blood depofits, in putrefaction, a fediment refembling well-digefted pus, and changes to a faint olive green. A ferum, fo far putrefied as to become green, is perhaps never to be feen in the veffels of living animals: but in dead bodies this ferum is to be diftinguifhed by the green colour which the flefh acquires in corrupting. In falted meats, this is commonly afcribed to the brine, but erroneoufly; for that has no power of giving this colour, but only of qualifying the tafte, and in fome degree the ill effects of corrupted aliments. In foul ulcers, and other fores, where the ferum is left to ftagnate long, the matter is likewife found of this colour, and is then always acrimonious.

The putrefaction of animal fubftances is prevented or retarded by all faline matters, even by the fixt and volatile alkaline falts, which have generally been fuppofed to produce a contrary effect. Of all the falts that have been made trial of, fea falt feems to refift putrefaction the leaft: in fmall quantities, it even accelerates the procefs. The vegetable bitters, as chamomile flowers, are much ftronger antifeptics, not only preferving flefh long uncorrupted, but likewife fomewhat correcting it when putrid: the mineral acids have this laft effect in a more remarkable degree. Vinous fpirits, aromatic and warm fubftances, moft of the diaphoretic drugs, and the acrid plants, falfely called alkalefcent, as fcurvy-grafs and horfe-radifh, are alfo found to refift putrefaction. Sugar and camphor are found to be powerful antifeptics. Fixed air, or aërial acid, is likewife thought to refift putrefaction; but, above all, the vapours of nitrous acid in the form of air, the nitrous air of Dr. Prieftley, is found to be the moft effectual in preferving animal bodies from corruption.—The lift of feptics, or of the fubftances that promote putrefaction, is

very ſhort; and ſuch a property has only been diſcovered in calcareous earths, and magneſia, and a very few ſalts whoſe baſes are of theſe earths.

It is obſervable, that, notwithſtanding the ſtrong tendency of animal matters to putrefaction, yet broths made from them with the admixture of vegetables, inſtead of putrefying, turn ſour. Dr. Pringle finds, that when animal fleſh in ſubſtance is beaten up with bread, or other farinaceous vegetables, and a proper quantity of water, into the conſiſtence of a pap, this mixture likewiſe, kept in a heat equal to that of the human body, grows in a little time ſour; while the vegetable matters, without the fleſh, ſuffer no ſuch change. (See the Appendix to Dr. Pringle's Obſervations on the Diſeaſes of the Army.)

ANIMAL ſubſtances, burnt in the open air, are reſolved, like vegetables, into ſoot and aſhes, but with this difference, that no fixt alkaline ſalt can be obtained from the aſhes, and that no acid vapour accompanies the ſmoke. They emit, during the burning, a fetid ſmell, of a peculiar kind, by which animal ſubſtances may be diſtinguiſhed at once from all thoſe of the vegetable kingdom. In cloſe veſſels, they give over, after the watery moiſture, a volatile alkaline ſalt, which either concretes into a ſolid form, or diſſolves in the water, and thus compoſes what is called ſpirit; together with an empyreumatic oil, of a more fetid kind than the oils of vegetables: without the leaſt footſtep of acid throughout the whole proceſs. A black coal remains, which, in the open air, burns into white aſhes void of ſaline matter.

It was obſerved in the preceding ſection, that ſome few vegetables, in this reſolution of them by fire, diſcover ſome agreement, in their matter, with bodies of the animal kingdom; yielding a volatile alkaline ſalt in conſiderable quantity, with little or nothing of the acid or fixt alkali, which the generality of vegetables afford. In animal ſubſtances alſo there are ſome exceptions to the general analyſis: from animal fats, inſtead of a volatile alkali, an acid liquor is obtained, and their empyreumatic oil wants the peculiar offenſiveneſs of the other animal oils.

SECT. III.

MINERALS.

Oils and Bitumens.

IN the mineral kingdom is found a fluid oil, called naphtha or petroleum, floating on the ſurface of waters, or iſſuing from cleſts of

rocks, particularly in the eaſtern countries, of a ſtrong ſmell, very different from that of vegetable or animal oils, limpid almoſt as water, highly inflammable, not ſoluble in ſpirit of wine, and more averſe to union with water than any other oils.

There are different ſorts of theſe mineral oils, more or leſs tinged, and of a more or leſs agreeable, and a ſtronger or weaker ſmell. By the admixture of concentrated acids, which raiſe no great heat or conflict with them, they become thick, and at length conſiſtent; and, in theſe ſtages, are called *bitumens*.

Theſe thickened or concreted oils, like the correſponding products of the vegetable kingdom, are generally ſoluble in ſpirit of wine, but much more difficultly, more ſparingly, and for the moſt part only partially: they liquefy by heat, but require the heat to be conſiderably ſtronger. In a proper degree of heat, they give out a fluid oil, greatly reſembling the native petrolea; a ſmall quantity of a black coaly matter remaining behind. Their ſmells are various; but all of them, either in their natural ſtate, or when melted, or ſet on fire, yield a peculiar kind of ſtrong ſcent, called, from them, *bituminous*.

The ſolid bitumens are amber,—jet,—aſphaltum, or bitumen of Judea,—and foſſil or pit-coal.—Theſe, when diſtilled, give out an odorous phlegm, or water, more or leſs coloured and ſaline; an acid, frequently in a concrete ſtate; an oil, at firſt reſembling the native petrolea, but ſoon becoming heavier and thicker, and laſtly, a quantity of volatile alkali is obtained; the reſiduum is a charry matter, differing in its appearances according to the nature of the bitumen which had been analyſed.

Earths.

The little impropriety of joining the vegetable and animal earths to the mineral, muſt be overlooked for the ſake of bringing both under one ſynoptical view. Under the mineral earths are included ſtones, theſe being no other than earths in an indurated ſtate.—The different kinds of theſe bodies hitherto taken notice of, are the following:

I. *Earths ſoluble in the nitrous, marine, and vegetable acids, but not at all or exceedingly ſparingly in the vitriolic acid. When previouſly diſſolved in other acids, they are precipitated by the addition of this laſt, which thus unites with them into inſipid, or nearly inſipid concretes, not diſſoluble in any liquor.* Of this kind are,

1. The mineral calcareous earth: *diſtinguiſhed by its being convertible, in a ſtrong fire, without addition, into an acrimonious calx, called quicklime.* This earth occurs in a variety of forms in the mineral kingdom. The fine ſoft chalk, the coarſer limeſtones, the hard marbles, the tranſparent ſpars, the earthy matter contained in

waters, and which, ſeparating from them, incruſtates the ſides of caverns, or hangs in icicles from the top, receiving from its different appearances different appellations—how ſtrongly ſoever ſome of theſe bodies have been recommended for particular medicinal purpoſes,—are at bottom no other than different forms of this calcareous earth, ſimple pulverization depriving them of the ſuperficial characters by which they were diſtinguiſhed in the maſs. Moſt of them contain generally a greater or leſs admixture of ſome of the indiſſoluble kinds of earth; which, however, affects their medicinal qualities no otherwiſe, than by the addition which it makes to their bulk. Chalk appears to be one of the pureſt, and is therefore in general preferred. They all burn into a ſtrong quicklime: in this ſtate, a part of them diſſolves in water, which thus becomes impregnated with the aſtringent and lithontriptic powers that have been erroneouſly aſcribed to ſome of the earths in their natural ſtate.

During the calcination of calcareous earth, a large quantity of elaſtic vapours is diſcharged: the abſence of this fluid renders it cauſtic, and ſoluble in water in the form of lime water.

2. The animal calcareous earth: *burning into quicklime, like the mineral.* Of this kind are oyſter ſhells, and all the marine ſhells that have been examined; though with ſome variation in the ſtrength of the quicklime produced from them.

3. The earth of bones and horns: *not at all burning into quicklime.* This kind of earth is more difficult of ſolution in acids than either of the preceding. It is accompanied in the ſubjects with a quantity of gelatinous matter, which may be ſeparated by long boiling in water, and more perfectly by burning in the open air: the earth may be extracted alſo from the bone or horn, though difficultly, by means of acids; whereas vegetables, and the ſoft parts of animals, yield their pure earth by burning only.

II. *Earths ſoluble with eaſe in the vitriolic as well as other acids; and yielding, in all their combinations therewith, ſaline concretes ſoluble in water.*

1. Magneſia alba: *compoſing with the vitriolic acid a bitter purgative liquor.* This earth has not yet been found naturally in a pure ſtate. It is obtained from the purging mineral waters and their ſalts, from the bitter liquor which remains after the cryſtallization of ſea ſalt from ſea water, and from the fluid which remains uncryſtallized in the putrefaction of ſome ſorts of rough nitre. The aſhes of vegetables appear to be nearly the ſame kind of earth.

2. Aluminous earth: *compoſing with the vitriolic acid a very aſtringent liquor.* This earth alſo has not been found naturally pure. It is obtained from alum, which is no other than a combination of it with the vitriolic acid: it may likewiſe be extracted, by ſtrong boiling in that acid, from clays and boles.

III. *Earths which by digeſtion in acids, either in the cold or in a moderate warmth, are not at all diſſolved.*

1. Argillaceous earth: *becoming hard, or acquiring an additional hardneſs, in the fire.* Of this kind of earth there are ſeveral varieties, differing in ſome particular properties: as the purer *clays*, which, when moiſtened with water, form a very viſcous maſs, difficultly diffuſible through a larger quantity of the fluid, and ſlowly ſubſiding from it: *boles*, leſs viſcous, more readily miſcible with water, and more readily ſubſiding: and *ochres*, which have little or nothing of the viſcoſity of the two foregoing, and are commonly impregnated with a yellow or red ferrugineous calx.

2. Cryſtalline earth: *naturally hard, ſo as to ſtrike ſparks with ſteel: becoming friable in a ſtrong fire.* Of this kind are flints, cryſtals, &c. which appear to conſiſt of one and the ſame earth, differing in the purity, hardneſs, and tranſparency of the maſs.

3. Gypſeous earth: *reducible by a gentle heat into a ſoft powder, which unites with water into a maſs, ſomewhat viſcous and tenacious while moiſt, but quickly drying and becoming hard. A greater heat deprives the powder of this property, without occaſioning any other alteration.* Such are the tranſparent *ſelenites*; the fibrous ſtony maſſes improperly called *Engliſh talc*; and the granulated *gypſa* or *plaſter of Paris* ſtones. Though theſe bodies, however, have been commonly looked upon as mere earths, of a diſtinct kind from the reſt, they appear, both from analytical and ſynthetical experiments, to be no other than combinations of the mineral calcareous earth with vitriolic acid. (See the characters of the earths of the firſt claſs.)

4. Talky earth: *ſcarcely alterable by a vehement fire.* The maſſes of this earth are generally of a fibrous or leafy texture; more or leſs pellucid, bright or glittering; ſmooth and unctuous to the touch; too flexible and elaſtic to be eaſily pulveriſed; ſoft, ſo as to be cut with a knife. In theſe reſpects ſome of the gypſeous earths greatly reſemble them, but the difference is readily diſcovered by fire; a weak heat reducing the gypſeous to powder, while the ſtrongeſt makes no other alteration in the talky, than ſomewhat diminiſhing their flexibility, brightneſs, and unctuoſity.

Metals.

Of metals, the next diviſion of mineral bodies, the moſt obvious characters are, their peculiar bright aſpect, perfect opacity, and great weight; the lighteſt of them is ſix, and the heavieſt upwards of nineteen times heavier than an equal bulk of water.

Metals are divided into the perfect, imperfect, and the ſemi-metals——

The perfect metals are those possessed of ductility, and malleability, which are not very sensibly altered by violent degrees of heat. Of these there are three — gold, silver, and platina. — The mark of their incapability of being destroyed by fire is only relative; — for modern chemists have been able, by a very intense degree of heat, to bring gold into a state of calx, or something very nearly resembling it.

They all melt in the fire; except platina, a metallic body, which has not been applied to any medical use, and which is therefore excluded from this general view of medicinal subjects.

The other metals, if air be admitted to them, are gradually converted, with different degrees of facility, into a powdery or friable substance, called *calx*, destitute of the metallic aspect, and much lighter in proportion to its bulk, than the metal itself. — Besides this method of calcining metals by air and fire, they may likewise be brought into the state of calx, by dissolving them in acids, from which they may be afterwards freed, by evaporating the acid, or by adding to the solution alkaline salt. — Metals are sometimes dephlogisticated by detonation. — This change in the obvious properties of metals is generally accompanied with a notable alteration in their medicinal virtues: thus quicksilver, which, taken into the body in its crude state and undivided, seems inactive, when calcined by fire, proves, even in small doses, a strong emetic and cathartic, and, in smaller ones, a powerful alterative in chronical disorders; while regulus of antimony, on the contrary, is changed, by the same treatment, from a high degree of virulence to a state of inactivity.

Calces of mercury and arsenic exhale in a heat below ignition; those of lead and bismuth, in a red or low white heat, run into a transparent glass: the others are not at all vitrescible, or not without extreme vehemence of fire. Both the calces and glasses recover their metallic form and qualities again, by the skilful addition of any kind of inflammable substance that does not contain a mineral acid. This recovery of these calces into their metallic form is called reduction. — During this process an elastic aërial fluid escapes, which is found to be pure air.

All metallic bodies dissolve in acids; some only in particular acids, as silver and lead in the nitrous; some only in compositions of acids, as gold in a mixture of the nitrous and marine; and others, as iron and zinc, in all acids. Some likewise dissolve in alkaline liquors, as copper; and others, as lead, in expressed oils. Fused with a composition of sulphur and fixt alkaline salt, they are all, except zinc, made soluble in water.

All metallic substances, dissolved in saline liquors, have powerful effects in the human body, though many of them appear in their pure state to be inactive. Their activity is generally in proportion to the quantity of acid combined with them. Thus lead, which in its crude form has no sensible effect, when united with a small portion of vegetable acid into cerule, discovers a low degree of the styptic and malignant quality, which it so strongly exerts when

blended with a larger quantity of the ſame acid, into what is called *ſaccharum ſaturni*: and thus mercury, with a certain quantity of the marine acid, forms the violent corroſive ſublimate, which, by diminiſhing the proportion of acid, becomes the mild medicine called *mercurius dulcis*.

Acids.

THE mineral acids are diſtinguiſhed by the names of the concretes from which they have been principally extracted: the *vitriolic* from vitriol, the *nitrous* from nitre or ſaltpetre, and the *marine* from common ſea ſalt.—The form they are generally in, is that of a watery fluid; they have all a remarkable attraction for water; they imbibe the humidity of the air with rapidity; and although heat be produced by their union with water, yet, when mixed with ice in a certain manner, they generate a prodigious degree of cold. Acids change the purple and blue colours of vegetables to a red; they reſiſt fermentation; and, laſtly, impreſs that peculiar ſenſation on the tongue called *Sourneſs*.—They are all highly corroſive, inſomuch as not to be ſafely touched, unleſs largely diluted with water, or united with ſuch ſubſtances as obtund or ſuppreſs their acidity. Mixed haſtily with vinous ſpirits, they raiſe a violent ebullition and heat, accompanied with a copious diſcharge of noxious fumes: a part of the acid unites intimately with the vinous ſpirit into a new compound, void of acidity, called dulcified ſpirit. It is obſervable, that the marine acid is much leſs diſpoſed to this union with ſpirit of wine, than either of the other two: nevertheleſs, many of the compound ſalts reſulting from the combination of earthy and metallic bodies with this acid, are ſoluble in that ſpirit, while thoſe with the other acids are not. All theſe acids effervesce ſtrongly with alkaline ſalts, both fixt and volatile, and form with them neutral ſalts, that is, ſuch as diſcover no marks either of an acid or alkaline quality.

The nitrous and marine acids are obtained in the form of a thin liquor, the acid part being blended with a large proportion of water, without which it would be diffuſed into an incoercible vapour: the vitriolic ſtands in need of ſo much leſs water for its condenſation as to aſſume commonly an oily conſiſtence (whence it is called *oil* of vitriol), and, in ſome circumſtances, even a ſolid one. Alkaline ſalts, and the ſoluble earths and metals, abſorb from the acid liquors only the pure acid part; ſo that the water may now be evaporated by heat, and the compound ſalt left in a dry form.

From the coalition of the different acids with theſe three alkalies, and with the ſeveral ſoluble earths and metallic bodies, reſult a variety of ſaline compounds, the principal of which will be particularized in the ſequel of this work.

The *vitriolic acid*, in its concentrated liquid ſtate, is much more ponderous than the other two, emits no viſible vapours in the heat

of the atmosphere, but imbibes moisture therefrom, and increases in its weight: the *nitrous* and *marine* emit copious corrosive fumes, the nitrous yellowish red, and the marine white vapours. If bottles, containing the three acids, be stopt with cork, the cork is found in a little time tinged *black* by the *vitriolic*, corroded into a *yellow* substance by the *nitrous*, and into a *whitish* one by the marine.

There are, however, a few other mineral acids, which are of importance to be known. These are *aqua regia*, *acid of borax*, *sparry acid*, and *fixed air*.

Aqua regia is formed of certain proportions of muriatic and nitrous acids.

The *sparry acid* is extracted from a fossil called sparry fluor, or vitreous spar. It is not yet determined whether it is a distinct acid; but as neither of these acids has any place in pharmacy, it will be unnecessary in this place to take any further notice of them.

The *acid of borax*, or *sedative salt of Homberg*, may be extracted from borax, a neutral salt, whose base is mineral alkali. —It has also been found native in the water of several lakes of Tuscany. It is a light crystallised concrete salt; its taste is sensibly acid; it is difficultly soluble in water; but the solution changes blue vegetable colours to red; it was supposed to be an anodyne, and refrigerant remedy, but its estimation is very slight in the present practice.

Fixed air is a permanently elastic fluid, being only fixed, when in a state of combination with calcareous earth, or other substances from whence it may be extricated.

According to the substances from which it is disengaged, and from different opinions concerning its nature, it has been denominated—gas sylvestre,—fixed air,—the acid of chalk,—mephitic gas, —mephitic acid,—and aërial acid. It may be extricated by heat, or by other acids, from all calcareous earths, such as chalk, marble, lime-stones, sea-shells, &c. also from mild fixed vegetable, and volatile alkalies, and from magnesia alba.

When disengaged, it assumes its real character, that of a permanently elastic fluid. It is separated in a great quantity during the vinous fermentation of vegetable substances. When calcareous earth is deprived of this aërial acid by heat, it is converted into that caustic substance called quick-lime. When alkalies fixed or volatile, are deprived by any means of this aërial acid, they are rendered much more caustic, incapable of crystallization, and of effervescing with other acids. They are also in this deaërated state much more powerful in dissolving other bodies. By re-combining the above substances with this aërial acid, they again resume their original properties: but as magnesia is not rendered caustic by calcination, the terms would be better changed to aërated, and deaërated, than mild and caustic; the aërial is more disposed to unite with quick lime than with any other substance; next to that, its attraction is for fixed alkali; then for magnesia; and lastly for volatile

alkali. Thefe relative powers of the different fubftances to unite with this aërial acid, lay the foundation of many important proceffes in pharmacy. Water impregnated with aërial acid is capable of diffolving iron; and in this way are formed native and artificial chalybeate waters: *zinc* is alfo foluble in the fame liquid. This acid is eafily expelled from the water by removing the preffure of the atmofphere; by boiling, and even by time alone, if the veffel be not kept clofe fhut. *Fixed air* extinguifhes flame, vegetable, and animal life, and ought therefore to be cautiouffy managed; like other acids, it changes the blue colour of vegetables to a red, and communicates an acidulous tafte to water impregnated with it: fo feeble is the attraction of aërial acid to quick-lime, that any acid will difengage it. From what has been faid, it will appear obvious, that mild and effervefcing alkalies, whether fixed or volatile, are no more than neutral falts compounded of aërial acid, and pure or cauftic alkali: like other acids, it unites with thefe bodies, diminifhes their caufticity, and effects their cryftallization.

Of the Affinities of Bodies.

It is already laid down as a character of one of the claffes of earths, that the vitriolic acid precipitates them when they are previoufly diffolved in any other acid. It is obvious, that, on the fame principle, this particular acid may be diftinguifhed from all others. This character ferves not only for the acid in its pure ftate, but likewife for all its combinations that are foluble in water. If a folution of any compound falt, whofe acid is the vitriolic, be added to a folution of chalk in any other acid, the vitriolic acid will part from the fubftance with which it was before combined, and join itfelf to the chalk, forming therewith a compound, which, being no longer diffoluble in the liquor, renders the whole milky for a time, and then gradually fubfides.

This acid may be diftinguifhed alfo, in compound falts, by another criterion not lefs ftrongly marked. If any falt containing it be mixed with powdered charcoal, and the mixture expofed, in a clofe veffel, to a moderate ftrong fire, the acid will unite directly with the inflammable part of the charcoal, and compofe therewith a genuine fulphur. Common brimftone is no other than a combination of the vitriolic acid with a fmall proportion of inflammable matter. With any kind of inflammable matter that is not volatile in clofe veffels, as the coal of vegetables, of animals, or of bitumens, this acid compofes always the fame identical fulphur.

The nitrous acid alfo, with whatever kind of body it be combined, is both diftinguifhed and extricated therefrom by means of any inflammable fubftance brought to a ftate of ignition: if the fubject be mixed with a little powdered charcoal, and made red-hot, a deflagration or fulmination enfues, that is, a bright flame with a hiffing noife; and the inflammable matter and the acid being

thus consumed or dissipated together, there remains only the substance that was before combined with the acid, and the small quantity of the ashes afforded by the coal.

This property of the nitrous acid, of deflagrating with inflammable substances, and that of the vitriolic, of forming sulphur with them, serve not only as criteria of the respective acids in the various forms and disguises, but likewise for discovering inflammable matter in bodies, when its quantity is too small to be sensible on other trials.

If a fixt alkaline salt be united with a vegetable acid, as that of vinegar, into a neutral salt; on adding to this compound some marine acid, the acetous acid will be disengaged, so as to exhale totally in a moderate heat, leaving the marine in possession of the alkali: the addition of the nitrous will, in like manner, dispossess the marine, which now arises in its proper white fumes, though, without such an addition, it could not be extricated from the alkali by any degree of heat: on the addition of the vitriolic acid, the nitrous gives way in its turn, exhaling in red fumes, and leaving only the vitriolic acid and the alkali united together.

Again, if any metallic body be dissolved in an acid, the addition of any earthy body that is dissoluble in that acid will precipitate the metal; a volatile alkaline salt will, in like manner, precipitate the earth: and a fixt alkali will dislodge the volatile; which last being readily exhalable by heat, the remaining salt will be the same as if the acid and fixt alkali had been joined together at first, without the intervention of any of the other bodies.

THE power in bodies, on which these various transpositions and combinations depend, is called by the chemists AFFINITY; a term, like the Newtonian *attraction*, designed to express, not the cause, but the effect. When an acid spontaneously quits a metal to unite with an alkali, they say *it has greater affinity* to the alkali than to the metal: and when, conversively, they say it has a greater affinity to fixt alkalies than to those of the volatile kind, they mean only that it will unite with the fixt in preference to the volatile, and that, if previously united with a volatile alkali, it will forsake this for a fixt one.

The doctrine of the affinities of bodies is of very extensive use in the chemical pharmacy: many of the officinal processes, as we shall see hereafter, are founded on it: several of the preparations turn out very different from what would be expected by a person unacquainted with these properties of bodies; and several of them, if, from an error in the process, or other causes, they prove unfit for the use intended, may be rendered applicable to other purposes, by such transpositions of their component parts as are pointed out by the knowledge of their affinities.

I shall here, therefore, subjoin a table of the principal affinities observed in pharmaceutical operations, formed chiefly on that of

Mr. Geoffroy (which was publiſhed in the Memoirs of the French Academy for the Year 1718), with ſuch corrections and additions as later experiments have furniſhed.

The table is thus to be underſtood: The ſubſtance printed in capitals, on the top of each ſeries, has the greateſt affinity with that immediately under it, a leſs affinity with the next, and ſo on to the end of the ſeries; that is, if any of the remote bodies have been combined with the top one, the addition of any of the intermediate bodies will diſunite them; the intermediate body uniting with the uppermoſt body of the ſeries, and throwing out the remote one. Thus, in the firſt ſeries of the affinities of water, a fixt alkali being placed between the water and inflammable ſpirit, it is to be concluded, that, wherever water and ſpirit are mixed together, the addition of any fixt alkaline ſalt will abſorb the water, and occaſion the pure ſpirit to be ſeparated. Where ſeveral ſubſtances are expreſſed in one ſeries, it is to be underſtood, that any one of thoſe bodies, which are neareſt to the uppermoſt, will in like manner diſengage from it any one of thoſe which are more remote.

Table of Affinities.

1. WATER:

Fixt alkaline ſalt:
Inflammable ſpirit.

2. WATER:

Inflammable ſpirit:
Volatile alkaline ſalt.

3. WATER:

Inflammable ſpirit:
Sundry compound ſalts.

4. INFLAMMABLE SPIRIT:

Water:
Oils and Reſins.

5. VITRIOLIC ACID:

Inflammable principle:
Fixt alkaline ſalts:
Calcareous earths calcined:
Volatile alkaline ſalts:
Calcareous earths uncalcined:
Zinc and Iron:
Copper:
Silver.

6. NITROUS ACID:

Inflammable principle:
Fixt alkaline ſalts:
Calcareous earths calcined:
Volatile alkaline ſalts:
Calcareous earths uncalcined:
Zinc:
Iron:
Copper:
Lead:
Mercury:
Silver:
Camphor.

7. MURIATIC ACID:

Fixt alkaline ſalts:
Calcareous earths calcined:
Volatile alkaline ſalts:
Calcareous earths uncalcined:
Zinc:

Iron:
Tin:
Regulus of antimony:
Copper:
Lead:
Silver:
Mercury.

8. Acetous Acid:

Iron:
Copper.

9. Alkaline Salts:

Vitriolic acid:
Nitrous acid:
Muriatic acid:
Vinegar:
Tartar:
Oils and Sulphur.

10. Soluble Earths:

Vitriolic acid:
Nitrous acid:
Muriatic acid.

11. Inflammable Principle:

Nitrous acid:
Vitriolic acid:
Muriatic substances:
Fixt alkaline salts.

12 Sulphur:

Fixt alkali, and Quicklime:
Iron:
Copper:
Lead:
Silver:
Regulus of antimony:
Mercury:
Arsenic.

13. Gold:

Ethereal spirit:
Acids.

14. Mercury:

Muriatic acid:
Vitriolic acid:
Nitrous acid.

15. Lead:

Vitriolic acid:
Muriatic acid:
Nitrous acid:
Vinegar:
Oils.

16. Silver:

Muriatic acid:
Vitriolic acid:
Nitrous acid.

17. Copper:

Vitriolic acid:
Muriatic acid:
Nitrous acid.

18. Iron:

Vitriolic acid:
Muriatic acid:
Nitrous acid.

19. Regulus of Antimony:

Vitriolic acid:
Nitrous acid:
Muriatic acid.

This table is sufficient to shew the nature of simple affinities; but there are others much more extensive, which the nature of this work will not admit; we therefore recommend our readers to the works of Bergman, and other of the more modern chemists, for further information.

CHAPTER III.

Of the Pharmaceutical Apparatus.

ONE of the principal parts of the pharmaceutic apparatus consists in contrivances for containing and applying fire, and for directing and regulating its power. Of these contrivances, called *furnaces*, there are different kinds, according to the convenience of the place, and the particular purposes they are intended to answer. I shall here endeavour to give a general idea of the structure of those which are employed in pharmaceutical operations, and of the principles on which they are built.

Furnaces.

THE most simple furnace is the common stove, otherwise called the furnace for OPEN FIRE. This is usually made of an iron hoop, five or six inches deep: with a grate or some iron bars across the bottom, for supporting the fuel. It either stands upon feet, so as to be moveable from place to place; or is fixt in brickwork. In this latter case, a cavity is left under the grate, for receiving the ashes that drop through it; and an aperture or door, in the fore part of this ash-pit, serves both for allowing the ashes to be occasionally raked out, and for admitting air to pass up through the fuel. This furnace is designed for such operations as require only a moderate heat; as infusion, decoction, and the evaporation of liquids.

A deeper hoop or body, cylindrical, parallelopipedal, widening upwards, elliptical, or of other figures; formed of, or lined with, such materials as are capable of sustaining a strong fire; with a grate and ash-pit beneath, as in the preceding; and communicating at the top with a perpendicular pipe, or chimney; makes a WIND FURNACE.

The greater the perpendicular height of the chimney, the greater will be the draught of air through the furnace, and the more intensely will the fire burn; provided the width of the chimney is sufficient to allow a free passage to all the air that the furnace can receive through the grate: for which purpose, the area of the aperture of the chimney should be nearly equal to the area of the interstices of the grate.

Hence, where the chimney consists of moveable pipes, made to fit upon one another at the ends, so that the length can be occasionally increased or diminished, the vehemence of the fire will be increased or diminished in the same proportion.

In furnaces whose chimney is fixed, the same advantage may be procured on another principle. As the intensity of the fire depends wholly upon the quantity of air successively passing through and animating the burning fuel, it is obvious, that the most vehement fire may be suppressed or restrained at pleasure, by more or less closing either the ash-pit door by which the air is admitted, or the chimney by which it passes off; and that the fire may be more or less raised again, by more or less opening those passages. A moveable plate, or REGISTER, in any convenient part of the chimney, affords commodious means of varying the width of the passage, and consequently of regulating the heat. But this is most conveniently accomplished by keeping the ash-pit door entirely shut, and regulating the heat by a range of holes in a damping plate; each hole being provided with a proper pin, by which it may be closed at pleasure. These holes may be made of different sizes; the smallest hole may be considered as one; the second as twice the size; the next to that double to the second, &c. and by combining these holes we can let in any quantity of air, from 1 to 128——as 1, 2, 4, 8, 16, 32, 64, 128.

THERE are two general kinds of these wind furnaces; one, with the chimney on the top, over the middle of the furnace; the other with the chimney on one side, and the mouth clear.

In the former, either the upper part of the furnace is contracted to such an aperture, that the chimney may fit upon it; or it is covered with an arched dome, or with a flat plate, having a like aperture in the middle. As in this disposition of the chimney, the inside of the furnace cannot be come at from above, a door is made in the side, a little above the grate, for supplying fuel, inspecting the matter in the fire, &c.

For performing FUSIONS in this furnace, the crucible, or melting vessel, is placed immediately among the fuel, with a slip of brick, or some other like support, between it and the grate, to keep the cold air, which enters underneath, from striking on its bottom.

When designed as a REVERBERATORY, that is, for distillation in long necks or coated glass retorts, two iron bars are placed across above the fire, for supporting the vessel, whose neck comes out at an aperture made for that purpose in the side. This aperture should be made in the side opposite to that in which is the door above mentioned, or at least so remote from it, that the receiver, fitted on the neck of the distilling vessel without the furnace, may not lie in the operator's way when he wants to stir the fire, or throw in fresh fuel.

The other kind of wind furnace communicates, by an aperture in its back part near the top, either with an upright pipe of its own, or with the chimney of the room; in which latter case, all other passages into the chimney must be closed. Here the mouth of the

furnace ſerves for a door, which may be occaſionally covered with a plate or tile. Of this kind is the furnace moſt commonly uſed for fuſion in a crucible.

THIS laſt conſtruction, by leaving the mouth of the furnace clear, affords the convenience of letting into it a boiling or evaporating pan, a copper ſtill, an iron pot for diſtilling hartſhorn, an iron ſand pot, or other like veſſels, of ſuch a ſize, that they may be ſupported on the furnace by their rims. The mouth being thus occupied by the veſſels, a door muſt be made in the ſide for ſupplying and ſtirring the fuel.

When a furnace of this kind is deſigned only for a SAND BATH, it is moſt commodious to have the ſand placed on a long iron plate furniſhed with a ledge of freeſtone or brickwork at each ſide. The mouth of the furnace is to be cloſely covered by one end of this plate; and the canal, by which the furnace communicates with its chimney, is to be lengthened and carried along under the plate; the plate forming the upper ſide of the canal. In this kind of ſand-bath, digeſtions, &c. requiring different degrees of heat, may be carried on at once; for the heat decreaſes gradually from the end over the furnace to the other.

When large veſſels, as STILLS, and iron pots for diſtilling hartſhorn and aqua-fortis, are fixed in furnaces, a conſiderable part of the bottom of the veſſel is commonly made to reſt upon ſolid brickwork.

The large ſtill, whoſe bottom is narrow in proportion to its height, and whoſe weight when charged with liquor requires great part of it to be thus ſupported, expoſes but a ſmall ſurface to the action of the fire underneath. To make up for this diſadvantage, the heat, which riſes at the further end of a long narrow grate, is conveyed all round the ſides of the veſſel, by a ſpiral canal, which communicates at top with a common chimney.

The pots for diſtilling hartſhorn and aqua-fortis in the large way have part of their great weight borne up by three ſtrong pins or trunnions, at equal diſtances round the pot towards the middle, reaching into a brickwork; ſo that leſs ſupport being neceſſary underneath, a greater ſurface of the wide bottom lies expoſed to the immediate action of the fire.

IF a furnace, communicating with its chimney by a lateral canal, as in the ſand furnace above-mentioned, be carried to a conſiderable height above the part where this canal enters it; and it be filled with fuel to the top, and cloſely covered; the fuel will burn no higher than up to the upper ſide of the canal through which the air paſſes off, and, in proportion as this lower part of the fuel conſumes, it will be ſupplied by that above, which falls down in its place. Hence, in this furnace, called an ATHANOR, a conſtant heat may be kept up for a conſiderable length of time, without attendance.

The tower of the athanor, or that part which receives the fuel, is commonly made to widen a little downwards, that the coals may fall the more freely; but not so much as that the part on fire at bottom may be too strongly pressed. A small aperture is made opposite to the canal or flue, or a number of openings according to the size of the furnace and the degree of heat required, for supplying air, which is more conveniently admitted in this manner than through the grate, as the interstices of the grate are in time choaked up by the ashes.

This furnace is designed only for heating bodies exterior to it. Its canal, or *flue*, as in the sand furnace already described, passes under a sand-bath or water-bath: at the further end of which, it rises perpendicularly to such a height, as may occasion a sufficient draught of air through the fire.

The flue may be so wide, as to correspond to the whole height of the fire-place. A register or sliding plate, placed between the flue and the furnace, enables us to increase or diminish this height, and consequently the quantity of fire, at pleasure. If the space beneath the flue be inclosed to the ground, the heat in this cavity will be considerable enough to be applicable to some useful purposes.

WITH regard to the materials of furnaces, the fixt ones are built of bricks, cemented together by some good loam or clay. Any kind of loam or clayey composition that is of a proper degree of tenacity, which, when made into a paste with water and well worked, does not stick to the fingers, and which, when thoroughly dried, neither cracks nor melts in a vehement fire, is fit for this use: the purer and more tenacious clays require to have their tenacity lessened by an admixture of sand, or rather of the same kind of clay burnt and grossly powdered.

Smaller portable furnaces are made of strong iron or copper plates, lined to the thickness of an inch or more with the same kind of clayey composition: which, for this use, may be beaten with some horse-dung, chopt straw, or cut hair or tow.

Very commodious portable furnaces, for a business of moderate extent, may be formed also of the larger kind of the common black-lead melting pots, by cutting a door at the bottom of the pot for the ash-pit, another above this for the fire-place, and introducing a circular iron grate, of such a size, that it may rest between the two doors. [A particular account of the method of preparing these furnaces for different uses may be seen in the first part of the Commercium Philosophico-technicum; and under the word FURNACE in the Encyclopædia Britannica.]

Baths.

WHERE a strong degree of heat is requisite, as in the fusion of metals, &c. the vessel containing the subject-matter is placed among

the burning fuel, or immediately over it: this is called *operating in a naked fire*. Where a ſmaller heat is ſufficient, and the veſſel employed is either of glaſs, or of the more tender kinds of earthenware, the ſand-bath or water-bath is uſed, to defend the veſſel from the immediate action of the fire, and to render the heat leſs fluctuating.

Both theſe baths have their particular advantages and inconveniences. In water, the heat is equal through every part of the fluid; whereas in ſand, it varies in different parts of one perpendicular line, decreaſing from the bottom to the top. Water cannot be made to receive or to tranſmit to veſſels immerſed in it, above a certain degree of heat, viz. that which is ſufficient to make it boil, and hence it ſecures effectually againſt any danger of an exceſs of heat in thoſe operations wherein the product would be injured by a heat greater than that of boiling water: but this advantage renders it uſeleſs for proceſſes which require a greater heat, and for which ſand, or other like ſolid intermedia, are neceſſarily employed. There is this convenience alſo in the ſand-bath, that the heat may be readily diminiſhed or increaſed about any particular veſſel, by raiſing it higher out of the ſand, or ſinking it deeper; that different ſubjects may be expoſed to different degrees of heat from one fire; and that it keeps the veſſels ſteady. The ſand made choice of ſhould be a large coarſe-grained kind, ſeparated from the finer parts by waſhing, and from little ſtones by the ſieve.

Coating of Glaſſes, and Lutes.

SOME proceſſes require to be performed with glaſs veſſels in a naked fire. For theſe purpoſes, veſſels made of the thinneſt glaſs ſhould be choſen; for theſe bear the fire, without cracking, much better than thoſe which are thicker and in appearance ſtronger.

All glaſſes, or other veſſels that are apt to crack in the fire, muſt be cautiouſly nealed, that is, heated by ſlow degrees: and when the proceſs is finiſhed, they ſhould be as ſlowly cooled, unleſs where the veſſel is to be broken to get out the preparation, as in ſome ſublimations: in this caſe it is more adviſeable to expoſe the hot glaſs ſuddenly to the cold air, which will ſoon occaſion it to crack, than to endanger throwing down the ſublimed matter among the fæces by a blow.

As a defence from the violence of the fire, and to prevent the contact of cold air on ſupplying freſh fuel, &c. the glaſs is to be coated over, to the thickneſs of about half a crown, with Windſor loam, ſoftened with water into a proper conſiſtence, and beaten up with ſome horſe-dung, or with the other clayey compoſitions already mentioned.

Theſe compoſitions ſerve alſo as a lute, for ſecuring the junctures of the veſſels in the diſtillation of the volatile ſalts and ſpirits of

animals: for the diſtillation of acid ſpirits, the matter may be moiſtened with a ſolution of fixt alkaline ſalt inſtead of water. For moſt other purpoſes, a piece of wet bladder, or a paſte of flour and water, or of linſeed meal (that is, the cake left after the expreſſion of oil of linſeed), are ſufficient lutes.

Clay and chalk are ſometimes mixed up into a paſte, and ſpread upon ſlips of paper; and ſometimes gum arabic is uſed inſtead of clay, and mixed up in the ſame manner. Where very elaſtic ſteams are to be condenſed, we are often obliged, even where the common lutes are employed, to leave or make an opening, which may be occaſionally ſtopped by a plug: by this means a paſſage may be given to a part of theſe vapours, which prevents the burſting of the veſſels, and facilitates the condenſation of the reſt. If we wiſh to collect incondenſible vapours, we receive them into a jar inverted under a baſon of water, or quickſilver, as is uſually done in the analyſis of vegetables by fire.

Veſſels.

It would be needleſs to enter here into a particular detail of the pharmaceutical inſtruments, as we ſhall have occaſion to mention the principal of them in the following chapter, in ſpeaking of the ſeveral operations to which they are reſpectively ſubſervient. In this place I ſhall only give the operator a few general cautions with regard to the *matter* of the veſſels deſigned for containing the ſubject.

Metalline veſſels poſſeſs the advantage of being able to bear ſudden alterations of heat and cold, and of being very ſtrong, ſo as to be capable of confining elaſtic ſteams; but, except thoſe of gold or ſilver, are corroded by acids, even by the mild ones of the vegetable kingdom. Copper ones are corroded alſo by alkaline liquors, and by ſome neutral ones, as ſolutions of ſal ammoniac: it is obſervable, that vegetable acids do not act upon copper by boiling, ſo much as by ſtanding in the cold; for even lemon-juice may be boiled in a clean copper veſſel, without receiving from it any taſte or ill quality; whereas, in the cold, it ſoon diſſolves ſo much as to contract a pernicious taint. The tin, with which copper veſſels are uſually lined, gives likewiſe a ſenſible impregnation to acid juices; and this impregnation alſo is probably not innocent, more eſpecially as a quantity of lead is commonly mixed with the tin.

From the want of tranſparency in theſe veſſels, we are alſo deprived of the advantage of ſeeing the different changes during the operation.

The common EARTHEN veſſels are of a looſe porous texture, and hence are apt to imbibe a conſiderable quantity of certain liquids, particularly of thoſe of the ſaline kind; which ſoon diſcover their penetrating the veſſel, by ſhooting into ſaline efflorescences on the

outſide. Thoſe which are GLAZED have their glazing corroded by acids; by vinegar, and the acid juices of fruits, as well as by the ſtronger acids of the mineral kingdom. And as this glazing conſiſts chiefly of vitrified lead, the impregnation, which it communicates to theſe liquors, is of a very dangerous kind: if vinegar be boiled for ſome time in a glazed earthen veſſel, it will yield, on being inſpiſſated, a true ſaccharum ſaturni, that is, a ſalt compoſed of lead and the acetous acid: but of all kinds of earthen-ware, the moſt perfect is porcelain; compoſed of the fineſt clay mixed with a ſtony matter, capable of melting in a violent heat.

A method has been diſcovered of imitating porcelain, by melting the coarſer kinds of glaſs with a mixture of ſand and clay: —this is much ſtronger than glaſs, and bears the moſt ſudden changes of heat and cold that we have occaſion to apply.

The veſſels called, from their hardneſs and compactneſs, STONE WARE, are in good meaſure free from the inconveniences of the coarſer earthen ones. Their glazing, being a part of the clay itſelf ſuperficially vitrified by means of the fumes of common ſalt, appears to be proof againſt acids.

GLASS veſſels ſuffer no corroſion, and give no taint in any of the pharmaceutic operations. When therefore they are made of a proper thinneſs, when they are well annealed, and when blown into a ſpherical form, ſo that the heat may be equally applied, they are preferable to all others, where great and ſudden changes of heat and cold are not to take place, and where ſtrength is not required: what is called the *flint glaſs*, which contains a quantity of lead in its compoſition, is the beſt for chemical purpoſes. Glaſs veſſels, therefore, in ſuch proceſſes as will admit their uſe, ought always to be preferred.

Weights.

Two different kinds of weights are made uſe of in this country; one in the merchandiſe of gold and ſilver; the other for almoſt all goods beſides. The firſt we call Troy, the latter Averdupois weight.

The goldſmiths divide the Troy pound into twelve ounces; the ounce into twenty penny-weights; and the penny-weight into twenty-four grains. The Averdupois pound is divided into ſixteen ounces; and the ounce into eight parts, called drachms.

The pound of the London and Edinburgh diſpenſatories (which is the only one made uſe of in this work) is that of the goldſmiths, divided in the following manner:

The Pound	contains	twelve Ounces.
The Ounce		eight Drachms.
The Drachm		three Scruples.
The Scruple		twenty Grains.

The grain is equal to the goldſmith's grain.

The medical or Troy pound is less than the Averdupois, but the ounce and the drachm greater. The Troy pound contains 5670 grains; the Averdupois 7000 grains. The Troy ounce contains 480 grains; the Averdupois only 437½. The Troy drachm 60; the Averdupois drachm somewhat more than 27. Eleven drachms Averdupois are equal to five drachms Troy; twelve ounces Averdupois to nearly eleven ounces Troy; and nineteen pounds Averdupois to somewhat more than twenty-three pounds Troy.

These differences in our weights have occasioned great confusion in the practice of pharmacy. As the druggists and grocers sell by the Averdupois weight, the apothecaries have not in general kept any weights adjusted to the Troy pound greater than two drachms, using for all above Averdupois. By this means it is apparent, that in all compositions, where the ingredients are prescribed some by pounds and others by ounces, they are taken in a wrong proportion to each other; and the same happens when they are directed in lesser denominations than the ounce, as these subdivisions, used by the apothecaries, are made to a different ounce. But these differences are now happily removed.

Measures.

THE measures employed with us in pharmacy are the common wine measures.

A Gallon	contains	eight Pints *(libræ)*.
The Pint		sixteen Ounces.
The Ounce		eight Drachms.

By a spoonful is understood, in the London dispensatory, the measure of half an ounce; in the Edinburgh, half an ounce weight in syrups, and three drams in distilled waters.

Though the pint is called by Latin writers *libra* or pound, there is not any known liquor of which a pint measure answers to that weight. A pint of the highest rectified spirit of wine exceeds a pound by above half an ounce; a pint of water exceds it by upwards of three ounces; and a pint of oil of vitriol weighs more than two pounds and a quarter.

In the last edition of the Edinburgh Pharmacopeia, measures are entirely rejected; and the Troy weight is used in directing the quantity either of solid or fluid substances.—All possible care is however taken, that the proportions of the simples and strength of the compounds should neither be increased nor diminished by this alteration.

A table of the weights of certain measures of different fluids may on many occasions be useful, both for assisting the operator in regulating their proportions in certain cases, and for shewing the comparative gravities of the fluids themselves. I have therefore drawn

up ſuch a table for a pint, an ounce, and a drachm meaſure, of thoſe liquids whoſe gravity has been determined by experiments that can be relied on. The wine gallon contains 231 cubic inches, whence the pint contains $28\frac{7}{8}$; the ounce $1\frac{163}{128}$; and the dram $\frac{231}{1424}$ of a cubic inch.

Table of the weights of different fluids.

	Pint weighs			Ounce meaſure weighs	Drachm meaſure weighs
	ounces.	drachms.	grains.	grains.	grains.
INFLAMMABLE SPIRITS.					
Æthereal Spirit of Wine	11	1	36	336	42
Highly-rectified Spirit of Wine	12	5	20	380	$47\frac{1}{2}$
Common-rectified Spirit of Wine	13	2	40	400	50
Proof Spirit	14	1	36	426	$53\frac{1}{4}$
Dulcified Spirit of Salt	14	4	48	438	$55\frac{3}{4}$
Dulcified Spirit of Nitre	15	2	40	460	$57\frac{1}{2}$
WINES.					
Burgundy	14	1	36	426	$53\frac{1}{4}$
Red Port	15	1	36	456	57
Canary	15	6	40	475	$59\frac{1}{2}$
EXPRESSED OILS.					
Oil Olive	14	0	0	420	$52\frac{1}{2}$
Linſeed Oil	14	2	8	428	$53\frac{1}{2}$
ESSENTIAL OILS.					
Oil of Turpentine	12	1	4	364	$45\frac{1}{2}$
of Orange Peel	-		-	408	51
of Juniper Berries	-		-	419	$52\frac{3}{8}$
of Roſemary	-		-	430	$53\frac{3}{4}$
of Origanum	-		-	432	54
of Caraway Seeds	-		-	432	54
of Nutmegs	-		-	436	$54\frac{1}{2}$
of Savin	-		-	443	$55\frac{2}{8}$
of Hyſſop	-		-	443	$55\frac{3}{8}$
of Cummin Seed	-		-	448	56
of Mint	-		-	448	56
of Pennyroyal	-		-	450	$56\frac{1}{4}$
of Dill Seed	-		-	457	$57\frac{1}{8}$
of Fennel Seed	-		-	458	$57\frac{1}{4}$
of Cloves	-		-	476	$59\frac{1}{2}$
of Cinnamon	-		-	476	$49\frac{1}{2}$
of Saſſafras	-		-	503	$62\frac{7}{8}$

	Pint weighs			Ounce measure weighs	Drachm measure weighs
	ounces.	drachms.	grains.	grains.	grains.
ALKALINE LIQUORS.					
Lixivium ſaponarium, *Pharm. Lond.*	16	0	0	480	60
Spirit of Sal ammoniac	17	1	10	$514\frac{3}{4}$	$64\frac{1}{2}$
Strong Soapboilers' ley	17	6	24	534	$66\frac{3}{4}$
Lixivium tartari	24	0	0	720	90
ACID LIQUORS.					
Wine Vinegar	15	3	44	464	58
Beer Vinegar	15	6	56	476	$59\frac{1}{2}$
Glauber's Spirit of Salt	17	4	0	525	$65\frac{5}{8}$
Glauber's Spirit of Nitre	20	2	40	610	$76\frac{1}{4}$
Strong oil of Vitriol	28	5	20	860	$107\frac{1}{2}$
ANIMAL FLUIDS.					
Urine	15	5	20	470	$58\frac{7}{8}$
Cow's Milk	15	6	40	475	$59\frac{1}{2}$
Aſſes' Milk	16	0	0	480	60
Blood	16	1	4	484	$60\frac{1}{2}$
WATERS.					
Diſtilled Water	15	1	50	$456\frac{7}{8}$	57
Rain Water	15	2	40	460	$57\frac{1}{2}$
Spring Water	15	3	12	462	$57\frac{3}{4}$
Sea Water	15	5	20	470	$58\frac{7}{8}$
QUICKSILVER	214	5	20	6440	805

12 17. 10. 5. 20

CHAPTER IV.

Of the Pharmaceutical Operations.

SECT. I.

Solution.

SOLUTION is an intimate commixture of folid bodies with fluids into one feemingly homogeneous liquor. The diffolving fluid is called a MENSTRUUM or SOLVENT; and the body diffolved, the SOLVEND.

Solution cannot take place unlefs one of the bodies be in a fluid ftate, and this fluidity is affected either by water or fire: hence folution is faid to be performed in the humid, or in the dry way.

Hence, if a quantity of brimftone be diffolved in a folution of fixed alkali, the brimftone is faid to be diffolved in the humid way; but if the brimftone be diffolved by melting it in a pan with the dry alkali, the folution is faid to be done in the dry way: but one of the fubftances is thrown into a ftate of fluidity by the powers of heat, before the folution takes place; hence the rectitude of the firft pofition. If one of the two bodies to be united is tranfparent, the folution, if complete, is a tranfparent compound. But if the folution be opaque and milky, as is the cafe with foap and water, it is then confidered as incomplete.

The principal menftrua made ufe of in pharmacy, are *water*, *vinous fpirits*, *oils*, *acid*, and *alkaline* liquors.

WATER is the menftruum of all falts, of vegetable gums, and of animal gellies. Of falts it diffolves only a determinate quantity, though of one kind of falt more than another; and being thus SATURATED, leaves any additional quantity of the fame falt untouched.

Experiments have been made for determining the quantities of water which different falts require for the diffolution. Mr. Eller has given a large fet in the Memoirs of the Royal Academy of Sciences of Berlin for the Year 1750, from which the following table is extracted.

Table of the folubility of fluids.

Eight ounces by weight of diftilled water diffolved

	oz.	dr.	gr.
Of Refined Sugar	24	0	0
Green Vitriol	9	4	0

	oz.	dr.	gr.
Of Blue Vitriol	9	0	0
White Vitriol	4	4	0
Epsom Salt	4	0	0
Purified Nitre	4	0	0
Soluble Tartar	4	0	0
Common Salt	3	4	0
Sal gemmæ	3	4	0
Sal catharticus Glauberi	3	4	0
Seignette's Salt	3	0	0
Alum	2	4	0
Sal Ammoniac	2	4	0
Vitriolated Tartar	1	4	0
Salt of Hartshorn	1	4	0
Sugar of Lead	1	2	0
Cream of Tartar	1	0	0
Borax	0	4	20

Though great care appears to have been taken in making these experiments, it is not to be expected, that the proportions of the several salts, soluble in a certain quantity of water, will always be found exactly the same with those just set down. Salts differ in their solubility, according to the degree of their purity, perfection, and dryness: the vitriols, and the artificial compound salts in general, differ remarkably in this respect, according as they are more or less impregnated with the acid ingredient. Thus vitriolated tartar, perfectly neutralised, is extremely difficult of solution. The matter which remains in making Glauber's spirit of nitre is no other than a vitriolated tartar, and it dissolves so difficultly, that the operator is obliged to break the retort in order to get it out; but on adding more of the vitriolic acid, it dissolves with ease. Hence many have been tempted to use an over-proportion of acid in this preparation, and we frequently find in the shops, under the name of vitriolated tartar, this acid soluble salt. The degree of heat occasions also a notable difference in the quantity of salt taken up; in very cold weather, eight ounces of water will dissolve only about one ounce of nitre: whereas, in warm weather, the same quantity will take up three ounces or more. To these circumstances are probably owing, in great part, the remarkable differences in the proportional solubilities of salts, as determined by different authors. It is observable, that common salt is less affected in its solubility, by a variation of heat, than any other salt; for water in a temperate state will dissolve nearly as much of it as very hot water; and accordingly this is the salt in which the different experiments agree the best. In the experiments of Hoffmann, Neumann, and Petit, the proportion of this salt, on a reduction of the numbers, comes out exactly the same, viz. three ounces of the salt to eight of water. Dr. Brownrigg makes the quantity of salt a little more; Dr. Grew, a drachm and

a ſcruple more; and Eller, as appears in the above table, four drams more. So, in the trials of ſix different perſons, made probably in different circumſtances, the greateſt difference is only one-ſixth of the whole quantity of ſalt; whereas in ſome other ſalts there are differences of twice or thrice the quantity of the ſalt. In the experiments, from which the table is drawn, the water was of the temperature of between 40 and 42 degrees of Fahrenheit's thermometer; or above freezing by about one-ſeventh of the interval between freezing and the human heat.

Some ſalts omitted by Eller are here ſubjoined. The firſt is taken from Dr. Grew, and the other four from Neumann.

Eight ounces of water diſſolved

		oz.	dr.	gr.
Of fixt alkaline Salt	above	8	0	0
Sal diureticus		8	0	0
Sugar-Candy, both brown and white		9	0	0
Sugar of Milk		0	2	40
Eſſential Salt of Sorrel		0	1	20

Though water takes up only a certain quantity of one kind of ſalt, yet, when ſaturated with one, it will ſtill diſſolve ſome portion of another; and, when it can bear no more of either of theſe, it will ſtill take up a third, without letting go any of the former. The principal experiments of this kind that have been made, relative to pharmaceutic ſubjects, are exhibited in the following table, of which the two firſt articles are from Grew, and the others from Eller.

Water, 32 parts by weight,

fully ſaturated with	diſſolved afterwards.	Parts.		
Nitre	Sal ammoniac	10		
Common Salt	Nitre	10	Sal ammoniac	2
Nitre	Fixt Alkali	7	Common Salt	2
Common Salt	Nitre, near	2	Fixt Alkali	2½
Volatile alkali	Nitre	4	Sugar	2
Sal ammoniac	Common Salt	2½		
Soluble Tartar	Nitre	2		
Vitriolated Tartar	Fixt Alkali	2		
Glauber's Salt	Nitre	1	Sugar	1
Epſom Salt	Sugar	6		
Borax	Fixt Alkali	2		

In regard to the other claſs of bodies for which water is a menſtruum, viz. thoſe of the gummy and gelatinous kind, there is no determinate point of ſaturation: the water unites readily with any

proportions of them, forming, with different quantities, liquors of different consistences. This fluid takes up likewise, when assisted by trituration, the vegetable gummy resins, as ammoniacum and myrrh; the solutions of which, though IMPERFECT, that is, not transparent, but turbid, and of a milky hue, are nevertheless applicable to valuable purposes in medicine. It mingles with vinous spirits, with acid, and alkaline liquors, not with oils, but imbibes some of the more subtile parts of essential oils, so as to become impregnated with their smell and taste.

Rectified SPIRIT OF WINE is the menstruum of the essential oils; resins and camphor of vegetables; of the pure distilled oils, and several of the colouring and medicinal parts of animals; of some mineral bituminous substances, as of ambergris; and of soaps, though it does not act upon the expressed oil and fixt alkaline salt, of which soap is composed; whence, if soap contain any superfluous quantity of either the oil or salt, it may, by means of this menstruum, be excellently purified therefrom. It dissolves, by the assistance of heat, volatile alkaline salts; and, more readily, the neutral ones, composed either of fixed alkali and the acetous acid, as the sal diureticus, or of volatile alkali and the nitrous acid, as also the salt of amber, &c. It mingles with water and with acids; not with alkaline lixivia.

OILS dissolve vegetable resins and balsams, wax, animal fats, mineral bitumens, sulphur, and certain metallic substances, particularly lead. The expressed oils are, for most of these bodies, more powerful menstrua than those obtained by distillation; as the former are more capable of sustaining, without injury, a strong heat, which is, in most cases, necessary to enable them to act. It is said, that one ounce of sulphur will dissolve in three ounces of expressed oil, particularly that of linseed, but requires six ounces of essential oil, as that of turpentine.

All ACIDS dissolve alkaline salts, alkaline earths, and metallic substances. The different acids differ greatly in their action upon these last; one dissolving only some particular metals; and another, others.

The *vegetable* acids dissolve a considerable quantity of zinc, iron, copper, lead, and tin; and extract so much from the metallic part of antimony, as to become powerfully emetic: they dissolve lead more readily, if the metal be previously calcined by fire, than in its metallic state.

The *marine* acid dissolves zinc, iron, and copper; and though it scarce acts on any other metallic substance, in the common way of making solutions, it may nevertheless be artfully combined with them all except gold: the corrosive sublimate, and antimonial caustic of the shops, are combinations of it with mercury and the me-

tallic part of antimony, effected by applying the acid, in the form of fume, to the subjects, at the same time also strongly heated.

The *nitrous* acid is the common menstruum of all metallic substances, except gold and the metallic part of antimony; of which two, the proper solvent is a mixture of the nitrous and marine acids, called *aqua regia*.

The *vitriolic* acid, diluted with water, easily dissolves zinc and iron: in its concentrated state, and assisted by a boiling heat, it may be made to corrode, or imperfectly dissolve, most of the other metals.

The *aërial* acid dissolves zinc, iron, and calcareous earth: and those solutions must be conducted without heat.

ALKALINE *lixivia* dissolve oils, resinous substances, and sulphur. Their power is greatly promoted by the addition of *quick-lime*: instances of which occur in the preparation of soap, and in the common caustic. Thus acuated, they reduce the flesh, bones, and other solid parts of animals, into a gelatinous matter. This increased acrimony, in the alkaline fixed salts, is owing to the abstraction of their fixed air; that acid having a greater attraction for quick-lime, than alkali.

Solutions made in water, and in spirit of wine, possess the virtues of the body dissolved; while oils generally sheathe its activity; and acids and alkalies vary its quality. *Hence watery and spirituous liquors are the proper menstrua of the native virtues of vegetable and animal matters.*

Most of the foregoing solutions are easily effected, by pouring the menstruum on the body to be dissolved, and suffering them to stand together for some time, exposed to a suitable warmth. A strong heat is generally requisite to enable oils and alkaline liquors to perform their office: nor will acids act on some metallic bodies without its assistance. The action of watery and spirituous menstrua is likewise expedited by a moderate heat; though the quantity, which they afterwards keep dissolved, is not, as some suppose, by this means increased: all that heat occasions these to take up, more than they would do in a longer time in the cold, will, when the heat ceases, subside again: this at least is most commonly the case, though there may be some instances of the contrary.

The action of acids on the bodies which they dissolve, is generally accompanied with heat, effervescence, and a copious discharge of fumes. The fumes which arise during the dissolution of some metals in the vitriolic acid, prove inflammable: hence, in the preparation of the artificial vitriols of iron and zinc, the operator ought to be careful, especially where the solution is made in a narrow-mouthed vessel, lest, by the imprudent approach of a candle, the exhaling vapour be set on fire. — This vapour is the inflammable air of Dr. Priestley, and other modern chemists.

There is another species of solution, in which the moisture of the air is the menstruum. Fixt alkaline salts and those of the

neutral kind, compofed of alkaline falts, and the vegetable acids, or of foluble earths, and any acid except the vitriolic, and fome metallic falts, on being expofed for fome time to a moift air, gradually attract its humidity, and at length become liquid. Some fubftances, not diffoluble by the application of water in its groffer form, as the butter of antimony, are eafily liquefied by this flow action of the aërial moifture. This procefs is termed DELIQUATION.

SECT. II.

Extraction.

THE liquors which diffolve certain fubftances in their pure ftate, ferve likewife to *extract* them from admixtures of other matter. Thus rectified fpirit of wine, the menftruum of effential oils and refins, takes up the virtues of the refinous and oily vegetables; as water does thofe of the mucilaginous and faline; the inactive earthy parts remaining untouched by both. Water extracts likewife from many plants, fubftances, upon which by themfelves it has little effect; even effential oils being, as we have formerly obferved, rendered foluble in that fluid, by the admixture of gummy and faline matter, of which all vegetables participate in a greater or lefs degree. Thus many of the aromatic plants, and moft of the bitters and aftringents, yield their virtues to this menftruum.

Extraction is performed by MACERATING or STEEPING the fubject in its appropriated menftruum, in the cold; or DIGESTING or CIRCULATING them, in a moderate warmth; or INFUSING the plant in the boiling liquor, and fuffering them to ftand in a covered veffel till grown cold; or actually BOILING them together for fome time: but if the vegetable matter is itfelf fucculent and watery, it is fometimes only neceffary to exprefs the juice, and evaporate it to the proper confiftence.

The term *digeftion* is fometimes ufed for maceration, and, in this cafe, the procefs is directed to be performed *without heat:* where this circumftance is not expreffed, digeftion always implies the ufe of heat. *Circulation* differs from digeftion only in this; that the fteam, into which a part of the liquor is refolved by the heat, is, by means of a proper difpofition of the veffels, condenfed and conveyed back upon the fubject. Digeftion is ufually performed in a *matrafs* (or *bolthead*), Florence flafk, or the like; either of which may be converted into a *circulatory veffel*, by inverting another into the mouth, and fecuring the juncture with a piece of wet bladder. A fingle matrafs, if its neck be very long and narrow, will anfwer the purpofe as effectually; the vapour cooling and condenfing be-

fore it can rise to the top. In a vessel of this kind, even spirit of wine, one of the most volatile liquors we know, may be boiled without any considerable loss. The use of this instrument is likewise free from any inconvenience, which may, in some cases, attend the other, of the uppermost vessel being burst or thrown off. As the long-necked matrasses here recommended are difficultly filled or emptied, and likewise very dear, a long glass pipe may be occasionally luted to the shorter ones.

Heat greatly expedites extraction; but by these means proves as injurious to some substances, by occasioning the menstruum to take up their grosser and more ungrateful parts, as it is necessary for enabling it to extract the virtues of others. Thus guaiacum or logwood impart little to aqueous liquors, without a boiling heat, whilst even a small degree of warmth proves greatly prejudicial to the fine bitter of carduus benedictus. This plant, which, infused in boiling, or digested in sensibly hot water, gives a nauseous taste, so offensive to the stomach as to promote vomiting, yields to the cold element a grateful balsamic bitter.

As heat promotes the dissolving power of liquids, so cold, on the other hand, diminishes it. Hence tinctures, or extractions made by a considerable heat, deposit in cold weather a part of their contents, and thus become proportionably weaker: *a circumstance which deserves particular regard.*

SECT. III.

Depuration.

THERE are different methods of *depurating* or purifying liquors from their feculencies, according as the liquor itself is more or less tenacious, or the feculent matter of greater or less gravity.

Thin fluids readily deposit their more ponderous impurities, upon standing at rest for some time, in a cool place; and may then be DECANTED, or poured off clear, by inclining the vessel.

Glutinous, unctuous, or thick substances, are to be liquefied by a suitable heat; when the grosser feculencies will fall to the bottom; the lighter arising to the surface, to be DESPUMATED or scummed off.

Where the impurities are neither so ponderous as to subside freely to the bottom, nor so light as to arise readily to the surface; they may be separated in a great measure by COLATURE through strainers of linen, woollen, or other cloth; and more perfectly by FILTRATION through a soft bibulous kind of paper made for this use.

The *grey* paper, which covers pill-boxes as they come from

abroad, is one of the beſt for this purpoſe: it does not eaſily break when wetted, or tinge the liquor which paſſes through it, which the reddiſh ſort, called *bloſſom* paper, frequently does. The paper is ſupported by a funnel, or piece of canvas fixed in a frame. When the funnel is uſed, it is convenient to put ſome ſtraws or ſmall ſticks between the paper and its ſides, to prevent the weight of the liquor from preſſing the paper ſo cloſe to it, as not to allow room for this fluid to tranſude. In ſome caſes a funnel made of wire is put betwixt the paper and the glaſs funnel. There is alſo a kind of glaſs-funnel, with ridges down its ſides, made on purpoſe for this uſe.

Glutinous and unctuous liquors, which do not eaſily paſs through the pores of a filter or ſtrainer, are CLARIFIED, by beating them up with the whites of eggs, which, concreting or growing hard when heated, and entangling the impure matter, ariſe with it to the ſurface: the mixture is to be gently boiled, till the ſcum begins to break, when the veſſel is to be removed from the fire, the cruſt taken off, and the liquor paſſed through a flannel bag.

Decantation, colature, and filtration, are applicable to moſt of the medicated liquors that ſtand in need of purification. Deſpumation and clarification very rarely have place; ſince theſe, along with the impurities of the liquor, frequently ſeparate its medicinal parts. Thus, if the decoction of poppy heads, for making diacodium, be ſolicitouſly ſcummed or clarified, the medicine will loſe almoſt all that the poppies communicated, and inſtead of a mild opiate, turn out little other than a plain ſyrup of ſugar.

It may be proper to obſerve, that the common ſorts of filtering paper are apt to communicate a diſagreeable flavour: and, hence, in filtering fine bitters, or other liquors, whoſe gratefulneſs is of primary conſequence, the part, which paſſes through firſt, ought to be kept apart for inferior purpoſes.

SECT. IV.

Cryſtallization.

WATER, aſſiſted by heat, diſſolves a larger proportion of ſaline ſubſtances than it can retain when grown cold: hence, on the abatement of the heat, a part of the ſalt ſeparates from the menſtruum, and concretes at the ſides and bottom of the veſſel. The concretions, unleſs too haſtily formed by the ſudden cooling of the liquor, or diſturbed in their coaleſcence by agitation, or other like cauſes, prove tranſparent, and of regular figures, reſembling in appearance the natural ſprig-CRYSTALS.

Salts, diſſolved in a large quantity of water, may, in like manner, be recovered from it in their cryſtalline form, by boiling down the

ſolution, till ſo much of the fluid has exhaled, as that the remainder will be too little to keep the ſalt diſſolved when grown perfectly cold. It is cuſtomary to continue the evaporation, till the ſalt ſhews a diſpoſition to concrete even from the hot water, by forming a pellicle on that part which is leaſt hot, viz. on the ſurface. If large, beautiful, and perfectly-figured cryſtals are required, this point of time is ſomewhat too late: for if the ſalt thus begin to coaleſce whilſt conſiderably hot, on being removed into a cold place, its particles will run too haſtily and irregularly together; the pellicle at the ſame time falling down through the liquor, and thus proving a further diſturbance to the regularity of the cryſtallization.

In order to perform this proceſs in perfection, the evaporation muſt be gentle, and continued no longer than till ſome drops of the liquor, let fall on a cold glaſs plate, diſcover cryſtalline filaments. When this mark of ſufficient exhalation appears, the veſſel is to be immediately removed from the fire into a leſs warm, but not cold place, and covered with a cloth, to prevent the acceſs of cold air, and conſequently the formation of a pellicle.

The fixed alkalies, eſpecially the mineral, when fully ſaturated with fixed air, or aërial acid, aſſume a cryſtalline form; but theſe cryſtals are not ſo perfect as when the ſame alkalies are united with the other acids: the volatile alkalies cannot cryſtallize, becauſe they eſcape before the menſtruum exhales. Some even of the neutral kind, particularly thoſe, of which certain metallic bodies are the baſis, are ſo ſtrongly retained by the aqueous fluid, as not to exhibit any appearance of cryſtallization, unleſs ſome other ſubſtance be added, with which the water has a greater affinity. The table of affinity ſhews, that ſuch a ſubſtance is ſpirit of wine; by the prudent addition of which, theſe kinds of ſalts ſeparate freely from the menſtruum, and form large and beautiful cryſtals, ſcarce obtainable by any other means.

The operator muſt be careful not to add too much of the ſpirit, leſt, inſtead of a gradual and regular cryſtallization, the baſis of the ſalt be haſtily precipitated in a powdery form. One twentieth part of the weight of the liquor will in moſt caſes be a ſufficient, and in ſome too large a quantity.

Different ſalts require different quantities of water to keep them diſſolved: and, hence, if a mixture of two or more be diſſolved in this fluid, they will begin to ſeparate and cryſtallize at different periods of the evaporation. Upon this foundation, ſalts are freed, not only from ſuch impurities, as water is not capable of diſſolving and carrying through the pores of a filter, but likewiſe from admixtures of one another; that which requires moſt water to diſſolve it, ſhooting firſt into cryſtals.—For further particulars reſpecting cryſtallization, ſee Part III. Sect. VI.

SECT. V.

Precipitation.

BY this operation, bodies are recovered from their ſolutions, by means of the addition of ſome other ſubſtance, with which either the menſtruum, or the body diſſolved, have a greater affinity than they have with each other.

Precipitation, therefore, is of two kinds; one, where the ſubſtance ſuperadded unites with the menſtruum, and occaſions that before diſſolved to be thrown down: the other, in which it unites with the diſſolved body, and falls along with it to the bottom. Of the firſt we have an example in the precipitation of ſulphur from alkaline lixivia, by the means of acids; of the ſecond, in the precipitation of mercury from aqua-fortis by ſea-ſalt, or its acid.

The ſubjects of this operation, as well thoſe which are capable of being precipitated as thoſe which precipitate them, will readily appear from inſpection of the table of affinity. The manner of performing it is ſo ſimple, as not to ſtand in need of any particular directions; no more being required, than to add the precipitant by degrees, ſo long as it continues to occaſion any precipitation. When the whole of the powder has fallen, it is to be well EDULCORATED, that is, waſhed in ſeveral freſh parcels of water, and afterwards dried for uſe.

Where metals are employed as precipitants, as in the purification of martial vitriol from copper by the addition of freſh iron, they ought to be perfectly clean and free from any ruſty or greaſy matter; otherwiſe they will not readily, if at all, diſſolve, and conſequently the precipitation will not ſucceed; for the ſubſtance to be precipitated ſeparates only by the additional one's diſſolving and taking its place. The ſeparated powder, often, inſtead of falling to the bottom, lodges upon the precipitant, from which it muſt be occaſionally ſhaken off, for reaſons ſufficiently obvious.

Though, in this operation, the precipitated powder is generally the part required for uſe, yet ſome advantage may frequently be made of the liquor remaining after the precipitation. Thus, when fixt alkaline ſalt is diſſolved in water, and ſulphur diſſolved in this lixivium, the addition of acids ſeparates and throws down the ſulphur, only by virtue of the acid's uniting with, and neutralizing the alkali by which the ſulphur was held diſſolved: conſequently, if the precipitation be made with the vitriolic acid, and the acid gradually dropt in till the alkali be completely ſatiated, that is, ſo long as it continues to occaſion any precipitation or turbidneſs, the liquor will yield, by proper evaporation and cryſtallization, a neutral ſalt

compoſed of the vitriolic acid and fixt alkali, that is, vitriolated tartar. In like manner, if the precipitation be made with the nitrous acid, a true nitre may be recovered from the liquor; if with the marine, the ſalt called *ſpiritus ſalis marini coagulatus*; and if with the acid of vinegar, the *kali acetatum*.

SECT. VI.

Evaporation.

THIS is a third method of recovering ſolid bodies from their ſolutions, effected by the means of heat; which *evaporating* the fluid part, that is, forcing it off in ſteam, the matter which was diſſolved therein is left behind in its ſolid form.

The general rules for evaporating are, to place the matter in a flat, ſhallow, wide veſſel, ſo that a large ſurface of the liquor may be preſented to the air; for it is only from the ſurface that evaporation takes place. The degree of heat ought to be proportioned to the volatility of the ſubſtance to be evaporated, and to the degree of the fixity of the matter to be loſt; thus the leſs fixed the matter to be left is, and the more ſtrongly it adheres to the volatile parts, the leſs the degree of heat ought to be; and in ſuch caſes, too, a forcible current of air is ſometimes ſcarcely admiſſible: on the contrary, when the matter to be evaporated is not very volatile, and the matter to be left is very fixed, and does not adhere ſtrongly to the volatile part, the evaporation may be urged by a ſtrong heat, aided by a current of air directed upon the ſurface of the liquor.

This proceſs is applicable to the ſolutions of all thoſe ſubſtances which are leſs volatile than the menſtruum, or which will not exhale by the heat requiſite for the evaporation of the fluid: as the ſolutions of fixt alkaline ſalts; of the gummy, gelatinous, and other inodorous parts of vegetables and animals in water; and of many reſinous and odorous ſubſtances in ſpirit of wine.

Water extracts the virtues of ſundry fragrant aromatic herbs, almoſt as perfectly as rectified ſpirit of wine: but the aqueous infuſions are far from being equally ſuited to this proceſs, with thoſe made in ſpirit; water carrying off the whole odour and flavour of the ſubject, which that lighter liquor leaves entire behind it. Thus a watery infuſion of mint loſes in evaporation the ſmell, taſte, and virtues of the herb, while a tincture drawn with pure ſpirit, yields, on the ſame treatment, a thick balſamic liquid, or ſolid gummy reſin, extremely rich in the peculiar qualities of the mint.

In evaporating theſe kinds of liquors, particular care muſt be had, towards the end of the proceſs, that the heat be very gentle; other-

wiſe the matter, as it grows thick, will burn to the veſſel, and contract a diſagreeable ſmell and taſte: this burnt flavour is called an *empyreuma*. The liquor ought to be kept ſtirring during the evaporation; otherwiſe a part of the matter concretes on the ſurface expoſed to the air, and forms a pellicle which impedes the further evaporation.

SECT. VII.

Diſtillation.

IN the foregoing operation fluids are rarefied by heat into ſteam or vapour, which is ſuffered to exhale in the air, but which the buſineſs of diſtillation is to collect and preſerve. For this purpoſe the ſteam is received in proper veſſels, luted to that in which the ſubject is contained; and being there cooled, condenſes into a fluid form again.

There are two kinds of diſtillation: by the one, the more ſubtile and volatile parts of liquors are elevated from the groſſer; by the other, liquids, incorporated with ſolid bodies, are forced out from them by vehemence of fire.

To the firſt, belong the diſtillation of the pure inflammable ſpirit from vinous liquors; and of ſuch of the active parts of vegetables as are capable of being extracted by boiling water or ſpirit, and at the ſame time ariſing along with their ſteam.

As boiling water extracts or diſſolves the eſſential oils of vegetables, while blended with the other principles of the ſubject, without ſaturation, but imbibes only a determinate, and that a ſmall, proportion of them in their pure ſtate; as theſe oils are the only ſubſtances contained in common vegetables, which prove totally volatile in that degree of heat; and as it is in them that the virtues of aromatics, and the peculiar odour and flavour of all plants reſide, it is evident, that water may be impregnated, by diſtillation, with the more valuable parts of many vegetables: that this impregnation is limited, the oil ariſing in this proceſs pure from thoſe parts of the plant which before rendered it ſoluble in water without limitation; hence greateſt part of the oil ſeparates from the diſtilled aqueous liquor, and, according to its greater or leſs gravity, either ſinks to the bottom or ſwims on the ſurface: and that, conſequently, infuſions and diſtilled waters are greatly different from one another; that the firſt may be rendered ſtronger and ſtronger by pouring the liquor on freſh parcels of the ſubject; but that the latter cannot be in like manner improved by *cohabating*, or re-diſtilling them from freſh ingredients. See Part II. Chap. V. Sect. II.

As the oils of many vegetables do not freely diſtil with a leſs

heat than that in which water boils; as rectified ſpirit of wine is not ſuſceptible of this degree of heat; and as this menſtruum totally diſſolves theſe oils in their pure ſtate, it follows, that ſpirit elevates far leſs from moſt vegetables than water; but that nevertheleſs the diſtilled ſpirit, by keeping all that it does elevate perfectly diſſolved, may, in ſome caſes, prove as ſtrong of the ſubject as the diſtilled water. The more gentle the heat, and the ſlower the diſtillation goes on, the volatile parts are the more perfectly ſeparated in their native ſtate.

The apparatus made uſe of for diſtilling ſpirits, waters, and oils, conſiſt of a *ſtill*, or copper veſſel, for containing the ſubject, on which is luted a large *head* with a *ſwan neck*. The vapour ariſing into the head, is hence conveyed through a *worm*, or long ſpiral pipe, placed in a veſſel of cold water called a *refrigeratory*; and being there condenſed, runs down into a *receiver*. In the ſecond part of this work, we ſhall give ſome improvements in this apparatus for particular purpoſes; with directions for performing the ſeveral proceſſes to the greateſt advantage.

It may be obſerved, that as the parts which are preſerved in evaporation cannot ariſe in diſtillation, the liquor remaining after the diſtillation, properly depurated and inſpiſſated, will yield the ſame extracts as thoſe prepared from the tincture or decoction of the ſubject made on purpoſe for that uſe; the one of theſe operations collecting only the volatile parts, and the other the more fixt; ſo that where one ſubject contains medicinal parts of both kinds, they may thus be obtained diſtinct, without one's being injured by the proceſs which collects the other.

THE ſubjects of the ſecond kind of diſtillation are, the groſs oils of vegetables and animals; the mineral acid ſpirits; and the metallic fluid quickſilver; which, as they require a much ſtronger degree of heat to elevate them than the foregoing liquors can ſuſtain, ſo they likewiſe condenſe without ariſing ſo far from the action of the fire. The diſtillation of theſe is performed in low glaſs veſſels, called, from their necks being bent to one ſide, *retorts*: to the further end of the neck a *receiver* is luted, which ſtanding without the furnace, the vapours ſoon condenſe in it, without the uſe of a refrigeratory: nevertheleſs, to promote this effect, ſome are accuſtomed, eſpecially in warm weather, to cool the receiver, by occaſionally applying wet cloths to it, or keeping it partly immerſed in a veſſel of cold water.

The vapours of ſome ſubſtances are ſo ſluggiſh, or ſtrongly retained by a fixt matter, as ſcarce to ariſe even over the low neck of the retort. Theſe are moſt commodiouſly diſtilled in ſtraight-necked earthen veſſels, called *longnecks*, laid on their ſides, ſo that the vapour paſſes off laterally with little or no aſcent: a receiver is luted to the end of the neck without the furnace: in this manner, the acid ſpirit of vitriol is diſtilled. The matter which remains in

the retort or longneck, after the diſtillation, is vulgarly called *caput mortuum*.

In theſe diſtillations, a quantity of elaſtic air is frequently generated; which, unleſs an exit is allowed it, blows off or burſts the receiver. The danger of this may, in good meaſure, be prevented, by ſlowly raiſing the fire; but more effectually, by leaving a ſmall hole in the luting, to be occaſionally opened or ſtopped with a wooden plug; or inſerting at the juncture an upright pipe of ſuch a height, that the ſteam of the diſtilling liquor may not be able to riſe to the top; but it is ſtill better done by fitting to the apparatus other veſſels, by which their vapours may be condenſed.

SECT. VIII.

Sublimation.

As all fluids are volatile by heat, and conſequently, capable of being ſeparated, in moſt caſes, from fixed matters, by the foregoing proceſs, ſo various ſolid bodies are ſubjected to a ſimilar treatment. Fluids are ſaid to *diſtil*, and ſolids to *ſublime*; though ſometimes both are obtained in one and the ſame operation. If the ſubliming matter concrete into a maſs, it is commonly called a *ſublimate*; if into a powdery form, *flowers*.

The principal ſubjects of this operation are, volatile alkaline ſalts; neutral ſalts compoſed of volatile alkalies and acids, as ſal ammoniac; the ſalt of amber, and flowers of benzoin; mercurial preparations; and ſulphur. Bodies, of themſelves not volatile, are frequently made to ſublime by the mixture of volatile ones: thus iron is carried up by ſal ammoniac in the preparation of the *ferrum ammoniacale*.

The fumes of ſolid bodies, in cloſe veſſels, riſe but a little way, and adhere to that part of the veſſel where they concrete. Hence a receiver or condenſer is leſs neceſſary here than in the preceding operation; a ſingle veſſel, as a *matraſs*, or tall *vial*, or the like, being frequently ſufficient.

SECT. IX.

Expreſſion.

The *preſs* is chiefly made uſe of for forcing out the juices of ſucculent herbs and fruits; and the inſipid oils of the unctuous ſeeds and kernels,

The harder fruits, as quinces, require to be previouſly well beaten or ground; but herbs are to be only moderately bruiſed. The ſubject is then included in a hair bag, and preſſed betwixt wooden plates, in the common ſcrew-preſs, as long as any juice runs from it.

THE expreſſion of oils is performed nearly in the ſame manner as that of juices; only, here, iron plates are ſubſtituted for the wooden ones there made uſe of. The ſubject is well pounded, and included in a ſtrong canvaſs bag, betwixt which and the plates of the preſs a hair-cloth is interpoſed.

The inſipid oils of all the unctuous ſeeds are obtained, uninjured, by this operation, if performed without the uſe of heat; which though it greatly promotes the extraction of the oil, at the ſame time impreſſes an ungrateful flavour, and increaſes its diſpoſition to grow rancid.

The oils expreſſed from aromatic ſubſtances generally carry with them a portion of their eſſential oil: hence the ſmell and flavour of the expreſſed oils of nutmegs and mace. They are very rarely found impregnated with any of the other qualities of the ſubject; oil of muſtard ſeed, for inſtance, is as ſoft and void of acrimony as that of almonds, the pungency of the muſtard remaining entire in the cake left after the expreſſion.

SECT. X.

Exſiccation.

THERE are two general methods of exſiccating or drying moiſt bodies: in the one, their humid parts are exhaled by heat; in the other, they are imbibed or abſorbed by ſubſtances, whoſe ſoft and ſpongy texture adapts them to that uſe. Bodies intimately combined with, or diſſolved in, a fluid, as recent vegetables and their juices, require the firſt: ſuch as are only ſuperficially mixed, as when earthy or indiſſoluble powders are ground with water, are commodiouſly ſeparated from it by the ſecond.

Vegetables and their parts are uſually exſiccated by the natural warmth of the air; the aſſiſtance of a gentle artificial heat may, nevertheleſs, in general, be not only ſafely, but advantageouſly had recourſe to. By a moderate fire, even the more tender flowers may be dried, in a little time, without any conſiderable loſs, either of their odour or lively colour; which would both be greatly injured or deſtroyed by a more ſlow exſiccation in the air. Some plants indeed, particularly thoſe of the acrid kind, as horſe-radiſh, ſcurvy-graſs, and arum, loſe their virtues by this proceſs, however

carefully performed: but far the greater number retain them unimpaired, and often improved.

The thicker vegetable juices may be exſiccated by the heat of the ſun; or, where this is not ſufficient, by that of a water bath, or an oven moderately warm. The thinner juices may be gently boiled till they begin to thicken, and then treated as the foregoing: this proceſs, termed INSPISSATION or EVAPORATION, has been ſpoken of already. The juices of ſome plants, as arum root, briony root, orris root, wild cucumbers, &c. ſeparate, upon ſtanding for ſome time, into a thick part, which falls to the bottom; and a thin aqueous one, which ſwims above it: this latter is to be poured off, and the firſt exſiccated by a gentle warmth: preparations of this kind have been uſually called FÆCULÆ; that of the wild cucumber, to be ſpoken of in its place, is the only one which practice now retains.

Indiſſoluble bodies, mixed with water into a thick conſiſtence, may be eaſily freed from the greateſt part of it, by dropping them on a *chalk-ſtone*, or ſome powdered chalk preſſed into a ſmooth maſs, which readily imbibes their humidity. Where the quantity of fluid is large, as in the edulcoration of precipitates, it may be ſeparated by decantation or filtration. It has been before obſerved, that one of the principal circumſtances favouring fermentation was a certain degree of moiſture; exſiccation is therefore employed to diſſipate humidity, and render vegetables thereby leſs liable to thoſe changes produced by a kind of inſenſible fermentation.

SECT. XI.

Comminution.

COMMINUTION is the bare reduction of ſolid coherent bodies into ſmall particles or powder. The methods of effecting this are various, according to the texture of the ſubject.

Dry friable bodies, or ſuch as are brittle and not very hard, and mixtures of theſe with ſomewhat moiſt ones, are eaſily PULVERIZED in a *mortar*, or a *mill*.

For very light dry ſubſtances, reſins, and the roots of a tenacious texture, the mortar may in ſome caſes be previouſly rubbed with a little ſweet oil, or a few drops of oil to be occaſionally added: this prevents the finer powder of the firſt from flying off, and the others from cohering under the peſtle. Camphor is moſt commodiouſly powdered, by rubbing it with a little rectified ſpirit of wine.

Tough ſubſtances, as woods, the peels of oranges and lemons, &c. are moſt conveniently *raſped*; and ſoft oily bodies, as nutmegs, paſſed through a *grater*.

The comminution of the harder minerals, as calamine, cryſtal, flint, &c. is greatly facilitated by EXTINCTION; that is, by heating them red-hot, and quenching them in water: by repeating this proceſs a few times, moſt of the hard ſtones become eaſily pulverable. This proceſs, however, is not to be applied to any of the alkaline or calcareous ſtones; leſt, inſtead of an inſipid powder, we produce an acrimonious calx or lime.

Some metals, as tin, though ſtrongly cohering in their natural ſtate, prove extremely brittle when heated, inſomuch as to be eaſily divided into ſmall particles by dextrous agitation. Hence the officinal method of pulveriſing tin, by melting it, and, at the inſtant of its beginning to return into a ſtate of ſolidity, briſkly ſhaking it in a wooden box. The comminution of metals, in this manner, is termed by the metallurgiſts GRANULATION.

On a ſimilar principle, certain ſalts, as nitre, may be reduced into powder in large quantity, by diſſolving them in boiling water, ſetting the ſolution over a moderate fire, and keeping the ſalt conſtantly ſtirring during its exſiccation, ſo as to prevent its particles, disjoined by the fluid, from re-uniting together into larger maſſes.

Powders are reduced to a great degree of fineneſs by TRITURATING, or rubbing them, for a length of time, in a mortar. Such as are not diſſoluble in water, or injured by the admixture of that fluid, are moiſtened with it into the conſiſtence of a paſte, and LEVIGATED, or ground, on a flat ſmooth *marble* or *iron plate*; or where a large quantity is to be prepared at a time, in *mills* made for that uſe.

Comminution, though one of the moſt ſimple operations of pharmacy, has, in many caſes, very conſiderable effect. The reſinous purgatives, when finely triturated, are more eaſily ſoluble in the animal fluids, and conſequently prove more cathartic, and leſs irritating, than in their groſſer ſtate. Crude antimony, which, when reduced to a tolerable fine powder, diſcovers little medicinal virtue, if levigated to a great degree of ſubtility, proves a powerful alterative in many chronical diſorders.

By comminution, the heavieſt bodies may be made to float in the lighteſt fluid *, for a longer or ſhorter time, according to their

* Some attribute this effect to a diminution of the ſpecific gravity of the body; and, at the ſame time, ſuppoſe the peculiar virtues of certain medicines, particularly mercury, to be in great meaſure owing to their gravity. If theſe hypotheſes were juſt, it ſhould follow, that the mercurial preparations, by being finely comminuted, would loſe proportionably their efficacy; and ſo indeed mercurius dulcis, for inſtance, has been ſuppoſed to do. But experience ſhews, that this is far from being the caſe; and that comminution by no means leſſens, but rather increaſes its power: when reduced to a great degree of ſubtility, it paſſes readily into the habit, and operates, according to its quantity, as an alterative or a ſialagogue; while, in a groſſer form, it is apt to irritate the ſtomach and bowels, and run off by the inteſtines, without being conveyed into the blood.

greater or leſs degree of tenuity. Hence we are furniſhed with an excellent criterion of the fineneſs of certain powders, and a method of ſeparating the more ſubtile parts from the groſſer, diſtinguiſhed by the name of ELUTRIATION, or *waſhing over*.

SECT. XII.

Fuſion.

FUSION is the reduction of ſolid bodies into a ſtate of fluidity by fire. Almoſt all natural ſubſtances, the pure earths, and the ſolid parts of animals and vegetables excepted, melt in proper degrees of fire; ſome in a very gentle heat, while others require its utmoſt violence.

Turpentine, and other ſoft reſinous ſubſtances, LIQUEFY in a gentle warmth; wax, pitch, ſulphur, and the mineral bitumens, require a heat too great for the hand to ſupport; fixt alkaline ſalts, common ſalt, nitre, require a red, or almoſt white heat to MELT them; and glaſs, a full white heat.

Among metallic ſubſtances, tin, biſmuth, and lead, flow long before ignition: antimony likewiſe melts before it is viſibly red-hot, but not before the veſſel is conſiderably ſo: the regulus of antimony demands a much ſtronger fire. Zinc begins to melt in a red heat; gold and ſilver require a low white heat; copper a bright white heat; and iron an extreme white heat.

One body, rendered fluid by heat, becomes ſometimes a menſtruum for another, not fuſible of itſelf in the ſame degree of fire. Thus red-hot ſilver melts, upon being thrown into melted lead leſs hot than itſelf: and thus if ſteel, heated to whiteneſs, be taken out of the furnace, and applied to a roll of ſulphur, the ſulphur inſtantly liquefying, occaſions the ſteel to melt with it; hence the chalybs cum ſulphure of the ſhops. This concrete, nevertheleſs, remarkably impedes the fuſion of ſome other metals, as lead, which, when united with a certain quantity of ſulphur, is ſcarce to be perfectly melted by a very ſtrong fire: hence the method, deſcribed in its place, of purifying zinc, a metal upon which ſulphur has no effect from the lead ſo frequently mixed with it.

Sulphur is the only unmetallic ſubſtance which mingles in fuſion with metals. Earthy, ſaline, and other matters, even the calces and glaſſes prepared from metals themſelves, float diſtinct upon the ſurface, and form what is called SCORIA or droſs. Where the quantity of this is large in proportion to the metal, it is moſt commodiouſly ſeparated by pouring the whole into a conical mould: the pure metal or REGULUS, though ſmall in quantity, occupies a

considerable height in the lower narrow part of the *cone*, and when congealed, may be easily freed from the scoriæ by a hammer. The mould should be previously greased, or rather smoked, to make the metal come freely out; and thoroughly dried and heated, to prevent the explosion which sometimes happens from the sudden contact of melted metals with moist bodies.

SECT. XIII.

Calcination.

BY calcination is understood, the reduction of solid bodies, by the means of fire, from a coherent to a powdery state, accompanied with a change of their quality; in which last respect, this process differs from comminution.

To this head belong, the burning of vegetable and animal matters, otherwise called USTION, INCINERATION, or CONCREMATION; and the change of metals into a powder, which in the fire either does not melt, or VITRIFIES, that is, runs into glass.

The metals which melt before ignition, are calcined by keeping them in fusion for some time. The free admission of air is essentially necessary to the success of this operation; and hence, when the surface of the metal appears covered with calx, this must be taken off, or raked to one side; otherwise the remainder, excluded from the air, will not undergo the change intended. If any coal, or other inflammable matter that does not contain a mineral acid, be suffered to fall into the vessel, the effect expected from this operation will not be produced, and part of what is already calcined, will be REVIVED or REDUCED; that is, it will return into its metallic form again.

Those metals which require a strong fire to melt them, calcine with a much less heat than is sufficient to make them flow. Hence the burning or SCORIFICATION of such iron or copper vessels, as are long exposed to a considerable fire without defence from the air. Gold and silver are not calcinable by any degree of fire.

In calcination, the metals visibly emit fumes; nevertheless, the weight of the calx proves greater than that of the metal employed. The antimonial regulus gains about one eleventh part of its weight; zinc, sometimes one tenth; tin, above one sixth; and lead, in its conversion into minium, often one fourth.

The calcination of metallic bodies, gold, silver, and mercury excepted, is greatly promoted by nitre. This salt, exposed to the fire in conjunction with any inflammable substances, extricates their

inflammable matter, and burſts with it into flame, accompanied with a hiſſing noiſe: this proceſs is uſually termed DEFLAGRATION or DETONATION.

All the metallic calces and ſcoriæ are revived into this metallic ſtate, by fuſion with any vegetable or animal inflammable matter. They are all more difficult of fuſion than the reſpective metals themſelves: and ſcarcely any of them, thoſe of lead and biſmuth excepted, can be made to melt at all, without ſome addition, in the ſtrongeſt fire that can be produced in the common furnaces. The additions, called fluxes, employed for promoting the fuſion, conſiſt chiefly of fixt alkaline ſalts: a mixture of alkaline ſalt with inflammable matter, as powdered charcoal, is called a *reducing flux*, as contributing at the ſame time to bring the calx into fuſion, and to revive it into metal. Such a mixture is commonly prepared from one part of nitre, and two parts of tartar; by grinding them well together, ſetting the powders on fire with a bit of coal, or a red-hot iron, then covering the veſſel, and ſuffering them to deflagrate or burn, till they are changed into a black alkaline coaly maſs. This is the common reducing flux of the chemiſts, and called from its colour the *black flux*. Metallic calces, or ſcoriæ, mingled with twice their weight of this compound, and expoſed to a proper fire, in a cloſe covered crucible, melt, and reſume their metallic form; but, though they received an increaſe of weight in the calcination, the revived metal is always found to weigh conſiderably leſs than the quantity from which the calx was made.

WE have now given a conciſe view of the operation neceſſary for pharmaceutical purpoſes: but theſe will be further treated of in the courſe of the ſucceeding parts of this work, where particular ſubſtances are directed to undergo ſuch proceſſes as are neceſſary for acquiring any deſired product. As for the inſtruments which have been deſcribed, by which the operations are to be performed, they appear ſufficient to anſwer the propoſed ends; but further knowledge may be acquired by conſulting the works of modern chemiſts, viz. the works of LAVOISIER, FOURCROY, CHAPTAL, and NICHOLSON's Chemical Dictionary.

PART II.

THE

MATERIA MEDICA.

THIS term includes every ſubſtance uſed in medicine, and by ſome is extended even to every article uſed as food and drink.

Writers on the Materia Medica have endeavoured to arrange the various articles of which it is compoſed into different claſſes; but a ſlight inveſtigation would ſoon convince us of the inaccuracy of the plans which have been preſented to us, particularly ſome of the beſt—CARTHEUSER — NEWMAN — LEWIS — GLEDITSCH — LINNÆUS — ALSTON — and VOGEL. But Dr. CULLEN has ſupplied us with one, the moſt judiciouſly arranged. — On which ſubject he ſays — "That as the ſtudy of the Materia Medica is truly the ſtudy of medicinal virtues, ſo the plan that arranges the ſeveral ſubſtances, according to their agreeing in ſome general virtues, will be the beſt adapted to acquiring the knowledge of theſe, and will moſt readily inform the practitioner what different means he can employ for his general purpoſe. — It will alſo inform him, how far the ſeveral ſimilar ſubſtances may differ in their degree of power, and how far, from the particular qualities aſſigned to each, he may be directed, or limited in his choice. — As it ſeems proper that every practitioner ought, as far as poſſible, to practiſe on general indications, ſo it is evident that his ſtudy of the Materia Medica is eſpecially to know the ſeveral means that can anſwer there. Such a plan muſt be moſt proper for giving inſtruction; and if, while medicines are arranged, according as they anſwer general indications, the particulars be likewiſe thrown together, as far as poſſible, according to their ſenſible qualities and botanical affinities, this plan will have the advantage of any other that has been propoſed, for preſenting together the ſubject that ought to be conſidered at one and the ſame time, and give the beſt means of recollecting every thing that relates to them."

He then arranges the different fubſtances in the following order:—

A. Such as supply nourishment—*Solid food—Liquids and condiments.*

B. Medicines which act upon the simple solids—*Aſtringents—Tonics—Emollients and Erodents;*—

C. ——— upon the living solids—*Stimulants—Sedatives—Narcotics—Refrigerants—Antiſpaſmodics;*—

D. Those which act upon the fluids.—1ſt. ſuch as alter their fluidity—*Attenuants—Inſpiſſants and their mixture;*—2d. Correctors of acrimony in general—*Demulcents;*—3d. in general—*Anti-acids—Anti alkalines—Anti-putreſcents;*—and, laſtly,

E. Evacuants—*Errhines—Sialagogues—Expectorants—Emetics—Cathartics—Diuretics—Diaphoretics and Menagogues.*

By other authors they are differently divided—Boerhaave de Viribus, Medicumentorum—Gregory Conſpectus Medicinæ Theoreticæ—Wallis on Health and Diſeaſe.

But it has been imagined, that "the whole materia medica is reducible "under the three diſtinctions of *alteratives*, *evacuants*, and *reſtoratives;* "the firſt comprehending all that has any power to alter the conſtitution, "without ſenſibly increaſing or diminiſhing any of the natural evacua- "tions; the ſecond, whatever viſibly promotes thoſe diſcharges; and "the third, all that contributes to leſſen them, and make the increaſe "greater than the waſte." Theſe diviſions being too general, they are broke into ſubdiviſions; and theſe again are further divided into different claſſes, under more reſtrained denominations, as cardiac, carminative, hyſteric, ſtomachic, &c.

Specious as this plan may appear to be, I am afraid that the execution of it, to any uſeful purpoſe, would require a far more extenſive knowledge of the nature and operation of medicines than has yet been attained to. A juſt and uſeful method of ſimples is ſcarcely to be expected, while thoſe properties, on which the method is founded, are imperfectly known, and in many articles only conjectural.

In all the arrangements that have been hitherto contrived upon this plan, there appears a ſtriking incongruity among the ſeveral articles of which even the ultimate ſubdiviſions are compoſed; ſubſtances extremely diſſimilar being claſſed together, as cantharides and tea, tobacco and bran, hemlock and cowſlips, ſcurvy-graſs and raiſins, arum root and liquorice, wormwood and parſneps, cinnamon and nettles, raſpberries and chalk, artichokes and alum, cloves and coffee, muſtard-ſeed and black cherries, &c. Nor are theſe incongruities to be laid always to the charge of the authors; the nature of the ſyſtem itſelf renders them often unavoidable; for the particular effect, which entitles a medicine to a particular claſs, may be produced by ſubſtances very diſſimilar, and even oppoſite in their general powers: thus the alvine excretions are reſtrained by ſtarch, wax, tormentil root, opium: among the capital diuretics are cantharides, nitre, fixt alkaline ſalts, ſquills. It ſhould ſeem, that the method of arrangement cannot be a juſt one, which requires ſubſtances ſo diſcordant to be ranked together; and which farther requires each of theſe ſubſtances to be ranked over again, in other claſſes, along with other ſubſtances to which they are equally diſcordant.

There is alſo a material imperfection in this ſcheme, even in the primary diviſions. Steel and its preparations act, in different circumſtances, both as evacuants and reſtoratives. Mercury and antimony afford, in their different preparations, both evacuants and alteratives, and there are many other drugs which are ſometimes uſed as alteratives, and ſometimes as evacuants: indeed, all evacuants, in diminiſhed doſes, ſeem to act merely as alteratives. It ſhould ſeem therefore that "the "diviſion of the whole materia medica into alteratives, evacuants, and "reſtoratives," is a diviſion not founded in nature, even if there were no objection to the vague meaning of the appellations themſelves.

Cartheuſer has divided the materia medica on a plan which appears more rational. Inſtead of the operations of medicines in the human body, which are precarious, complicated, and greatly diverſified according to the doſe, the preparation, and the circumſtances of the patient, he takes for the baſis of his arrangement their more ſimple, obvious, and conſtant properties, as bittterneſs, ſweetneſs, aſtringency, acidity, &c. Having conſidered the nature of bitterneſs, for inſtance, in general, he examines what effects medicines poſſeſſed of this property are capable of producing in the body, and in what circumſtances they may be expected to be ſerviceable, and then proceeds to an account of the particular bitters.

This method is of real uſe, but its uſe is limited to a ſmall part of the materia medica. There are many of the medicinal ſimples, in which we can diſtinguiſh no prevailing qualities of this kind; there are many, in which different qualities are blended together; and many, which, though ſimilar in theſe kinds of qualities, are very diſſimilar in their operations in the human body. Thus, though gentian and aloes agree in having a bitter taſte, and ſugar and manna in being ſweet, their medicinal virtues are reſpectively very different. Accordingly the author is obliged in ſome caſes to depart from his general plan, and found the diviſion on the medicinal effects: he makes one claſs of purgatives and emetics, and another of vaporoſe inebriants and narcotics: this laſt claſs conſiſts of tobacco, elder-flowers, ſaffron, opium, and poppy-ſeeds; ſubſtances certainly very diſcordant in all their qualities that relate to medical intentions.

In this work, inſtead of attempting a medicinal diſtribution of the ſimples, which I apprehend not to be practicable, to any good purpoſe, and which, as hitherto executed, ſeems more likely to miſlead the reader than to promote true knowledge, I ſhall take them in the order of the alphabet; and even in this order we ſhall ſeldom perhaps find ſubſtances more diſſimilar come together, than thoſe which have been joined in one claſs by ſome of the ſyſtematic writers. It may be proper, however, to premiſe ſome general obſervations on certain claſſes of medicines, in Cartheuſer's manner, and thus to preſerve the leſs exceptionable parts of his plan, with ſome amendments.

ACIDS.

Claſs I. *Vegetable* { *native*; as ſorrel, wood-ſorrel, juice of lemons, oranges, barberries, and other fruits.
produced by fermentation; as vinegar and tartar.

Claſs II. *Mineral:* the acids of vitriol, nitre, and common ſalt.

THE medical effects of acids, duly diluted, and given in proper doſes, are to cool, quench thirſt, correct a tendency to putrefaction, and allay inordinate motions of the blood. By theſe qualities, in hot bilious temperaments and inflammatory diſorders, they frequently reſtrain immoderate hæmorrhages, and promote the natural ſecretions; in ſome kinds of fevers, they excite a copious diaphoreſis, where the warm medicines, called alexipharmic, tend rather to prevent this ſalutary diſcharge.

Vegetable acids, particularly the native juices of certain plants and fruits, have ſome degree of ſaponaceous quality; by means of which they attenuate or diſſolve viſcid phlegm, and deterge the veſſels; and thus prove ſerviceable in ſundry chronical diſorders. Inveterate ſcurvies have ſometimes yielded to their continued uſe, eſpecially when given in conjunction with medicines of the acrid or pungent kind. Experience has ſhewn, that the acrid antiſcorbutics have much better effects when thus managed, than when exhibited by themſelves; hence in the *ſucci ſcorbutici* of our diſpenſatory, Seville orange juice is uſefully joined to that of the *cochlearia* and *naſturtium*.

The mineral acids inſtantly coagulate blood: the vegetable dilute it, even when inſpiſſated or thickened by heat; in which ſtate, watery liquors will not mingle with it. Hence, in ſome fevers, where water runs off by the kidneys almoſt as pale and inſipid as it was drank, vegetable acids render the urine of the due colour and quality. The mineral acids (the ſpirit of nitre in particular), combined with vinous ſpirits, have a like effect.

Acids are prejudicial in cold, pale, phlegmatic habits, where the veſſels are lax, the circulation languid, bile deficient, and the power of digeſtion weak. In theſe caſes, an acid is often generated in the ſtomach, from milk and moiſt vegetable food, which, while it continues in the firſt paſſages, occaſions uneaſineſs about the ſtomach, flatulencies, ſometimes griping pains of the bowels, and vomitings.

INSIPID EARTHS *capable of* ABSORBING ACIDS.

Oyſter Shells,
Crabs' Claws, and Eyes, ſo called,
Coral, red and white,
Pearls,
Bezoar,
Chalk,
Some Marles,
Limeſtones,
Marbles,
Spars.

THE virtues of theſe ſubſtances are, to abſorb or deſtroy acidities in the firſt paſſages, and conſequently remove ſuch diſorders as proceed from that cauſe. The cordial, alexipharmic, antifebrile, and other like virtues, attributed to theſe medicines, appear to have little foundation; or, at beſt, are only ſecondary ones. When united with the acid, they form a neutral ſaline compound, poſſeſſing ſome degree of an aperient and detergent quality, though too inconſiderable to be in general regarded.

The abſorbent earths were all ſtrangers to medicine in the earlier times; and their uſe does not ſeem to have been eſtabliſhed before the laſt century; when ſome practitioners, from an opinion that moſt kinds of diſeaſes proceeded from a preternatural acid, introduced a great variety of antiacid bodies, both of the earthy and ſaline kind; and very liberally exhibited them on almoſt every occaſion.

It is certain that in children, and adults of a weak conſtitution, and whoſe food is chiefly of the vegetable aceſcent kind, ſundry diſorders are occaſioned by acidities; theſe readily diſcover themſelves by ſour eructations, the pale colour of the face, and in children by the ſour ſmell and green colour of the alvine fæces, which are ſometimes ſo manifeſtly acid as to raiſe a ſtrong effervescence with alkaline ſalts. In theſe caſes, and theſe only, the uſe of abſorbent earths is indicated.

If there be really no acid juices in the ventricle, theſe earths are apt to concrete with the mucous matter uſually lodged there, into hard indiſſoluble maſſes; which have ſometimes been thrown up by vomit, or found in the ſtomach upon diſſection. Hence indigeſtion, loſs of appetite, nauſea, vomiting, obſtructions of the bowels, and other diſorders. Sometimes the ſtomach and inteſtines have been found lined with a cruſt, as it were, of theſe earthy bodies, which muſt not only have prevented the ſeparation of the gaſtric liquor, but likewiſe cloſed the orifices of the lacteal veſſels, ſo as to obſtruct the paſſage of the chyle into the maſs of blood.

Some ſuppoſe the earthy powders capable (without the concurrence of any acid) of paſſing the lacteals along with the chyle; and alledge, in ſupport of this opinion, that when triturated with water, they are in part taken up, and carried with it through a filter of paper; the filtrated liquor leaving, upon evaporation, a portion of whitiſh earthy matter. This experiment (allowing the conſequence to be juſtly drawn from it) is itſelf erroneous: the reſiduum proceeds from the earth naturally contained in the water, not from that employed in the experiment; for if pure diſtilled water be made uſe of, it will leave no reſiduum, though long triturated, or digeſted with the earth.

All theſe bodies, particularly thoſe of the animal kind, contain,

beſides their purely alkaline earth, a portion of glutinous matter. An inſtance of this we have in crabs' eyes. If theſe be macerated in the weaker acids, or the ſtronger ſufficiently diluted with water, the earthy part will be diſſolved, and the animal glue remain in form of a ſoft tranſparent mucilage. The glutinous ſubſtance increaſes their tendency to concrete in the ſtomach; and, hence, thoſe which contain leaſt thereof ſhould be preferred to the others. The mineral earths contain the leaſt of this kind of matter, and ſome of them are very eaſy of ſolution; chalk, for inſtance, which may therefore be given with greater ſafety than the animal abſorbents. Theſe ſubſtances, diveſted of their conglutinating matter by means of fire, are reduced into acrimonious calces or limes, and thus become medicines of a different claſs.

The teeth, bones, hoofs, and horns of animals, conſiſt of the ſame principles with the animal abſorbents above-mentioned, but combined in different proportions: the quantity of gelatinous matter is ſo large, as to defend the earthy part from the action of weak acids; while the earth, in its turn, protects the gluten from being eaſily diſſolved by watery liquors. Hence theſe bodies in their crude ſtate, though recommended as poſſeſſing ſingular virtues, are not found to have any virtue at all.

Experiments have been made for determining the degree of ſolubility, or comparative ſtrength, of theſe earths; the principal of which are arranged in the two following tables, one taken from Langius, and the other from Homberg.

Table of the quantity of acid deſtroyed by different abſorbents.

Ten grains of	Some kinds of Limeſtones	deſtroyed the acidity of	160	drops of Spirit of Salt.
	Oyſter Shells		120	
	Chalk		100	
	Shells of Garden Snails		100	
	Calcined Cray Fiſh		100	
	Pearl		80	
	Tooth of the Sea Horſe		80	
	Volatile Salts		80	
	Fixt Salts		60	
	Coral, red and white		60	
	Crabs' Eyes		50	
	Egg Shells		50	
	Mother of Pearl		50	
	Crabs' Claws		40	
	Jaw-bone of the Pike-fiſh		30	

Table of the quantity of abſorbent earths ſoluble in acids.

		grains.
576 grains of Spirit of Salt diſſolved, of	Crabs' Eyes	216
	Mother of Pearl	144
	Pearls	128
	Oyſter Shells	156
	Hartſhorn	165
	Coral	180
	Oriental Bezoar	118
	Occidental Bezoar	123
	Quick Lime	199
	Slacked Lime	193
576 grains of Spirit of Nitre diſſolved, of	Crabs' Eyes	297
	Mother of Pearl	202
	Pearls	219
	Oyſter Shells	236
	Hartſhorn	234
	Coral	233
	Oriental Bezoar	108
	Occidental Bezoar	144
	Quick Lime	180
	Slacked Lime	216

Theſe experiments do not ſufficiently aſcertain the point intended by them. In the firſt ſet, the quantity of acid is too vague and indetermined: in the ſecond, we are not told whether the acid was perfectly ſaturated: and, in both, the acids made uſe of were ſo very different from any that can be ſuppoſed ever to exiſt in the human body, that little can be concluded from them, with regard to the medical effects of theſe abſorbents. Trial ſhould have been made with the mild vegetable acids, as the juices of certain fruits, ſour fermented liquors; or rather with ſour milk. Nevertheleſs, theſe tables, though not ſo perfect as could be wiſhed, have their uſe in the hands of ſuch as can make proper allowances. (See the Experimental Hiſtory of the materia medica, under ACID SPIRITS.

EARTHS NOT DISSOLUBLE *in acids, or other liquors.*

The earths of this kind may be ranged in two claſſes;

CLASS I.

Hard cryſtalline earths: as the ruby, garnet, emeralds, ſapphire, hyacinth, and other precious ſtones; cryſtal, flint, &c.

THESE kinds of ſubſtances were introduced into medicine, and many fabulous virtues attributed to them, by the ſuperſtition of the earlier ages. Some of them are ſtill preſerved in foreign Pharmacopœias, but they are, at length, very juſtly expunged from ours.

CLASS II.

SOFTER EARTHS: THE TALKY, GYPSEOUS, AND ARGILLACEOUS.

THE talcs and gypsa have rarely been used as medicines. Some of the former, from their unctuous softness and silver hue, stand recommended externally as cosmetics; and some of the latter, on little better foundation, internally, as astringents. But they have long been deservedly rejected by the judicious practitioners; and therefore it will be of no use to trouble our readers with investigating the component parts of these substances, as they are not calculated to answer any pharmaceutical purposes.

GLUTINOUS:

Vegetable, and Animal Substances.

CLASS I.

VEGETABLE.

PURE GUMS.
TRAGACANTH,
SENICA,
THE GUMS OF CHERRY, PLUM, AND OTHER EUROPEAN TREES.

VEGETABLES ABOUNDING WITH MUCILAGE:
ORCHIS ROOTS,
ALTHÆA ROOT,
QUINCE SEEDS, *&c.*

GUMS and mucilages are glutinous vegetable productions, of no particular taste or smell, soluble in water, but not in vinous spirits, or in oils. They differ from one another, only in degree of tenacity: the more tenacious are called gums; those which are less so, mucilages. The former naturally exude from certain trees and shrubs; the latter are extracted by art. Almost all vegetable substances contain some portion of these, which, after the resinous part has been extracted by spirit, may be separated from the remaining matter by means of water.

The general virtues of these kinds of substances are to thicken the fluids, and defend the solids from them, when grown sharp or corrosive. Hence their use in a thin acrimonious state of the juices, and where the natural mucus of the intestines is abraded.

CLASS II.

ANIMAL.

MOST animal substances, the fat excepted, contain a viscous matter, in many respects similar to the foregoing, and capable of being extracted by strong coction in water.

Animal glues and jellies have the general qualities of the vegetable gums and mucilages; with this difference, that the former are more nutrimental, and apt to run

into a putrid ſtate. Conſidered as the ſubjects of chemiſtry, the difference betwixt them is very great: thoſe of the animal kind are changed by fire into a volatile alkaline ſalt and a fetid oil; the vegetable into an acid liquor, and a very ſmall portion of oily matter, conſiderably leſs fetid than the former. But the moſt nutricious part of animal ſubſtances is the finer fluids, which in chemical operations are diſſipated.

SOFT UNCTUOUS SUBSTANCES.

CLASS I.

Inſipid Vegetable Oils, and Subſtances abounding with them, as Almonds, and the Kernels of moſt Fruits; Linſeed, and the Medullary Part of ſundry other Seeds.

CLASS II.

ANIMAL FATS: AS SPERMACETI.

UNCTUOUS vegetables unite with water, by trituration, into a milky liquor: and give out their oil upon expreſſion. — Theſe kinds of oils, and animal fats, diſſolve not in any menſtruum except alkaline ones; which change their quality, and reduce them into a ſoap, diſſoluble in water, but more perfectly in vinous ſpirits: from this compound, the oil may, by a ſkilful addition of acids, be recovered in a purer ſtate than before, and rendered ſoluble, like eſſential oils, in ſpirit of wine.

The medical virtues of theſe ſubſtances are, to obtund acrimonious humours, and to ſoften and relax the ſolids: hence their uſe internally, in tickling coughs, heat of urine, pains and inflammations; and, externally, in tenſion and rigidity of particular parts. The milky ſolutions, commonly called emulſions, though much leſs emollient than the oils themſelves or animal fats, have this advantage, that they may be given in acute or inflammatory diſtempers, without danger of the ill conſequences which the others might ſometimes produce. Fats and oils, kept in a degree of heat no greater than that of the human body, ſoon become rancid and acrimonious; while emulſions tend rather to grow ſour.

ASTRINGENTS.

Galls,
Tormentil Root,
Bistort Root,
Balaustines,
Terra Japonica,
Acacia, &c.

ASTRINGENT ſubſtances are diſtinguiſhed by a rough austere taſte; and by changing ſolutions of iron, eſpecially thoſe made in the vitriolic acid, of a dark purple or black colour.

Aſtringents yield their virtues by infuſion, both to water and vinous ſpirits, generally in greateſt perfection to the former. Oils extract nothing from them; nor do they give over any of their virtue

in diſtillation: nevertheleſs, their aſtringency is conſiderably abated by evaporating decoctions of them to the conſiſtence of an extract; and totally deſtroyed by long keeping.

The medical effects of theſe kinds of ſubſtances are, to conſtringe the fibres, and incraſſate, or lightly thicken the juices. Their more experienced uſe is in diſorders proceeding from a debility, or flaccid ſtate, of the ſolids; in hæmorrhages, from a thinneſs of the blood, laxity or rupture of the veſſels; in preternatural diſcharges of other kinds, after the offending matter has been duly corrected, or evacuated; and in external relaxations.

In ſome caſes, they produce the effects of aperients; the veſſels, conſtringed and ſtrengthened by them, being enabled to protrude the circulating juices with greater force.

A good deal of caution is requiſite in the uſe of theſe medicines, eſpecially thoſe of the more powerful kind. In plethoric habits, inveterate obſtructions, critical evacuations, and in all kinds of fluxes in general, before the morbific matter has been expelled, or where there is any ſtricture or ſpaſmodic contraction of the veſſels, aſtringents prove eminently hurtful. Where critical dyſenteries or diarrhœas are reſtrained by ſtyptics, the acrimonious matter, now confined in the inteſtines, corrodes or inflames them; and ſometimes occaſions a gangrene of the parts.

SWEETS.

Sugar,
Honey,
Raisins,
Liquorice, &c.

THE vegetable ſweets are a very numerous tribe; almoſt every plant that has been examined, diſcovering, in ſome of its parts, a ſaccharine juice. The bottoms of flowers, and moſt kinds of ſeeds and grain, when they begin to vegetate, are remarkably ſweet.

Vegetable ſweets are extracted both by water and vinous ſpirits; moſt readily by the former, but in greateſt perfection by the latter. Nothing of their taſte ariſes in diſtillation with either of theſe liquors: nevertheleſs, by long boiling with water they become ſomewhat leſs agreeable; but are not much injured by being treated in the ſame manner with rectified ſpirit.

The purer ſweets, as ſugar, promote the union of diſtilled oils with watery liquors, and prevent the ſeparation of the butyraceous part from milk: from this quality, they are ſuppoſed to unite the unctuous part of the food with the animal juices. Hence ſome have concluded, that they increaſe fat: others, that they have a contrary effect, by preventing the ſeparation of the unctuous matter, which forms the fat, from the blood: and others, that they render the juices thicker and more ſluggiſh, retard the circulation and cuticular excretion, and thus bring on a variety of diſorders. But ſweets have not been found to produce any of theſe effects, in any remarkable degree: common experience ſhows, that their moderate, and even liberal uſe, is at leaſt innocent; that they reconcile, not only to the palate, but the ſtomach alſo, ſubſtances of themſelves diſguſtful to both; and thus render ſalutary what would otherwiſe be injurious to the body.

The unctuous and mucilaginous

ſweets, as the impure ſugars, liquorice, &c. have a conſiderable degree of emollient and lubricating virtue.—Thoſe, accompanied with a manifeſt acid, as in the juices of moſt ſweet fruits, are remarkably relaxing; and, if taken immoderately, occaſion diarrhœæ and dyſenteries, which ſometimes have proved fatal.

ACRIDS.

ACRIDS are ſubſtances of a penetrating pungency. Applied to the ſkin, they inflame or exulcerate it; chewed, they occaſion a copious diſcharge of ſaliva: and ſnuffed up the noſe, provoke ſneezing.

Theſe ſubſtances, conſidered as the ſubjects of pharmacy, may be divided into three claſſes,

yielding their acrimony
1. In diſtillation with water: as horſe-radiſh: muſtard, ſcurvy-graſs, &c.
2. By infuſion only: as the greater celandine, pyrethrum, &c.
3. Neither to infuſion nor diſtillation: as arum and dracunculus.

The general effects of acrid medicines are, to ſtimulate the veſſels, and diſſolve tenacious juices. In cold leucophlegmatic habits, ſtagnations of the fluids, and, where the contractive power of the ſolids is weak, they prove powerful expectorants, deobſtruents, diuretics, and emmenagogues; and if the patient be kept warm, ſudorifics. In hot bilious conſtitutions, plethoric habits, inflammatory diſtempers, where there is already a degree of irritation, where the juices are too thin and acrimonious, or the viſcera unſound; theſe ſtimulating medicines prove highly prejudicial, and never fail to aggravate the diſeaſe.

Certain acrid ſubſtances have been recommended in dry convulſive aſthmas; of the efficacy of the ſquill in particular, for the cure of this diſorder, ſeveral inſtances are related it the Commercium Literarium of Norimberg for the years 1737 and 1739. Cartheuſer thinks, that not the aſthma itſelf, but a particular effect of it, was removed by this medicine. He obſerves, that, in all aſthmas, the free circuculation of the blood through the pulmonary veſſels is impeded: and hence, during every paroxyſm, the lungs are in a kind of œdematous ſtate: that if this œdema, becoming habitual, remain after the fit is over, it is either perpetually occaſioning freſh ones, or gives riſe to a dropſy of the breaſt: that acrid medicines, by removing the œdema, remove what was originally an effect of the aſthma, and will be, in time, a cauſe of its aggravation.

AROMATICS.

AROMATICS are ſubſtances of a warm pungent taſte, and a more or leſs fragrant ſmell. Some of the ſpices are purely aromatic, as cubebs, pepper, cloves; ſome ſubſtances have a ſweetneſs mixed

with the aromatic matter, as angelica root, aniſeed, fennel ſeed; ſome an aſtringency, as cinnamon; ſome a ſtrong mucilage, as caſialignea: ſome a bitterneſs, as orange peel. The aromatic matter itſelf, contained in different ſubjects, differs alſo not a little in its pharmaceutic properties. It is extracted from all by rectified ſpirit of wine; from ſome in great part, from others ſcarcely at all, by water. The aromatic matter of ſome ſubjects, as of lemon peel, riſes wholly in diſtillation, both with ſpirit and water; that of others, as cinnamon, riſes wholly with water, but ſcarcely at all with ſpirit; while that of others, as pepper, is in part left behind, after the diſtillation of water itſelf from the ſpice.

With regard to the general virtues of aromatics, they warm the ſtomach, and by degrees the whole habit, raiſe the pulſe, and quicken the circulation. In cold languid caſes, phlegmatic habits, and a weak flaccid ſtate of the ſolids, they ſupport the vis vitæ, and promote the ſalutary ſecretions In hot bilious temperaments, plethoric habits, inflammatory indiſpoſitions, dryneſs and ſtrictures of the fibres, they are generally hurtful.

BITTERS.

Gentian Root,
Hops,
Lesser Centaury,
Carduus, &c.

BITTERS for the moſt part yield their virtue both to watery and ſpirituous menſtrua; ſome more perfectly to one, and others to the other. None of the ſubſtances of this claſs give over any thing conſiderable of their taſte in diſtillation, either to water or to ſpirit; their bitterneſs remaining entire, and frequently improved, in the extracts. Such as are accompanied with flavour, as wormwood, may, by this proceſs, be reduced into ſimple flavourleſs bitters.

Theſe ſubſtances participate of the virtues of aſtringents and aromatics. Their general effects are, to conſtringe the fibres of the ſtomach and inteſtines, to warm the habit, attenuate the bile and juices in the firſt paſſages, and promote the natural evacuations, particularly of ſweat and urine. In weakneſs of the ſtomach, loſs of appetite, indigeſtion, and the like diſorders, proceeding from a laxity of the ſolids, or cold ſluggiſh indiſpoſition of the juices, theſe kinds of medicines do ſervice. Where the fibres are already too tenſe and rigid, where there is any immoderate heat or inflammation, bitters very ſenſibly increaſe the diſtemper; and if their uſe be continued, communicate it to the kidneys: hence the urine becomes high coloured, ſmall in quantity, and, at length, ſuppreſſed; a dropſy ſoon ſucceeding. If the kidneys were before ſo lax, as to remain now uninjured, yet the other viſcera become gradually more and more rigid, and a tabes is at length brought on.

Bitter ſubſtances deſtroy inſects, and prevent putrefaction. Hence they are recommended as anthelmintic; and externally as antiſeptics.

EMETICS AND CATHARTICS.

HELLEBORE,
JALAP,
IPECACOANHA,
COLOCYNTH,
SCAMMONY,
GAMBOGE, &c.

THESE ſubſtances conſiſt of a reſinous part, in which the purgative or emetic quality reſides; and a gummy ſaline one, which acts chiefly as a diuretic. The former is extracted or diſſolved by vinous ſpirits; the latter by water. Nothing ariſes in diſtillation from either.

The acrid reſins, exhibited by themſelves, tenaciouſly adhere to the coats of the inteſtines, by their ſtimulating power irritate and inflame them, and thus produce ſundry violent diſorders. Hoffman relates, that he has ſometimes obſerved convulſions, and a paralyſis of both ſides, from their uſe.

Theſe inconveniences may be avoided, by previouſly triturating them with ſubſtances capable of dividing their tenacious texture, and preventing their adheſion; by theſe means, they become mild and ſafe, operate without diſturbance, and, at the ſame time, more effectually anſwer the purpoſes intended by them.

Some have endeavoured to correct the ill quality of the reſinous purgatives, by the addition of acids and aromatic oils. Acids weaken their power, but have no other effect than what a diminution of the doſe would equally anſwer. The pungent eſſential oils may ſerve to warm the ſtomach, make the medicine ſit eaſier, and thus prevent the nauſea, which ſometimes happens; but as ſoon as the reſin begins to exert itſelf in the inteſtines, theſe oils, inſtead of correcting, increaſe its virulence; being themſelves apt to occaſion the inconveniences which they are here intended to prevent, an irritation and inflammation of the bowels. Alkaline ſalts or ſoaps have a better effect; as they diſpoſe the reſin to ſolution, and promote its operation.

The medicines of this claſs ſeem to act by liquefying the juices, and ſtimulating the coats of the ſtomach and inteſtines. If the irritation be ſtrong and ſudden, their action is quick and upwards: if ſlower, downwards. Cathartics, given in a liquid form, or in very ſenſible habits, often prove emetic; and emetics, where mucus abounds, cathartic. They operate more violently in robuſt conſtitutions than in thoſe of a contrary temperament: the veſſels being in the former more tenſe and rigid, and conſequently leſs capable of bearing an equal degree of irritation.

The action of theſe medicines is extended beyond the primæ viæ. This appears evident from the increaſe of the pulſe, which always accompanies their operation; and from the common obſervation of children's being purged by the milk, if the nurſes have taken a cathartic. Some of them, particularly hellebore, are ſaid to purge, if only applied externally in iſſues. Purgatives, even of the more powerful kind, exhibited in ſuitable ſmall doſes, in conjunction with the milder aperients, may be introduced into the habit, ſo as to prove notable deobſtruents, diuretics, and diaphoretics, without acting ſenſibly by ſtool.

The foregoing obſervations are inſerted, not with any view to a method of ſimples, but to give a general idea of the virtues of ſuch

medicinal ſubſtances as are poſſeſſed of the qualities which make the objects of the reſpective articles. I ſhall dwell no longer on general reflections, but proceed to an account of each of the ſimples ſeparately.

ABIETIS lignum, ſummitates, Pini piceæ vel Pini abietis Lin. The ſilver and the red fir; their wood, tops, and cones.

Theſe are large ever-green trees, frequent in the northern climates. The firſt is ſaid to be found wild in ſome parts of England, and the ſecond on the hills of Scotland. From theſe trees, in different parts of Germany, the Straſburgh turpentine is extracted, of which hereafter. The wood, and the fruit or cones, gathered about the end of autumn, abound with reſinous matter, and yield, in diſtillation with water, an eſſential oil, not greatly different from that obtained by the ſame means from turpentine.—The wood and tops of the fir trees, on account of their reſinous juice, are ſometimes employed in decoctions and diet drinks, for *promoting urine* and *ſweat*, *purifying the blood* and *juices*, and *cleanſing and healing internal ulcerations*, particularly thoſe of the urinary paſſages. See the article TEREBINTHINA.

MED. VIRT. *diuretic*, and *diaphoretic*.

PREP. *Decoction*.

ABROTONI MARIS *folia: Artemiſiæ abrotoni Lin.* Spec. Plant. Southernwood; the leaves [*L. E.*]

This is a ſhrubby plant, clothed with very finely divided leaves, of a greyiſh green colour: the flowers, which are very ſmall and yellowiſh, hang downwards, ſeveral together, from the middle of the branches to the top. It is a native of the warmer countries; in this it is cultivated in gardens: the leaves fall off every winter: the roots and ſtalks abide many years.

Southernwood has a ſtrong, not very diſagreeable ſmell; and a nauſeous, pungent, bitter taſte; which is totally extracted by rectified ſpirit, leſs perfectly by watery liquors. It is recommended as an *anthelmintic*; and in cold leucophlegmatic habits, as a *ſtimulant*, *detergent*, *aperient*, and *ſudorific*. The preſent practice has almoſt entirely confined its uſe to external applications. The leaves are frequently employed in *diſcutient* and *antiſeptic fomentations*; and have been recommended alſo in lotions and unguents for *cutaneous eruptions*, and the *falling off of the hair*.

MED. VIRT. *Stimulant; detergent; aperient*, and *ſudorific*.

PREP. *Decoction*, and *Tincture;* — *Lotion*, and *Ointment* for cutaneous eruptions.

ABROTONI FEMINÆ folia: Santolinæ chamæcypariſſi Lin. Lavendar-cotton; the leaves.

This plant is all over white and hoary: the leaves are compoſed of ſmall knobs ſet in rows along a middle rib; the flowers ſtand upright on the tops of the ſtalks. It is raiſed in gardens, flowers in June and July, and holds its leaves all the winter.

The *abrotonum fœmina* is ſuppoſed to poſſeſs the ſame virtues with the *mas*; but in a leſs degree. For external purpoſes, the medical difference betwixt them is not very great. — The *abrotonum fœmina* is recommended by ſome in *hyſteric* and other *female complaints:* it has been cuſtomary among the common people to uſe a decoction of it in milk *againſt worms*.

MED. VIRT. *Stimulant*, *detergent*, and *anthelmintic*.

PREP. *Decoction*, and *Ointment* for cutaneous eruptions.

ABSINTHII VULGARIS *folia: Artemisiæ absinthii. Lin.* Common wormwood; the leaves [*L. E.*]

The leaves of this sort of wormwood are divided into roundish segments, of a dull green colour above, and whitish underneath. It grows wild in several parts of England; about London large quantities are cultivated for medicinal use: it flowers in June and July; and, after having ripened its seeds, dies down to the ground, except a tuft of the lower leaves, which generally abides the winter.

Wormwood is a strong bitter: and was formerly much used as such, against weakness of the stomach, and the like, in medicated wines and ales. At present it is rarely employed in these intentions, on account of the ill relish and offensive smell with which it is accompanied. From these it may be in part freed by keeping, and totally by long coction, the bitter remaining entire. An extract, made by boiling the leaves in a large quantity of water, and evaporating the liquor with a strong fire, proves a bitter sufficiently grateful, without any disgustful flavour. — An oil distilled from this plant [*L. E.*] and an extract [*E.*] are kept in the shops.

MED. VIRT. *Stomachic, corroborant, anthelmintic.*

PREP. Oil—*Extract.*—*Conserv.*—in Common Fomentation — *Green Oil.*

ABSINTHII MARITIMI *summitates: Artemisiæ maritimæ Lin.* Sea wormwood, commonly, but falsely, called Roman wormwood; the tops [*L.*]

The leaves of sea wormwood are much smaller than those of the common, and hoary on the upper side, as well as the lower; the stalks also are hoary all over. It grows wild about our salt marshes, and in several parts near the sea coasts. — In taste and smell it is weaker and less unpleasant than the common wormwood. The virtues of both are supposed to be of the same kind, and to differ only in degree. They have both been considered as *stomachic*, and *corroborant*. The essential oil of wormwood has been given internally, in doses of two or three drops, made into pills with crumbs of bread as a *vermifuge*, with success; and, on the same account, sometimes applied to the abdomen.

The tops enter three of our distilled waters, and give name to a conserve [*L.*] They are an ingredient also in the common fomentation and green oil [*L.*]

MED. VIRT. and PREP. *The same as the former.*

ABSINTHII ROMANI *folia: Artemisiæ maritimæ Lin. S. P.* Roman wormwood; the leaves and tops [*E.*]

This species is very different in appearance from the two foregoing: it is in all its parts smaller than either; the leaves are divided into fine filaments, and hoary on the lower side; the stalks, either entirely or in part, of a purplish hue. It is a native of the warmer countries, and, at present, difficultly procurable in this, though as hardy and as easily raised as any of the other sorts. Sea wormwood has long supplied its place in the markets, and been in general mistaken for it.

Roman wormwood is less ungrateful than either of the others: its smell is tolerably pleasant: the taste, though manifestly bitter, scarce disagreeable. It appears to be the most eligible of the three *as a stomachic*; and is likewise recommended by some *in dropsies*.

MED. VIRT. and PREP. *The same as the former.*

ACACIA [*E.*] : the inſpiſſated juice of the unripe fruit of a large prickly tree. *Mimoſa nilotica Lin. S. P.*

This juice is brought to us from Egypt, in roundiſh maſſes, wrapt up in thin bladders. It is outwardly of a deep brown colour, inclining to black; inwardly of a reddiſh or yellowiſh brown; of a firm conſiſtence, but not very dry. It ſoon ſoftens in the mouth, and diſcovers a rough, not diſagreeable taſte, which is followed by a ſweetiſh reliſh. This inſpiſſated juice entirely diſſolves in watery liquors; but is ſcarce ſenſibly acted on by rectified ſpirit.

Acacia is a *mild aſtringent medicine*. The Egyptians give it in *ſpitting of blood*, in the quantity of a dram, diſſolved in any convenient liquor; and repeat this doſe occaſionally: they likewiſe employ it in *collyria for ſtrengthening the eyes*, and in *gargariſms for quinſeys*. What is uſually ſold for the Egyptian acacia, is the inſpiſſated juice of unripe ſloes: this is harder, heavier, of a darker colour, and ſomewhat ſharper taſte, than the true ſort.

MED. VIRT. *Aſtringent.*

ACANTHI folia: *Acanthi ſativi vel mollis Virgilii C. B.* Brank-urſine; the leaves.

This is a beautiful plant, growing naturally in Italy, and other warm climates: from its leaves, the ancients are ſaid to have taken the idea of their moſt beautiful order of architecture. All the parts of it have a ſoft ſweetiſh taſte, and abound with a mucilaginous juice: its virtues do not ſeem to differ from thoſe of althæa and other mucilaginous plants.

ACETOSA *vulgaris*, *Acetoſa pratenſis* [*L. E.*] Common ſorrel; the roots and leaves.

Sorrel grows wild in fields and meadows throughout England. The leaves have a reſtringent acid taſte, without any ſmell or particular flavour. Their medical effects are, *to cool*, *quench thirſt*, and *promote the urinary diſcharge: a decoction of them in whey affords an uſeful and agreeable drink in febrile or inflammatory diſorders;* uſed alſo againſt bilious and ſcorbutic acrimony, and is recommended by Boerhaave to be uſed in the ſpring as one of the *moſt efficacious aperients and detergents*. Some kinds of ſcurvies have yielded to the continued uſe of this medicine: the Greenlanders, who are very ſubject to this diſtemper, are ſaid to employ, with good ſucceſs, a mixture of the juices of ſorrel and ſcurvygraſs. The only officinal preparation of this plant, is an eſſential ſalt from the juice of the leaves [*E.*]

The roots of ſorrel have a bitteriſh auſtere taſte, without any acidity: they are ſaid to be *deobſtruent* and *diuretic*; and have ſometimes had a place in aperient apozems, to which they impart a reddiſh colour.

MED. VIRT. *Aſtringent, antiſcorbutic.*

PREP. *An eſſential Salt* for taking out Spots in Clothes — *A Decoction.*

ACETUM [*L. E.*] Vinegar: an acid produced from fermented vinous liquors by a ſecond fermentation. See page 5.

Wine vinegar is conſiderably purer than that prepared from malt liquors; the latter, however acid and fine, contains a large portion of a viſcous mucilaginous ſubſtance; as is evident from the ropineſs and ſlimineſs to which this kind of vinegar is very much ſubject; the ſtronger and more ſpirituous the wine, the better and ſtronger vinegar it yields. The French vinegars are ſaid by Geof-

froy to ſaturate above one-thirty-fifth of their weight of fixt alkaline ſalt, and ſome of them no leſs than one-twelfth; the beſt of the German vinegars little more than one-fortieth.

Vinegar is a medicine of excellent uſe in all kinds of *inflammatory and putrid diſorders*, either internal or external: in *ardent, bilious fevers, peſtilential*, and *other malignant diſtempers*, it is recommended by Boerhaave as one of the moſt *certain ſudorifics*. (See the ſection of acids, page 66.) *Weakneſs, fainting, vomiting, hyſterical*, and *hypocondriacal* complaints, have been frequently relieved by vinegar applied to the mouth and noſe, or received into the ſtomach. It has been uſed internally in rabies canina; water, ſweetened with honey, and ſtrongly medicated with vinegar, is eſteemed *an antidote againſt vegetable poiſons*—but ſhould be preceded by an emetic of antimonium tartariſatum, or vitriolum album.—Diſtilled vinegar in the quantity of two or three ounces in a day, for a continuance, premiſed by bleeding, is recommended in maniacal caſes.

MED. VIRT. *Cordial, refrigerant, ſudorific*, and *antiſeptic*.

PREP. *A diſtilled ſpirit*.

ACONITUM, [*E. L.*] *Aconitum Napellus Lin.* S. P. Blue Wolfsbane.

This is a perennial plant, having many ſtalks ariſing from one root, alternate petiolated leaves divided into five parts, each portion cut into linear ſegments; and terminal bunches of irregular blue flowers with five petals, many ſtamina, and three piſtils, ſucceeded by three capſules containing ſeeds. It is a native of various parts of Europe and Virginia. It is found alſo in the mountainous parts of Virginia and Switzerland, and in gardens.

Blue wolfsbane, when firſt gathered, has a ſtrong ſmell, but no peculiar taſte: and has long been known to be one of the moſt virulent of the vegetable poiſons. It occaſions giddineſs, convulſions, violent purgings both upwards and downwards, faintings, cold ſweats, and even death itſelf. Dr. Stœrck was the firſt who ventured to introduce it into medicine. His formula was two grains of the inſpiſſated juice rubbed down with two drams of ſugar. Ten grains of this was given night and morning, and increaſed gradually to ſix drachms twice a day. But the common doſe now is from half a grain to four twice a day, or of a tincture made with ſix parts of the dried leaves to one part ſpirits of wine—doſe twenty to forty drops; and by perſiſting in the uſe of it, great relief was obtained in *fixed rheumatic* and *arthritic pains, ſpina ventoſa, itch, ſcirrhous tumours, venereal nodes, anchyloſes, amauroſis*, and other ſimilar complaints; *intermitting fevers, convulſive diſorders*.

MED. VIRT. *Narcotic*.

PREP. *Powder — Tincture — Extract*.

ADIANTHI VERI ſeu capilli Veneris folia Lin. True maidenhair; the leaves.

This is a low evergreen herb, and one of thoſe which, from the ſlenderneſs of their ſtalk, are called capillary. It is a native of Italy, and the ſouthern parts of France; whence the leaves are ſometimes brought to us. Theſe have an agreeable, but very weak ſmell; and a mucilaginous ſomewhat roughiſh taſte, which they readily impart to boiling water.

Maidenhair has been greatly celebrated in *diſorders of the breaſt, proceeding from a thinneſs and acrimony of the juices; and likewiſe for opening obſtructions of the viſcera, and*

promoting the expectoration of tough phlegm. But modern practice pays little regard to it; nor is it often to be met with in the ſhops; the TRICHOMANES, or *Engliſh maiden-hair*, which is of the ſame quality, generally ſupplying its place.

MED. VIRT. *Attenuating, aperient.*

PREP. *Decoction.* — *Infuſion* with liquorice, and ſweetened — drank as tea.

ÆRUGO [*L. E.*] Verdegris. This is a preparation of copper, made chiefly at Montpellier in France, by ſtratifying copper-plates with grape ſtalks that have been impregnated with a fermented vegetable acid. In a few days, the plates are found covered with a pale-green downy matter, which is ſcraped off from the copper and the proceſs again repeated.

Verdegris, as it comes to us, is generally mingled with ſtalks of the grape; theſe may be ſeparated, in pulveriſation, by diſcontinuing the operation, as ſoon as what remains ſeems to be almoſt entirely compoſed of them.

Verdegris is rarely or never uſed internally. Some writers greatly extol it as *an emetic*, and ſay, that a grain or two being taken, it acts as ſoon as received into the ſtomach; but its uſe has been too often followed by dangerous conſequences. (See the article CUPRUM.)—Verdegris, applied externally, proves a *gentle detergent* and *eſcharotic*, and ſerves to take down *fungous fleſh ariſing in wounds*, and *clean foul ulcers.*

MED. VIRT. *Detergent — eſcharotic.*

PREP. *A Honey — Ointment — Balſam.*

AGALLOCHUM ſeu lignum aloes. Aloes wood.

There have been different conjectures concerning this wood, but no ſatisfactory account of it has hitherto appeared. Authors diſtinguiſh ſeveral ſorts of Agallochum, moſt of which are ſtrangers to Europe. That which comes to us is in little hard ponderous pieces, of a yellowiſh-brown colour, with ſeveral black or purpliſh veins. It has a bitteriſh aromatic taſte: and a fragrant ſmell, eſpecially if reduced to powder, or ſet on fire. Diſtilled with water, it affords a very fragrant eſſential oil, but in ſmall quantity: digeſted in rectified ſpirit, it yields an elegant tincture, which loſes nothing valuable in being evaporated to the conſiſtence of an extract.

Agallochum is at preſent of very little uſe in medicine, and rarely to be met with in the ſhops. If it could be eaſily procured, at leaſt the better ſort of it bids fair to be a very uſeful cordial. Hoffman greatly recommends, in this intention, the diſtilled oil, and ſpirituous tincture: and eſteems a *mixture of this latter with tincture of ſteel an excellent corroborant.*

AGARICUS: Boletus Pini—Laricis Lin. Agaric; a fungus growing on old larch trees.

This fungus is an irregular ſpongy ſubſtance, extremely light, and of a uniform ſnowy whiteneſs (except the cortical part, which is uſually taken off before the agaric is brought into the ſhops). It cuts freely with a knife, without diſcovering any hardneſs or grittineſs, and readily crumbles betwixt the fingers into a powder. It has no remarkable ſmell; its taſte is at firſt ſweetiſh, but on chewing for a little while, proves acrid, bitter, and nauſeous.

Agaric was formerly in great eſteem *as a cathartic*, but the preſent practice has almoſt entirely

rejected its use. It operates exceeding slowly, insomuch that some have denied it to have any purgative virtue at all. Given in substance, it almost *always occasions a nausea*, not unfrequently *vomiting*, and sometimes *excessive tormina of the bowels*; these effects are attributed to its light farinaceous matter adhering to the coats of the intestines, and producing a constant irritation. The best preparation of agaric seems to be an extract made with water, in which fixt alkaline salt has been dissolved; or with vinegar or wine; the first is said by Boulduc, and the other two by Neumann, to prove *effectual and safe purgatives*. Nevertheless, this is at best a precarious medicine, of which we stand in no manner of need.

MED. VIRT. *Cathartic.*

PREPAR. *Aqueous Extract*—not now in use.

AGARICUS. *Boletus igniarius Lin.* [E.] Female agaric, or agaric of the oak; called, from its being very easily inflammable, touchwood, or spunk.

This fungus is frequently met with, on different kinds of trees, in England; and is said to have been sometimes brought into the shops mixt with the true agaric of the larch. From this it is easily distinguishable by its greater weight, dusky colour, and mucilaginous taste, void of bitterness. The medullary part of this fungus, beaten soft, and applied externally, has been greatly celebrated *as a styptic*, and said to *restrain not only venal but arterial hæmorrhages*, without the use of ligatures. It does not appear, however, to have any real styptic power, or to act any otherwise than dry lint, sponge, or other soft fungous applications.

MED. VIRT. *Styptic.*

PREPAR. Pieces applied externally.

AGRIMONIÆ folia: agrimonia eupatoria—Agrimony; the leaves. *Lin.*

This is a common plant in hedges, and the borders of fields. The leaves have an herbaceous, somewhat acrid, roughish taste, accompanied with an aromatic flavour. Agrimony is said to be *aperient, detergent*, and *to strengthen the tone of the viscera:* hence it is recommended *in scorbutic disorders*, in *debility and laxity of the intestines*, &c. Digested in whey, it affords an useful diet-drink for the spring season, not ungrateful to the palate or stomach.

MED. VIRT. *Attenuant* and *tonic.*

PREPAR. *Infused* in whey, it forms a diet-drink used by some in spring.

ALCEÆ folia: malvæ verbenaceæ. Vervain mallow; the leaves.

This is easily distinguishable from the common and marsh mallow, by its leaves being jagged or cut in about the edges. It grows in hedges, and flowers the greatest part of the summer. *Alcea* agrees in quality with the ALTHÆA and MALVA VULGARIS; but appears to be less mucilaginous than either.

ALCHIMILLÆ folia: Alchimillæ vulgaris, Lin. Lady's mantle; the leaves.

This grows wild in many parts of England, but is rarely met with about London. The leaves seem as if plaited or folded together, so as to have given occasion to the English name of the plant. The leaves of alchimilla discover to the taste a moderate astringency, and were formerly much esteemed in *some female weaknesses*, and in *fluxes of the belly*. They are now rarely made use of; though both the *leaves and roots might, doubtless, be of service in cases where mild astringents are required.*

MED. VIRT. *Astringent.*

ALKEKENGI seu halicacabi fructus: Alkekengi Physalis, Lin. Winter cherry: the fruit.

This is a low, branched shrub, bearing leaves like those of night-shade; with white flowers, which stand single at the points. The flower cup changes into a membranous cover, which at length bursts, and discovers a fruit of a fine red colour, about the size of a common cherry. The fruit ripens in October, and continues frequently to the middle of December. This plant grows wild in some parts of France, Germany, &c. The beauty and lateness of its fruit have gained it a place in our gardens.

Winter cherries are said by most writers to be extremely bitter: but, as Haller justly observes, the cherry itself, if carefully freed from the cover (which is very bitter and pungent), has merely a subacid taste. They stand highly recommended as *detergent, aperient, diuretic*, and for *expelling gravel:* four, five, or more of the cherries are directed for a dose, or an ounce of the expressed juice. Mr. Ray tells us of a gouty person who was cured and kept free from returns of his disorder, by taking eight of these cherries at each change of the moon; these occasioned a copious discharge of extremely fœtid urine.

MED. VIRT. *Aperient* and *diuretic*.

PREPAR. *Dried and powdered.—Inspissated juice.*

ALLIARIÆ folia. Erysimi alliariæ, Lin. Sauce alone, or jack by the hedge; the leaves.

This is common in hedges and shady waste places, flowering in May and June. The leaves have a bitterish acrid taste, and, when rubbed betwixt the fingers, a strong smell, approaching to that of garlick. They are recommended internally as *sudorifics* and *deobstruents*, somewhat of the nature of garlick, but much milder; and externally as *antiseptics in gangrenes* and *cancerous ulcers*. Hildanus used to gather the herb for these last purposes in the spring, and expose it for a day to the action of a dry air in a shady place; being then committed to the press, it yielded a juice possessing the smell and taste of the alliaria: this, he informs us, with a little oil on the surface, keeps in perfection for years; whereas the herb in substance soon loses its virtue in keeping.

MED. VIRT. *Sudorific — deobstruent.*

ALLIUM: *radix Allii sativi— Lin. S. P.* Garlick; the roots [*L. E.*]

These roots are of the bulbous kind, of an irregularly roundish shape, with several fibres at the bottom: each root is composed of a number of lesser bulbs, called cloves of garlick, inclosed in one common membranous coat and easily separable from one another. All the parts of this plant, but more especially the roots, have a strong offensive smell, and an acrimonious, almost caustic taste. The root applied to the skin inflames, and often exulcerates the part. Its smell is extremely penetrating and diffusive; when the root is applied to the feet, its scent is soon discoverable in the breath; and when taken internally, its smell is communicated to the urine, or the matter of an issue, and perspires through the pores of the skin.

This pungent root *warms and stimulates the solids*, and *attenuates tenacious juices*. Hence, in cold leucophlegmatic habits, it proves a *powerful expectorant, diuretic*, and *emmenagogue;* and if the patient be kept warm, *a sudorific*. In *humoural asthmas*, and *catarrhous*

diſorders of the breaſt, in ſome ſcurvies, flatulent colics, hyſterical and other diſeaſes proceeding from laxity of the ſolids, and cold ſluggiſh indiſpoſition of the fluids, it has generally good effects: it has likewiſe been found ſerviceable *in ſome hydropic caſes.* SYDENHAM relates, that he has known the dropſy cured by the uſe of garlick alone; he recommends it chiefly as a warm ſtrengthening medicine in the beginning of the diſeaſe.

The liberal uſe of garlick is apt to occaſion head-achs, flatulencies, thirſt, febrile heats, inflammatory diſtempers, and ſometimes diſcharges of blood from the hæmorrhoidal veſſels. In hot bilious conſtitutions, where there is already a degree of irritation, where the juices are too thin and acrimonious, or the viſcera unſound; this ſtimulating medicine is manifeſtly improper, and never fails to aggravate the diſtemper.

The moſt commodious form for the taking of garlick, a medicine to moſt people not a little unpleaſant, is that of a bolus or pill. Infuſions in ſpirit, wine, vinegar, and water, although containing the whole of its virtues, are ſo acrimonious, as to be unfit for general uſe. A ſyrup and oxymel of it are kept in the ſhops.

Garlick infuſed in brandy is a medicine eſteemed highly uſeful in gouty affections of the ſtomach:—where its operation is intended to be long continued, and the ſtomach will bear it, a clove or two dipped in oil, and ſwallowed, has been recommended as the beſt mode of adminiſtration.

Garlick made into an unguent with oils, &c. and applied externally, is ſaid *to reſolve and diſcuſs cold tumours*, and has been by ſome greatly eſteemed in *cutaneous diſeaſes.* It has likewiſe ſometimes been employed as a *revellent.* SYDENHAM aſſures us, that among all the ſubſtances which occaſion a derivation or revulſion from the head, none operate more powerfully than garlick applied to the ſoles of the feet: hence he was led to make uſe of it in the confluent ſmall pox: about the eighth day after the face began to ſwell, the root cut in pieces, and tied in a linen cloth, was applied to the ſoles, and renewed once a day till all danger was over.

MED. VIRT. *Stimulant—attenuant—diſcutient*, and *diuretic.*

PREP. *Syrup.—Oxymel.—Ointment.—Poultice.*

ALNI VULGARIS folia & cortex. Betulæ Alni Lin. The leaves and bark of the alder tree. Theſe have a bitter ſtyptic diſagreeable taſte. The bark is recommended by ſome in *intermittent fevers;* and a decoction of it in gargariſms, *for inflammations of the tonſils.*

MED. VIRT. *Aſtringent.*

PREPAR. *Decoction.* — Leaves chopped and heated, efficacious for diſperſing milk in the breaſts.

ALOE. Aloe is the inſpiſſated juice of certain plants of the ſame name. The ancients diſtinguiſhed two ſorts of aloes; the one was pure and of a yellowiſh colour, inclining to a red, reſembling the colour of a liver, and, thence, named *hepatic*; the other was full of impurities, and, hence, ſuppoſed to be only the droſs of the better kind. At preſent, various ſorts are met with in the ſhops; which are diſtinguiſhed either from the places, from the ſpecies of the plants, or from ſome differences in the juices themſelves. Theſe may be all ranged in three claſſes:

(1) ALOE SOCOTORINA [*L. E.*] Socotorine aloes, brought from the iſland Socotora in the Indian ocean, wrapt in ſkins; it is obtained from

the *aloe Succotorina anguſtifolia ſpinoſa, flore purpureo Bryen. & Commelin. Varietas aloes perfoliatæ, Lin.* —This ſort is the pureſt of the three; it is of a gloſſy ſurface, clear, and in ſome degree pellucid; in the lump, of a yellowiſh red colour, with a purple caſt; when reduced to powder, of a bright golden colour. It is hard and friable in the winter, ſomewhat pliable in ſummer, and grows ſoft betwixt the fingers. Its taſte is bitter, accompanied with an aromatic flavour, but inſufficient to prevent its being diſagreeable; the ſmell is not very unpleaſant, and ſomewhat reſembles that of myrrh.

(2) ALOE HEPATICA [*E.*]—*Barbadenſis* [L.] — *aloe perfoliata* Lin. Hepatic, Barbadoes, or common aloes; the juice of the *Aloe C. B. aloe vera vulgaris Munting.*—Hepatic aloes is not ſo clear and bright as the foregoing ſort; it is alſo of a darker colour, more compact texture, and for the moſt part drier. Its ſmell is much ſtronger and more diſagreeable: the taſte intenſely bitter and nauſeous, with little or nothing of the fine aromatic flavour of the Socotorine.—The beſt hepatic aloes comes from Barbadoes, in large gourd ſhells; an inferior ſort of it (which is generally ſoft and clammy) is brought over in caſks.

(3) ALOE CABALLINA. Fetid, caballine, or horſe aloes; the produce of the *aloe Guineenſis caballina vulgari ſimilis ſed tota maculata Commelin.*—This ſort is eaſily diſtinguiſhed from both the foregoing, by its ſtrong rank ſmell; although, in other reſpects, it agrees pretty much with the hepatic, and is not unfrequently ſold in its ſtead. Sometimes the caballine aloes is prepared ſo pure and bright, as not to be diſtinguiſhable by the eye even from the Socotorine; but its offenſive ſmell, of which it cannot he diveſted, readily betrays it.

All the ſorts of aloes diſſolve in pure ſpirit, proof ſpirit, and proof ſpirit diluted with half its weight of water; the impurities only being left. They diſſolve alſo by the aſſiſtance of heat in water alone; but as the liquor grows cold, the reſinous part ſubſides, the gummy remaining united with the water. The hepatic aloes is found to contain more reſin, and leſs gum, than the Socotorine, and this than the caballine. The reſins of all the ſorts, purified by ſpirit of wine, have little ſmell; that obtained from the Socotorine has ſcarce any perceptible taſte; that from the hepatic, a ſlight bitteriſh reliſh, and the reſin of the caballine, a little more of the aloetic flavour. The gummy extracts of all the ſorts are leſs diſagreeable than the crude aloes: the extract of Socotorine aloes has very little ſmell, and is in taſte not unpleaſant; that of the hepatic has a ſomewhat ſtronger ſmell, but is rather more agreeable in taſte than the extract of the Socotorine: the gum of the caballine retains a conſiderable ſhare of the peculiar rank ſmell of this ſort of aloes, but its taſte is not much more unpleaſant than that of the extracts made from the two other ſorts.

Aloes is a ſtimulating cathartic bitter: if given in ſo large a doſe as to purge effectually, it often occaſions an irritation about the anus, and ſometimes a diſcharge of blood. *Small doſes of it frequently repeated,* not only *cleanſe the primæ viæ,* but likewiſe *attenuate and diſſolve viſcid juices in the remoter parts, warm the habit, quicken the circulation,* and *promote the uterine* and *hæmorrhoidal fluxes.* This medicine is particularly ſerviceable to perſons of *a phlegmatic temperament* and *ſedentary life,* and where the *ſtomach is op-*

preſſed and *weakened:* in dry bilious habits, aloes prove injurious, immoderately heating the blood, and inflaming the bowels.

The juice is likewiſe, on account of its bitterneſs, ſuppoſed *to kill worms*, either taken internally, or applied in plaſter to the umbilical region. It is alſo celebrated for *reſtraining external hæmorrhages*, and *cleanſing and healing wounds* and *ulcers*.

The ancients gave aloes in much larger doſes than is cuſtomary at preſent. Dioſcorides orders half a dram or a dram for gently looſening the belly: and three drams when intended to have the full effect of a cathartic. But modern practice rarely exceeds a ſcruple, and limits the greateſt doſe to two ſcruples. *For the common purpoſes of this medicine, ten* or *twelve grains ſuffice:* taken in theſe or leſs quantities, it acts as a gentle ſtimulating eccoprotic, capable of removing, if duly continued, very obſtinate obſtructions.

Aloes in doſes of a few grains is occaſionally mixed into pills, with a third, or equal parts, of ſome ſaponaceous or reſolvent body, ſuch as extract of liquorice, and gentian, ſapo albus, or the like; and is ſeldom given in large doſes, or to hot bilious habits: it is a ſlow, but ſure-working purge, and is generally taken at bed time, ſeldom operating until the next day. Aloes, particularly in its operation, affects the rectum; its preparations are on that account ſometimes employed in larger doſes, to produce the bleeding piles, when they have been ſuddenly and injuriouſly ſuppreſſed. The particular purpoſes for which the different preparations are adminiſtered will be given under their reſpective heads.

Some are of opinion, that the purgative virtue of aloes reſides entirely in its reſin; but experience has ſhewn, that the pure reſin has little or no purgative quality; and that the gummy part, ſeparated from the reſinous, acts more powerfully than crude aloes. If the aloes, indeed, be made to undergo long coction in the preparation of the gummy extract, its cathartic power will be conſiderably leſſened, not from the ſeparation of the reſin, but from an alteration made in the juice itſelf by the heat. The ſtrongeſt vegetable cathartics become mild by a like treatment, without any remarkable ſeparation of their parts.

Socotorine aloes, as already obſerved, contains more gummy matter than the hepatic; and hence it is likewiſe found to purge more, and with greater irritation. The former ſort, therefore, is moſt proper where a ſtimulus is required, as for promoting or exciting the menſtrual flux; while the latter is better calculated to act as a common purge. It is ſuppoſed that the vulnerary and balſamic virtues of this juice reſide chiefly in the reſin; and hence that the hepatic aloes, which is moſt reſinous, is moſt ſerviceable in external application.

The Edinburgh college directs the hepatic aloes in the *tinct. benzoini comp.* and *tinctura myrrhæ et aloes*, deſigned for external uſe; and the Socotorine in thoſe preparations or compoſitions which are to be taken internally, as the *elixir rhæi c. al. pulvis hieræ picræ, pilulæ aloeticæ, pilulæ aloes c. myrrh. pilulæ ſtomachicæ, aloes c. colocynth,* &c.

The London college uſes the Socotorine only. In the *vinum aloes, tinct. aloes, comp. tinct. benzoes, comp. pulv. aloeticus e guaiaco*, and the other pills or powders wherein aloes is an ingredient, the Socotorine kind in ſubſtance is directed. In the *pulvis aloeticus*, only the pure gummy part of the Socotorine aloes is employed, the ſeparation of which from the reſinous matter is given in a diſtinct proceſs.

MED. VIRT. *Cathartic.*

PREPAR. *Inspissated juice*—ingredient in several tinctures and pills.

ALSINES folia. Alsines mediæ, Lin. Chickweed; the leaves.

This plant was employed by the ancients externally *against erysipelatous* and *other inflammatory disorders.* Later times have given it internally *in hæmoptoës*, as a restorative *in atrophies* and *consumptions*, and likewise as an *antepileptic.* Some recommend for these purposes the expressed juice, to be taken to the quantity of an ounce; others the dried leaves, in the dose of a dram; and others, a water distilled from them. But if any real benefit be expected from *alsine*, it ought to be used liberally as food; though even then, its effects would not, perhaps, be superior to those of more approved culinary herbs.

MED. VIRT. *Refrigerant.*

ALTHÆÆ *folia, radix: Althææ officinalis, Lin.* Marsh-mallows; the leaves and root [*L. E.*]

This plant grows wild in marshes, and other moist places, in several parts of England; though frequently cultivated for medicinal use in gardens. All the parts of it have a slimy taste, and abound with a soft mucilaginous substance, which is readily extracted by water: the mucilage of the roots appears to be the strongest; and, hence, this part is generally made use of in preference to the others.

This plant has the general virtues of an emollient medicine; and proves serviceable in a *thin acrimonious state of the juices*, and *where the natural mucus of the intestines is abraded.* It is chiefly recommended *in sharp defluxions upon the lungs, hoarsenesses, dysenteries*, and likewise *in nephritic and calculous complaints*; and is given in decoction and infusion, with pearl barley, and liquorice root, and with gum for the relief of dysury and nephritic complaints. Not, as some have supposed, that this medicine has any peculiar power of dissolving or expelling the calculus; but as, by lubricating and relaxing the vessels, it procures a more free and easy passage. Althæa root is sometimes employed externally *for softening and maturating hard tumours*: chewed, it is said to give ease in *difficult dentition of children.*

MED. VIRT. *Emollient.*

PREPAR. *Syrup—Ointment.*

ALUMEN [*L. E.*] Argilla vitriolata. Alum.

Alum is a salt artificially produced from certain minerals, by calcining and exposing them to the air; after which the alum is elixated by means of water. The largest quantities are prepared in England, Germany, and Italy.

This salt is of a white or pale red colour, of an austere styptic taste, accompanied with a nauseous sweetishness. It dissolves in about twelve times its weight of water; and concretes again, upon duly evaporating the solution, into semitransparent crystals of an octagonal figure. Exposed to the fire, it easily melts, bubbles up in blisters, emits a copious phlegm, and then turns into a light spongy white mass, considerably more acrid than the alum was at first: this, urged with a stronger fire, yields a small quantity of acid spirit, similar to that obtained by the same means from vitriol; the part which remains, if the heat has been sufficiently intense and long continued, is an insipid white earth, readily soluble in every kind of acid.

Solutions of alum coagulate milk, change the blue colour of vegetable juices into a red or purple, and turn an infusion of galls turbid and whitish. Upon adding fixt alkaline salts to these solutions, the earth of

the alum is precipitated, its acid uniting with the alkali into a neutral ſaline concrete ſimilar to vitriolated tartar.

Alum is a powerful aſtringent: it is reckoned particularly ſerviceable for *reſtraining hæmorrhages*, and *immoderate ſecretions from the blood*; but leſs proper in inteſtinal fluxes. In *violent hæmorrhages*, it may be given in doſes of fifteen or twenty grains, nay even to thirty, and repeated every hour or half hour till the bleeding abates: in other caſes, ſmaller doſes are more adviſeable; large ones being apt to nauſeate the ſtomach, and occaſion violent conſtipations of the bowels. It is beſt exhibited with dragon's blood, or gum kino, gum arabic, ſpermaceti, or opium. It is uſed alſo externally, in aſtringent and repellent lotions, gargles, and collyria. From three to ſix grains of alum and canella alba with about one dram of Peruvian bark, taken three or four times a day, have prevented the return of obſtinate intermittents.

The *alumen uſtum* is no other than the alum dried by fire, or freed from the watery moiſture, which, like other ſalts, it always retains in its cryſtalline form. By this loſs of its water it becomes ſharper, ſo as to act as a ſlight eſcharotic In this ſtate it has been given in doſes of a ſcruple as a laxative in colic.

Med. Virt. *Strongly aſtringent.*

Prepar. *Styptic powder—Styptic water-whey—Coagulum*, &c.

AMBRAGRISEA. Ambra ambroſiaca, Lin.

Ambergris is a bituminous ſubſtance, of a greyiſh or aſh colour, intermingled with yellowiſh and blackiſh ſpecks or veins: it is uſually met with in little opake rugged maſſes, very light, of a looſe texture, friable in a certain degree like wax; they break rough and uneven, and not unfrequently contain pieces of ſhells, bones of fiſhes, and other like matters. This concrete is found floating on the ſurface of the ſea, or thrown out upon the ſhores; the greateſt quantities are met with in the Indian ocean; pieces have likewiſe been now and then diſcovered in our own and other northern ſeas. It has been ſuppoſed to be an animal product, from being ſo frequently found in the belly of the phyſeter macrocephalus.

Pure ambergris ſoftens betwixt the fingers; melts in a ſmall degree of heat into the appearance of oil, and in a ſtronger heat proves almoſt totally volatile. Warmed a little, it emits a peculiar fragrant ſmell; ſet on fire, it ſmells like burning amber. It diſſolves, though difficultly, in ſpirit of wine, and eſſential oils; but not in expreſſed oils or in water.

Ambergris is in general the moſt agreeable of the perfumes, and rarely accompanied with the inconveniencies which other ſubſtances of this claſs frequently occaſion. It is looked upon as *an high cordial*, and eſteemed of great ſervice *in all diſorders of the head*, and in *nervous complaints*. A ſolution of it in a ſpirit diſtilled from roſes, ſtands recommended by Hoffman, as one of the *moſt efficacious corroborants of the nervous ſyſtem*. The Orientals entertain an high opinion of the *aphrodiſiac virtues* of this concrete; and likewiſe ſuppoſe that the frequent uſe of it *conduces to long life*.

Med. Virt. *Cordial.*

Prepar. *Tincture or eſſence.*

AMMEOS VERI ſemen. Siſonis Ammeos, Lin. The ſeeds of the true ammi or biſhopſweed, brought from Egypt.

Theſe are ſmall ſtriated ſeeds, of a reddiſh brown colour, a warm pungent taſte, and a pleaſant ſmell approaching to that of origanum. They are recommended as *ſtoma-*

chic, *carminative*, and *diuretic*: but have long been ſtrangers to the ſhops.

MED. VIRT. *Stimulant.*

AMMONIACUM GUMMI — [*L. E.*] Ammoniacum is a concrete gummy reſinous juice, brought from the Eaſt Indies, uſually in large maſſes, compoſed of little lumps or tears, of a milky colour, but ſoon changing, upon being expoſed to the air, of a yellowiſh hue. We have no certain account of the plant which affords this juice. The ſeeds uſually found among the tears reſemble thoſe of the umbelliferous claſs. It has however been ſaid to be an exudation from a ſpecies of ferula. Such tears as are large, dry, free from little ſtones, ſeeds, or other impurities, ſhould be picked out, and preferred for internal uſe; the coarſer kind is purified by ſolution and colature, and then carefully inſpiſſating it; unleſs this be artfully managed, the gum will loſe a conſiderable deal of its more volatile parts. There is often vended in the ſhops, under the name of ſtrained gum ammoniacum, a compoſition of ingredients much inferior in virtue.

Ammoniacum has a nauſeous ſweet taſte, followed by a bitter one; and a peculiar ſmell ſomewhat like that of galbanum, but more grateful; it ſoftens in the mouth, and grows of a whiter colour upon being chewed. Thrown upon live coals, it burns away in flame: it is in ſome meaſure ſoluble in water and in vinegar, with which it aſſumes the appearance of milk; but the reſinous part, amounting to about one half, ſubſides, on ſtanding.

Ammoniacum is an uſeful *deobſtruent*; and frequently preſcribed for opening *obſtructions of the abdominal viſcera*, and *in hyſterical diſorders* occaſioned by a deficiency of the menſtrual evacuations. It is likewiſe ſuppoſed *to deterge the pulmonary veſſels*, and proves of conſiderable ſervice in ſome kinds of *aſthmas* where the lungs are oppreſſed by viſcid phlegm; in this intention, a ſolution of gum ammoniacum in vinegar of ſquills proves a medicine of great efficacy, though not a little unpleaſant. *In long and obſtinate colics*, proceeding from viſcid matter lodged in the inteſtines, this gummy reſin has produced happy effects, after purges and the common carminatives had been uſed in vain. Ammoniacum is moſt commodiouſly taken in the form of pills: about a ſcruple may be given every night, or oftener. Externally it ſoftens and ripens hard tumours: a ſolution of it in vinegar ſtands recommended by ſome for reſolving even ſchirrous ſwellings. A plaſter made of ammoniacum and ſquill vinegar, is recommended by ſome in white ſwellings—a dilute ſolution of the ſame is likewiſe rubbed on the parts, which are alſo fumigated with the ſmoke of juniper berries. Notwithſtanding all which, Dr. Cullen thinks its antiſpaſmodic power inconſiderable, its expectorant and reſolvent very doubtful.

MED. VIRT. *Aperient; antiſpaſmodic; emollient; deobſtruent; expectorant.*

PREPAR. *A ſolution* — an ingredient in ſeveral pectoral compoſitions, and diſcutient plaſters.

AMYGDALÆ AMARÆ et DULCES. Nucleus amygdalus communis variet. *Lin. S. P.* Sweet and bitter almonds [*L. E.*] The kernel.

The almond is a flattiſh kernel, of a white colour, covered with a thin browniſh ſkin; of a ſoft ſweet taſte; or a diſagreeable bitter one. The ſkins of both ſorts are unpleaſant, and covered with an acrid powdery ſubſtance; they are very apt to become rancid on keeping,

and to be preyed on by a kind of insect, which eats out the internal part, leaving the almond to appearance entire. To these circumstances regard ought to be had in the choice of them.

The fruit which affords these kernels, is the produce of a tree greatly resembling the peach, called by C. B. *amygdalus sativa*. The eye distinguishes no difference betwixt the trees which produce the sweet and bitter, or betwixt the kernels themselves. It is said that the same tree has, by a difference in culture, afforded both.

Both sorts of almonds yield, on expression, a large quantity of oil, which has no smell, or any particular taste. This oil separates likewise upon boiling the almonds in water, and is gradually collected on the surface: but, on triturating the almonds with water, the oil and water unite together, by the mediation of the other matter of the kernel, and form an unctuous milky liquor.

Sweet almonds are of greater use in food than as medicines: but they are reckoned to afford little nourishment, and when eaten in substance, are not easy of digestion, unless thoroughly comminuted. They are supposed, on account of their soft unctuous quality, *to abtund acrimonious juices in the primæ viæ:* peeled sweet almonds, eaten six or eight at a time, sometimes *give present relief in the heartburn.*

Bitter almonds have been found *poisonous to dogs, and sundry other animals;* and a water distilled from them, when made of a certain degree of strength, has had like effects. Nevertheless, when eaten, they appear innocent to men, and have been not unfrequently used as medicines. Boerhaave recommends them, in substance, as *diuretics*, which heat but moderately, and which may therefore be ventured upon in acute diseases.

The oils obtained by expression from both sorts of almonds are in their sensible qualities the same. The general virtues of these oils are, to *blunt acrimonious humours*, and *to soften and relax the solids; hence their use internally, in tickling coughs, heat of urine, pains, and inflammations;* and, externally, *in tension and rigidity of particular parts.*

Their common dose is from half an ounce to an ounce, but in some cases they are given to the quantity of three or four ounces. The most commodious forms for their exhibition are in emulsions.

The milky solutions of almonds in watery liquors, commonly called emulsions, contain the oil of the subject, and participate in some degree of the emollient virtue thereof; but have this advantage above the pure oil, that they may be given in acute or inflammatory disorders, without danger of the ill effects which the oil might sometimes produce; since emulsions do not turn rancid or acrimonious by heat, as all the oils of this kind, in a little time, do. Several unctuous and resinous substances, of themselves not miscible with water, may by trituration with almonds be easily mixed with them into the form of an emulsion; and are thus excellently fitted for medicinal use. In this form, camphor and the resinous purgatives may be commodiously taken.

Bergius considers bitter almonds as a remedy in intermittent fevers, which he thus administers:—He first dissolves, in a pound of water, two drams of soluble tartar, and half an ounce of honey: with this he forms an emulsion with one ounce of bitter almonds, and strains it in the usual way; of this he gives,

during the intermiſſion, a pound or two every day, and thus prevents the recurrence of the paroxyſm; he acknowledges, though, that certain fevers have reſiſted this remedy, and obliged him to have recourſe to the bark; but even then he mixes with it the bitter emulſion. But he alſo ſays, intermittent fevers have yielded to the bitter emulſion alone, after they had entirely reſiſted the bark.

MED. VIRT. *Relaxing.*

PREPAR. *Expreſſed oil.—Emulſion.*

Though the bitter almond with the ſkin is ſaid to have other more active properties, as above explained.

ANACARDIA. Avicennia tomentoſa, Lin. Anacardium, or Malacca bean.

This is the fruit of a tree growing in Malabar and other parts of the Eaſt Indies. It is of a ſhining black colour, of the ſhape of a heart flattened, about an inch long, terminating at one end in an obtuſe point, and adhering by the other to a wrinkled ſtalk: it contains, within two ſhells, a kernel of a ſweetiſh taſte: betwixt the ſhells is lodged a thick and acrid juice.

But the kernel of anacardium is not different in quality from that of almonds. The ill effects attributed to this fruit belong only to the juice contained betwixt the kernels, whoſe acrimony is ſo great, that it is ſaid to be employed by the Indians as *a cauſtic.* This juice is recommended externally for *tetters, freckles*, and *other cutaneous deformities;* which it removes only by exulcerating or excoriating the part, ſo that a new ſkin comes underneath.

MED. VIRT. *Corroſive.*

PREPAR. *Oil on the outſide.*

But the kernels may be uſed as almonds—the gum as gum arabic.

ANAGALLIDIS folia. Anagallidis arvenſis, Lin. Common male and female pimpernel; the leaves.

Pimpernel is a low plant, in appearance reſembling chickweed; but eaſily diſtinguiſhable by its leaves being ſpotted underneath, and joined immediately to the ſtalk. The male and female pimpernels differ no otherwiſe than in the colour of their flowers; they are both found wild in the fields, but the male or red-flowered ſort is more common.

Both the pimpernels have an herbaceous, roughiſh taſte, with little or no ſmell. Many extraordinary virtues have been attributed to them. Geoffroy eſteems them cephalic, ſudorific, vulnerary, antimaniacal, antiepileptic, and alexeterial. Tragus, Caſpar Hoffman, Michaeli, and others, are alſo very liberal in their praiſes; one of theſe gentlemen declares, that he has known numerous inſtances of the ſingular efficacy of a decoction and tincture of pimpernel, in maniacal and melancholic deliria. But later practitioners have not been ſo happy as to meet with the like ſucceſs. Pimpernel is not unfrequently taken as food; it makes no unpleaſant ſalad; and in ſome parts of this kingdom, is a common pot-herb. A ſpirituous tincture of it contains nothing valuable: the only preparation that promiſes any utility, is an extract made with water; or the expreſſed juice depurated and inſpiſſated.

MED. VIRT. *Sudorific* and *nervine.*

PREPAR. *Extract, or inſpiſſated juice.*

ANCHUSÆ *radix. Anchuſæ tinctoriæ, Lin.* Alkanet root [*E.*]

Alkanet is a rough hairy plant, much reſembling the vipers' bugloſs: its chief difference from the common bugloſſes conſiſts in the colour of its roots; the cortical

part of which is of a dusky red, and imparts an elegant deep red to oils, wax, and all unctuous substances, but not to watery liquors. This plant is a native of the warmer parts of Europe: it is sometimes cultivated in our gardens; but the greatest quantities are raised in Germany and France, particularly about Montpelier, whence the dried roots are usually imported to us. The alkanet root produced in England is much inferior in colour to that brought from abroad; the English being only lightly reddish, the others of a deep purplish red: this has induced some to suspect that the foreign roots owe part of their colour to art, but, we think, without sufficient foundation.

Alkanet root has little or no smell: when recent, it has a bitterish astringent taste, but when dried, scarce any. As to its virtues, the present practice expects not any from it. Its chief use is for colouring oils, unguents, and plasters. As the colour is confined to the cortical part, the small roots are best, these having proportionably more bark than the large.

MED. VIRT. *Used only for colouring.*

ANETHI *semen. Anethi graveolentis, Lin.* Dill seed [*L. E.*]

Dill is an umbelliferous plant, cultivated in gardens, as well for culinary as medical use. The seeds are of a pale yellowish colour, in shape nearly oval, convex on one side, flat on the other. Their taste is moderately warm and pungent; their smell aromatic, but not of the most agreeable kind. These seeds are recommended as *antispasmodic* and *carminative*, in flatulent colics proceeding from a cold cause or a viscidity of the juices. They have been much employed by the nurses in England for colicky complaints of children. The most efficacious preparations of them are the distilled oil, and a tincture or extract made with rectified spirit.

MED. VIRT. *Carminative.*

PREPAR. *Distilled oil—water—spirituous extract.*

ANGELICÆ *radix, folia, semen. Angelicæ Archangelicæ, Lin.* Garden angelica; the roots, leaves, and seeds [*L. E.*]

This is a large umbelliferous plant, growing spontaneously in the northern climates: for the use of the shops, it is cultivated in gardens, in the different parts of Europe. Bohemia and Spain are said to produce the best. Angelica roots are apt to grow mouldy, and be preyed upon by insects, unless thoroughly dried, kept in a dry place, and frequently aired. We apprehend that the roots which are subject to this inconvenience might be preserved, by dipping them in boiling spirit, or exposing them to its steam, after they are dried.

All the parts of angelica, especially the roots, have a fragrant aromatic smell; and a pleasant, bitterish warm taste, glowing upon the lips and palate for a long time after they had been chewed. The flavour of the seeds and leaves is very perishable, particularly of the latter, which, on being barely dried, lose greatest part of their taste and smell. The roots are more tenacious of their flavour, though even those lose part of it by keeping. The fresh root, wounded early in the spring, yields an odorous, yellow juice, which, slowly exsiccated, proves an elegant gummy resin, very rich in the virtues of the angelica. On drying the root, this juice concretes into distinct moleculæ, which, on cutting it longitudinally, appear distributed in little veins; in this state, they are extracted by pure spirit, but not by watery liquors.

Angelica is one of the most ele-

gant aromatics of European growth, though little regarded in the present practice. The root, which is the most efficacious part, is rarely met with in prescription, and does not enter any officinal composition. The stalks make a pleasant sweetmeat. — As to the medical virtue of Angelica, it is considered only to be a mild carminative.

MED. VIRT. *Aromatic—Carminative.*

PREP. *Sweetmeat.*

ANGUILLÆ HEPAR. The liver of the eel.

Boerhaave observes, that no fish has a more acrid gall than the eel; and says, that with pills made of the gall of the eel and pike, he has cured pale rickety children with swelled bellies: the gall powerfully promoting urine, and occasioning the belly to subside.

MED. VIRT. *Stimulant — Diuretic.*

ANGUSTURA CORTEX. Angustura Bark [*E.*]

This bark, first imported in the year 1788, was supposed to be the production of a tree on the coast of Africa; but Dr. BRUCE pronounced it to be the bark of a tree named *Wooginos*, by which he was cured of a dysentery in Abyssinia; and having brought over some of the seeds, and planted them in the gardens of Kew, their product he calls BRUCEA ANTIDYSENTERICA, seu FERRUGINEA.

This bark is a powerful bitter, joined with an aroma, not much more pungent than cascarilla, having a portion of pure oil, which in its nature approaches to camphor; it seems also to possess a narcotic principle; hence differs from the cinchona, and has been considered more powerful, both as a tonic and antiseptic: the virtues reside more in the gummy than resinous extract; but is still more powerful having both dissolved; which warm water effects, extracting also the oily portion; hence it is best prepared by infusion. This bark has been employed in similar views with the Peruvian bark. In *intermittents* it is not always superior; sometimes inferior. In *low fevers*, and those of the *putrid kind*, it has seemed more efficacious. In *head-aches, attended with fever, but rising from the stomach;* in *dysentery* and *dyspepsia*, it has been of great service.

From various experiments that have been made, the Angustura bark seems to claim the highest rank as an *antiseptic.*

MED. VIRT. *Tonic* and *antiseptic.*

PREP. *Extract.*

ANISI *semen. Pimpinellæ Anisi Lin.* Anise, the seed [*L. E.*]

Anise is an annual umbelliferous plant, growing naturally in Crete, Syria, and other places of the East. It is cultivated in some parts of France, Germany, and Spain, and may be raised also in England. The seeds brought from Spain, which are smaller than the others, are preferred.

Aniseeds have an aromatic smell, and a pleasant warm taste, accompanied with a degree of sweetness. Water extracts very little of their flavour; rectified spirit the whole.

These seeds are in the number of the four greater hot seeds: their principal use is in cold flatulent disorders, where tenacious phlegm abounds, and in the gripes to which young children are subject. Frederick Hoffman strongly recommends them in weakness of the stomach, diarrhœæ, and for strengthening the tone of the viscera in general; and thinks they well deserve the appellation given them by Helmont, *intestinorum solamen.* They are certainly carminative, and have been said to be expectorant, and to increase the quanty of nurses' milk; which does not seem improbable, as the odour ap-

pears, after taking it, in the milk itself.

The officinal preparations of these seeds are an *essential oil* [*L. E.*] and a *compound spirit* [*L. E.*]

MED. VIRT. *Aromatic—Tonic—Carminative.*

PREP. *Essential oil—Compound spirits*, &c.

ANTIMONIUM [*L. E.*] *Sulphuratum.* Antimony.

Antimony is a ponderous brittle mineral, composed of long shining streaks like needles, intermingled with a dark lead-coloured substance; of no manifest taste or smell. There are several mines of it in Germany, Hungary, and France, and some likewise in England. The English sort seems to be, of all the others, the least proper for medicinal use, as frequently containing a portion of lead. The substances found mixed with the foreign sorts are generally of the unfusible stony kind, from which the antimony is melted out in vessels, whose bottom is perforated with small holes, and received in conical moulds. In these, the lighter and more drossy matter arises to the surface, while the more pure and ponderous subsides to the bottom. Hence the upper broad part of the loaves is considerably less pure than the lower.

The goodness of antimony is judged of from its weight; from the loaves not being spongy; from the largeness of the striæ; and from the antimony totally evaporating in a strong fire.

Antimony was employed by the ancients in collyria against inflammations of the eyes; and for staining the eyebrows black. Its internal use does not seem to have been established till towards the end of the fifteenth century; and, even at that time, it was by many looked upon as poisonous. But experience has now fully evinced, that pure antimony, in its crude state, has no noxious quality; that some of the preparations of it are medicines of great efficacy; and that though many of them are most violently emetic and cathartic, yet even these, by a slight alteration or addition, lose their virulence, and become mild in their operation.

This mineral appears, from chemical experiments, to consist of a metal, united with common sulphur, and separable in its metallic form by the same means whereby other metallic bodies are extracted from their ores.

The pure metal operates, in a very minute dose, with extreme vehemence, as a purgative and emetic; when combined with sulphur, as in the crude mineral, its power is restrained; divested of the inflammable principle which it has in common with all perfectly metallic bodies, it becomes an indolent calx. There are a great variety of preparations of this mineral, which are formed in different ways.

1st. By simple pulverization. — 2d. By the action of heat and air. — 3d. By the action of fixed alkali. — 4th. By melting or deflagrating it with nitre. — 5th. By the action of acids. — All these operations are performed upon antimony in its cruder state. — The following are formed from its regulus:

1st. By the action of heat and air. — 2d. By the action of nitre: — See BLACK's Table of Antimonial Preparations. But few out of the great number are at present used in practice. The chief are *Pulvis antimonialis*; — *Antimonium tartarisatum*; — *Antimonium vitrificatum*; — *Antimonium præparatum*; — *Vinum antimonii*; — *Vinum ex antimonio tartarisato.* However, a great variety of others will be found in the third part of this

work, under the head of Antimonial Preparations. As for the cinnabar of antimony, ſo called, it ſcarcely contains any of the metalline part; it is chiefly a combination of quickſilver and ſulphur.

But in the various preparations of antimony in uſe, the reguline part is either combined with an acid, or in a condition to be acted upon by acid in the ſtomach; the general effects of which are, producing a diaphoreſis, nauſea, full vomiting and purging, which perhaps may be the beſt obtained by the pulvis antimonii, or antimonium tartariſatum; the laſt of which has been ſaid to be the moſt eligible, becauſe the moſt certain; the action of the firſt depending upon the acid contained in the ſtomach: hence, according to the quantity and nature of acid, it may be rendered too violent in its operation, or too inactive.

Some have aſſerted, that antimonials are moſt beneficial in fevers, when they do not produce any ſenſible evacution, as is ſaid to be the caſe with James's powder. Some therefore prefer this in typhus, and tartariſed antimony in ſynochus, in which there is appearance at firſt of more activity in the ſyſtem, and more apparent cauſe for evacuation. In all caſes, however, we ſhould be cautious never to begin at firſt with full doſes of either till we know how the ſtomach is likely to bear them; for different conſtitutions require different doſes, and ſometimes the ſame conſtitutions at different periods.

MED. VIRT. *Diaphoretic — cathartic — emetic* — and *cauſtic.*

PREP. *Antimony prepared — Tartariſed antimony — Glaſs of antimony — Antimonial wine — Wine of tartariſed antimony — Antimonial powder* — and a number of other chemical preparations; but thoſe ſpecified above are chiefly in uſe — *Kermes mineral*, and *regulus of antimony.*

ARABICUM GUMMI. See Gum. Arab.

ARGENTUM. Silver [*L. E.*]

Abundance of virtues have been attributed to crude ſilver by the Arabians, and by ſome alſo of later times, but on very little foundation. This metal, taken in its crude ſtate, has no effect in the body; combined with a ſmall quantity of the nitrous acid, it proves a powerful, though not always a ſafe, hydragogue; with a larger, a ſtrong cauſtic. The nitrous acid is the only one that perfectly diſſolves this metal: on adding to this ſolution a minute portion of marine acid, or ſubſtances containing it, the liquor turns milky, and the ſilver falls to the bottom in form of a white calx: hence we are furniſhed with a method of diſcovering marine ſalt in waters, &c. See the preparations of ſilver in the third part.

There are two preparations of this metal in the Edinburgh Pharmacopœia — The cauſticum lunare, and the pilulæ lunares; and in the London one, argentum nitratum.

ARGENTUM VIVUM: *Hydrargyrus*; *Mercurius.* Mercury or quickſilver [*L. E.*]

Mercury is an opake ſilver-coloured mineral fluid; appearing to the eye like tin or lead when melted: it is heavier than any other fluid, and than moſt of the metallic bodies: it does not congeal in the greateſt degree of natural cold hitherto known, though ſome chemiſts have produced this effect; in the fire it proves totally volatile. This mineral is either met with in its fluid form, in the earth, or extracted by art from certain ores. There are conſiderable mines of it in Hungary and Spain; and what

is employed in Britain comes chiefly from the former of these countries.

The use of mercury in medicine seems to have been little known before the fifteenth century. The ancients looked upon it as a corrosive poison, though, of itself, perfectly void of acrimony, taste, and smell. There are examples of its having been lodged for years in cavities both of bones and fleshy parts, without its having injured or affected them. Taken into the body in its crude state, and undivided, it passes through the intestines unchanged, and has not been found to produce any considerable effect. It has indeed been recommended in asthmas and disorders of the lungs; but the virtues attributed to it in these cases have not been warranted by experience.

Notwithstanding the mildness and inactivity of crude quicksilver undivided; when resolved by fire into the form of fume, or otherwise divided into very minute particles, and prevented from re-uniting by the interposition of proper substances, or combined with mineral acids, it has very powerful effects, affording the most violent poisons, and the most excellent remedies with which we are acquainted.

The mercurial preparations, either given internally or introduced into the habit by external application, seem to act generally as stimulants on the lymphatic system without producing heat, and increase the power of the circulation, through even the minutest, and most remote vessels of the body, and may be so managed as to promote excretion through all the emunctories. Hence their common use in inveterate chronic disorders proceeding from a thickness and sluggishness of the humours, and obstinate obstructions of the excretory glands; in scrophulous and cutaneous diseases; and in the venereal lues. If their power be not restrained, by proper additions, to certain emunctories, they tend chiefly to affect the mouth; and, by an elective stimulus exercised on the salivary glands, occasion a plentiful evacuation from them.

The good effects derived from mercury depend upon its being a general stimulant of the habit, but more particularly of the lymphatic system, and a promoter of evacuations from all the excretories of the human machine; particularly increasing perspiration, the salival flux, the flow of urine, freeing the hepatic system, and other visceral glands, from obstruction, and quickening the action of their excretory vessels.

The salutary effects of mercurials do not depend on the quantity of sensible evacuation. This medicine may be gradually introduced into the habit, so as, without occasioning any remarkable discharge, to be productive of very happy effects. To answer this purpose, it should be given in very small doses, in conjunction with such substances as determine its action to the kidneys or the pores of the skin. By this method inveterate cutaneous and venereal distempers have been cured, without any other sensible excretion than a gentle increase of perspiration or urine. Where there are ulcers in any part, they discharge for some time a very fetid matter, the quantity of which becomes gradually less, and at length the ulcer kindly heals. If the mercury should at any time, from cold or the like, affect the mouth, it may be restrained by omitting a dose, and by warmth or suitable medicines promoting perspiration.

There are an immense variety of preparations of this mineral fluid, which may be seen in Dr. SCHWEDIAUER's Table, arranged accord-

ing to Dr. BERGMAN's Table of Elective Attractions, a great number of which will be found in the third part of this work, under the head of 'Preparations of Mercury.'

But there is little doubt of every purpose being answered by a very few; which may be divided, with a view both externally and internally, into two classes, the mild and the acrid. Almost every purpose to be answered by the former may be accomplished by the unguentum ex hydrargyro and the pilulæ hydrargyri of the London and Edinburgh Pharmacopœias; while most of the effects to be obtained by the latter, may be derived from the judicious use of calomel, hydrargyrus calcinatus, and hydrargyrus muriaticus.

The marks of pure mercury are, its globules not losing their spherical figure, when poured on wood; its not communicating a tinge to water, or sweetness to vinegar when rubbed with them; its evaporating entirely in an iron spoon when over the fire; and its having a shining appearance, without any pellicle on the surface. Mercury is best purified by distillation in an iron pot, with a long bent neck, and immersed in vinegar.

MED. VIRT. A general *stimulant*, and most powerful *attenuant*.

PREP. A number of chemical preparations, and an ingredient of many officinal compositions.

ARISTOLOCHIA. Birthwort. Three roots of this name are directed for medicinal use.

(1) *Aristolochia longa*, *Lin.* Long birthwort. This is a tuberous root, sometimes about the size of the finger, sometimes as thick as a man's arm, and a foot in length: it is nearly of an equal thickness all over, or a little thicker in the middle than at the ends: the outside is of a brownish colour; the inside yellowish.

(2) *Aristolochia rotunda*. Round birthwort. This has scarce any other visible difference from the foregoing than its roundish shape.

(3) ARISTOLOCHIA TENUIS, *Aristolochia clematis*, *Lin.* [*E.*] Slender birthwort. This is a long and slender root, rarely exceeding the thickness of a goose quill.

These roots are the produce of Spain, Italy, and the southern parts of France. Their smell is somewhat aromatic; their taste warm and bitterish. Authors in general represent them as extremely hot and pungent: some say they are the hottest of all the aromatic plants; but, as they are usually met with in the shops, they have no great pungency. The long and round sorts, on being first chewed, scarce discover any taste, but in a little time prove nauseously bitterish; the long somewhat the least so. The other sort instantly fills the mouth with an aromatic bitterness, which is not ungrateful. Their medical virtues are, to *heat*, *stimulate*, *attenuate viscid phlegm*, and *promote the fluid secretions in general*; they are principally celebrated in *suppressions of female evacuations*. The dose in substance is from a scruple to two drams. The long sort is recommended externally for cleansing and drying wounds and ulcers, and in cutaneous diseases.

The whole of these are rejected from the London Pharmacopœia, and the *tenuis* alone retained in that of Edinburgh.

ARSENICUM. [*E.*] Arsenic.

Arsenic is contained, in greater or less quantity, in most kinds of ores, particularly in those of tin and bismuth, in the white pyrites, and in the mineral called *cobalt*; from which last, greatest part of the arsenic brought to us is extracted by a kind of sublimation. The arsenic arises at first in the form of greyish *meal*, which, more carefully resub-

limed, concretes into transparent masses, the *white* arsenic of the shops.

Arsenic, sublimed with one tenth its weight of sulphur, unites therewith into a bright yellow mass, in some degree transparent; the common *yellow* arsenic. On doubling the quantity of sulphur, the compound proves more opake and compact; of a deep red colour, resembling that of cinnabar, but with this difference, that it loses some of its beauty upon being reduced into powder, while that of cinnabar is improved by these means: this is the common *red* arsenic. By varying the proportions of arsenic and sulphur, sublimates may be obtained of a great variety of shades of yellow and red.

Natural mixtures of arsenic and sulphur, resembling the foregoing preparations, are not unfrequently met with in the earth. The fossil red arsenic is the *sandaracha* of the Greeks, the *realgar* and *risigal* of the Arabians. Both the red and yellow, when of a smooth uniform texture, are named *zarnichs*; and when composed of small scales or leaves, *auripigmenta*, or *orpiments*: the last are the only substances to which the Greeks gave the name αρσενικον. That the zarnichs and orpiments really contain arsenic (contrary to the opinion of some writers), is evident from sundry experiments, whereby a perfect arsenic, and in notable quantity, is obtainable from them. The compilers of the preceding edition of the Edinburgh Dispensatory, therefore, very justly gave *sandaracha Græcorum* as a synonymon to *red arsenic*; and *auripigmentum* to the *yellow*.

The pure or white arsenic has a penetrating corrosive taste; and taken into the body proves a most violent poison. Besides the effects which it has in common with other corrosives, it remarkably attenuates the coats of the stomach, occasions a swelling and sphacelation of the whole body, and a sudden putrefaction after death, particularly, as is said, of the genitals in men. Where the quantity is so very small as not to prove fatal, tremors, palsies, and lingering hectics succeed. The remedies recommended against this poison are, milk and oily liquors immediately and liberally drunk. Some recommend acids as an antidote, particularly vinegar; others a watery solution of calcareous or alkaline hepar sulphuris, which is found to combine with arsenic, and destroys most of its properties. It is said to be better for a little iron in the solution. The dry hepar may be also made into pills, and warm water drank after them. Notwithstanding the violent effects of arsenic, it has been employed both externally and internally in the cure of some diseases. Externally in cures of cancer, arsenic, in conjunction with the powder of the ranunculus flammeus, cotula fœtida, and sulphur, intimately mixed together, has been applied, made into a paste with the white of an egg; and is said to be precisely the same remedy as that of the famous remedy of PLUNKET'S. Of four grains of the fine white transparent crystalline part of arsenic, dissolved in a pint of distilled water, a solution is formed, a table spoonful of which, with the same quantity of milk and syrup of white poppies, is to be taken every morning fasting, and nothing is to be tasted for an hour afterwards. After a continuance for eight days, the quantity is to be gradually increased and the doses more frequently repeated, till six table spoonfuls are taken by an adult in the course of the day.

Arsenic in substance, to the extent of one-eighth part of a grain

for a dose, combined with a little flower of sulphur, has been said to be given internally in some obstinate cutaneous diseases, with the utmost efficacy.

It has also been very successful in the cure of intermittents; and is supposed to have gone under the name of the *Arsenic Drop*, or *the tasteless Ague Drop*. A composition, made in the following form, may be administered with the greatest safety: sixty-four grains of arsenic reduced to a fine powder, and mixed with as much fixed alkaline salt, should be added to half a pound of distilled water, in a Florence flask, placed in a sand heat, and gently boiled till the arsenic is totally dissolved. When the solution is cold, half an ounce of compound spirit of lavender is to be added to it, and as much distilled water as to make the whole amount to a pound. This solution is to be given in the following manner: patients from two to four years of age are to take *from two to four drops*; from five to seven, *from five to seven drops*; from eight to twelve, *from seven to ten drops*; from thirteen to eighteen and upwards, may take *twelve drops* at a dose, in any proper vehicle, two or three times a day. — Mr. Morveau, it is said, has brought arsenic to the state of a true neutral salt, readily soluble in water, by mixing it with equal quantities of nitre, and then submitting them to a chemical process. Mr. Milner, of Cambridge, has also produced an arsenical salt of the same nature, which has been employed with great success in that neighbourhood by several practitioners.

The red and yellow arsenics, both native and factitious, have little taste, and are much less virulent in their effects than the foregoing. Sulphur, which restrains the power of mercury and the antimonial metal, remarkably abates the virulence of this poisonous mineral also. Such of these substances as participate more largely of sulphur, seem to be almost innocent: the factitious red arsenic, and the native orpiments, have been given to dogs in considerable quantity, without being productive of any apparent ill consequences.

Med. Virt. *Corrosive, tonic, deobstruent.*

Prep. *Solution, arsenical salt, paste.*

ARTEMISIÆ *folia: Artemisiæ vulgaris, Lin.* Mugwort; the leaves [*E.*]

This plant grows plentifully in fields, hedges, and waste places, throughout England; and flowers in June. In appearance, it somewhat resembles the common wormwood: the difference most obvious to the eye is in the flowers, those of wormwood hanging downwards, while the flowers of mugwort stand erect.

The leaves of this plant have a light aromatic smell, and an herbaceous bitterish taste. They are principally celebrated as uterine and antihysteric: an infusion of them is sometimes drank, either alone, or in conjunction with other substances, in suppression of the menstrual evacuations. This medicine is certainly a very mild one, and considerably less hot than most others to which these virtues are attributed: in some parts of this kingdom, mugwort is of common use as a pot-herb.

Med. Virt. *Antispasmodic.*

Prep. *Infusion.*

ARI *radix: arum maculatum, Lin.* Wake-robin; the root [*L. E.*]

This plant grows wild under hedges, and by the sides of banks, in most parts of England. It sends forth, in March, three or four triangular leaves, which are followed by a naked stalk, bearing a purplish pistil inclosed in a long sheath: this is succeeded, in July, by a

bunch of reddiſh berries. In ſome plants, the leaves are ſpotted with black, in others with white, and in others not ſpotted at all; the black ſpotted ſort is ſuppoſed to be the moſt efficacious, and hence is expreſsly directed by the London college.

All the parts of arum, particularly the root, have an extremely pungent, acrimonious taſte. If the root be but lightly chewed, it continues to burn and vellicate the tongue for ſome hours, occaſioning at the ſame time a conſiderable thirſt: theſe ſymptoms are alleviated by butter, milk, or oily liquors. Dried and kept for ſome time, it loſes much of its acrimony, and becomes at length an almoſt inſipid farinaceous ſubſtance.

The root is a powerful ſtimulant and attenuant. It is reckoned a medicine of great efficacy in ſome cachectic and chlorotic caſes, in weakneſs of the ſtomach occaſioned by a load of viſcid phlegm, and in ſuch diſorders in general as proceed from a cold ſluggiſh indiſpoſition of the ſolids and lentor of the fluids. It not only increaſes the digeſtive powers, but is alſo an univerſal ſtimulant, and has therefore been uſeful in intermittents. I have experienced great benefit from it in rheumatic pains, particularly thoſe of the fixt kind, and which were ſeated deep. In theſe caſes I have given from ten grains to a ſcruple of the freſh root twice or thrice a day, made into a bolus or emulſion with unctuous and mucilaginous ſubſtances, which cover its pungency, and prevent its making any painful impreſſion on the tongue. It generally excited a ſlight tingling ſenſation through the whole habit, and, when the patient was kept warm in bed, produced a copious ſweat.

An officinal preparation ſtands in Lewis's improved Diſpenſatory, in which this root is an ingredient, in a compound *powder*; in which form, its virtues are very precarious. Some recommend a tincture of it drawn with wine; but neither wine, water, nor ſpirit, extract its virtues. Conſerve of arum has a place in the London Diſpenſatory. The powder, however, of the freſh root is the moſt active preparation.

MED. VIRT. *Stimulant.*

PREP. *Conſerve.*

ASAFŒTIDA. *Ferula Aſafœtida Lin.* Aſafœtida [*L. E.*] the concrete juice of a large umbelliferous plant growing in Perſia.

This juice exudes (from wounds made in the root of the plant) liquid, and white like milk: on being expoſed to the air, it turns of a browniſh colour, and gradually acquires different degrees of conſiſtency. It is brought to us in large irregular maſſes, compoſed of various little ſhining lumps or grains, which are partly of a whitiſh colour, partly reddiſh, and partly of a violet hue. Thoſe maſſes are accounted the beſt which are clear, of a pale reddiſh colour, and variegated with a great number of elegant white tears.

This drug has a ſtrong fetid ſmell, ſomewhat like that of garlic; and a bitter, acrid, biting taſte. It loſes by age ſome of its ſmell and ſtrength, a circumſtance to be particularly regarded in its exhibition. It conſiſts of about one-third part of pure reſin, and two-thirds of gummy matter; the former ſoluble in rectified ſpirit, the latter in water. Proof ſpirit diſſolves almoſt the whole into a turbid liquor; the tincture in rectified ſpirit is tranſparent.

Aſafœtida is the ſtrongeſt of the fetid gums, and of frequent uſe in all ſpaſmodic and convulſive complaints, particularly hyſteric; hypochondriac affections, and the

nervous asthma, and different kinds of nervous complaints; it may be administered in form of pills, watery solution or tincture. From one to two drams of the substance dissolved in from four to six ounces of distilled water have been often administered with success, by way of glyster in strong convulsions. The dose in substance may be from ten to twenty grains, or more, repeatedly. It is likewise of considerable efficacy in flatulent cholics; and for promoting all the fluid secretions in either sex. The ancients attributed to this medicine many other virtues, which are at present not expected from it.

This gummy resin is an ingredient in the officinal gum pills, compound powder of myrrh, fetid tincture, tincture of soot, fetid volatile spirit [*L.*] and antihysteric plaster [*E.*]

MED. VIRT. *Antispasmodic — Anthelmintic.*

PREPAR. *Concrete juice — tincture — an ingredient in the gum-pill.*

ASARI *folia, radix: Asari Europæi Lin.* Asarabacca: the roots and leaves [*L. E.*] The London college directs only the leaves; the Edinburgh both leaves and root.

Asarum is a very low evergreen plant, growing naturally in France, Italy, and other warm countries: the dried roots have been generally brought from the Levant; those of our own growth being supposed weaker.

Both the roots and leaves have a nauseous, bitter, acrimonious, hot taste; their smell is strong and not very disagreeable. Given in substance from half a dram to a dram, they evacuate powerfully both upwards and downwards. It is said, that tinctures made in spirituous menstrua, possess both the emetic and cathartic virtues of the plant: that the extract obtained by inspissating these tinctures, acts only by vomit, and with great mildness: that an infusion in water proves cathartic, rarely emetic; and that aqueous decoctions made by long boiling, and the watery extract, have no purgative or emetic quality, but prove notable diaphoretics, diuretics, and emmenagogues.

The principal use of this plant, among us, is as a sternutatory. The root of asarum is perhaps the strongest of all the vegetable errhines, white hellebore itself not excepted. Snuffed up the nose, in the quantity of a grain or two, it occasions a large evacuation of mucus, and raises a plentiful spitting. The leaves are considerably milder, and may be used to the quantity of three, four, or five grains. Geoffroy relates, that, after snuffing up a dose of this errhine at night, he has frequently observed the discharge from the nose to continue for three days together; and that he has known a paralysis of the mouth and tongue cured by one dose. He recommends this medicine in stubborn disorders of the head, proceeding from viscid tenacious matter, in palsies, and in soporific distempers. The leaves are an ingredient in the *pulvis sternutatorius*, or *pulvis asari comp.* of the London Pharmacopœia.

MED. VIRT. *Errhine — cathartic — emetic.*

PREPAR. *Pulvis asari comp.*

ASPARAGI radix: Asparagi sativi C. B. Asparagi officinalis Lin. Asparagus; the root.

This plant is cultivated in gardens for culinary use. The roots have a bitterish mucilaginous taste, inclining to sweetness; the fruit has much the same kind of taste; the young shoots are more agreeable than either. Asparagus promotes appetite, but affords little nourish-

ment. It gives a ſtrong ill ſmell to the urine in a little time after eating it, and, for this reaſon, chiefly, is ſuppoſed to be diuretic; it is likewiſe eſteemed aperient and deobſtruent. The root is one of the five called opening roots. Some ſuppoſe the ſhoots to be moſt efficacious; others the root; and others the bark of the root. Stahl is of opinion, that none of them have any great ſhare of the virtues uſually aſcribed to them. Aſparagus appears from experience to contribute very little either to the exciting of urine when ſuppreſſed, or the increaſing of its diſcharge; and, in caſes where aperient medicines generally do ſervice, this has little or no effect.

MED. VIRT. Suppoſed *diuretic*, but uncertain.

ATRIPLICIS FŒTIDÆ *herba: Chenopodii Vulvariæ Lin.* Stinking orach, or arach. *E.*

This is a low plant, ſprinkled all over with a kind of whitiſh clammy meal; it grows about dunghills, and other waſte places. The leaves have a ſtrong fetid ſmell, with which the hand, by a light touch, becomes ſo impregnated as not to be eaſily freed from it. Its ſmell has gained it the character of an excellent antihyſteric; and this is the only uſe to which it is applied. Tournefort recommends a ſpirituous tincture, others a decoction in water, and others a conſerve of the leaves, as of wonderful efficacy in uterine diſorders. Dr. Cullen is of opinion, from its remarkable fœtor, it may be a powerful antiſpaſmodic. It has in Scotland been frequently employed with great advantage.—The beſt mode of uſing it is in its recent ſtate, in form of a conſerve, as in its dry ſtate it loſes all its qualities.

MED. VIRT. *Antiſpaſmodic.*
PREPAR. *Conſerve.*

AVENA SATIVA *Lin.* [*L. E.*] Oats.

This grain is an article rather of food than of medicine. It is ſufficiently nutritive and eaſy of digeſtion. The gruels made from it have likewiſe a kind of ſoft mucilaginous quality; by which they obtund acrimonious humours, and prove uſeful in inflammatory diſorders, coughs, hoarſeneſs, roughneſs, and exulcerations of the fauces.

MED. VIRT. *Emollient.*
PREPAR. *Decoction.*

AURANTIORUM HISPALENSIUM *ſuccus, cortex, flos, & folium: Citrus Aurantium. Lin.* Seville oranges; the leaf, the juice, yellow rind, and flowers of the tree. [*L. E.*]

The orange is a beautiful evergreen tree, or rather ſhrub, bearing flowers and fruits all the year; it is a native of the warmer climates, and does not well bear the winters of this.

The flowers are highly odoriferous, and have been, for ſome time paſt, of great eſteem as a perfume; their taſte is ſomewhat warm, accompanied with a degree of bitterneſs. They yield their flavour by infuſion to rectified ſpirit, and in diſtillation both to ſpirit and water: the bitter matter is diſſolved by water, and, on evaporating the decoction, remains entire in the extract. There is a water diſtilled from its flowers, called by foreign writers *aqua naphæ*. An oil diſtilled from theſe flowers is brought from Italy under the name of *oleum* or *eſſentia neroli*.

The flowers, and alſo the leaves of the orange tree, have been ſaid to afford efficacious remedies in convulſive and epileptic caſes, but experience has by no means confirmed the validity of ſuch aſſertions; yet ſtill the leaves deſerve ſome attention, as three drachms,

taken three times a day, has prevented the return of epileptic paroxyſms, for ſome months, which uſed to come on weekly.

The outer yellow rind of the fruit is a grateful aromatic bitter, and, in cold phlegmatic conſtitutions, proves an excellent *ſtomachic* and *carminative, promoting appetite, warming the habit, and ſtrengthening the tone of the viſcera.* Dr. Cullen thinks it may be capable of reſtoring the tone of the ſtomach, when it has been much impaired, but doubts much its power in moderating or reſtraining uterine hæmorrhagy. He thinks alſo it might be beneficial in intermittents, in expediting their cure. Orange peel appears to be very conſiderably warmer than that of lemons, and to abound more with eſſential oil: to this circumſtance therefore due regard ought to be had in the uſe of theſe medicines. The flavour of the former is likewiſe ſuppoſed to be leſs periſhable than that of the latter: hence they employ orange peel in the ſpirituous bitter tincture, which is deſigned for keeping, whilſt, in the bitter watery infuſion, lemon peel is preferred.

MED. VIRT. *Stimulant — Stomachic—Cordial.*

PREPAR. *Syrup—Conſerve—Spirit —Tincture.*

The juice of oranges is a grateful acid liquor, of conſiderable uſe in *febrile* or *inflammatory diſtempers, for allaying heat, abating exorbitant commotions of the blood, quenching thirſt,* and *promoting the ſalutary excretions:* it is likewiſe of great uſe in ſea ſcurvy; it alſo, in a dilute and pure ſtate, excites appetite and promotes digeſtion.

MED. VIRT. *Cooling—Antiſeptic.*

PREPAR. *An ingredient in the Succus cochleariæ compoſitus.*

AURANTIA CURASSAVENSIA. Curaſſao oranges. [*E.*]

Theſe are the ſmall young fruit of the Seville orange dried. They appear very well adapted to give relief in ſtomach complaints, being moderately warm bitteriſh aromatics, of a flavour ſufficiently agreeable. They contain more of the bitter than the orange peel, though not ſo much of the aromatic; on that account ſhould not therefore be neglected.

MED. VIRT. *Stomachic—Tonic.*

AURUM. Gold.

This metal was introduced into medicine by the Arabians, who eſteemed it one of the greateſt cordials and comforters of the nerves. From them Europe received it, without any diminution of its character. In foreign Pharmacopœias it is ſtill retained, and even mixed with the ingredients from which ſimple waters are to be diſtilled. But no one, it is preſumed, at this time, expects any ſingular virtues from it, ſince it certainly is not alterable in the human body. Mr. Geoffroy, though unwilling to reject it from the cordial preparations, honeſtly acknowledges, that he has no other reaſon for retaining it, than complaiſance to the Arabian ſchools. The chemiſts have endeavoured, by many elaborate proceſſes, to extract what they call a ſulphur or anima of gold: but no method is as yet known of ſeparating the component parts of this metal: all the tinctures of it and aurum potabile, which have hitherto appeared, are real ſolutions of it in aqua regia, diluted with ſpirit of wine or other liquors, and prove injurious to the body rather than beneficial. The aurum fulminans has been however recommended as a remedy in ſome convulſive diſeaſes, particularly in the chorea Sancti Viti; and has a place given to it in ſome of the foreign Pharmacopœias.

AXUNGIA. Fat. [*L. E.*]

A great variety of fats were in-

troduced into medicine by the Arabians, and recommended as possessing distinct virtues. Experience, however, does not countenance these different virtues ascribed to different fats. They have all one common emollient quality, relax the part to which they are applied, and prevent perspiration: these effects, with the consequences of them, may be expected in a greater or less degree from fats of every kind. The London college has therefore retained only two fats, of different consistencies, for different mixtures, viz. hog's-lard and mutton suet. These are certainly sufficient for answering all the intentions for which substances of this kind are employed.

MED. VIRT. *Emollient.*

BALSAMITÆ MARIS folia: Tanaceti Balsamitæ Lin. Costmary; the leaves.

This was formerly a very common garden plant, and frequently used both for culinary and medicinal purposes; but is at present very little regarded for either; though it should seem, from its sensible qualities, to be equal or superior, as a medicine, to some aromatic herbs which practice has retained. The leaves have a bitterish, warm, aromatic taste; and a very pleasant smell, approaching to that of mint, or a mixture of mint and maudlin. Water elevates their flavour in distillation; and rectified spirit extracts it by infusion.

MED. VIRT. *Aromatic--Antihysteric.*

BALSAMUM COPAIBA [*L. E.*] *Copaifera officinalis Lin.*—Balsam of copaiba: a liquid resinous juice, flowing from incisions made in the trunk of a large tree which grows in the Spanish West Indies, and some part of the continent of South America.

This juice is clear and transparent, of a whitish or pale yellowish colour, an agreeable smell, and a bitterish pungent taste. It is usually about the consistence of oil, or a little thicker: long kept, it becomes nearly as thick as honey, retaining its clearness; but has not been observed to grow dry or solid, as most of the other resinous juices do. We sometimes meet with a thick sort of balsam of copaiba, which is not at all transparent, or much less so than the foregoing, and generally has a portion of turbid watery liquor at the bottom. This sort is probably either adulterated by the mixture of other substances, or has been extracted by coction from the bark and branches of the tree; its smell and taste are much less pleasant than those of the genuine balsam.

Pure balsam of copaiba dissolves entirely in rectified spirit, especially if the menstruum be previously alkalized: the solution has a very fragrant smell. Distilled with water, it yields a large quantity of a limpid essential oil; and, in a strong heat, without addition, a blue oil.

The balsam of copaiba is an useful *corroborating detergent medicine*, accompanied with a degree of irritation. It *strengthens the nervous system, tends to loosen the belly, in large doses proves purgative, promotes urine*, and *cleanses* and *heals exulcerations in the urinary passage*, which it is supposed to perform more effectually than any of the other balsams. FULLER observes, that it gives the urine an intensely bitter taste, but not a violet smell as the turpentines do.

This balsam has been principally celebrated in *gleets* and the *fluor albus*, and, externally, as a *vulnerary*. The author abovementioned recommends it likewise in *dysenteries*, in *scorbutic cachexies*, in *diseases of the breast and lungs*, and in an *acrimonious* or *putrescent state of the juices*: he says, he has known very dan-

gerous coughs, which manifeſtly threatened a conſumption, cured by the uſe of this balſam alone; and that, notwithſtanding its being hot and bitter, it has good effects even in hectic caſes.

The doſe of this medicine rarely exceeds twenty or thirty drops, though ſome direct ſixty or more. It may be conveniently taken in the form of an elæoſaccharum; or in that of an emulſion, into which it may be reduced by triturating it with almonds, or rather with a thick mucilage of gum arabic, till they are well incorporated, and then gradually adding a proper quantity of water.

Notwithſtanding what has been ſaid with reſpect to the efficacy of this balſam, it has been conſidered by modern phyſicians to be hurtful from its ſtimulus in caſes of internal ulcerations, dyſenteries, ulcers of the lungs, and other parts; alſo in hectic fevers, phthiſical affections, bloody urine, and dyſury ariſing from an acrimony of the humours: though in ſome caſes of hæmorrhoids it has been given with ſucceſs, in doſes of from 20 to 40 drops mixed with ſugar, and given two or three times a day.

MED. VIRT. *Stimulant — Diuretic.*

BALSAMUM GILEADENSE [*E.*] *Balm of Gilead.*

This balſam is the product of the *Amyris Gileadenſis*; is a native of Abyſſinia, growing among the myrrh trees behind Azab.

It has been received in the different Pharmacopœias under the names of *Balſam. de Mecca — Opobalſamum — Balſamum Verum* — and *Balſamum Gileadenſe.* It iſſues ſpontaneouſly from the bark of the tree, but is more commonly obtained by inciſions; the *Xylobalſamum* is obtained from the wood, and the *Carpobalſamum* from the fruit. The balſam now imported into Europe is ſaid to be principally collected between Mecca and Medina.

The mode of collecting this balſam is very tedious and troubleſome, ſo that genuine balſam is very rarely exported in a commercial way. The balſam, according to ALPINUS, is firſt turbid and white; of a very ſtrong pungent ſmell, like turpentine, but much ſweeter and more fragrant; and of a bitter, acrid, aſtringent taſte: on being kept for ſome time, it becomes thin, limpid, light, of a greeniſh hue; and then of a gold yellow; after which it grows thick like turpentine, and loſes much of its fragrance. This balſam, extravagant as are the encomiums beſtowed upon it by the eaſtern nations, by the European phyſicians is conſidered as not eſſentially different from other reſinous fluids or turpentines, and that every purpoſe might be as fully anſwered by Canada or Copaiva balſam. In Turkey it is not only in high eſteem as a medicine, but alſo as an odoriferous unguent and coſmetic.

BALSAMUM PERUVIANUM [*L. E.*] *Myroxylon Peruiferum, Lin.* Supplem. Plantar. Balſam of Peru.

The common Peruvian balſam is ſaid to be extracted, by coction in water, from an odoriferous ſhrub growing in Peru, and the warmer parts of America. This balſam, as brought to us, is nearly of the conſiſtence of thin honey, of a reddiſh brown colour, inclining to black, an agreeable aromatic ſmell, and a very hot biting taſte. Diſtilled with water, it yields a ſmall quantity of a fragrant eſſential oil of a reddiſh colour; and, in a ſtrong fire, without addition, a yellowiſh red oil.

Balſam of Peru is a very warm aromatic medicine, conſiderably hotter and more acrid than copaiba. Its principal effects are, to *warm the habit*, to *ſtrengthen the ner-*

vous system, and *attenuate viscid humours*. Hence its use in some *kinds of asthmas*, *gonorrhœas*, *dysenteries*, *suppressions of the uterine discharges*, and other disorders proceeding from a debility of the solids, or a sluggishness and inactivity of the juices. It is also employed externally, for *cleansing* and *healing wounds* and *ulcers*; and sometimes against *palsies* and *rheumatic pains*. Sydenham speaks of it as a remedy for the colica Pictonum; which may be readily admitted, as its laxative qualities are analogous to what we know of turpentines and balsam of copaiba. Its dose is from three to six grains, mixed into a draught with egg, sugar, or honey.

This balsam does not unite with water, milk, expressed oils, animal fats, or wax: it may be mingled in the cold with this last, as also with the sebaceous substance called expressed oil of mace; but if the mixture be afterwards liquefied by heat, the balsam separates and falls to the bottom. It may be mixed with water into the form of an emulsion after the same manner as the balsam of copaiba. Alkaline lixivia dissolve great part of it; and rectified spirit the whole.

There is another sort of balsam of Peru, of a *white* colour, and considerably more fragrant than the former. It is said to be the produce of the same plant which yields the common or *black* balsam; and to exude from incisions made in the trunk.

There is also another sort called the red or dry, but this is supposed only an inspissation of the white; but these are rarely brought to Britain, and seldom to be found in our shops.

MED. VIRT. *A warm Aromatic.*

PREPAR. *An ingredient in many tinctures and some ointments.*

BALSAMUM TOLUTANUM [*L. E.*] *Toluifera Balsamum, Lin.* Balsam of Tolu.

This flows from a tree of the pine kind, growing in Tolu, in the Spanish West-Indies, called by LINNÆUS Toluifera Balsamum; whence the balsam is brought to us in little gourd shells. It is of a yellowish brown colour, inclining to red; in consistence thick and tenacious: by age it grows hard and brittle, without suffering any great loss of its more valuable parts. The smell of this balsam is extremely fragrant, somewhat resembling that of lemons; its taste warm and sweetish, with little of the pungency, and nothing of the nauseous relish, which accompany the other balsams. It has the same general virtues with the foregoing; but is much milder, and for some purposes, particularly as a *corroborant in gleets* and *seminal weaknesses*, is supposed to be more efficacious. It possesses all the virtues of the other pectoral balsams, but is more mild.

MED. VIRT. *Aromatic — Corroborant.*

PREP. *Ingredient in several tinctures — Elixir — Pectoral pills.*—It forms *a Tincture and Syrup.*

BARDANÆ MAJORIS *radix et semen. Arctii Lappæ Lin.* Burdock; the roots and seeds. [*L. E.*]

This is a common plant about way-sides, sufficiently known from its scaly heads, or burs, which stick to the clothes. — The seeds have a bitterish subacrid taste: they are recommended as *very efficacious diuretics*, given either in the form of emulsion, or in powder, to the quantity of a drachm. — Dr. Cullen thinks the diuretic power so small, as scarce worthy to be taken notice of. — The roots taste sweetish, with a slight austerity and bitterishness: they are esteemed *aperient*, *diuretic*, and *sudorific*; and said to act without irritation, so as to

be ſafely ventured upon in acute diſorders. Decoctions of them have of late been uſed in *rheumatic*, *gouty*, *ſcorbutic*, *dropſical*, *nephritic*, and other diſorders; and preferred by ſome to thoſe of ſarſaparilla.

MED. VIRT. *Aperient—Diuretic—Sudorific.*

PREPAR. *Decoction.*

BARILLA or SODA. *Natron impurum Lond. Natrum antiquorum. Lin.* [*L. E.*]

Is a ſaline and earthy concrete, artificially prepared by burning certain plants growing on the ſea-coaſt. Its great conſtituent is the foſſil alkali. It varies its character and goodneſs according to the places from whence it is brought, and the plants from whence it is procured, and perhaps from the mode of preparation. The moſt eſteemed is that of Alicant, to which that of Carthagena is much inferior. All the ſorts contain, beſides earth, the NATRON of the ancients, and of the preſent Pharmacopœias, for many years paſt uſually called *foſſile* or *mineral fixed alkali*; and moſt of them have a mixture of kali, and ſome neutral ſalt; ſometimes ſulphur and particles of iron. The more natron and the leſs of other materials that it contains, the more valuable it is for medical purpoſes.

Barilla ſhould be choſen hard, dry, ſonorous, with many foramina; of a grey colour, blackiſh grey, inclining to blue, mixed with ſmall white particles, and larger ones blackiſh; diſcovering, when moiſtened with ſaliva, a violet ſmell, ſomewhat urinous, and volatile.

That which is moiſt, fat, mixed with hair or ſand, of a blackiſh or whitiſh green, eaſily becoming moiſt in the air, and ſmelling when moiſtened, muddy and fetid; without holes; of a diſagreeable or ſaltiſh taſte, but not lixivious, and readily effervescing with acids, is to be rejected.

As the foſſile alkali ſeparated from its impurities is the part chiefly uſed in medicine, its medical virtues will fall under ſal alkalinus ſalis marini, or ſoda, which ſee.

BARYTES, called alſo *Baryetes aërata; Terra ponderoſa;* Ponderous Earth. [*E.*]

This is found chiefly in the vicinity of mines or veins of metals. Its ſpecies is aërated ponderous ſpar, or vitriolated ponderous earth, either in the form of a tranſparent ſpar, or an opaque earth, of a white grey or fawn colour; frequently of no regular figure, but often in a peculiar form of a number of ſmall convex lenſes, ſet edgeways in the ground.—We are indebted to the celebrated chemiſts Gahn—Scheele—and Bergman, for our knowledge of this earth.

The ſolution of aërated barytes in ſpirit of ſalt has been found capable of producing powerful effects on the human ſyſtem. It proves efficacious in ſome ſcrophulous complaints: in caſes of ſwelled glands, foul ulcers, enlarged joints, cutaneous eruptions, and general cachexy, it has given ſingular relief, either alone, or joined with mercurials, antimonials, and the bark.—It appears in ſome inſtances to increaſe the cuticular diſcharge; in moſt it proves very diuretic, and almoſt always improves the appetite, and general habit of the body.—On trial, few ſtomachs could bear more than from ſix to ten drops of a ſaturated ſolution, nor did the continued uſe of the medicine reconcile the ſtomach to it, but rather the contrary.—Sometimes it produced a vertigo, which probably aroſe from its nauſeating quality. Dr. Crawford, who had been in habits of uſing this medicine a good deal, was of opinion that this ſolution, when injudiciouſly managed, was capable of producing deleterious effects; by diſordering

the nervous ſyſtem, and bringing on violent vomiting and purging. From ſome experiments made upon dogs, it appears that a large doſe would prove fatal.

MED. VIRT. *Deobſtruent—Diuretic.*

PREPAR. *Solution in muriatic acid.*

BECABUNGA. *Veronica Becabunga Lin.* Brooklime; the leaves, the herb. [*L.*]

This is a low plant, common in little rivulets and ditches of ſtanding water: the leaves remain all the winter, but are in greateſt perfection in the ſpring. Their prevailing taſte is an herbaceous one, accompanied with a very light bitterneſs.

Becabunga has been ſuppoſed to have a ſaponaceous detergent virtue, and to *attenuate viſcid humours without pungency or irritation:* hence it has been directed in the ſpecies of *ſcurvy called hot*, where the *cochleariæ*, and other acrid antiſcorbutics, were ſuppoſed to be leſs proper. It is now uſed only in compoſition with thoſe plants, as in the *ſps. cochl. compoſit.* but does not perhaps add much to their efficacy. If any virtue be expected from becabunga, it ſhould be uſed as food.

MED. VIRT. *Attenuating and Antiſcorbutic.*

BELLIS MINOR. *Bellis perennis Lin.* Common daiſy; the leaves.

This is common almoſt every where, and flowers early in the ſpring. — The leaves have a ſubtile ſubacrid taſte, and are recommended as *vulnerariesi*, and in *aſthmas* and *hectic fevers*, and ſuch diſorders as are occaſioned by drinking cold liquors when the body has been much heated. Ludovici prefers the *bellis minor* to the plants commonly uſed as antiſcorbutics, and reſolvents of coagulated blood in hypochondriacal diſorders.

MED. VIRT. *Attenuant.*

BENZOINUM. Benzöe. [*L. E.*] *Styrax Benzöe:* Acta Philoſophica Londinenſia; *Terminalia Benzoin. Lin.* Benzoin; — the reſin. — The tree from which this is acquired grows chiefly in the iſland of Sumatra.

Benzoin is a concrete reſinous juice, obtained from a large tree growing naturally in both the Indies, and hardy enough to bear the winters of our own climate. The reſin is brought from the Eaſt Indies only; in large maſſes compoſed of white and light brown pieces, or yellowiſh ſpecks, breaking very eaſily betwixt the hands: ſuch as is whiteſt, and free from impurities, is moſt eſteemed.

This reſin has very little taſte, impreſſing only a light ſweetneſs on the tongue; its ſmell is extremely fragrant and agreeable, eſpecially when heated. Committed to the fire in proper veſſels, it yields a conſiderable quantity of a white ſaline concrete, called *flowers*, of an acidulous taſte and grateful odour, ſoluble in rectified ſpirit, and by the aſſiſtance of heat in water.

The principal uſe of benzoin is in perfumes, and as a coſmetic: it is rarely met with in extemporaneous preſcription, and enters in ſubſtance only one officinal compoſition, the *Tinct. Benzöes compoſ.* deſigned chiefly for external uſe. It ſhould nevertheleſs ſeem applicable to other purpoſes, and to have no bad title to the virtues of ſtorax and balſam of Tolu, at leaſt in a ſubordinate degree. The *flowers* are recommended in diſorders of the breaſt; and in this intention they are made an ingredient in the *Tinct. Opii Camphor.* and ſome other compoſitions. [*L.*]

MED. VIRT. *Pectoral.*

PREPAR. *Camphorated Tincture of Opium—Compound Tincture of Benzoin.*

BERBERIS cortex et fructus: Berberis vulg. Lin. Barberry; the bark and fruit.

The barberry is a ſmall tree, or rather a large buſh, covered with an aſh-coloured bark, under which is contained another of a deep-yellow: the berries are of an elegant red colour, and contain each two hard brown ſeeds. It grows wild on chalky hills in ſeveral parts of England; and is frequently planted in hedges and in gardens.

The outward bark of the branches, and the leaves, have an aſtringent acid taſte; the inner yellow bark a bitter one: this latter is ſaid to be ſerviceable in the jaundice; and by ſome, to be an uſeful purgative.

The berries, which to the taſte are gratefully acid, and moderately reſtringent, have been given with ſucceſs in *bilious fluxes*, and *diſeaſes proceeding from heat, acrimony*, or *thinneſs of the juices*. Among the Egyptians, barberries are employed in *fluxes*, and in *malignant fevers*, for *abating heat, quenching thirſt, raiſing the ſtrength*, and *preventing putrefaction*: the fruit is macerated for a day and night, in about twelve times its quantity of water, with the addition of a little fennel ſeed, or the like, to prevent offence to the ſtomach; the liquor ſtrained off, and ſweetened with ſugar, or ſyrup of citrons, is given the patient liberally to drink. Proſper Alpinus (from whoſe treatiſe *De Medicina Ægyptiorum* this account is extracted) informs us, that he took this medicine himſelf, with happy ſucceſs, in a peſtilential fever, accompanied with an immoderate bilious diarrhœa. It is now however almoſt totally rejected, though in feveriſh complaints, particularly in thoſe which have a putrid tendency, the jelly of the barberry fruit is very pleaſant, nor would it be totally uſeleſs. A jelly of the fruit is directed by the Edinburgh college as an officinal.

MED. VIRT. *Aſtringent — Antiſeptic.*

PREPAR. *Jelly.*

BETÆ folia, Betæ vulgaris Lin. White and red beets; and the turnep-rooted red beet, or beet-rave.

Theſe plants are cultivated in gardens, chiefly for culinary uſe. The eye diſtinguiſhes little other difference betwixt them, than that expreſſed in their titles. Decoctions of beets *gently looſen the belly*; hence they have been ranked among the emollient herbs: the plants remaining after the boiling are ſuppoſed to have rather a contrary effect. They afford little nouriſhment, and are ſaid by ſome to be prejudicial to the ſtomach. The juice expreſſed from the roots is a powerful errhine. But from the trials made by Dr. Cullen, it gave no durable or large evacuation.

MED. VIRT. *Cathartic*—and *Errhine.*

BETONICÆ folia: Betonicæ officinalis Lin. Common or wood-betony; the leaves.

Betony is a low plant, growing in woods and ſhady places, in ſeveral parts of England; the flowers come forth in June and July; they are of a purpliſh colour, and ſtand in ſpikes on the tops of the ſtalks. The leaves and flowers have an herbaceous, roughiſh, ſomewhat bitteriſh taſte, accompanied with a very weak aromatic flavour. This herb has long been a favourite among writers on the materia medica, who have not been wanting to attribute to it abundance of good qualities. Experience does not diſcover any other virtue in betony, than that of a *mild corroborant*; as ſuch, an infuſion or light decoction of it may be drank as tea, or a ſaturated tincture in rectified ſpirit given in

ſuitable doſes, in *laxity and debility of the viſcera*, and *diſorders proceeding from them*. The powder of the leaves, ſnuffed up the noſe, *provokes ſneezing*; and hence betony is ſometimes made an ingredient in ſternutatory powders: this effect does not ſeem to be owing, as is generally ſuppoſed, to any peculiar ſtimulating quality in the herb, but to the rough hairs with which the leaves are covered. The roots of this plant differ greatly in quality from the other parts: their taſte is bitter and very nauſeous: taken in a ſmall doſe, they *vomit* and *purge violently*, and are ſuppoſed to have ſomewhat in common with the roots of hellebore. It is pretty ſingular, if true, that betony affects thoſe who gather any conſiderable quantity of it, with a diſorder reſembling drunkenneſs; as affirmed by Simon Paulli and Bartholinus.

From the ſenſible qualities of this plant, though it is not much uſed in medicine, it does not appear unworthy of farther attention.

MED. VIRT. *Corroborant.*

BETULÆ cortex et lacryma: Betulæ C. B. Betulæ albæ Lin. The birch tree; the bark and ſap.

This tree grows wild in moiſt woods: its bark conſiſts of a thick brittle ſubſtance of a browniſh red colour; and of ſeveral very thin, ſmooth, white, tranſparent membranes. Theſe membranes are highly inflammable, and appear to abound with reſinous matter, though ſcarcely of any particular ſmell or taſte: the thick brittle part is leſs reſinous, and in taſte roughiſh: of the medical virtues of either, little or nothing is known with certainty.

Upon deeply wounding or boring the trunk of the tree in the beginning of ſpring, a ſweetiſh juice iſſues forth, ſometimes, as is ſaid, in ſo large quantity, as to equal in weight the whole tree and root: one branch will bleed a gallon or more in a day. This juice is chiefly recommended in *ſcorbutic diſorders*, and *other foulneſſes of the blood*; its moſt ſenſible effect is to promote the urinary diſcharge.

MED. VIRT. *Antiſcorbutic — Diuretic.*

BEZOAR lapis—Calculus Capræ bezoardicæ. Bezoar ſtone.

The bezoar ſtone is a calculous concretion found in the ſtomach of certain animals which are ſaid to be of the goat kind. It is compoſed of concentrical coats ſurrounding one another, with a little cavity in the middle, containing a bit of wood, ſtraw, hair, or the like ſubſtances.

The ſhops diſtinguiſh two ſorts of bezoar, one brought from Perſia and the Eaſt-Indies, the other from the Spaniſh Weſt-Indies. The former or better ſort, called oriental bezoar, is of a ſhining dark green or olive colour, and an even ſmooth ſurface; on removing the outward coat, that which lies underneath it appears likewiſe ſmooth and ſhining. The occidental has a rough ſurface, and leſs of a green colour than the foregoing: it is likewiſe much heavier, more brittle, and of a looſer texture; the coats are thicker, and on breaking exhibit a number of ſtriæ curiouſly interwoven. The oriental is generally leſs than a walnut; the occidental for the moſt part larger, and ſometimes as big as a gooſe egg. The former is univerſally more eſteemed. Many virtues have been formerly aſcribed to the bezoar: but it is now found to be only a mere abſorbent, and of ſo very inferior an order, that it is never uſed for that purpoſe.

BISMUTHUM. Viſmuthum nativum. Biſmuth.

Biſmuth is a ponderous brittle metal, reſembling in appearance

the antimonial regulus and zinc, but greatly differing from them in quality. It diſſolves with vehemence in the nitrous acid, which only corrodes the regulus of antimony; and is ſcarce at all ſoluble in the marine acid which acts ſtrongly on zinc. A calx and flowers of this ſemimetal have been recommended as ſimilar in virtue to certain antimonial preparations: but are at preſent of no other uſe than as a pigment or coſmetic.

BISTORTÆ *radix: Polygoni Biſtortæ Lin.* Biſtort, or ſnakeweed; the root [*L. E.*]

This plant grows wild in moiſt meadows, in ſeveral parts of England; but is not very common about London. The root is about the thickneſs of the little finger, of a blackiſh brown colour on the outſide, and reddiſh within: it is writhed or bent vermicularly (whence the name of the plant) with a joint at each bending, and full of buſhy fibres; the root of the ſpecies here meant has, for the moſt part, only one or two bendings; others have three or more.

All the parts of biſtort have a rough auſtere taſte, particularly the root, which is one of the ſtrongeſt of the vegetable aſtringents. It is employed in *all kinds of immoderate hæmorrhages* and *other fluxes*, both internally and externally, where aſtringency is the only indication. It is certainly a very powerful ſtyptic, and is to be looked on ſimply as ſuch; to the ſudorific, antipeſtilential, and other like virtues attributed to it, it has no other claim, than in conſequence of its aſtringency, and of the antiſeptic power which it has in common with other vegetable ſtyptics. It has frequently been employed in large doſes in intermittents, both by itſelf and with gentian: it has been given to the quantity of three drams in a day; though its common doſe is from 20 to 60 grains.

MED. VIRT. *Powerfully aſtringent.*

BOLI. Boles are viſcid earths, leſs coherent and more friable than clay, more readily uniting with water, and more freely ſubſiding from it. They are ſoft and unctuous to the touch, adhere to the tongue, and by degrees melt in the mouth, impreſſing a light ſenſe of aſtringency. A great variety of theſe kinds of earths has been introduced into medicine; the principal of which are the following:

(1) *Bolus Armena.* Armenian bole, or bole Armenic. Pure Armenian bole is of a bright red colour, with a tinge of yellow: it is one of the hardeſt and moſt compact of the bodies of this claſs, and not ſmooth or gloſſy like the others, but generally of a rough duſty ſurface. It raiſes no effervescence with acids.

(2) BOLUS GALLICA. French bole. [*L.*] The common French bole is of a pale red colour, variegated with irregular ſpecks or veins of white and yellow. It is much ſofter than the foregoing; and ſlightly effervesces with acids.

(3) BOLUS BLESENSIS. Bole of Blois. This is a yellow bole, remarkably lighter than the former, and than moſt of the other yellow earths. It effervesces ſtrongly with acids.

(4) *Bolus Bohemica.* Bohemian bole. This is of a yellow colour, with a caſt of red, generally of a flaxy texture. It is not acted on by acids.

(5) *Terra Lemnia.* Lemnian earth. This is a pale red earth; ſlightly effervescing with acids.

(6) *Terra Sileſiaca.* Sileſian earth is of a browniſh yellow colour: acids have no ſenſible effect upon it. Theſe and other earths, made into little maſſes, and

ſtamped with certain impreſſions, are called *terræ ſigillatæ*.

Theſe earths have been recommended as aſtringent, ſudorific, and alexipharmac; in diarrhœas, dyſenteries, hæmorrhages, and in malignant and peſtilential diſtempers. In inteſtinal fluxes, and complaints in the firſt paſſages from thin acrimonious humours, they may, doubtleſs, be of ſome uſe. However great and numerous may be the virtues formerly aſcribed to them, they are certainly mere inert ſubſtances, and are not allowed to have medical properties of any conſequence.

BONUS HENRICUS. Chenopodium Boni Henrici Lin. Engliſh herb mercury; the leaves [*E.*]

This herb is met with by road ſides, and in uncultivated places. It is ranked among the emollient herbs, but rarely made uſe of in practice. The leaves are applied by the common people for *healing ſlight wounds, cleanſing old ulcers*, and other purpoſes of that kind.

BORRAGINIS flores: Boraginis officinalis Lin. Borage; the flowers.

This is a rough plant, clothed with ſmall prickly hairs: it grows wild in waſte places, and upon old walls. An exhilarating virtue has been attributed to the flowers of borage, which are hence ranked among thoſe called *cordial flowers*: but they appear to have very little claim to any virtue of this kind, and ſeem to be altogether inſignificant.

BORAX. *Natron boracicatum.* [*L. E.*] Tincar, or Borax.

This is a ſaline ſubſtance, brought from the Eaſt-Indies in great maſſes, compoſed partly of large cryſtals, but chiefly of ſmaller ones, partly white and partly green, joined together as it were by a greaſy yellow ſubſtance, intermingled with ſand, ſmall ſtones, and other impurities. The purer cryſtals, expoſed to the fire, melt into a kind of glaſs, which is nevertheleſs diſſoluble in water.

This ſalt, diſſolved and cryſtallized, forms ſmall tranſparent maſſes; the refiners have a method of ſhooting it into larger cryſtals; but theſe differ in ſeveral reſpects from the genuine ſalt, inſomuch that Cramer calls them not a purified, but adulterated borax. The origin of this ſalt is as yet unknown, and its compoſition is known only in part. Thus much experiments have clearly ſhown, that it conſiſts of fixt mineral alkaline ſalt, in ſome degree neutralized by a peculiar acid.

Nor have the medical virtues of borax been ſufficiently aſcertained by experience. It is ſuppoſed to be, in doſes of half a dram or two ſcruples, *diuretic, emmenagogue*, and a *promoter of delivery*. Mr. Biſſet, in an eſſay on the medical conſtitution of Great Britain, recommends a ſolution of this ſalt in water as the moſt powerful diſſolvent yet known of aphthous cruſts in the mouth and fauces of children. There are ſtrong reaſons to believe, that the virtues of borax are much greater than they are in general ſuppoſed to be.

For the acid of Borax, ſee SAL SEDATIVUS.

MED. VIRT. *Diuretic* and *Emmenagogue*.

BOTRYOS folia: Chenopodii ambroſioidis folio ſinuato Tourn. Atriplicis odoræ ſeu ſuaveolentis Moriſ. Chenopodii Botryos Lin. Jeruſalem oak; the leaves.

This plant is cultivated in gardens. It has a ſtrong, not diſagreeable ſmell; and a warm ſomewhat pungent taſte. It is recommended as a carminative pectoral. Infuſions of it may be drank as tea; and in this form it has been recommended for chronic catarrh. But rectified ſpirit is ſaid to be the beſt

menſtruum for the active parts of both the ſeeds and leaves.

MED. VIRT. *Carminative—Pectoral.*

PREPAR. *Infuſion.*

BRASSICA SATIVA: Braſſica Oleracea Lin. White and red cabbages, coleworts, Savoy cabbages, and cauliflower.

Theſe are cultivated in gardens rather for culinary than medicinal uſe. They are all ſuppoſed to be hard of digeſtion, to afford little nouriſhment, and to produce flatulencies; though probably on no very good foundation. They tend ſtrongly to putrefaction, and run into this ſtate ſooner than almoſt any other vegetable; when putrefied, their ſmell is likewiſe the moſt offenſive, greatly reſembling that of putrefied animal ſubſtances. A decoction of them is ſaid to *looſen the belly.* Of all theſe plants, cauliflower is reckoned the eaſieſt of digeſtion. The white is the moſt fetid; and the red moſt emollient or laxative: a decoction of the latter is recommended for *ſoftening acrimonious humours in ſome diſorders of the breaſt, and in hoarſeneſs.*

Cabbage is well ſuited for the purpoſe of diet, both from its ſucculency, and the great quantity of ſaccharine matter it contains. It has alſo been uſed for medical purpoſes. The leaves bruiſed gently are often applied to parts previouſly bliſtered, with the effect of promoting a conſiderable diſcharge. They produce a watery diſcharge through the ſkin, when applied to the ancles, in anaſarca; and in ſome inſtances have done it completely. They ſometimes even have the effect of bringing on veſications.

If by proper art they are made to undergo an aceſcent fermentation, and can be made to remain in that ſtate, they are a very effectual means both of obviating and curing the ſcurvy. Cabbage thrown into this ſtate is called *ſaur kraut* or ſour crout.

MED. VIRT. *Refrigerant—Laxative—Antiſcorbutic.*

PREPAR. *Sour-crout.*

BRYONIÆ ALBÆ *Lin. radix:* White bryony, or wild vine; the roots [*E.*]

This is a rough plant, growing on dry banks under hedges, and climbing upon the buſhes. The roots are large, ſometimes as thick as a man's thigh; their ſmell, when freſh, is ſtrong and diſagreeable; the taſte nauſeouſly bitter, acrid, and biting: the juice is ſo ſharp, as in a little time to excoriate the ſkin: in drying, they loſe great part of their acrimony, and almoſt the whole of their ſcent.

Bryony root is a ſtrong irritating cathartic; and, as ſuch, has ſometimes been ſucceſsfully exhibited in *maniacal caſes*, in *ſome kinds of dropſies*, and in *ſeveral chronical diſorders*, where a quick ſolution of viſcid juices, and a ſudden ſtimulus on the ſolids, were required. An extract prepared by water acts more mildly, and with greater ſafety, than the root in ſubſtance; given from half a dram to a dram, it is ſaid to prove a gentle purgative, and likewiſe to operate powerfully by urine.

Bryony root, applied externally, is ſaid to be a powerful diſcutient. Though this is rejected by the preſent practice, yet from its active powers, which might be rendered leſs drastic, it merits ſome attention.

MED. VIRT. *Diſcutient, and ſtrongly Cathartic.*

BUGLOSSI radix, folia, flores: Anchuſæ officinalis Lin. Garden bugloſs; the roots, leaves, and flowers.

This is a rough, hairy plant, reſembling borage, but leſs prickly: a wild ſort is commonly met with

in hedges and among corn, which differs from the garden ſort only in being ſmaller. Bugloſs has a ſlimy ſweetiſh taſte, accompanied with a kind of coolneſs: the roots are the moſt glutinous, and the flowers the leaſt ſo. Theſe qualities point out its uſe in *hot bilious* or *inflammatory diſtempers*, and a *thin acrimonious ſtate of the fluids*. The flowers are one of the four called cordial flowers: the only quality they have that can entitle them to this appellation, is, that *they moderately cool and ſoften, without offending the palate or ſtomach*; and thus, in warm climates, or in hot diſeaſes, may in ſome meaſure refreſh the patient.

MED. VIRT. *Refrigerant—emollient.*

BURSÆ PASTORIS folia: Thlaſpi Burſa Lin. Shepherd's purſe; the leaves.

This plant is common in waſte places; and is found in flower all the ſummer. Shepherd's purſe has long been celebrated as an *aſtringent*, and ſtrongly recommended *in diarrhœas, dyſenteries, uterine fluors*, and in general in all diſeaſes where aſtringents of any kind can avail. Some have eſteemed it ſo powerful a ſtyptic, as ſcarce to be ſafely adminiſtered internally. Others have thought it to be of a hot fiery nature, and ſuppoſed it to ſtop fluxes and hæmorrhages, by coagulating the juices like alcohol, and burning or ſearing the orifices of the veſſels. The ſenſible qualities of ſhepherd's purſe diſcover little foundation for either of theſe opinions; it has no perceptible heat, acrimony, pungency, and ſcarcely any aſtringency: the taſte is almoſt merely herbaceous, ſo as ſufficiently to warrant the epithet given this plant by Mr. Ray, *Fatuum*.

MED. VIRT. *Aſtringent*, but very doubtful.

BUXI lignum et folia: Buxi ſempervirentis Lin. The box-tree: the leaves and wood.

The box is a ſmall tree, growing wild in ſome parts of Kent and Surry. The wood is of a yellow colour, more ſolid, compact, and ponderous than any other of the European woods. The leaves have a ſtrong nauſeous taſte, and when freſh, a fetid ſmell: they are ſaid to *purge violently*, in the doſe of a dram. A decoction of the wood is recommended by ſome as powerfully *ſudorific*, preferable even to guaiacum: but the taſte readily diſcovers that it wants the qualities of that wood. The box-wood is now rejected from our Pharmacopœias; but from its active qualities, particularly the leaves, ſome writers recommended them to attention.

MED. VIRT. Of the leaves—*Purgative.*

CACAO Theobroma Cacao Lin. Chocolate nuts.

Theſe are the fruit of an American tree reſembling the almond. The principal uſe of theſe nuts is for the preparation of a ſubſtance of which the dietetic liquor chocolate is made. This is a mild, unctuous, nutritious fluid, capable of *ſoftening acrimonious humours*, and of *great ſervice in conſumptive diſorders*; eſpecially if made with milk, and with only a ſmall proportion of aromatics.

This ſubſtance is not always eaſily digeſted, but has ſometimes occaſioned inconveniences to the ſtomach, which may be obviated by very diligent triture, uniting very intimately the farinaceous, and oily part, which renders it more eaſily digeſtible. The chocolate of London is eſteemed by much the beſt, becauſe the two parts are ſo very perfectly united, by making them paſs between two cylinders rolling

one against the other, which has more power to form the intimate union, than by levigation, which was formerly practised.

MED. VIRT. *Analeptic.*

PREP. *Chocolate.*

CALAMINARIS LAPIS, *Zincum Calaminaris* [*L. E.*]. Calamy or calamine stone.

This mineral is found plentifully in England, Germany, and other countries, either in distinct mines, or intermingled with the ores of different metals. It is usually of a greyish, brownish, yellowish, or pale reddish colour; considerably hard, though not sufficiently so to strike fire with steel. It has been looked upon by some as a simple earth, by others as iron ore: later experiments have discovered it to be an ore of zinc. Calamine is generally roasted or calcined before it comes into the shops, in order to separate some sulphureous or arsenical matter which the crude mineral is supposed to contain, and to render it more easily reducible into a fine powder. In this state, it is employed in collyria against *defluxions of thin acrid humours upon the eyes;* for *drying up moist, running ulcers;* and *healing excoriations.*

MED. VIRT. *Desiccative* and *healing.*

PREP. An *ingredient* in *ceratum lap. calam.* and *collyria*, &c.

CALAMI AROMATICI *radix: Acori Calami Lin. S. P.* Sweet-scented flag; the roots [*L. E.*]

This flag resembles, as to its leaves, the common *iris*, but, in other respects differs greatly from it: the stalk grows at a little distance from the leaves; the lower half, up to where the flowers come forth, is roundish; the part above this, broad like the other leaves; the flowers are very small, whitish, and stand in a kind of head about the size of a finger. This plant grows plentifully in rivulets and marshy places, about Norwich and other parts of this island; in the canals of Holland; in Switzerland; and in other countries of Europe. The shops have been usually supplied from the Levant with dried roots, which do not appear to be superior to those of our own growth.

The root of acorus is full of joints, crooked, somewhat flatted on the sides, internally of a white colour, and loose spongy texture: its smell is strong; the taste warm, acrid, bitterish, and aromatic; both the smell and taste are improved by exsiccation. This root is generally looked upon as a *carminative* and *stomachic medicine*, and as such is sometimes made use of in practice. It is also given in anorexia and fen agues. It is said by some to be superior in aromatic flavour to any other vegetable that is produced in these northern climates: but such as I have had an opportunity of examining, fell short, in this respect, of several of our common plants. It is, nevertheless, a sufficiently elegant aromatic. The fresh root, candied after the manner directed in our Dispensatory for candying eryngo root, is said to be employed at Constantinople as a preservative against epidemic diseases. The leaves of this plant have a sweet fragrant smell, more agreeable, though weaker, than that of the roots.

MED. VIRT. *Aromatic* and *stomachic.*

CALENDULÆ flores: Calendula officinalis Lin. Garden marigold; the flowers.

This herb is common in gardens, where it is found in flower greatest part of the summer. Marigold flowers are supposed to be aperient and attenuating; as also cardiac, alexipharmic, and sudorific. They are principally celebrated in uterine

obſtructions, the jaundice, and for throwing out the ſmall-pox. Their ſenſible qualities give little foundation for theſe virtues: they have ſcarcely any taſte, and no conſiderable ſmell. The leaves of the plant diſcover a viſcid ſweetiſneſs, accompanied with a more durable ſaponaceous pungency and warmth. However, they are now almoſt totally rejected, as they are not allowed to poſſeſs any material medical properties. If they have any at all, it is that of being very ſlightly ſudorific.

CALX VIVA [*L. E.*] *Lapis calcareus purus, recens uſtus.* Quicklime. Quicklime is uſually prepared among us, by calcining certain ſtones of the chalky kind. All chalks and marbles, and, in general, all the mineral earths that diſſolve in acids, burn into quicklime; with this difference, that the more compact the ſtone, generally the ſtronger is the lime. In maritime countries, in defect of the proper ſtones, ſea ſhells are made uſe of, which afford a calx agreeing in moſt reſpects with the ſtone limes.

All theſe limes are, when freſh burnt, highly acrimonious and corroſive. In this ſtate they are employed in ſome external applications as a depilatory; for rendering ſulphur ſoluble in water; and for increaſing the power of fixt alkaline ſalts either for the purpoſes of a cauſtic, or to enable them more readily to diſſolve oils for making ſoap. If the lime be expoſed for a length of time to the air, it falls by degrees into a powder, and loſes much of its acrimony.

Water, poured directly upon quicklime, takes up a conſiderable portion of it. The ſolution has a ſtrong taſte, ſomewhat ſtyptic, drying the mouth, and accompanied with a kind of ſweetiſhneſs. This liquor does not effervesce either with acids or alkalies, but is rendered by the latter turbid and milky; it *prevents the coagulation of milk, and hence is ſometimes made uſe of along with milk diets:* agitated with expreſſed oils, it unites with them into a thick compound, recommended by Dr. Slare againſt burns and inflammations. Both the ſimple ſolution of the lime, and the ſolution impregnated with other materials, are directed as officinal, under the titles of ſimple and compound lime waters.

Lime water, drank to the quantity of a quarter of a pint, three or four times a day, and continued for a length of time, has been found *ſerviceable in ſcrophulous caſes*, and *other obſtinate chronic diſorders.* It generally *promotes urine*, and *not unfrequently the cuticular diſcharge:* for the moſt part it *binds the belly*, and *ſometimes produces troubleſome coſtiveneſs*, unleſs this effect be occaſionally provided againſt, by the interpoſition of proper medicines. It does ſervice in *debility* and *laxity of the viſcera in general; in thoſe of the uterine and ſeminal veſſels* it is particularly recommended. Care muſt be had not to uſe this medicine too liberally in hot bilious conſtitutions, or where the patient is much emaciated, or the appetite weak, or at the time of any critical or periodical evacuations. Its principal uſe is *in cold, moiſt, ſluggiſh*, and *corpulent* habits.

It has been uſed as a lithontriptic; and though incapable of diſſolving human calculi, yet under its uſe patients afflicted with the ſtone have experiencied great relief. In the form of gliſters it is very effectual in *killing and bringing away the aſcarides.* It has been given in repeated draughts from ſix ounces up to a pint or more in a day, with or without a fourth or fifth part of milk, againſt *leucorrhœas, diabetes*, and *acidities* in the primæ viæ. It is ſometimes applied as a

wash for foul ulcers, by injection for the relief of fluor albus, and other preternatural discharges.

MED. VIRT. A *powerful corrosive; alterant* and *absorbent*.

PREP. *Medicated water*.

CAMPHORA [*L. E.*] *Ex Lauro camphora Lin.* Camphor is a solid concrete, extracted from the wood and roots of a tree growing in Japan, Sumatra, and other parts of the East Indies, by a process similar to that by which essential oils are obtained. As it first sublimes from the wood, it appears brownish, composed of semipellucid grains mixed with dirt: in this state it is exported by the Dutch, and purified by a second sublimation; after which, it is reduced into loaves (in which it is brought to us) probably by fusion in close vessels; for it does not assume this form in sublimation. It is also produced by several trees in the East Indies, in a more fluid state, and then styled the oil of camphor; and also this concrete is produced, in small quantities, from other vegetables by distillation.

Pure camphor is very white, pellucid, somewhat unctuous to the touch; of a bitterish, aromatic, acrid taste, yet accompanied with a sense of coolness; of a very fragrant smell, somewhat like that of rosemary, but much stronger. It is totally volatile, and inflammable; soluble in vinous spirits, oils, and the mineral acids; not in water, alkaline liquors, or the acids of the vegetable kingdom. This concrete is esteemed one of the most efficacious *diaphoretics;* and has long been celebrated in *fevers, malignant* and *epidemical distempers*. In *deliria*, where opiates fail of procuring sleep, and often aggravate the symptoms, this medicine frequently succeeds.

Frederick Hoffman has written an express dissertation *De Camphoræ usu interno securissimo et præstantissimo*. The substance of his observation is, that camphor seems to penetrate very quickly through the whole body, and *notably increase perspiration:* that though given to the quantity of half a dram, dissolved in spirit of wine, and duly diluted, it *does not raise the pulse* or *occasion any heat*, but *rather causes a sense of coolness about the præcordia:* that on continuing its use for some time, the blood became sensibly more fluid, and the quantity of watery serum, with which the habit before abounded, was notably diminished: that in *malignant fevers*, and *all disorders, whether acute or chronical, proceeding from an acrid or putrescent state of the juices, camphor has excellent effects*, correcting the acrimony, expelling the putrid morbific matter through the cutaneous pores, and preventing an inflammation or sphacelus, where there is previously any disposition thereto: that, by *strengthening the vessels*, it *restrains hæmorrhages happening* in *acute fevers*, and *promotes critical* and *periodical evacuations*. In inflammatory cases, where there *is a tendency to mortification, intense heat, thirst, or where the skin is dry and parched*, whether before or after a delirium has come on, *small doses of camphor joined with nitre*, produced happy effects, almost immediately relieving the symptoms, occasioning a calm sleep and plentiful sweat, without fatiguing the patient. He further observes, that this simple, by *its antiphlogistic quality, prevents the ill effects of the more irritating medicines*. There has been great diversity of opinion respecting the medical virtues of camphor, whether it was a stimulant or sedative; however, now, from a vast variety of experiments, it has been proved, and generally allowed to be a sedative. It lessens the frequency of the pulse, and when given in a

very large dose, it produces a weakness, and paleness of the whole body, and sometimes sudden death occasioned by a direct action on the nervous system.

It has been employed in fevers of all kinds, but its use has been especially remarkable in those of the putrid kind. It will resist, and cure in many cases, gangrene. It has been of great service in the confluent small-pox; spasmodic, and convulsive affections; in epilepsy; in maniacal and melancholic cases.

It has been used in most acute inflammatory diseases, and in acute rheumatism, with some advantage. It has been of great service *externally* employed in ascites, rubbing the abdomen with a strong solution of camphor and oil; and in taking off severe pains of the muscles and joints in acute rheumatism. Nor is there any doubt of its taking off the inflammatory state both of rheumatism and gout; but in the latter it is rather a dangerous experiment, as it occasions only a retrocession of that disease; as also in the rheumatism, where the complaint was very long and general in the system. And indeed, whenever diseases depend upon a mobility of the nervous powers, and an irregularity of its motions, it may be expected, that such a powerful sedative should be of service. Its dose is from 5 grains to 30 grains, but may be gradually encreased to a much larger dose, according to the exigencies of the case; with myrrh it will mix into a homogeneous fluid with water. Vinegar is also said to add to its efficacy, particularly as a diaphoretic.

MED. VIRT. *Sedative—diaphoretic—diuretic*, and *antiseptic*.

PREP. *Mistura camph.* — *Sps. camph.* and an ingredient in many other compositions.

CANCRORUM CHELÆ: *Cancer pagurus Lin. Sys. Nat.* [*L. E.*] Crabs' claws: the black tips of the claws of the common sea crab, or *cancer marinus*.

CANCRORUM OCULI dicti. Crabs' eyes so called: stony concretions found in the head, or rather stomach, of the *cancer astacus Lin.*

The *only virtue* of these simples is to absorb acidities in the primæ viæ.

Crabs' eyes are said by most writers on the materia medica to be frequently counterfeited with tobacco pipe clay, or compositions of chalk with mucilaginous substances. This piece of fraud, if really practised, may be very easily discovered; the counterfeits wanting the leafy texture which is observed upon breaking the genuine; more readily imbibing water; adhering to the tongue; and dissolving in vinegar, or the stronger acids diluted with water, either entirely or not at all, or by piecemeal; whilst the true crabs' eyes, digested in these liquors, become soft and transparent, their original form remaining the same. This change happens, because the earthy part, on which depended their opacity and hardness, is dissolved by the gentle action of the acid, which leaves the conglutinating matter unhurt.

MED. VIRT. *Absorbent.*

CANELLA ALBA. [*L. E.*]

This is a bark rolled up into long quills, thicker than cinnamon, and both outwardly and inwardly of a whitish colour, lightly inclining to yellow. It is the produce of a tall tree growing in great plenty in the low lands in Jamaica, and other American islands, called by sir Hans Sloane *arbor baccifera laurifolia aromatica, fructu viridi calyculato racemoso.* The canella is the interior bark, freed from an outward thin rough one, and dried in the shade. The shops distinguish two

ſorts of canella, differing from one another in length and thickneſs of the quills; they are both the bark of the ſame tree, the thicker being taken from the trunk, and the thinner from the branches. This bark is a warm pungent aromatic, but not of the moſt agreeable kind, and is chiefly uſed to correct aloes, and other bitter ſubjects. Till of late this has been miſtaken for the Cortex Winteranus, which ſee.

MED. VIRT. *Aromatic* and *ſtimulant.*

CANNABIS ſemen: Cannabis ſativa Lin. Hemp; the ſeed.

This plant, when freſh, has a rank narcotic ſmell: the water in which the ſtalks are ſoaked, in order to facilitate the ſeparation of the tough rind for mechanic uſes, is ſaid to be violently poiſonous, and to produce its effects almoſt as ſoon as drank. The ſeeds alſo have ſome ſmell of the herb; their taſte is unctuous and ſweetiſh; on expreſſion they yield a conſiderable quantity of inſipid oil: hence they are recommended (boiled in milk, or triturated with water into an emulſion) *againſt coughs, heat of urine*, and the like. They are alſo ſaid to be uſeful in *incontinence of urine*, and *for reſtraining venereal appetites;* but experience does not warrant their having any virtues of this kind.

CANTHARIDES [*L. E.*] *Meloë veſicatorius.—Lin. S. N.* Spaniſh flies. Theſe inſects are of a ſhining green colour, intermingled with more or leſs of a blue and a gold yellow. They are found adhering to different kinds of trees and herbs, in Spain, Italy, and France; the largeſt and moſt eſteemed come from Italy.

Cantharides are extremely acrimonious: applied to the ſkin, they firſt inflame, and afterwards excoriate the part, raiſing a more perfect bliſter than any of the vegetable acrids, and occaſioning a more plentiful diſcharge of ſerum. The external application of cantharides is often followed by a ſtranguary, accompanied with thirſt and feveriſh heat: this inconvenience may be remedied by ſoft unctuous or mucilaginous liquors liberally drank.

Cantharides taken internally, often occaſion a diſcharge of blood by urine, with exquiſite pain: if the doſe is conſiderable, they ſeem to inflame and exulcerate the whole inteſtinal canal; the ſtools become mucous and purulent; the breath fetid and cadaverous; intenſe pains are felt in the lower belly; the patient faints, grows giddy, raving mad, and dies. All theſe terrible conſequences have ſometimes happened from a few grains. Herman relates, that he has known a quarter of a grain inflame the kidneys, and occaſion bloody urine with violent pain. There are, nevertheleſs, caſes in which this ſtimulating fly, given in larger doſes, proves not only ſafe, but of ſingular efficacy for the cure of diſeaſes that yield little to medicine of a milder claſs. In *cold phlegmatic ſluggiſh habits*, where *the viſcera are overloaded*, and *the kidneys and ureters obſtructed with thick viſcid mucuous matter*, cantharides have excellent effects; here the abounding mucus defends the ſolids from the acrimony of the fly, till it is itſelf expelled; when the medicine ought to be diſcontinued. Groenvelt employed cantharides with great ſucceſs *in dropſies, obſtinate ſuppreſſion of urine*, and *ulcerations of the bladder:* giving very conſiderable doſes made into boluſes with camphor; and interpoſing large draughts of emulſions, milk, or other emollient liquors; by theſe means the exceſſive irritation, which they would otherwiſe have occaſioned, was in great meaſure prevented. The camphor did

not perhaps contribute so much to this effect as is generally imagined; since it has no sensible quality that promises any considerable abatement of the acrimony of cantharides: nitre would answer all that the camphor is supposed to perform: this, with milk, or emollient mucilaginous liquors, drunk in large quantity, are the best correctors. Cantharides, in very small doses, may be given with safety also in other cases. Dr. Mead observes, that the *obstinate gleetings* which frequently remain after the cure of venereal maladies, and which rarely yield to balsamic medicines, are effectually remedied by cantharides; and that no one remedy is more efficacious in cutaneous and leprous disorders; in which last, proper purgatives are to be occasionally taken during the use of the cantharides. The best and safest preparation of cantharides for these purposes, is a spirituous tincture, and indeed in all cases, the tincture is far preferable, for internal use, to the fly in substance.

As they are allowed to be stimulants of the genital organs, which is their most certain operation, and as this power may be communicated to the parts contiguous, the internal use of the tincture has been recommended in *diabetes — leucorrhœa — amænorrhœa*, &c. but the medicine is to be applied with great caution; small doses begun with, and gradually increased, and if no apparent benefit presents itself by a few doses, it should not be persisted in.

The virtues of cantharides are extracted by rectified spirit of wine, proof spirit, and water; but do not arise in distillation. The watery and spiritous extracts blister as freely as the fly in substance; whilst the fly remaining after the several menstrua have performed their office, is to the taste insipid, and does not in the least blister or inflame the skin.

MED. VIRT. *Strongly stimulant*, and *vesicatory*.

PREP. *Ointments—plasters—tincture*, &c.

CAPPARIS radicis cortex, et florum gemmæ: Capparis spinos. Lin. Caper bush; the bark of the root, and buds of the flowers.

This is a low prickly bush, found wild in Italy, and other countries; it is raised with us by sowing the seeds upon old walls, where they take root betwixt the bricks, and endure for many years.

The bark of the root is pretty thick, of an ash colour, with several transverse wrinkles on the surface: cut in slices and laid to dry, it rolls up into quills. This bark has a bitterish acrid taste; it is reckoned *aperient* and *diuretic*; and *recommended in several chronic disorders, for opening obstructions of the viscera.*

The buds, pickled with vinegar, &c. are used at table. They are supposed to *excite appetite*, and *promote digestion*; and to be particularly useful, as *detergents* and *aperients*, in *obstructions of the liver* and *spleen*. Their taste and virtues depend more upon the saline matter introduced into them, than on the caper buds.

CARDAMINES FLORES: *Cardaminis pratensis Lin.* [*L. E.*] Ladies' smock, or cuckow flower. This is a plant in taste resembling cress. It has an erect stalk; and leaves set in pairs on a middle rib, with an odd one at the end. Its flower is white or purplish, and is succeeded by a bivalvular pod. It grows in plenty in moist low meadows, and flowers early in the spring.

The virtue of the flowers of ladies-smock, in hysteric and epileptic cases, was first noticed by Ray; and their use has been revived by sir George Baker, who gave them with

ſucceſs, he ſays, in ſpaſmodic aſthma, chorea ſancti Viti, epilepſy, &c. in doſe of ℈j. to ʒj. of the powder twice a day; reduced to that ſtate after being properly dried.

CARDAMOMI MINORIS *ſemen. Amomum repens*, Sonnerati iter. Leſſer cardamom. The ſeeds of this fruit are conſiderably ſtronger both in ſmell and taſte than thoſe of the cardamum majus; and hence is the only one now directed in the ſhops. [*L. E.*]

Cardamom ſeeds are a very warm, grateful, pungent aromatic, and frequently employed as ſuch in practice: they are ſaid to have this advantage, that notwithſtanding their pungency, they do not, like thoſe of the pepper kind, immoderately heat or inflame the bowels. Both water and rectified ſpirit extract their virtues by infuſion, and elevate them in diſtillation; with this difference, that the tincture and diſtilled ſpirit are conſiderably more grateful than the infuſion and diſtilled water: the watery infuſion appears turbid and mucilaginous; the tincture made in ſpirit, limpid and tranſparent. The huſks of the ſeeds, which have very little ſmell or taſte, may be commodiouſly ſeparated, by committing the whole to the mortar, when the ſeed will readily pulveriſe, ſo as to be freed from the ſhell by the ſieve: this ſhould not be done till juſt before uſing them; for if kept without the huſks, they ſoon loſe much of their flavour.—They are conſidered as warm cordial ſtomachics, and may be taken in powder from five to ten grains or more.

MED. VIRT. *Aromatic* and *ſtimulant.*

PREP. *Tincture*, and *an Ingredient in ſeveral officinal compoſitions.*

CARDIACÆ folia: Leonuri Cardiacæ Lin. Motherwort; the leaves.

This plant is common in waſte places, and found in flower during the greateſt part of the ſummer. The leaves have a bitter taſte, and a pretty ſtrong ſmell; they are ſuppoſed to be uſeful in hyſteric diſorders, to ſtrengthen the ſtomach, to promote urine; and indeed it may be judged from their ſmell and taſte, that their medicinal virtues are conſiderable, though they are now rejected both from the London and Edinburgh Pharmacopœias.

CARDUI BENEDICTI *folia ſemen: Centaureæ benedictæ Lin.* Bleſſed thiſtle; the leaves [*L. E.*]

This is an annual plant, cultivated in gardens: it flowers in June and July, and perfects its ſeeds in the autumn. The herb ſhould be gathered when in flower, dried in the ſhade, and kept in a very dry airy place, to prevent its rotting or growing mouldy, which it is very apt to do. The leaves have a penetrating bitter taſte, not very ſtrong, or very durable; accompanied with an ungrateful flavour, from which they are in great meaſure freed by keeping. Water extracts, in a little time, even without heat, the lighter and more grateful parts of this plant; if the digeſtion be continued for ſome hours, the diſagreeable parts are taken up; a ſtrong decoction is very nauſeous and offenſive to the ſtomach. Rectified ſpirit gains a very pleaſant bitter taſte, which remains uninjured in the extract.

The virtues of this plant ſeem to be little known in the preſent practice. The nauſeous decoction is ſometimes *uſed to provoke vomiting*; and *a ſtrong infuſion to promote the operation of other emetics.* But this elegant bitter, when freed from the offenſive parts of the herb, may be advantageouſly applied to other purpoſes. I have frequently experienced excellent effects from a *light watery infuſion of carduus*, with freſh lemon, or dried orange peel, *in loſs of appetite*, where the ſtomach was

injured by irregularities. *A ſtronger infuſion* made in cold or warm water, if drunk freely, and the patient kept warm, *occaſions a plentiful ſweat*, and promotes *all the ſecretions in general.*

MED. VIRT. *Stomachic.*

PREP. *Infuſion.*

CARICÆ [*L. E.*] Figs; the dried fruit of the *Ficus Carica Lin.*

The principal uſe of theſe is as a ſoft emollient ſweet. In this intention they enter the pectoral decoction and lenitive electuary of the ſhops. They are alſo eſteemed by ſome as ſuppuratives, and hence have a place in the maturating cataplaſm.

MED. VIRT. *Emollient* and *ſuppurative.*

PREP. *Ingredient* in *Decoct. Hord. Comp.* and *Cataplaſma maturans.*

CARUON, *carvi, ſeu cari, ſemen: Carum Carui Lin.* Caraway; the ſeeds [*L. E.*]

Caraway is an umbelliferous plant, cultivated with us in gardens, both for culinary and medicinal uſe. The ſeeds have an aromatic ſmell, and a warm pungent taſte. Theſe are in the number of the four greater hot ſeeds; and frequently employed as a ſtomachic and carminative in flatulent colics, and the like. They contain a large proportion of oil, and except ſome peculiarity in odour, neither their ſeeds, nor their oil differ in their virtues from thoſe of aniſe.

MED. VIRT. *Aromatic—Carminative.*

PREP. *Eſſential Oil.*

CARYOPHYLLUS AROMATICUS, *Lin. Sp. Pl.* [*L. E.*] Clove; the *unripe ſeed-veſſel*, and its *eſſential oil.*

Cloves are the flower-cups (not, as is generally ſuppoſed, the fruit) of a bay-like tree, growing in the Eaſt Indies. In ſhape, they ſomewhat reſemble a ſhort thick nail.

Cloves have a very ſtrong agreeable aromatic ſmell, and a bitteriſh pungent taſte, almoſt burning the mouth and fauces. The Dutch, from whom we have this ſpice, frequently mix it with cloves which have been robbed of their oil: theſe, though in time they regain from the others a conſiderable ſhare both of taſte and ſmell, are eaſily diſtinguiſhable by their weaker flavour and lighter colour. Cloves, conſidered as medicines, are very hot ſtimulating aromatics, and poſſeſs, in an eminent degree, the general virtues of ſubſtances of this claſs. Though they are ſeldom uſed but as correctors to officinal compoſitions, they may be given in infuſion, in the proportion of two drams of cloves to half a pint of boiling water; of which 3 or 4 ſpoonfuls may be given at a doſe, in flatulent complaints, in dyſpepſy, and as a vehicle to other medicines.

MED. VIRT. *Aromatic—Stimulant.*

PREP. *Eſſential oil.*

CARYOPHYLLÆ RUBRÆ: *Flores. Dianthi caryophylli Lin.* Clove July flowers [*L. E.*]

A great variety of theſe flowers are met with in our gardens. Thoſe made uſe of in medicine ought to be of a deep crimſon colour, and a pleaſant aromatic ſmell, ſomewhat like that of cloves: many ſorts have ſcarce any ſmell at all. The *caryophylla rubra* are ſaid to be *cardiac* and *alexipharmic.* At preſent the flowers are chiefly valued for their pleaſant flavour, which is entirely loſt even by light coction; hence the college direct the ſyrup, which is the only officinal preparation of them, to be made by infuſion;—

CARYOPHYLLATÆ radix: Gei urbani Lin. Avens, or herb benet; the root.

Avens is a rough plant found wild in woods and hedges. The root has a warm, bitteriſh, aſtringent taſte, and a pleaſant ſmell, ſome-

what of the clove kind, especially in the spring, and when produced in dry warm soils. Parkinson observes, that in the growth of moist soils it has nothing of this flavour. This root has been employed as a *stomachic*, and for *strengthening the tone of the viscera in general:* it is still in some esteem in foreign countries, though not taken notice of among us. It yields, on distillation, an elegant odoriferous essential oil, which concretes into a flaky form.

This root is considerably astringent, and has some aroma, when it has been recently raised in the spring season, and upon dry soil.

Some foreign physicians have spoken highly in its favour against intermittents: but on repeated trials it has been found inadequate to the Peruvian bark.

MED. VIRT. *Astringent—Aromatic.*

PREP. *Essential Oil.*

CASIA FISTULARIS, *Cassia fistula Sp. Plant.* [*L. E.*] Cassia of the cane, the fruit of an oriental tree, resembling the walnut.

This fruit is a cylindrical pod, scarce an inch in diameter, a foot or more in length: the outside is a hard brown bark; the inside is divided by thin transverse woody plates, covered with a soft black pulp, of a sweetish taste, with some degree of acrimony. There are two sorts of this drug in the shops; one brought from the East-Indies, the other from the West: the canes or pods of the latter are generally large, rough, thick-rinded, and the pulp nauseous; those of the former are less, smoother, the pulp blacker, and of a sweeter taste; this sort is preferred to the other. Such pods should be chosen as are weighty, new, and do not make a rattling noise (from the seeds being loose within them) when shaken. The pulp should be of a bright shining black colour, and a sweet taste, not harsh (which happens from the fruit being gathered before it is grown fully ripe) or sourish (which it is apt to turn upon keeping). It should neither be too dry, nor too moist, nor at all mouldy, which, from its being kept in damp cellars, or moistened, in order to increase its weight, it is very subject to be. Greatest part of the pulp dissolves both in water and in rectified spirit; and may be extracted from the cane by either. The shops employ water, boiling the bruised pod therein, straining, and afterwards evaporating the solution to a due consistence.

The pulp of casia is a gentle *laxative medicine*, and frequently given, in a dose of some drams, in costive habits. Some direct a dose of two ounces or more as a cathartic, *in inflammatory cases*, where the more acrid purgatives have no place: but in these large quantities it generally nauseates the stomach, produces flatulencies, and sometimes gripings of the bowels, especially if the casia is not of a very good kind; these effects may be prevented by the addition of aromatics, and exhibiting it in a liquid form. Geoffroy says, it does excellent service in *the painful tension of the belly*, which sometimes follows the imprudent use of antimonials; and that it may be advantageously acuated with the more acrid purgatives, or antimonial emetics, or employed to abate their force. Vallisnieri relates, that the *purgative virtue of this medicine is remarkably promoted by manna;* that a mixture of four drams of casia, and two of manna, purges as much as twelve drams of casia, or thirty-two of manna alone. Sennertus observes, that the urine is apt to be turned of a green colour by the use of casia; and sometimes, where a large quantity has been taken, blackish. So little opinion had Dr. Cullen of the efficacy of this drug

from repeated trials, that he considers the pulp of prunes to possess superior power, and therefore thinks it might very properly be omitted in the officinal compositions, wherein it is now used.

MED. VIRT. *Aperient.*

PREP. *Electuary — Ingredient in another Electuary.*

CASIA LIGNEA: the bark of an Indian tree. *Laurus Cassia Lin.* [*E.*]

This bark, in appearance and aromatic flavour, approaches to cinnamon; from which it is easily distinguishable by its remarkable viscidity: chewed, it seems to dissolve in the mouth into a slimy substance; boiled in water, it gives a strong mucilage, the aromatic part exhaling; the water obtained by distillation, unless drawn with great care, has an unpleasant smell, somewhat of the empyreumatic kind: nevertheless the distilled oil proves nearly of the same quality with that of cinnamon. Cassia possesses the aromatic virtues of cinnamon; but in an inferior degree; and its effects are less durable. Its glutinous quality renders it useful in some cases where simple aromatics are less proper.

MED. VIRT. *Aromatic.*

CASTOREUM [*L. E.*] *Castor Fiber Lin.* Castor.

Castor appears to be a peculiar fatty substance, deposited in the cells, or bags, situated near the rectum, in the beaver, a four-footed amphibious animal, frequent in several parts of Europe and America. The best comes from Russia: this is in large round hard cods, which appear, when cut, full of a brittle red liver-coloured substance, interspersed with membranes and fibres exquisitely interwoven. An inferior sort is brought from Dantzick; this is generally fat and moist. The worst of all is that of New England, which is in longish thin cods.

Russia castor has a strong disagreeable smell, and an acrid, biting, bitterish, nauseous taste. Water extracts the nauseous part, with little of the finer bitter; rectified spirit extracts this last, without much of the nauseous; proof spirit, both; water elevates the whole of its flavour in distillation; rectified spirit brings over nothing.

Castor is looked upon as one of the *capital nervine and antihysteric* medicines: some celebrated practitioners have nevertheless doubted its virtues; and Neumann and Stahl declare it insignificant. Experience, however, has shown, that the virtues of castor are considerable, though they are certainly far less than they have been generally supposed to be. Dr. Cullen says that on many occasions it is a *powerful antispasmodic*, in doses from ten to thirty grains; though he allows not of the narcotic power attributed to it. The medicinal virtues, he thinks, are best extracted by spirit of wine, as this probably extracts most powerfully the odoriferous oil upon which the medical quality is thought to depend. The Edinburgh college are of this opinion, but the London orders proof spirits. Either of them may be given as a medicine to be suddenly diffused; but he prefers the compound tincture of castor of the Edinburgh Dispensatory for the attaining this purpose.

MED. VIRT. *Nervine* and *antispasmodic.*

PREP. *Powder — Tincture — Compound Tincture.*

CASUMUNAR.

This is a tuberous root, an inch or more in thickness, marked on the surface with circles or joints like galangal, of a brownish or ash colour on the outside, and dusky yellowish within; it is brought

from the Eaſt-Indies, cut into tranſverſe ſlices: what kind of plant it produces, is not known.

Caſumunar has a warm bitteriſh taſte, and an aromatic ſmell, ſomewhat reſembling that of ginger. It has been celebrated in *hyſteric caſes, epilepſies, palſies, loſs of memory*, and *other diſorders*. The preſent practice ſometimes employ it as a *ſtomachic* and *carminative*, but it is not ſo much uſed or known as it deſerves to be.

MED. VIRT. *Stomachic — Carminative.*

CENTAURII MINORIS *ſummitates: Gentianæ Centaurei Lin.* Leſſer centaury; the tops [*L. E.*]

This grows wild in many parts of England, in dry paſture grounds, and amongſt corn. The tops are an uſeful aperient bitter: the Edinburgh Pharmacopœia directs an extract to be prepared from them, and employs them as an ingredient in the bitter infuſion and ſtomachic tincture. It poſſeſſes all the virtues of gentian, and therefore the extract is preferred to that of gentian, as being cheaper.

MED. VIRT. *Stomachic.*

PREP. *Extract — Tincture — Infuſion.*

CEPA: Allium Cepa Lin. radix. Onions: the root.

Onions differ from other bulbous-rooted plants, in having ſingle roots, or ſuch as cannot be parted ſo as to increaſe the plant. Theſe roots are conſidered rather as articles of food than of medicine: when eaten liberally, they produce flatulencies, occaſion thirſt, headachs and turbulent dreams: in *cold phlegmatic habits, where viſcid mucus abounds, they doubtleſs have their uſe*; as by their ſtimulating quality they tend to *excite appetite, attenuate thick juices*, and *promote their expulſion*; by ſome they are ſtrongly recommended in *ſuppreſſions of urine*, and in *dropſies*. The chief medicinal uſe of onions in the preſent practice is in external applications, as a cataplaſm for ſuppurating tumours. When boiled and taken as food, both from their ſweetneſs, and the mucilage with which they abound, they are conſidered to afford conſiderable nouriſhment.

MED. VIRT. *Attenuating—diuretic.*

CERA FLAVA [*L. E.*] Yellow bees' wax.

This is a ſolid concrete, obtained from the honeycombs after the honey is taken, by heating and preſſing them betwixt iron plates. The beſt ſort is of a lively yellow colour, and an agreeable ſmell, ſomewhat like that of honey; when new, it is toughiſh, yet eaſy to break; by age it becomes harder and more brittle, it loſes its fine colour, and in great meaſure its ſmell.

CERA ALBA [*L. E.*] White wax is prepared from the yellow, by reducing it into thin flakes, and expoſing it for a length of time to the air; when ſufficiently bleached, it is melted, and caſt into cakes. The beſt ſort is of a clear and almoſt tranſparent whiteneſs, and of a light agreeable ſmell like that of the yellow wax, but much weaker.

The chief medicinal uſe of wax is in cerates, plaſters, unguents, &c. as an emollient for promoting ſuppuration, &c. It readily unites with oils and animal fats, but not with watery or ſpirituous liquors. It is given alſo internally in diarrhœas, dyſenteries, &c. either mixed with oily ſubſtances, or divided by earthy powders.

MED. VIRT. *Emollient.*

PREP. *Ingredients in many plaſters* and *ointments*, and ſome *balſams.*

CERASA: Prunus ceraſus Lin. *folia — fructus — gummi.* The cherry — leaves — fruit—and gum.

The ſweet cherry with a black

juice; the pleasantly fourish cherry, with a colourless juice; and the very sour cherry, with a blood-red juice; commonly called black, red, and morello cherries.

These fruits, especially the acid sorts, are very useful and agreeable *coolers* and *quenchers of thirst*; and are sometimes directed in this intention, in *hot bilious*, or *febrile distempers*. Boerhaave was extremely fond of these and the other fruits called *horæi*, as aperients in some chronic cases; and declares himself persuaded, that there is no kind of obstruction of the viscera capable of being removed by medicine, which will not yield to the continued use of these. These are seldom used as a medicine; the gum of the cherry tree is a pretty pure vegetable mucilage, nearly approaching to gum arabic. A water used to be extracted from black cherries and their bruised kernels; but as the kernels do certainly contain a like matter with the lauro-cerasus; and from them by certain management a very powerful poison can be obtained, this water is now rejected.

MED. VIRT. *Refrigerating*—THE GUM—*Similar to that of Gum Arabic.*

CHÆREFOLII folia: Scandicis Chærefolii Lin. Chervil; the leaves.

This is a low annual plant somewhat like parsley, commonly cultivated in gardens for culinary purposes. This plant is grateful both to the palate and stomach, *gently aperient and diuretic*. Geoffroy assures us, that he has found it from experience to be of *excellent service in dropsies*: that, in this disorder, it *promotes the discharge of urine* when suppressed; *renders it clear, when feculent and turbid*; and *when high and fiery*, of *a paler colour*; that it acts mildly without irritation, and *tends rather to allay than excite inflammation*. He goes so far as to say, that dropsies which do not yield to this medicine, are scarce capable of being cured by any other. He directs the juice to be given in a dose of three or four ounces every fourth hour, and continued for some time, either alone, or in conjunction with nitre and syrup of the five opening roots.

MED. VIRT. *Aperient* and *diuretic*.

CHAMÆDRYOS folia, Teucrii Chamædryos Lin. Germander; the leaves and tops with the seed.

This is a low shrubby plant, cultivated in gardens. The leaves, tops, and seeds, have a bitter taste, with some degree of astringency and aromatic flavour. They are recommended as *sudorific*, *diuretic*, and *emmenagogue*, and for *strengthening the stomach and viscera in general*. With some they have been in great esteem in *intermittent fevers*; as also in *scrophulous and other chronic disorders*. It has been celebrated with the chamæpitys for its antarthritic virtues, both of which make a part in the Portland powder: but they are not now thought to have any considerable efficacy.

MED. VIRT. *Sudorific*—*diuretic*, &c.

CHAMÆMELI *folia, flores: Anthemis nobilis Lin.* Single-flowered chamomile [*L. E.*]

These have a strong not ungrateful aromatic smell, and a very bitter nauseous taste. They are accounted carminative, aperient, emollient, and in some measure anodyne: and stand recommended in *flatulent colics*, for *promoting the uterine purgations*, in *spasmodic pains*, and the *pains of child-bed women*: sometimes they have been employed in *intermittent fevers*, and *the nephritis*. These flowers are frequently also used externally in *discutient* and *antiseptic fomentations*, and in *emollient glisters*. They have been employed

with ſucceſs in *intermittents*, in powder in doſes of from ʒſs. to a ʒj. between the fits: but then it ſhould be joined with an opiate, or aſtringent, otherwiſe it is apt to run off by the bowels. The flowers are conſidered *as a good ſtomachic*, and have been uſeful in pains of the ſtomach, taken in infuſion warm, in doſes of about four or ſix ounces twice a day; for in this ſtate it has been obſerved to be more efficacious than when cold.

MED. VIRT. *Stomachic — Carminative.*

PREP. *Infuſion—Extract—Eſſent. Oil.*

CHAMÆMELUM flore multiplici C. B. Double-flowered chamomile; the flowers.

Theſe differ from the foregoing in having ſeveral rows of the white petala ſet thick together about the middle diſk, which is much ſmaller. In this diſk the medicinal qualities of the flower chiefly reſide. The virtues of theſe are preciſely the ſame as thoſe of the former, but they are conſidered the ſtrongeſt: and if any regard is to be had to the eſſential oil, theſe flowers afford the greateſt quantity.

CHAMÆPITYOS folia, Teucrii Chamæpityos, Lin. Ground pine; the leaves.

This is a low hairy plant, clammy to the touch, and of a ſtrong aromatic reſinous ſmell, and a bitter roughiſh taſte. It is recommended as an *aperient* and *vulnerary*, as alſo in gouty and rheumatic pains. Indeed it is ſaid to have the ſame properties as the chamædrys.

CHELIDONII MAJORIS, Lin. folia, radix. Celandine; the herb and root.

This plant grows upon old walls, among rubbiſh, and in waſte ſhady places. The herb is of a blueiſh green colour; the root of a deep red; both contain a gold coloured juice; their ſmell is diſagreeable; the taſte ſomewhat bitteriſh, very acrid, biting and burning the mouth: the root is the moſt acrid. Juice of celandine has long been celebrated in *diſorders of the eyes*; but it is greatly too ſharp, unleſs plentifully diluted, to be applied with ſafety to that tender organ. It has been ſometimes uſed, and it is ſaid with good ſucceſs, for *extirpating warts, cleanſing old ulcers*, and *in cataplaſms for the herpes miliaris.* This acrimonious plant is rarely given internally; the virtues attributed to it are thoſe of a *ſtimulating aperient, diuretic*, and *ſudorific*: it is particularly recommended in the *ſlow kind of jaundice, where there are no ſymptoms of inflammation*, and *in dropſies*; ſome ſuppoſe the root to have been Helmont's ſpecific in the hydrops aſcites. Half a dram or a dram of the dry root is directed for a doſe; or an infuſion in wine of an ounce of the freſh root.

MED. VIRT. *Stimulating — Diuretic — Sudorific.*

PREP. *Infuſion — dried root powdered.*

CHINÆ radix. China root.

There are two ſorts of this root in the ſhops, one brought from the Eaſt Indies, *(Smilax China Lin.)* the other from the Weſt, *(Smilax Pſeudo-China Lin.)* They are both longiſh, full of joints, of a pale reddiſh colour, of no ſmell, and very little taſte: the oriental, which is the more eſteemed, is conſiderably harder and paler-coloured than the other. Such ſhould be choſen as is freſh, cloſe, heavy, and upon being chewed appears full of a fat unctuous juice. China root was either unknown or diſregarded by the ancient phyſicians. It was firſt introduced into Europe about the year 1535, with the character of a *ſpecific againſt venereal and cutaneous diſorders*, and, as ſuch, was made uſe of for ſome time, but at length gave place to medicines of a more powerful kind. It is generally ſup-

posed to promote *insensible perspiration* and *the urinary discharge*; and by its unctuous quality *to obtund acrimonious juices.*

MED. VIRT. *Diaphoretic — Diuretic.*

CICHOREI folia, radix: Cichorii Intybi Lin. Wild succory; the roots and herb.

The root has a moderately bitter taste, with some degree of roughness; the leaves are somewhat less bitter: the roots, stalks, and leaves yield, on being wounded, a milky saponaceous juice. By culture this plant loses its green colour and its bitterness, and in this state is employed in salads: the darker coloured, and more deeply jagged the leaves, the bitterer is their taste. Wild succory is an *useful detergent, aperient*, and *attenuating medicine*, acting without much irritation, *tending rather to cool than to heat the body*, and, at the same time, *corroborating the tone of the intestines.* The juice taken in large quantities, so as to keep up a gentle diarrhœa, and continued for some weeks, has been found to produce excellent effects in scorbutic and other chronical disorders.

MED. VIRT. *Laxative — Antiscorbutic.*

CICUTÆ *folia: Conii maculati Lin.* Hemlock; the leaves, flower, and seed [*L. E.*]

As it is of great importance to be perfectly acquainted with this vegetable substance, being the mildest of the hemlocks, the following description has been given in order to distinguish it from the rest; and from other plants also to which it is similar in appearance.

The LEAVES are large, with a hollow round rib; of a dark or blackish green colour on the upper side, and of a whitish green underneath; separated into a number of small oblong, somewhat oval segments, which stand in pairs: these segments are again deeply cut, but not quite divided on both sides; and many of these ultimate sections have one or two slighter indentions. The flowers consist of five white pointed petals. The seeds are flat on one side, on the other convex, and rendered unequal by five elevated striæ. These striæ are elegantly indented like a saw, and this last is a most certain characteristic. The whole plant is somewhat smooth.

The ROOT is biennial, white, the thickness of a finger, often branched: the first year only producing leaves, when it yields, on being cut, a milky liquor; the second year, when it has stalks, it is almost juiceless.

The stalk, which rises several feet high, is as thick as the finger, round, hollow, with impervious knots, greenish, and having commonly spots of a deep red, variegated irregularly with white streaks, and spots of a red or blackish purple.

The leaves, stalks, and flowers, have a peculiar fœtid smell, like mice, which at some times is in the highest degree; at others so little, even in the same plant, as scarcely to be perceptible, unless when rubbed between the fingers. The hemlock, though genuine, which has not this smell, must not be taken, as being less efficacious. This plant is common about the sides of fields, under hedges, and in moist shady places, and flowers in June and July. Hemlock is sometimes applied externally as a *discutient.* With regard to its virtue when taken internally, it has been generally accounted poisonous, which it doubtless is, in a high degree, when used in any considerable quantity. But Dr. Stoerck has found, that in certain small doses it may be taken with great safety, and that, without at

all disordering the constitution, or even producing any sensible operation, it sometimes proves a powerful resolvent in many obstinate disorders. It is used with advantage in scrophulous tumors; in foul as well as scrophulous and venereal ulcers, both internally and externally; in scabies; phthisis; rheumatism, &c. &c. See *Succus cicutæ spissatus.*

MED. VIRT. *Resolvent* and *alterant.*

PREP. *Powder* and *Extract.*

CINARA: *Cinara Scolymus Lin. S. P.* Artichoke; the leaves [*L. E.*]

This plant is too well known to need any description. The expressed bitter juice of the leaves, not depurated, or only freed from the grosser feculencies by pressing it through a coarse strainer, is mixed with an equal quantity of white wine, and three or four table spoonfuls of this mixture given night and morning, as a diuretic, in some dropsical cases, or as a deobstruent in jaundice. In a larger dose, it is a strong purgative. For these purposes sometimes an infusion of the leaves is used: but this mode of administration is more uncertain.

MED. VIRT. *Diuretic.*

PREP. *Expressed juice—Infusion.*

CINCHONÆ CORTEX: *Cinchonæ officinalis Lin. S. P.* [*L. E*]

This is a species of the Jesuits' bark, the product of Jamaica and the Caribbee islands. This tree, called by the natives the sea-side beech, grows to the height of from twenty to forty feet. The outer bark of these trees is white, furrowed, and very thick. This is inert, and may be knocked off from the inner, which is of a dark brown colour. Its flavour is at first sweet, with a mixture of the taste of horseradish and of the eastern aromatics; but when swallowed, it has that very bitterness and astringency which characterise the Peruvian bark. It yields its virtues both to cold and warm water; and a decoction of half an ounce of it, boiled in a quart of water to the consumption of a pint, proved as strong as a decoction of an ounce and an half of the true bark. With the addition of orange peel it makes an elegant and grateful bitter tincture. It has been given in London in an intermittent, and effected a cure as completely as the Peruvian bark.

MED. VIRT. *Resolvent* and *alterant.*

PREP. *Powder* and *Extract.*

CINERES RUSSICI: *Cineres clavellati; Kali impurum.* Pot-ash; and pearl-ash; Russian pot-ash [*L. E.*]

Pot-ash is an impure alkaline salt, produced from vegetable matters by burning. The strongest is brought from Russia, in dark coloured very hard masses, which do not soon deliquate in the air, like the purer alkaline salts. This sort is said to be prepared by burning wood with a close smothering heat, and making the ashes, with a ley drawn from the coarser part of them, into a paste, which is afterwards stratified with some of the more inflammable kinds of wood, and burnt a second time: by these means the salt melts, and concretes with the earthy matter of the ashes into hard cakes; but it appears from experiment, that this kind of pot-ash contains, besides the vegetable earth, a large proportion of quicklime. A purer and whiter salt is brought to us from Germany, under the name of pearl-ashes: this is extracted from wood ashes by means of water, and afterwards reduced into a dry form by evaporation. These salts are liable to great abuses from sundry admixtures, and therefore should never be employed for medicinal purposes, without due purification:

this may be effected by ſolution in cold water, filtration, and exſiccation. See Part III. chap. viii.

CINNABARIS NATIVA. Native cinnabar.

This is a ponderous mineral of a red colour, found in Spain, Hungary, and ſeveral other parts of the world. The fineſt ſort is in pretty large maſſes, both externally and internally of an elegant deep red colour, which greatly improves upon grinding the maſs into fine powder; this is imported by the Dutch from the Eaſt-Indies. There is another ſort, of a good colour, in roundiſh drops, ſmooth without, and ſtriated within.

This mineral appears from chemical experiments to be compoſed of mercury and ſulphur, in ſuch a manner, that the quantity of the former is commonly above ſix times greater than that of the latter: the finer the colour of the cinnabar, the more mercury it is found to hold. Native cinnabar has been by many preferred as a medicine to that made by art: but there does not appear to be any juſt foundation for this preference. The native has ſometimes been obſerved to occaſion nauſea, vomiting, and anxiety: theſe probably proceeded from an admixture of ſome arſenical particles from which it could not be freed by repeated ablution. When pure, it has no quality or medical virtue diſtinct from thoſe of the artificial cinnabar; like which, it is not diſſoluble in the animal fluids, and is commonly found of little activity.

CINNAMOMUM. *Laurus Cinnamomum Lin.* Cinnamon, the bark, and its eſſential oil [*L. E.*]

This is a light thin bark of a reddiſh colour, rolled up in long quills or canes; of a fragrant, delightful ſmell, and an aromatic, ſweet, pungent taſte, with ſome degree of aſtringency; but ſo ſlight, that it can never be by itſelf depended upon. It is alſo ſtimulating and heating; for even the ſimple diſtilled water, when frequently employed, has proved hurtfully irritating to the ſtomach. It is generally mixed with the caſſia bark: this latter is eaſily diſtinguiſhable by its breaking over ſmooth, whilſt cinnamon ſplinters; and by its ſlimy mucilaginous taſte, without any thing of the roughneſs of the true cinnamon. Cinnamon is a very elegant and uſeful *aromatic*, more grateful both to the palate and ſtomach, than moſt other ſubſtances of this claſs: by its aſtringent quality it likewiſe *corroborates the viſcera*, and *proves of great ſervice in ſeveral kinds of alvine fluxes*, and *immoderate diſcharges from the uterus*. An eſſential oil, a ſimple and ſpirituous diſtilled water, and a tincture of it, are kept in the ſhops: it is likewiſe employed as a ſpicy ingredient in a great number of compoſitions. The eſſential oil is only obtained by us as imported from the Eaſt Indies; and, when obtained in its genuine ſtate, is one of the moſt powerful and agreeable aromatics we can employ.

MED. VIRT. *Aromatic — corroborant — aſtringent.*

PREP. *Powder — ſimple and ſpirituous diſtilled Water — Tincture — Eſſential Oil.*

CITREORUM cortex et ſuccus: Citrus medica Lin. Citrons; the yellow rind and juice.

The citron is an evergreen tree or ſhrub, of the ſame genus with the orange and lemon; it was firſt brought from Aſſyria and Media (whence the fruit is called *mala Aſſyria, mala Medica*) into Greece, and thence into the ſouthern parts of Europe, where it is now cultivated. Citrons are rarely made uſe of among us: they are of the

ſame quality with lemons, except that their juice is ſomewhat leſs acid.

COCCINELLA, *ſeu Cochinilla, Coccus Cacti Lin. S. N.* Cochineal [*L. E.*]

This is a ſmall irregular roundiſh body, of a dark red colour on the outſide, and deep bright red within: it is brought from Mexico and New Spain. This ſubſtance has long been ſuppoſed to be the ſeed of a plant: but it appears, from chemical experiments, to be an animal, and from the accounts of the more celebrated naturaliſts, an inſect, which breeds on the American prickly pear-tree, and adheres to it without changing its place. Cochineal has been ſtrongly recommended as a *ſudorific, cardiac*, and *alexipharmac*; but practitioners have never obſerved any conſiderable effects from it. Its greateſt conſumption is among the ſcarlet-dyers; and in medicine its principal uſe is as a colouring drug: both watery and ſpirituous liquors extract its colour.

COCHLEARIÆ HORTENSIS *folia: Lin.* Garden ſcurvy-graſs; the leaves [*L. E.*]

COCHLEARIÆ MARINÆ folia: Cochleariæ anglicæ Lin. Sea ſcurvy-graſs; the leaves.

Theſe plants have little other difference, as to their external appearance, than that expreſſed in their titles: in taſte and medical virtue, the former is conſiderably the ſtronger; and hence is alone retained both by the London and Edinburgh colleges.

Scurvy graſs is a pungent ſtimulating medicine; capable of *diſſolving viſcid juices, opening obſtructions of the viſcera and the more diſtant glands, and promoting the fluid ſecretions*: it is particularly celebrated in *ſcurvies*, and is the principal herb employed in theſe kinds of diſorders in the northern countries. It is eaten as ſallad, and the expreſſed juice is the moſt effectual as a medicine, and chiefly given under the title of Succus Cochleariæ Scorbuticus.

MED. VIRT. *Stimulating* and *Attenuant.*

PREP. *A Conſerve — Spirit — Expreſſed Juice.*

COFFEA: Coffea Arabica Lin. Coffee: the fruit of an oriental ſhrub called by JUSSIEU *jaſminum Arabicum lauri folio, cujus ſemen apud nos caffé dicitur.*

This fruit is employed rather as food than as a medicine. The medicinal effects expected from it are, to *aſſiſt digeſtion, promote the natural ſecretions*, and *prevent* or *remove a diſpoſition to ſleepiſneſs.*

MED. VIRT. *Stomachic* and *Corroborant.*

COLCHICUM: *Colchicum autumnale Stoerck. & Lin.* [*L. E.*]

Meadow Saffron: a plant growing in rich moiſt meadow grounds in the ſouthern and weſtern parts of England. It has a bulbous root, producing from the lower part a ſmaller bulb; from this laſt ariſes, in autumn, along a furrow in the ſide of the old root, a ſlender hollow tranſparent pedicle, widening at top into a flower like thoſe of crocuſes, of a whitiſh red purple colour: from the ſame root, next ſpring, come forth three or four upright leaves, like thoſe of the lily; in the middle of which appear, on ſhort pedicles, three triangular pods, about the ſize of ſmall walnuts, divided into three cells full of roundiſh dark-coloured ſeeds. The roots, freed from the outer blackiſh coat and the fibres at bottom, are, while freſh, of a white colour, fleſhy, and full of a milky juice.

This is one of thoſe plants, whoſe violent and ſingular effects engaged the attention of Dr. Stoerck. He obſerves, that on

cutting the fresh root into slices, the acrid particles emitted from it irritate the nostrils, fauces, and breast, and that the ends of the fingers with which it had been held, become for a time benumbed: that, applied for two minutes to the tip of the tongue, it rendered the part rigid, and almost void of sensation for six hours: that less than a grain, wrapt up in crumb of bread and taken internally, produced alarming symptoms, a burning heat and pain in the stomach and bowels, strangury, tenesmus, thirst, total loss of appetite, &c. which were greatly relieved by an acidulated mixture with syrup of poppies, and which on the fourth day went entirely off; that an infusion of three grains of the root in four ounces of wine, slowly swallowed, occasioned a tickling in the larynx, and short dry cough, soon after a heat in the urinary passages and a copious discharge of pale urine; that *an ounce of the sliced juicy root, being digested with a gentle heat in a pound of vinegar for forty-eight hours, and the bottle frequently shaken, the root became almost insipid, and the strained liquor proved acrid in taste, irritated and constringed the fauces, and raised a short cough: that this vinegar, mixed with twice its quantity of honey, and gently boiled down to the consistence of honey, proved a sufficiently grateful oxymel, which, taken in doses of a dram, promoted a copious discharge of urine, without inconvenience.* He made trial of this oxymel, in the hospital at Vienna, in desperate hydropic and others serous disorders, in which it was found to act as a most *potent diuretic.* He begins with giving a dram twice a day in any suitable vehicle, and gradually increases the dose to an ounce, and sometimes an ounce and a half in a day: if this last quantity proves ineffectual, he thinks there are little hopes of any benefit from this medicine. The Edinburgh college have now received into their Pharmacopœia a syrup of colchicum, made with the same infusion of the root in vinegar as above described, in which are dissolved twenty-six ounces of fine sugar. This syrup, in place of two or three drams merely, has been given to the extent of two or three ounces in a day, in general without inconvenience, and sometimes with good effects.

The London College form an oxymel, by putting to one pint of the vinegar of colchicum two pounds of clarified honey. However, the syrup is the best preparation, because with some people honey is apt to excite violent colic pains.

MED. VIRT. *Diuretic.*

PREP. *Syrup* and *Oxymel.*

COLOCYNTHIDIS *medulla. Cucumis Colocynthidis Lin.* Coloquintida, or bitter apple; the medullary part of the dried fruit [*L. E.*]

This is the produce of a plant of the gourd kind, growing in Turkey. The fruit is about the size of an orange: its medullary part, freed from the rind and seeds, is alone made use of in medicine: this is very light, white, spongy, composed of membranous leaves; of an extremely bitter, nauseous, acrimonious taste. Colocynth is one of the most powerful and most violent cathartics. Many eminent physicians condemn it as dangerous, and even deleterious: others recommend it not only as an efficacious purgative, but likewise as an alterative in obstinate chronical disorders. Thus much is certain, that colocynth, in the dose of a few grains, acts with great vehemence, disorders the body, and ometimes occasions a discharge of blood. Many attempts have been made to correct its virulence by the addi-

tion of acids, aſtringents, and the like; theſe may leſſen the force of the colocynth, but no otherwiſe than might be equally done by a reduction of the doſe. *The beſt method of abating its virulence, without diminiſhing its purgative virtue, ſeems to be by triturating it with gummy farinaceous ſubſtances*, or the *oily ſeeds*, which, without making any alteration in the colocynth itſelf, prevent its reſinous particles from cohering and ſticking upon the membranes of the inteſtines, ſo as to irritate, inflame, or corrode them. It is an ingredient in ſome of the purgative pills, and the cathartic extract of the ſhops; and is ſeldom uſed but in this way.

COLUMBÆ *radix* [*L. E.*]—This is a root brought from Columbo, a town in the iſland of Ceylon, from whence it takes its name; but we are not yet acquainted with the vegetable of which it is a part. It is brought to us cut in roundiſh pieces, about an inch long, and ſometimes two inches thick; covered with a thickiſh rough brown bark: the parenchyma ſlightly ſolid, appearing, after a tranſverſe ſection, marked with a large central diſk, brown ſtreaks, and yellow points. The ſmell is weakly aromatic, not diſagreeable; the taſte bitter, and ſomewhat acrid; chewed it ſoftens and almoſt diſſolves, tinging the ſaliva yellowiſh. By keeping, it is very apt to be worm-eaten; and its bitteriſhneſs diminiſhed.

The columbo root has long been a medicine in great repute among the natives of the countries which produce it, in diſorders of the ſtomach and bowels. It was, however, little known or regarded in this country, till Dr. Percival, in his Eſſays Medical and Experimental, Vol. II. publiſhed his obſervations and experiments on this root, with caſes of its efficacy in various diſeaſes depending on the ſtate of the bile: as the *bilious colic, bilious fevers, diarrhœas, habitual vomitings, dyſentery*, &c. Other practitioners have confirmed its utility in theſe caſes. It has been employed in *dyſpepſia*, with much advantage: but with regard to its peculiar power of changing the acrimony and correcting the putreſcency of the bile, from the experiments which have been made it does not appear to be more powerful than other bitters. Water is not ſo complete a menſtruum as ſpirits, but to their united action it yields a flavoured extract in very conſiderable quantity. The doſe of the powder uſually given, is from one ſcruple to two.

MED. VIRT. *Stomachic* and *Antiſeptic.*

PREP. *Powder — Tincture.*

CONESSI: Nerium antidyſenterricum Lin. Coneſſi.

This is the bark of a ſmall tree, growing in Ceylon and Madagaſcar, and on the Coromandel coaſt, where it is called *Coneſſi*. It is blackiſh outwardly, and covered more or leſs with a whitiſh moſs or ſcurf, which ſhould be ſcraped off. To the taſte it is gratefully bitter, and auſtere. In diarrhœas it is reckoned a ſpecific. ʒſs. or more may be taken four times a day, after a vomit has been given. The firſt day the number of ſtools is increaſed without any increaſe of griping; the ſecond, the colour of the ſtools is meliorated; and on the third or fourth, the conſiſtence becomes nearly natural; when it makes a cure. It *ſeldom fails of curing* a recent *diarrhœa* proceeding from irregularities in diet, without fever; and it is frequently of ſervice in habitual diarrhœas. It is alſo uſeful in *hæmorrhages*; and the root boiled in water makes good fomentations againſt *inflammatory tumours*; and ſome ſay, taken

internally, it is an useful *anthelmintic.*

MED. VIRT. *Antiseptic* and *Tonic.*

CONSOLIDÆ MAJORIS :— *Symphyti officinalis Lin.* Comfry; the root.

This is a rough hairy plant, growing wild by river-sides and in watery places. The roots are very large, black on the outside, white within, full of a viscid glutinous juice, of no particular taste. They agree in quality with the roots of althæa; with this difference, that the mucilage of *consolida* is somewhat stronger-bodied. Many ridiculous histories of the *consolidating* virtues of this plant are related by authors.

MED. VIRT. *Emollient.*

CONTRAYERVA [*L. E.*] *Dorstenia Contrayerva Lin. S. P.*

This is a knotty root, an inch or two in length, about half an inch thick, of a reddish-brown colour externally, and pale within: long, tough, slender fibres shoot out from all sides of it, which are generally loaded with small round knots. This root is of a peculiar kind of aromatic smell, and a somewhat astringent, warm, bitterish taste, with a light and sweetish kind of acrimony when long chewed: the fibres have little taste or smell; the tuberous part therefore should be alone chosen. Contrayerva is one of the mildest of those substances called alexipharmacs: it is indisputably a *good and useful diaphoretic*, and may be safely given in much larger doses than the common practice is accustomed to exhibit it. Its virtues are extracted both by water and rectified spirit, and do not arise in evaporation with either: the spirituous tincture and extract taste stronger of the root than the aqueous ones.

MED. VIRT. *Diaphoretic — Stimulant.*

PREP. *Pulv. Contrayerv.* et *compositus.*

CORALLIUM RUBRUM :— *Isis nobilis Lin. S. P.* Red coral [*L.*]

This is also a marine production, of the same nature with coralline. It cannot reasonably be looked upon in any other light than as a mere absorbent; as such it enters the officinal crabs' claw powder, and is sometimes in practice directed alone.

MED. VIRT. *Absorbent.*

CORIANDRI *semen : Coriandri sativi Lin.* Coriander; the seed [*L. E.*]

Coriander is an umbelliferous plant, differing from all the others of that class in producing *spherical* seeds. These, when fresh, have a strong disagreeable smell, which improves by drying, and becomes sufficiently grateful; they are recommended as *carminative* and *stomachic.* Infused along with senna, they more powerfully correct the odour and taste than any other aromatic; and are equally powerful in obviating the griping that senna is very apt to produce.

MED. VIRT. *Carminative — Stomachic.*

CORNU CERVI. The stag or hart's horns [*E.*]

Many extraordinary virtues have been attributed to these horns, and to all the parts of the animal in general; but experience gives no countenance to them; nor do they seem to have any other foundation than the great timidity of the hart, the annual renewal of his horns, and an opinion of his extraordinary longevity; from these circumstances it was inferred, that all the parts of him must be proper for intimidating the enraged Archeus, renewing health and strength, and prolonging life.

The horns, boiled in water, give an emollient nutritious *jelly* [*E.*]

Burnt to whiteneſs, they yield an *abſorbent earth*, purer from gelatinous matter than the natural teſtaceous abſorbents, but which appears to be weaker in its abſorbent power. This earth is employed in the officinal white decoction.

MED. VIRT. *Emollient — Nutritious.*

CRETA [*L. E.*] White chalk.

This is a pure alkaline earth, totally ſoluble in vinegar and the lighter acids, ſo as to deſtroy every ſenſible mark of their acidity. This earth is one of the moſt uſeful of the abſorbents, and is to be looked upon ſimply as ſuch; the aſtringent virtues which ſome attribute to it have no foundation, unleſs ſo far as the earth is ſatiated with acid, with which it compoſes a ſaline concrete manifeſtly ſubaſtringent. The creta, like the other teſtacea, corrects the acidities, and may be uſed in large quantities; they ſometimes ſeem to be of ſervice in diarrhœas, merely from correcting acidity, which, being mixed with the bile, occaſioned the diſeaſe—not from any aſtringent power.

MED. VIRT. *Abſorbent.*

CROCUS: *Crocus ſativus C. B. Lin. S. P.* Saffron; the chives or fleſhy capillaments growing at the end of the piſtil of the flower, carefully picked and preſſed together into cakes [*L. E.*]

There are three ſorts of ſaffron met with in the ſhops, two of which are brought from abroad, the other is the produce of our own country; this laſt is greatly ſuperior to the other two, from which it may be diſtinguiſhed by its blades being broader. When in perfection, it is of a fiery orange-red colour, and yields a deep yellow tincture: it ſhould be choſen freſh, not above a year old, in cloſe cakes, neither dry, nor yet very moiſt, tough and firm in tearing, of the ſame colour within as without, and of a ſtrong, acrid, diffuſive ſmell.

Saffron is a very elegant and uſeful aromatic: beſides the virtues which it has in common with all the bodies of that claſs, *it remarkably exhilarates, raiſes the ſpirits*, and *is accounted one of the higheſt cordials*; taken in large doſes, it is ſaid to *occaſion immoderate mirth, involuntary laughter*, and the ill effects which follow from the abuſe of ſpirituous liquors. This medicine is particularly ſerviceable *in hyſteric depreſſions* proceeding from a cold cauſe or *obſtruction of the uterine ſecretions*, where other aromatics, even thoſe of the more generous kind, have little effect. Saffron imparts the whole of its virtue and colour to rectified ſpirit, proof ſpirit, wine, vinegar, and water: a tincture drawn with vinegar loſes greatly of its colour in keeping: the watery and vinous tinctures are apt to grow ſour, and then loſe their colour alſo; that made in pure ſpirit keeps in perfection for many years.

Notwithſtanding the great power attributed to this medicine by many writers, from the experiments carefully made by later practitioners it has not appeared to be of any conſequence. Dr. Cullen ſays, in two inſtances he thought it manifeſted ſome power as an emmenagogue: but though tried in many other caſes in large doſes, it had diſappointed his expectations. In ſeveral hyſterical caſes it has been given to the extent of half an ounce a day, without producing any ſenſible effect; ſo that now it has almoſt fallen into diſuſe except as a colouring ingredient.

CUBEBÆ: *Piper Cubeba Lin. Suppl. P.* Cubebs [*L. E.*]

Cubebs are a fruit brought from the Eaſt Indies. This fruit has a great reſemblance to pepper. The principal difference diſtinguiſhable

by the eye, is, that each cubeb is furnished with a long slender stalk (whence they are called by some *piper caudatum*). In aromatic warmth and pungency, cubebs are far inferior to pepper; but their odour and flavour are more agreeable than either of the peppers; and they make a pleasanter ingredient in the vinum amarum than either the pepper or ginger.

MED. VIRT. *Aromatic* and *Stimulant.*

CUCUMERIS HORTENSIS *semen. Cucumis sativus Lin.* Garden cucumbers; the seeds.

These are in the number of the four greater cold seeds; they are less apt to grow rancid in keeping than the others of that class.

The cucumber, though not very nutrient, still makes a considerable part of the aliment of persons in warm climates and seasons; and its aqueous, cooling, and acescent quality, renders it a very pleasant summer aliment. The firmness however of its texture occasions it often to be retained long in the stomach: it is therefore properly accompanied with some of the condiments.

MED. VIRT. The FRUIT *diluent*——SEED *refrigerant.*

CUCUMERIS AGRESTIS *fructus. Momordicæ Elaterii Lin.* Wild cucumber; the fruit [*L. E.*]

This plant, found wild in foreign countries, is, with us, cultivated in gardens. Its principal botanic difference from the former is the smallness of its fruit, which is no bigger than a Spanish olive: when ripe, it bursts on a light touch, and sheds its seeds with violence, and hence was named by the Greeks *elaterium*. This name was applied likewise to the inspissated juice of the fruit, *the only preparation of the plant made use of in medicine.* (See the third Part, under the term ELATERIUM.) Elaterium is a strong *cathartic*, and very often operates also upwards. Two or three grains are accounted in most cases a sufficient dose. Simon Paulli relates some instances of the good effects of this purgative in dropsies; but cautious practitioners have not recourse to it till after milder medicines have proved ineffectual; to which caution we heartily subscribe. Medicines, indeed, in general, which act with violence in a small dose, require the utmost skill to manage them with any tolerable degree of safety: to which may be added, that the various manners of making these kinds of preparations, as practised by different hands, must needs vary their power; though it has been given amongst modern practitioners with success in some obstinate hydropic cases. Exhibited in small doses of half a grain, and repeated at short intervals, it produces its effects; it in general acts moderately: some give it in doses to adults of one or two grains, successfully sometimes: some unite it in small doses with other medicines to promote urine.

MED. VIRT. *Strong Cathartic.*

PREP. *Inspissated Juice.*

CUCURBITÆ semen. Cucurbitæ lagenariæ Lin. The gourd; its seeds.

These are in the number of the four greater cold seeds. They unite with water by trituration into an emulsion, and yield to the press a soft insipid oil, and possess the general virtues of unctuous substances.

MED. VIRT. *Refrigerating.*

CUPRUM [*L. E.*] *Cuprum nativum Lin.* Copper.

The preparations of copper are *violently emetic*, and therefore very rarely exhibited internally. Some have ventured upon a solution of a grain or two of the metal in vegetable acids, and observe, that it

acts almost as soon as received into the stomach, so as to be of good use for occasioning poisonous substances that have been swallowed, to be immediately thrown up again. Boerhaave recommends *a saturated solution of this metal in volatile alkaline spirits*, as a medicine of great service in disorders proceeding from an acid, weak, cold, phlegmatic cause: if three drops of this tincture be taken every morning with a glass of mead, and the dose doubled every day to twenty-four drops, it proves (he says) *aperient, attenuating, warming*, and *diuretic*: he assures us, that by these means he cured a confirmed ascites, and that the urine ran out as from an open pipe; but at the same time acknowledges, that, upon trying the same medicine on others, it failed. He likewise recommends other preparations of copper, as of wonderful efficacy in certain kinds of ill habits, weakness of the stomach, &c. but we cannot think the internal use of this metal commendable, or even safe. Physicians in general seem to be agreed, that it has really a virulent quality; and too many examples are met with of fatal consequences ensuing upon eating food that had been dresst in copper vessels not well cleaned from the rust which they had contracted by lying in the air.

Great care ought to be taken that acid liquors, or even water designed for internal use, be not suffered to stand long in vessels made of copper: otherwise they will dissolve so much of the metal as will give them disagreeable qualities. Hence in the distillation of simple waters with copper stills, the last runnings, which are manifestly acid, have frequently proved emetic. It is remarkable, that whilst weak acid liquors are kept boiling in copper vessels, they do not seem to dissolve any of the metal; but if suffered to remain in them for the same length of time without boiling, they become notably impregnated with the copper. Hence the confectioners, by skilful management, prepare the most acid syrups in copper vessels without giving them any ill taste from the metal.

The preparations of copper which are in use, are the acetated copper, or verdigris; the vitriolum cœruleum, or blue vitriol; and cuprum ammoniacum. The first is chiefly used in external applications; the two latter internally, beginning with very small doses, and increasing them gradually, till they create a slight degree of nausea upon the stomach; a quarter of a grain twice a day, which may be increased progressively to five: these have been supposed to be of service by their tonic and astringent powers in *hysteria* and *epilepsy*; but the cuprum ammoniacum is allowed to be the mildest medicine. Should the medicine not shew any good effect in the course of one month, it will be prudent to desist, and only give it some days before the expected accession of the paroxysm.

Blue vitriol is also given as an emetic in incipient phthisis, with a view of resolving tubercles.

Verdigris, from its stimulant and escharotic powers, has been long applied for the *cleansing of foul ulcers*, and bringing them to a discharge of laudable pus. A weak solution of verdigris has been used for *restraining inflammation of the eyes*; but a great deal of nicety is required in the management, to avoid its becoming too irritative.

MED. VIRT. *Escharotic — Tonic — Astringent.*

PREP. *Verdigris — blue Vitriol — ammoniacal Copper.*

CURCUMA [*L. E.*] *Curcuma longa Lin.* Turmeric.

Turmeric is a root brought from

the Eaſt Indies. It is internally of a deep lively yellow, or ſaffron-colour, which it readily imparts to watery liquors. It has an agreeable, weak ſmell, and a bitteriſh ſomewhat warm taſte. Turmeric is eſteemed *aperient* and *emmenagogue*, and of *ſingular efficacy in the jaundice*. It tinges the urine of a ſaffron-colour.

MED. VIRT. *Aromatic — Aperient — Emmenagogue.*

CURSUTÆ *radix: Gentianæ purpureæ Lin.* [*E.*]

This is a foreign root, which has been uſed by ſome practitioners at Edinburgh for more than forty years. It is a ſtrong bitter, has very much the appearance and taſte of gentian; and in no degree ſuperior, though by ſome it is uſed in *dyſpepſia*; Dr. Home, in his liſt of the materia medica, ſtyles it *Gentiana lutea ſylveſtris*; while he terms the common gentian, *Gentiana lutea ſativa*. No botanic author, however, makes this diſtinction; nor can the name of curſuta be met with in any writer the editor has conſulted.

MED. VIRT. *Stomachic.*

CYDONIA MALA, *eorumque ſemina: Pyrus Cydonea Lin.* The quince-tree; the fruit and its ſeeds [*L.*]

Quinces have a very auſtere acid taſte: taken in ſmall quantity, they are ſuppoſed to *reſtrain vomiting*, and *alvine fluxes*; and more liberally, *to looſen the belly*. The ſeeds abound with a mucilaginous ſubſtance, of no particular taſte, which they readily impart to watery liquors: an ounce will render three pints of water thick and ropy like the white of an egg.

MED. VIRT. FRUIT *Stomachic and Corroborant* — SEEDS *Emollient.*

PREP. *A mucilage from the Seeds.*

CYMINI *ſemen: Cumini Cymini Lin.* Cummin; the ſeeds. [*L. E.*]

This is an umbelliferous plant, in appearance reſembling fennel, but much ſmaller; the ſeeds are brought chiefly from Sicily and Malta. Cummin ſeeds have a bitteriſh warm taſte, accompanied with an aromatic flavour, not of the moſt agreeable kind. They are accounted good *carminatives*, but not very often made uſe of.

MED. VIRT. *Aromatic — Stimulant.*

CYNOSBATI *fructus: Roſæ caninæ Lin.* The wild briar, dog roſe, or hip tree; its fruit [*L.*]

This buſh grows wild in hedges throughout England. The flowers have a pleaſant ſmell; but ſo weak, that Parkinſon and others have named the plant *roſa ſylveſtris inodora*: a water diſtilled from them ſmells agreeably. The fruit or hips contain a ſouriſh ſweetiſh pulp; with a rough prickly matter incloſing the ſeeds, from which the pulp ought to be carefully ſeparated before it is taken internally. The Wirtemberg college obſerves, that from a neglect of this caution, the pulp of hips ſometimes occaſions a pruritus, and uneaſineſs about the anus; and I have known the conſerve of it to excite violent vomiting.

This poſſeſſes no material qualities that give it any right to be introduced either into diet or medicine; and the conſerve is kept merely to give form to other medicines.

CYPERI LONGI Lin. radix: Long cyperus; the root.

This is a plant of the graminifolious kind; it is ſometimes found wild, in marſhy places in England; the roots have been generally brought to us from Italy. This root is long, ſlender, crooked, and full of knots: outwardly of a dark brown, or blackiſh colour, inwardly whitiſh; of an aromatic ſmell, and an agreeable warm taſte: both the taſte and ſmell are improved by

moderate exſiccation. Cyperus is accounted a good ſtomachic and carminative, but at preſent very little regarded.

DACTYLI: fructus. Phœnicis dactyliferæ Lin.

Dates, a half-dried imported fruit, about the ſhape of an acorn, but generally larger, conſiſting of a ſweet pulpy part and a hard ſtone: the beſt are brought from Tunis. They were formerly uſed in pectoral decoctions, and ſuppoſed, beſides their emollient and incraſſating virtue, to have a ſlight aſtringency.

MED. VIRT. *Emollient* and *ſlightly Aſtringent.*

DAUCI CRETICI ſemen: Athamantæ Cretenſis Lin. Candy carrot, or carrot of Crete; the ſeeds.

This is an umbelliferous plant, growing wild in the Levant, and the warmer parts of Europe. The ſeeds, which are brought from Crete, have a warm biting taſte, and rather an aromatic ſmell. They are *carminative*, and ſaid to be *diuretic*, but at preſent little uſed.

MED. VIRT. *Aromatic.*

DAUCI SYLVESTRIS *ſemen: Dauci carotæ Lin.* Wild carrot; the ſeed [*L. E.*]

This is common in paſture grounds and fallow fields throughout England. The ſeeds poſſeſs the virtues of thoſe of the *daucus Creticus*, in an inferior degree: and have often ſupplied their place in the ſhops; and been themſelves ſupplied by the ſeeds of the garden carrot: theſe laſt are, in warmth and flavour, the weakeſt of the three: the ſeeds of the Candy carrot are much the ſtrongeſt. They are uſed in cachectic and ſcorbutic diſorders, and in dropſy.

MED. VIRT. *Aromatic.*

DENTIS LEONIS *ſive Taraxaci, radix et folia: Leontodon Taraxacum Lin.* Dandelion; the root and herb [*L. E.*]

This plant is common in fields, and uncultivated places; it has ſeveral narrow dentated leaves lying on the ground, with a ſlender naked ſtalk ſuſtaining a yellow flower. The root, leaves, and ſtalk, contain a bitter milky juice: they promiſe to be of uſe as *aperient* and *detergent medicines*; particularly in the jaundice and other hepatic obſtructions, and have ſometimes been directed in this intention with ſucceſs. Boerhaave eſteems them capable, if duly continued, of *reſolving almoſt all kinds of coagulations*, and *opening very obſtinate obſtructions of the viſcera.*

Indeed we have various proofs of the good effects of dandelion related by Van SWIETEN, BERGIUS, MURRAY, ZIMMERMAN, HALLER, and other authors of great reſpectability, not only in the complaints recited above, but alſo in *dropſy*, *pulmonic tubercles*, in *impetigo*, *ſcabies*, and other *cutaneous diſorders*, likewiſe in *ſtones in the kidneys.* It has been given in doſes of from ℥ij to ℥iv. of the expreſſed juice, three or four times a day, or a ſtrong decoction of the roots. The leaves, roots, flower-ſtalks, and juice of this plant, have all been ſeparately employed for medical purpoſes, and ſeem rather to differ in degrees of ſtrength, than any eſſential property. It has been given in broths, whey, mixed with cream of tartar, and joined with graſs roots; and, taken every day for weeks, or months, has been ſaid to ſucceed often in *reſolving a hardneſs of the liver*, where other remedies have failed. The plant ſhould always be uſed freſh; the extract appears to loſe much of its ſtrength by keeping; though, made in a ſoft form, and given freſh from two to four tea ſpoonfulls every morning,

it has been extolled for *obſtructed viſcera*, *jaundice*, and *coſtiveneſs*, and for *tubercles of the lungs*.

DICTAMNI CRETICI folia: Origanum Dictamnus Lin. Dittany of Crete.

This is a kind of origanum, ſaid to grow plentifully in the iſland of Candy, in Dalmatia, and in the Morea: it has been found hardy enough to bear the ordinary winters of our own climate. The leaves, which are the only part in uſe with us, come from Italy. The beſt ſort are well covered over with a thick white down, and now and then intermixt with purpliſh flowers. In ſmell and taſte, they ſomewhat reſemble lemon-thyme; but have more of an aromatic flavour, as well as a greater degree of pungency; when freſh, they yield a conſiderable quantity of an excellent eſſential oil.

DIGITALIS *folia: Digitalis purpureæ Lin.* Fox-glove; the leaves [*L. E.*]

This grows wild in woods, on uncultivated heaths, and under hedges; the leaves are oblong, acuminated, and ſomewhat hairy, with a thick, angular, hollow ſtalk, on which numerous purple tubulous flowers, reſembling the finger of a glove, hang downwards in a row along one ſide; each on a ſhort pedicle. It flowers in May and June.

The leaves are to be gathered after the flowering ſtem has ſhot up, and about the time the bloſſoms are coming forth; the leaves have a bitteriſh nauſeous taſte, and been ſtrongly recommended, externally againſt *ſcrophulous tumours*; and likewiſe internally, in *epileptic diſorders*; what ſervice they may be capable of doing in theſe caſes, we have no experience. Several examples are mentioned by medical writers of their occaſioning *violent vomiting*, *hypercatharſes*, and *diſordering the whole conſtitution*; inſomuch that Boerhaave accounts them poiſonous. It has lately been much recommended in dropſical and aſthmatic caſes, and is conſidered as one of our moſt certain diuretics. It is given in decoction, infuſion, and in powder: of the latter, from $\frac{1}{3}$ of a grain to two grains has been given for a doſe with three grains of aromatic powder, twice a day. The infuſion is to be made with the dried leaves, one dram to half a pint of boiling water, to ſtand four hours, ſtrained, and mixed with one ounce of ſpirit of nutmegs, of which one or two table ſpoonfulls may be taken twice a day; one grain of calomel once or twice a day has been ſucceſsfully conjoined. In the adminiſtration, great caution is requiſite, as it has been found very poſſible to pour in an injurious quantity of this medicine before any of the ſignals for diſcontinuance have appeared. It therefore ſhould be given in ſmall doſes, and at diſtant periods, and the uſe to be ſtopped on the appearance of its affecting the pulſe, ſtomach, kidneys, or the bowels.

MED. VIRT. *Emetic—Cathartic—Diuretic.*

PREP. *Decoction--Infuſion--Powder.*

DOLICHOS *Ph. Edinb. Dolichos pruriens Lin.* Couhage, or Cow-Itch. *Cadjuct*, *Bengalis* [*E.*]

This is an herbaceous plant, of the papilionaceous tribe, growing in the Eaſt and Weſt Indies. It bears pods denſely covered with ſharp hairs, which have the property of penetrating the ſkin, and cauſing a moſt troubleſome itching. In the Weſt Indies, the cow-itch is given internally, as an *efficacious anthelmintic*. The moſt particular account of the uſe of this remedy is contained in Mr. Bancroft's Hiſtory of Guinea, and it is confirmed by a letter in the Medical Commentaries, vol. II.

The manner in which it is employed, is to mix the hairy matter ſcraped off from the pods, with ſyrup or melaſſes, into a thin electuary, of which a tea ſpoonful is given to a child two or three years old, and double the quantity to an adult. The doſe is exhibited in the morning, faſting, for three ſucceſſive days, after which a doſe of rhubarb is given. The worms are ſaid to appear with the ſecond or third doſe; and by means of a purge in ſome caſes the ſtools are ſaid to conſiſt entirely of worms; and in caſes of lumbrici it is ſaid alſo to produce a ſafe and effectual cure. Its effects are repreſented as remarkably powerful and certain, without the leaſt dangerous conſequence.

Mr. Kerr has given a botanical deſcription of the plant in the Medical Commentaries, vol. II.

DORONICI GERMANICI, *ſeu Arnicæ, flores*: *Arnicæ montanæ Lin. S. P.* German leopardſbane; the leaves and root [*L. E.*]

This acrid and bitter plant grows in various mountainous parts of Europe; that, however, from Bohemia and Saxony is preferred, on account of its ſtronger ſmell.

It has long been in reputation in Germany, as a *reſolvent* of *coagulated blood*, and generally given after contuſions and internal bleedings; from its ſuppoſed good effects in which caſes, it has been called panacea Lapſorum. Formerly an infuſion or decoction in beer, of ʒj or ℥ij of the herb alone, or with the flowers, was employed: of late, the flowers have been preferred. Both are ſometimes *diuretic*, ſometimes *diaphoretic*, and very often they occaſion nauſea, anxiety, and vomiting. The flowers are earneſtly recommended by Collin *in paralytic* and *ſpaſmodic caſes*: he gave an infuſion of ʒj, to ʒiij, to a pint of water; or ʒj to ʒij of the powder mixed with honey into an electuary, either of which was the quantity for a day.

A ſtrong infuſion of theſe flowers was the popular remedy for intermittents in the diſtrict of Lutia. Dr. Mangor, of Wiburg, tried them in two caſes; an infuſion of half a maniple in half a pint of boiling ſmall beer, was taken warm two hours before the paroxyſm by each patient; one of whom was cured by the firſt doſe, the other by the ſecond. It vomited both ſmartly.

The root has been of late employed in *dyſentery*, either alone or joined with other remedies.

The arnica has alſo been recommended in *paralytic caſes*, and alſo where a *loſs or diminution of ſenſe ariſes from an affection of the nerves*, as in inſtances of *amauroſis*; in theſe it has chiefly been employed in infuſion. From ʒj to ℥ſs of the flowers has been infuſed in ℔j of boiling water and taken in different doſes in the courſe of the day.

MED. VIRT. *Antiſpaſmodic* — *Emetic* — and *Cathartic*.

PREP. *Infuſion* — *Electuary*.

DULCAMARA, *ſeu Amara-dulcis*: *Solanum dulcamara Lin. Stipites*, the ſtalks; Bitterſweet, or woody nightſhade [*E.*]

This plant grows wild in moiſt hedges, and climbs on the buſhes with woody brittle ſtalks. The taſte of the twigs and roots, as the name of the plant expreſſes, is both bitter and ſweet; the bitterneſs being firſt perceived, and the ſweetneſs afterwards. They are commended as deobſtruents for reſolving coagulated blood, &c. and are ſaid to occaſion generally ſome conſiderable evacuation by ſweat, urine, or ſtool, particularly the laſt.

They have ſometimes been given with ſucceſs in the *rheumatiſm*, but do not always anſwer the purpoſe. They have alſo been recommended

in ſome *cutaneous diſeaſes of the herpetic kind.*

MED. VIRT. *Diaphoretic—Attenuant—Cathartic.*

PREP. *Infuſion.*

EBULI folia, cortex, radix: *Sambuci ebuli Lin.* Dwarf elder, or danewort; the root, bark, and leaves.

This plant grows wild in ſome counties of England; but about London is rarely met with, unleſs in gardens: the eye diſtinguiſhes little difference betwixt it and the elder tree, except in the ſize; the elder being a pretty large tree, and the dwarf elder only an herb three or four feet high. The leaves, roots, and bark of *ebulus* have a nauſeous, ſharp, bitter taſte, and a kind of acrid ungrateful ſmell: they are all *ſtrong cathartics*, and as ſuch are recommended in dropſies, and other caſes where medicines of that kind are indicated. The bark of the root is ſaid to be ſtrongeſt; the leaves the weakeſt. But they are all too churliſh medicines for general uſe; they ſometimes evacuate violently upwards, almoſt always nauſeate the ſtomach, and occaſion great uneaſineſs of the bowels. By boiling they become (like the other draſtics) milder, and more ſafe in operation. Fernelius relates, that by long coction they entirely loſe their purgative virtue. The berries of this plant are likewiſe purgative, but leſs virulent than the other parts. A rob prepared from them may be given to the quantity of an ounce, *as a cathartic*; and in ſmaller doſes as an *aperient* and *deobſtruent in chronic diſorders*; in this laſt intention, it it is ſaid by Haller to be frequently uſed in Switzerland, in the doſe of a dram.

MED. VIRT. *Strongly Cathartic.*

PREP. *Rob from the berries.*

ELEMI: *Amyris Elemifera Lin. Sp. P.* Gum Elemi. [*L.*]

This is a reſin brought from the Spaniſh Weſt Indies, and ſometimes from the Eaſt Indies, in long roundiſh cakes, generally wrapped up in flag leaves. The beſt ſort is ſoftiſh, ſomewhat tranſparent, of a pale whitiſh yellow colour, inclining a little to green, of a ſtrong not unpleaſant ſmell. It almoſt totally diſſolves in pure ſpirit, and ſends over ſome part of its fragrance along with this menſtruum in diſtillation: diſtilled with water, it yields a conſiderable quantity of a pale coloured, thin, fragrant, eſſential oil. This reſin gives name to one of the officinal unguents, and is at preſent ſcarce any otherwiſe made uſe of; it has been much employed in *promoting the digeſtion and deterſion of wounds*, and ſeldom for any other purpoſe; though the green is certainly preferable, for internal purpoſes, to ſome others which are held in greater eſteem.

MED. VIRT. *Stimulant.*

ELEUTHERIÆ, *ſeu Caſcarillæ cortex* [*L. E.*] *Crotonis Caſcarillæ Lin.* Caſcarilla; a bark ſaid to be imported into Europe from one of the Bahama iſlands called *Elatheria*, in curled pieces, or rolled up into ſhort quills, about an inch in width, pretty much reſembling in appearance the *Peruvianus cortex*, but of a paler brown colour on the inſide, leſs compact and more friable.

Its taſte is more bitter, yet leſs diſagreeable and leſs rough, than that of the Peruvian bark; with a conſiderably greater ſhare of aromatic pungency and heat: the thin outward ſkin, which is of a whitiſh colour, has no taſte. It is eaſily inflammable, and yields, while burning, a very fragrant ſmell: this peculiar property diſtinguiſhes the *eleutheria* from all other known barks.

Stiſſerus ſeems to have been the firſt that employed the *cortex eleu-*

theriæ as a medicine in Europe; he relates (in his *Act. laborat. chym.* publiſhed in the year 1693) that he received this aromatic bark from England; and that, ſome time after, it was ſold at Brunſwick for Peruvian bark: that a tincture of it in alkalized vinous ſpirits, or dulcified alkaline ones, proved *carminative* and *diuretic*, and did conſiderable ſervice in *arthritic*, *ſcorbutic*, and *calculous caſes*; and that if taken immediately after meals, it affected the head a little. Eleutheria was ſoon after employed by Apinus *in an epidemic fever* which raged in ſome parts of Norway in 1694 and 1695: this diſeaſe, which at firſt had the appearance of an ordinary intermittent, at length was accompanied with petechial ſpots. The common alexipharmacs and ſudorifics were found ineffectual: but the powder or extract of this bark, joined with them, proved ſucceſsful, even after petechiæ had come forth: *dyſenteries ſucceeding the fever were removed by the ſame medicine.* During the uſe of the eleutheria, the patient generally ſweated plentifully, without loſs of ſtrength, or other inconvenience: the belly was likewiſe kept open; thoſe who did not ſweat, had three or four ſtools a day: where the menſtrual or hæmorrhoidal fluxes were ſuppreſſed at the beginning of the diſorder, they generally, upon the uſe of this medicine, re-appeared. Among the Germans, the eleutheria is at preſent in very great eſteem, and frequently employed *againſt common intermittents*, in preference to the Peruvian bark, as being leſs ſubject to ſome inconveniences which the latter, on account of its greater aſtringency, is apt to occaſion: it is alſo given, with ſucceſs, in *flatulent colics*, *internal hæmorrhages*, *dyſenteries*, the *diarrhœa of acute fevers*, and other ſimilar diſorders. The gentlemen of the French academy found this bark of excellent ſervice in *an epidemic dyſentery* in the year 1719: in which ipecacuanha proved ineffectual. M. Boulduc obſerved, that this latter left a lowneſs and weakneſs of ſtomach, which continued for a long time, whilſt eleutheria ſoon raiſed the ſtrength, and promoted appetite. Among us the uſe of this bark is not yet ſo general as it ſeems to deſerve: infuſions of it are ſometimes directed for promoting expectoration. It is given in form of tincture, powder, and extract. The doſe of the former is from one to three drams repeatedly in any convenient vehicle; and of the two latter, from ten to thirty grains.

MED. VIRT. *Tonic — Stomachic.*

PREP. *Tincture — Powder — Extract.*

ENDIVIÆ *radix*, *folia*: *Cichorii endiviæ Lin.* Endive: the roots and leaves [*E.*]

Endive is raiſed in gardens for culinary uſe. It is a gentle cooler and aperient, nearly of the ſame quality with the *cichorium*. The ſeeds are ranked among the four leſſer cold ſeeds.

ENULÆ CAMPANÆ: *Inula helenium Lin. S. P.* Elecampane; the root [*L.*]

This is a very large downy plant, ſometimes found wild in moiſt rich ſoils. The root, eſpecially when dry, has an agreeable aromatic ſmell: its taſte, on firſt chewing, is glutinous, and as it were ſomewhat rancid; in a little time it diſcovers an aromatic bitterneſs, which by degrees becomes conſiderably acrid and pungent. Elecampane root is principally recommended for *promoting expectoration in humoural aſthmas and coughs*: liberally taken, it is ſaid to *excite urine*, and *looſen the belly*. In ſome parts of Germany, large quantities of

this root are candied, and uſed as *a ſtomachic*, for *ſtrenthening the tone of the viſcera in general*, and *for attenuating tenacious juices*. Spirituous liquors extract its virtues in greater perfection than watery ones: the former ſcarce elevate any thing in diſtillation: with the latter an eſſential oil ariſes, which concretes into white flakes: this poſſeſſes at firſt the flavour of the elecampane, but is very apt to loſe it in keeping. Its doſe is from twenty to ſixty grains powdered.

MED. VIRT. *Aperient* and *Diuretic*.

PREP. *Candied — Powder.*

ERUCÆ ſemen: Braſſicæ Erucæ Lin. Rocket; the ſeeds.

This was formerly much cultivated in gardens for medicinal uſe, and for ſallads, but is at preſent leſs common. In appearance, it reſembles muſtard, but is eaſily diſtinguiſhable by the ſmoothneſs of its leaves, and its diſagreeable ſmell. The ſeeds have a pungent taſte, of the muſtard kind, but weaker: they have long been celebrated as *aphrodiſiacs*, and may, probably, have in ſome caſes a title to this virtue, in common with other acrid plants.

MED. VIRT. *Stimulant.*

ERYNGII *radix: Eryngii maritimi C. B. Lin. S. P.* Eryngo, or ſea holly; the root [*L. E.*]

This plant grows plentifully on ſome of our ſandy and gravelly ſhores; the roots are ſlender, and very long; of a pleaſant ſweetiſh taſte, which, on chewing them for ſome time, is followed by a light degree of aromatic warmth and acrimony. They are conſidered as *aperient* and *diuretic*, and have alſo been celebrated as *aphrodiſiac*: their virtues however are too weak to admit them under the head of medicines. The candied root is ordered to be kept in the ſhops.

MED. VIRT. *Aperient—Diuretic.*

ERYSIMI folia: Eryſimi officinalis Lin. Hedge muſtard; the leaves.

This is a low hairy plant, common in waſte places, and by way-ſides. The leaves are ſaid to *promote expectoration*, *excite urine*, and the *other fluid ſecretions*, *attenuate* and *diſſolve viſcid juices*, &c. This they are ſuppoſed to perform by an acrimonious ſtimulating quality; but the taſte diſcovers in them only an herbaceous ſoftneſs void of acrimony: the ſeeds indeed are conſiderably pungent, and the roots in ſome ſmall degree. It has been in eſtimation for the curing of hoarſeneſs, which it is ſuppoſed to effect by a gentle ſtimulus on the glands of the fauces. The juice ſhould be made uſe of mixed with an equal part of ſugar, or honey; two or three ſpoonfulls of which may be taken occaſionally, and gradually ſwallowed: in its ſtead, horſe-radiſh may be uſed, which often produces the ſame effect.—See RAPHANUS RUSTICANUS.

MED. VIRT. *Stimulant—Attenuant—Diuretic.*

PREP. *Juice.*

EUPATORII CANNABINI Lin. folia: Hemp agrimony, water agrimony, or water hemp; the leaves.

This plant is found wild by the ſides of rivers and ditches. It has an acrid ſmell, and a very bitter taſte, with a conſiderable ſhare of pungency. The leaves are greatly recommended *for ſtrengthening the tone of the viſcera*, and *as an aperient*; and ſaid to have excellent effects *in the dropſy*, *jaundice*, *cachexies*, and *ſcorbutic diſorders*. Boerhaave informs us, that this is the common medicine of the turf-diggers in Holland, *againſt ſcurvies*, *foul ulcers*, and *ſwellings in the feet*, to which they are ſubject. The root of this plant is ſaid to operate as a *ſtrong cathartic*.

MED. VIRT. *Attenuant — Corroborant.*

EUPHORBIUM. Euphorbia officinarum Lin. A gummy resin exuding from a large oriental shrub. It is brought to us immediately from Barbary, in drops of an irregular form; some of which, upon being broken, are found to contain little thorns, small twigs, flowers, and other vegetable matters; others are hollow, without any thing in their cavity: the tears in general are of a pale yellow colour externally, somewhat white withinside: they easily break betwixt the fingers. Lightly applied to the tongue, they affect it with a very sharp biting taste: and, upon being held for some time in the mouth, prove vehemently acrimonious, inflaming, and exulcerating the fauces, &c. Euphorbium is extremely troublesome to pulverise; the finer part of the powder, which flies off, affecting the head in a violent manner. The acrimony is so great as to render it absolutely unfit for any internal use; and we think, with Hoffman and others, that it ought to be expunged from the catalogue of internal medicines.

FERRUM et CHALYBS [*L. E.*] Iron and steel [*L. E.*]

Steel is accounted less proper for medicinal use than the softer iron, as being acted upon with more difficulty by the animal juices and the common menstrua: iron dissolves readily in all acids, and rusts freely in the air, especially if occasionally moistened with water; steel requires a longer time for its solution, and does not rust so easily.

The general virtues of these metals, and the several preparations of them, are, *to constringe the fibres, to quicken the circulation, to promote the deficient secretions in the remoter parts,* and at the same time *repress inordinate discharges into the intestinal tube.* After the use of them, if they take effect, the pulse is very sensibly raised; the colour of the face, though before pale, changes to a florid red; the alvine, urinary, and cuticular excretions, are increased. *Nidorous eructations, and the fæces voided of a black colour, are marks of their taking due effect.*

An *aperient virtue* is usually attributed *to some of the preparations* of iron, *and an astringent to others;* but in reality, they all produce the effects both of aperients and astringents, and seem to differ only in degree. Those distinguished by the name of astringent sometimes occasion a very copious discharge of urine, or a diarrhœa; whilst those called aperient frequently stop these evacuations.

Where either a præternatural discharge, or suppression of natural secretions, proceeds from a languor and sluggishness of the fluids, and weakness of the solids, this metal, by increasing the motion of the former, and the strength of the latter, will suppress the flux, or remove the suppression: but where the circulation is already too quick, the solids too tense and rigid, where there is any stricture or spasmodic contraction of the vessels; iron, and all the preparations of it, will aggravate equally both distempers.

Though the different preparations of iron act all in the same manner, yet they are not equally proper in all constitutions. Where acidities abound in the first passages, the crude filings, reduced into a fine powder, prove more serviceable than the most elaborate preparation of them. On the other hand, where there is no acid in the primæ viæ, the metal requires to be previously opened by saline menstrua: hence a solution of iron

in acid liquors has in many cases excellent effects, where (as Boerhaave obſerves) the more indigeſtible preparations, as the calces made by fire, have ſcarce any effect at all. If alkaleſcent juices be lodged in the ſtomach, this metal, though given in a liquid form, proves at leaſt uſeleſs; for here the acid ſolvent is abſorbed by the alkaline matters which it meets with in the body, ſo as to leave the iron reduced to an inactive calx.

Chalybeate medicines are likewiſe ſuppoſed to differ, independent of differences in the conſtitution, according to the nature of the acid united with the metal: vegetable acids ſuperadd a detergent and aperient virtue; combined with the vitriolic, the metal acts in the firſt paſſages powerfully as an aperient; whilſt the nitrous renders it extremely ſtyptic; and the marine, ſtill more ſo.

The ruſt of iron has been found one of the beſt preparations of iron, as there is generally a prevalent acid in the ſtomach, eſpecially in caſes where it is moſt likely to be uſeful, which uniting with the ruſt forms an active ſalt, poſſeſſed of aſtringent and tonic powers, upon the exertion of which all the benefit to be derived from chalybeates depends.

The prepared ruſt may be begun with in doſes of five grains, and increaſed further to as much as the ſtomach will bear; and if there are aromatics joined with it, its efficacy will be increaſed.

MED. VIRT. *Aſtringent* and *Tonic.*

PREP. See the third part of this Work, under *Preparations of Iron.*

FILICIS MARIS *radix: Polypodii Filicis Maris Lin.* Common male fern; the root [*E.*]

This vegetable is found growing in every part of Britain in great abundance on uncultivated ground. The greateſt part of the root lies horizontally; it conſiſts of a great number of long blackiſh fibres, matted together, and iſſuing from a thick knotty head: it has a great number of appendages placed cloſe to each other in a vertical direction, while a number of ſmall fibres ſtrike downwards. The large root, together with the appendages, are to be reſerved. The two ends, however, are to be cut off; the one being too old and ſpongy; the other, too new and green.

This root has been lately celebrated as an efficacious remedy againſt the tænia, or tape-worm: and indeed it appears to have been known to the ancients, and uſed with this view, as it is mentioned by Dioſcorides, Theophraſtus, and Galen. Notwithſtanding which, it had fallen into diſrepute, and was neglected, till Madame Noufer, a ſurgeon's widow, had acquired much celebrity by employing it as a ſpecific in the cure of this malady. It was exhibited in the following manner: To the patient was given an emollient glyſter, and a ſupper of panada with butter and ſalt; then in the morning, if *an adult*, while in bed, two or three drams of the powder of male fern recently gathered; if *an infant*, one dram, waſhed down with water; and two hours after a ſtrong cathartic, compoſed of calomel and ſcammony, was exhibited, proportioned to the ſtrength of the patient. Should this not operate in due time, a doſe of purging ſalt was to ſucceed; and if the worm was not expelled in a few hours, this proceſs at proper intervals was to be repeated. That this mode has ſucceeded there can be no doubt, becauſe it has been proved in ſeveral caſes: but whether the fern-root or the cathartic produces

the effect is uncertain; because, in several trials which have been made with the fern root in Scotland, it has been found that the stomach can bear considerable quantities, without the smallest inconvenience, and when given by itself it had no sensible effects. In Germany, however, it has been said, that the tænia has been expelled by the fern-root repeatedly exhibited, without the assistance of any other medicine.

MED. VIRT. *Anthelmintic* and *Deobstruent.*

PREP. *Powder.*

FILIPENDULÆ radix: Spiræa filipendulæ Lin. Dropwort; the root.

This plant grows wild in fields and chalky grounds: the root consists of a number of tubercles, fastened together by slender strings; its taste is rough and bitterish, with a slight degree of pungency. These qualities point out its use in a flaccid state of the vessels, and in a sluggishness of the juices: the natural evacuations are, in some measure, restrained or promoted by it, where the excess or deficiency proceeds from this cause. Hence some have recommended it *as an astringent in dysenteries, immoderate uterine fluors,* &c. others *as a diuretic*; and others *as an aperient and deobstruent in scrophulous habits.* At present it is wholly disregarded.

MED. VIRT. *Astringent — Corroborant.*

FLAMMULA JOVIS *Stoërck. Ph. Edinb. Clematis recta Lin.* Upright Virgin's Bower [*E.*]

This species of clematis, distinguished by its pinnated oval leaves and erect stalks, grows wild in thickets in the southern parts of France and Germany. Its leaves and flowers are extremely acrid; the former, when fresh, raising blisters on the part to which they are applied.

The flammula Jovis is one of the new medicines introduced by Dr. Stoërck. He has published several cases of its efficacy in *cancerous, venereal,* and *other malignant ulcers, obstinate pains of the head and bones, inveterate itch,* and other diseases proceeding from peculiar acrimony. It was used internally, in infusion of the leaves, two or three drams to a pint of boiling water; four ounces three times a day; and the powder was sprinkled on the ulcers externally, where it was found to act as a most excellent escharotic and detergent. The medicine is said to have proved *diuretic* to some, and *sudorific* to others, but rarely to have moved the belly. Small doses, of only half a grain of the extract, and half a dram of the dried leaves in infusion, were at first exhibited, which were gradually increased.

MED. VIRT. *Strongly Acrid* and *Stimulant.*

PREP. *Infusion — Powder — Extract.*

FŒNICULI DULCIS *radix, semen: Anethi Fœniculi varietas Lin. S. P.* Common fennel; the roots [*E. L.*]

The sweet fennel is smaller in all its parts than the common, except the seeds, which are considerably larger. The seeds of the two sorts differ likewise in shape and colour: those of the common are roundish, oblong, flattish on one side, and protuberant on the other, of a dark almost blackish colour; those of the sweet are longer, narrower, not so flat, generally crooked, and of a whitish or pale yellowish colour. Both sorts are cultivated in our gardens: the common is a perennial plant: the sweet perishes after it has given seed; nor do its seeds come to such perfection in this climate as those which we receive from Germany.

The seeds of both the fennels

have an aromatic ſmell, and a moderately warm, pungent taſte: thoſe of the *fœniculum dulce* are in flavour moſt agreeable, and have alſo a conſiderable degree of ſweetiſhneſs: hence our college have directed the uſe of theſe only. They are ranked among the four greater hot ſeeds, and not undeſervedly looked upon as *good ſtomachics* and *carminatives*.

The root is far leſs warm, but has more of a ſweetiſh taſte, than the ſeeds; it is one of the five roots called openers; and has ſometimes been directed in aperient apozems. Boerhaave ſays, that this root agrees in taſte, ſmell, and medical qualities, with the celebrated *genſeng* of the Chineſe; from which, however, it appears to be very conſiderably different.

The leaves of fennel are weaker than either the roots or ſeeds, and have very rarely been employed for any medicinal uſe.

MED. VIRT. *Aromatic — Stimulant — Carminative.*

PREP. *Diſtilled Water—Eſſential Oil.*

FŒNI GRÆCI *ſemen: Trigonellæ fœnigræci Lin.* Fœnugreek; the ſeeds [*L. E.*]

This plant is cultivated chiefly in the ſouthern parts of France, Germany, and in Italy; whence the ſeeds are brought to us. They are of a yellow colour, a rhomboidal figure; a diſagreeable ſtrong ſmell, and a mucilaginous taſte. Their principal uſe is in cataplaſms, fomentations, and the like, and in emollient glyſters.

FRAGARIÆ folia, fructus: Fragariæ veſcæ Lin. The ſtrawberry buſh; its leaves and fruit.

The leaves are ſomewhat ſyptic, and bitteriſh; and, hence, may be of ſome ſervice in *debility* and *laxity of the viſcera*; and *immoderate ſecretions*, or a *ſuppreſſion of the natural evacuations* depending thereon: they are recommended in *hæmorrhages* and *fluxes*; and likewiſe as *aperients*, *in ſuppreſſions of urine*, *obſtructions of the viſcera*, in *the jaundice*, &c. The *fruit* is in general very grateful both to the palate and ſtomach: like other fruits of the dulco-acid kind, they abate heat, quench thirſt, looſen the belly, and promote urine; but do not afford much nouriſhment. Geoffroy obſerves, that the urine of thoſe who eat liberally of this fruit, becomes impregnated with its fragrant ſmell.

MED. VIRT. *Aſtringent — Corroborant*—and *Refrigerant.*

FRAXINELLÆ, *ſeu Dictamni albi Lin. radix.* White or baſtard Dittany; the root [*E.*]

This plant grows wild in the mountainous parts of France, Italy, and Germany; whence the cortical part of the root, dried and rolled up into quills, is ſometimes brought to us. This is of a white colour; a weak, not very agreeable ſmell; and a durable bitter, lightly pungent taſte. Though it is not regarded by common practice, nor often kept in the ſhops, yet it is undoubtedly a medicine of conſiderable power. It was formerly uſed as a *ſtomachic* and *tonic*, and ſuppoſed to be efficacious in *removing uterine obſtructions* and *deſtroying worms*; baron Stoërck ſpeaks of its ſucceſs in *tertian intermittents*, *worms*, and *menſtrual ſuppreſſions*: the doſe, a ſcruple of the powder twice a day. In *epilepſies*, a tincture, made of two ounces of the freſh root to fourteen of ſpirits of wine, was ſucceſsfully preſcribed, in doſes of from twenty to fifty drops given two or three times a day; and when joined with ſteel, this root, to *chloretic patients*, has been of great ſervice.

MED. VIRT. *Stimulant—Diaphoretic.*

PREP. *Powder — Tincture.*

FRAXINI cortex et ſemen:

Fraxini excelsioris Lin. The ash-tree; its bark and seeds.

The bark of this tree is *moderately astringent*, and as such has sometimes been made use of; the seeds, which are somewhat acrid, have been employed as *aperients*. There are so many other medicines more agreeable, and more efficacious for these intentions, that all the parts of the ash tree have long been neglected. It yields volatile and fixed alkali, empyreumatic oil, and earth, when chemically analysed.

MED. VIRT. *Astringent — Stimulant.*

FULIGO *lignorum combustorum.* Wood-soot [*E.*]

This concrete is of a shining black colour, a disagreeable smell, and an acrid, bitter, nauseous taste. Its *chief use is in hysteric cases*, in which it is sometimes given in conjunction with the fetid gums. Its virtues are extracted both by watery and spirituous liquors, each of which, if the soot be of a good kind, dissolves about one sixth. Soot is said to differ greatly in quality, according to the wood from which it was produced: the more resinous the wood, the more the soot abounds with oily matter.

MED. VIRT. *Antispasmodic.*

FUMARIÆ *folia: Fumariæ officinalis. Lin.* Fumitory: the leaves [*E.*]

This is a common weed in shady cultivated grounds, producing spikes of purplish flowers, in May and June. It is very juicy, of a bitter taste, without any remarkable smell. The medical effects of this herb are, *to strengthen the tone of the bowels, gently loosen the belly*, and *promote the urinary* and *other natural secretions*. It is principally recommended in *melancholic, scorbutic*, and *cutaneous disorders*; for *opening obstructions of the viscera, attenuating and promoting the evacuation of viscid juices*. Frederick Hoffman had a very great opinion of it as a purifier of the blood; and assures us, that in this intention scarce any plant exceeds it. Both watery and spirituous menstrua extract its virtues.

MED. VIRT. *Stimulating—Attenuant*—and *Antiscorbutic.*

GALANGÆ MINORIS radix: Maranta Galanga Lin. Galangal; a root brought from China.

This root comes to us in pieces scarce an inch long, and not half so thick, full of joints, with several circular rings on the outside; of an aromatic smell, and a bitterish, hot, biting taste. Galangal is a warm stomachic bitter: it has been frequently prescribed in bitter infusions, but the flavour it gives is not agreeable.

MED. VIRT. *Stomachic.*

GALBANUM. *Bubon Galbanum Lin. S. P.* [*L. E.*]

This is the concrete juice of an African plant of the ferulaceous kind. The juice, as brought to us, is semipellucid, soft, tenacious; of a strong, and, to some, unpleasant smell; and a bitterish warm taste: the better sort is in pale-coloured masses, which, on being opened, appear composed of clear white tears. Geoffroy relates, that a dark greenish oil is to be obtained from this simple by distillation, which, upon repeated rectifications, becomes of an elegant sky-blue colour. The purer sorts of galbanum are said by some to dissolve entirely in wine, vinegar, or water: but these liquors are only partial menstrua with regard to this drug; nor do spirit of wine, or oils, prove more effectual in this respect: the best dissolvent is a mixture of two parts of spirit of wine, and one of water. Galbanum *agrees in virtue with gum ammoniacum*; but is generally consi-

dered as less efficacious *in asthmas*, and *more so in hysterical complaints*. Dissolved in vinegar, it has been successfully employed in indolent tumours; and, united with common plasters, it promotes suppuration.

MED. VIRT. *Antihysteric — Suppurant.*

PREP. *Tincture—Pills—Plaster.* The tincture is given up to a dram or more in nervous complaints.

GALLÆ [*L. E.*] Galls.

These are excrescences, in the warmer countries, caused by an insect upon the leaf and tender foot-stalks of the *quercus robur*. The animal within the gall eats its way through; those which have no hole are found to have the insect remaining in them. The best galls come from Aleppo: these are not quite round and smooth like the other sorts, and have several tubercles on the surface.

The Aleppo galls are the strongest, as two of these are equal to three of the other. Their virtues are similar to the oak bark, but possess a greater degree of styptic and astringent power. A mixture of galls with a bitter and aromatic has been proposed as a substitute for the Peruvian bark: and it has been said that by the internal use of galls intermittents have been cured. In painful states of the piles, an ointment made of powdered galls one part, and hog's lard eight parts, has been recommended as an efficacious remedy.

Galls have a very austere styptic taste, without any smell: they are *very strong astringents*, and as such have been sometimes used both internally and externally, but are not much taken notice of by the present practice.

MED. VIRT. *Astringent.*

PREP. *Ointment — Powder — Infusion.*

GAMBOGIA [*L. E.*] Gamboge; a solid concrete juice, brought from the East Indies, in large cakes or rolls. The best sort is of a deep yellow or orange colour, and breaks shining and free from dross. It has no smell, and very little taste, unless kept in the mouth for some time; when it impresses a slight sense of acrimony. It immediately communicates to spirit of wine a bright golden colour, and almost entirely dissolves in it, Geoffroy says, except the sixth part: alkaline salts enable water to act upon this substance powerfully as a menstruum: the solution made by their means is somewhat transparent, of a deep blood-red colour, and passes the filtre: the dulcified spirit of sal ammoniac readily and entirely dissolves it, and takes up a considerable quantity; and, what is remarkable, this solution mixes either with water or spirit, without growing turbid.

Gamboge *evacuates powerfully both upwards and downwards.* Hoffman and some others condemn it as acting with too great violence, and occasioning dangerous hypercatharses: whilst others are of a contrary opinion. Geoffroy seems particularly fond of this medicine, and informs us, that he has frequently given it, from two to four grains, without its proving at all emetic; that from four to eight grains, it both vomits and purges, without violence; that its operation is soon over; and that if given in a liquid form, and sufficiently diluted, it stands not in need of any corrector; that, in the form of a bolus or pill, it is most apt to prove emetic, but very rarely has this effect if joined with *mercurius dulcis*. He nevertheless cautions against its use where the patient cannot easily bear vomiting.

This is considered as a *powerful*

hydragogue, and often given in dropsy; though generally united with jalap, and cream of tartar, or with calomel, which admixture renders its operation more easy. Dr. Cullen tried it alone in doses of three or four grains, rubbed down with a little sugar, and repeated every three hours; in this way he found it operate without vomiting or griping; and after three or four such exhibitions a great deal of water was evacuated both by stool and urine.

It has been given with success for the expulsion of the tænia lata, in doses, it is said, of fifteen grains, to which was added an equal quantity of vegetable alkali; and if the worm is not expelled in two or three hours, it may be repeated even to the third time with safety and efficacy. It is also asserted that, to delicate constitutions, it has been given even to this extent.

MED. VIRT. *Emetic — Cathartic.*

GENISTÆ *folia, semen : Spartii scoparii Lin.* Broom; the leaves, flowers, and seeds [*E. L.*]

This is a shrubby plant, with numerous slender, angular, tough twigs; small, somewhat oval leaves, set three on one pedicle, and deep yellow papilionaceous flowers. It is common on heaths and uncultivated sandy ground; and flowers in May. It is to be collected in June.

The leaves and stalks of broom have a nauseous bitter taste, and are accounted *deobstruent* and *diuretic*; they are sometimes *laxative*, and sometimes *excite nausea*. The decoction has often been employed in dropsies: Dr. Mead relates a case in his Monita et Præcepta Medica, of an ascites being cured, after the patient had been tapped three times, by a decoction of broom tops and mustard seed; an infusion of the seeds, taken freely, has been known to produce similar effects. The infusion of broom ashes in Rhenish wine was a favourite medicine of SYDENHAM; and Dr. MONROE has succeeded by giving half a dram of the ashes divided into three doses every day; but the effect of these two rather depends upon the alkaline salt, than the vegetable from whence it was taken.

Dr. Cullen gave the broom in the following manner: half an ounce of fresh broom tops he ordered to be boiled in a pint of water, till reduced to half a pint; of which he gave two table spoonfuls every hour, till it operated by stool, or till the whole is taken. It seldom fails to operate both by stool and urine; and by repeating the exhibition every day, or every second day, some dropsies have been cured.

MED. VIRT. *Diuretic — Cathartic.*

PREP. *Decoction — Ashes.*

GENTIANÆ *radix : Gentiana lutea Lin. S. P.* Gentian; the root [*L. E.*]

This plant is found wild in some parts of England: but the dried roots are most commonly brought from Germany, &c. they should be chosen fresh, and of a yellow or bright gold colour within. This root is a strong bitter, and, as such, very frequently made use of in practice: in taste it is less exceptionable than most of the other substances of this class; infusions of it, flavoured with orange peel, are sufficiently grateful.

Gentian is employed now as the principal bitter; and as medicines of this class are allowed to possess many virtues, they have been considered as tonic and stomachic, and also antarthritic, emmenagogue, antiseptic, anthelmintic, and febrifuge. Gentian has a better claim to the possession of these powers than

moſt of this kind. Bitters are ſaid to relieve dyſpeptic complaints more readily than bark, by exerting a ſuperior tonic power upon the organs of digeſtion. Dr. Cullen informs us that gentian united with tormentil, or galls, if given in ſufficient quantity, conſtantly ſucceeded in curing intermittents.

In infuſing the gentian, the water ſhould be poured off ſoon after it is quite cold, elſe it acquires a nauſeating quality.

A poiſonous root was ſome years ago diſcovered among ſome of the gentian brought to London; the uſe of which occaſioned violent diſorders, and in ſome inſtances death. This is eaſily diſtinguiſhable by its being internally of a white colour, and void of bitterneſs. This poiſonous ſimple ſeems to be the root of the *thora valdenſis* of Ray, the *aconitum primum pardalianches* of Geſner; a plant with which, Lobel informs us, the inhabitants of ſome parts of the Alps uſed formerly to empoiſon darts.

MED. VIRT. *Stomachic — Tonic — and Stimulant.*

PREP. *Infuſion—Extract—Spiritous Tincture.*

It is given in powder; its doſe is from ten to thirty grains.

GEOFFRÆÆ *cortex : Geoffræa inermis Lin.* Cabbage Bark, or Worm-Bark tree [*E.*]

This is a tree growing abundantly in the low ſavannahs of Jamaica, of a conſiderable height, but no great thickneſs. It has a ſtraight ſmooth trunk, and ſends off its branches near the top. Its leaves are of a dark green, its flowers are roſe-coloured and of the papilionaceous kind, ſet in purple flower-cups. Theſe are ſucceeded by a green hard fruit, of the ſize of a plum, having a ſkin the thickneſs of a crown piece, and a nut within.

The bark of this tree is externally of a grey colour, black and furrowed on the inſide. Its taſte is mucilaginous and ſweetiſh; its ſmell diſagreeable. It has long been celebrated as *an anthelmintic* in the Weſt-Indies, and has lately been introduced into European practice.

This bark is uſed in decoction, ſyrup, powder, and extract. For making the decoction, an ounce of freſh dried bark is to be boiled gently in a quart of water, till the liquor be of the colour of Madeira wine; and then to be ſtrained off for uſe. The decoction is preferred in Jamaica, and ſeems to be the moſt efficacious as an anthelmintic.

Mr. Anderſon, who has written a paper concerning this bark, in the Medical Commentaries, recommends its exhibition in gradually augmented doſes of the decoction, for eight or nine mornings ſucceſſively, and then a doſe of jalap and calomel, which ſeldom fails to bring away the worms.

This is a powerfully acting medicine, and therefore ought to be begun with in ſmall doſes, whatever preparation is uſed, and let them be gradually increaſed. The decoction is moſt generally made uſe of.

MED. VIRT. *Anthelmintic—Purgative.*

PREP. *Decoction—Syrup—Extract—Powder.*

GINSENG [*E. L.*] *Panacis quinquefolii Lin.* A ſmall root brought from North America, and ſometimes from Tartary and China; an inch or two in length, taper, finely ſtriated, of a whitiſh or yellowiſh colour. It has a very ſweet taſte, accompanied with a ſlight bitteriſhneſs and warmth.

The Chineſe are ſaid to have a very extraordinary opinion of the virtues of this root, and to look

upon it as an *universal restorative*, in all decays from age, intemperance, or disease, after fatigue of body or mind, and is in high esteem as an *antispasmodic* in nervous complaints. The great value there set upon it, has prevented its being exported into other countries, and its discovery in North America is but of late date, so that among us it has hitherto been very rarely made use of; although, from what can be judged of it by the taste, it seems to deserve some regard, especially as it is now procurable in plenty.

It is given in doses of twenty grains of the powder repeatedly, or a dram of the root boiled in a sufficient quantity of water for one dose.

MED. VIRT. *Stimulant* and *Corroborant.*

PREP. *Decoction—Powder.*

GLADIOLI LUTEI radix : Iridis palustris. Iridis Pseudacori Lin. Yellow water flag, bastard acorus, or water flower de luce; the roots.

This grows common by the brinks of rivers and in other watery places. The root has a very acrid taste, and proves, when fresh, a strong cathartic: its expressed juice, given to the quantity of eighty drops every hour or two, and occasionally increased, has occasioned a plentiful evacuation, after jalap, gamboge, &c. had proved ineffectual (see the Edinburgh Essays, vol. v. art. 8. Abridg. vol. i. page 202.) By drying, it loses its acrimony and purgative virtue. BERGIUS says in its *fresh state*, it is an hydragogue and purgative; *when dried*, an astringent. Indeed, the root in this state is so powerfully astringent, that it has been used instead of galls, to make ink, and for the purpose of dying black; and been successfully employed in the cure of diarrhœas. The juice, besides being an acrid purgative, has been considered as an useful application to serpiginous eruptions, and scrophulous tumours.

MED. VIRT. JUICE *strongly cathartic*—DRIED ROOT *astringent.*

GLYCYRRHIZÆ *radix : Glycyrrhizæ glabræ Lin.* Liquorice; the root [*L. E.*]

This is produced plentifully in all the countries of Europe. That which is the growth of our own is preferable to such as comes from abroad; the latter being generally mouldy, which this root is very apt to become, unless kept in a dry place. The powder of liquorice, usually sold, is often mingled with flour, and I fear too often with substances not quite so wholesome: the best sort is of a brownish yellow colour (the fine pale yellow being generally sophisticated) and of a very rich sweet taste, much more agreeable than that of the fresh root. *Liquorice is almost the only sweet that quenches thirst;* whence it was called by the Greeks *adipson:* but then it must be chewed some time after it has lost its sweet taste, for then it gives out its acrid and bitterish matter, which stimulates the mouth and fauces, so as to produce an excretion of fluid, and thereby takes off the thirst, which the sweetness had produced.

Infusions or extracts made from it, afford very convenient vehicles for the exhibition of other medicines; its taste concealing that of unpalatable drugs more effectually than any other saccharine substances.

Galen takes notice, that it was *employed to relieve thirst in hydropic cases, to prevent the necessity of drinking.* Mr. Fuller, in his *Medicina gymnastica*, recommends this root as a very useful *pectoral*, and says it excellently *softens acrimonious humours*, at the same time that it *proves gently detergent:* and this ac-

count is warranted by experience. An extract is directed to be made from it in the shops: but this preparation is brought chiefly from abroad, though the foreign extract is not equal to such as is made with proper care among ourselves.

MED. VIRT. *Emollient Pectoral.*

PREP *Extract—Powder.*

GRAMINIS CANINI radix: Triticum repens Lin. Quick-grass; the roots.

Grass roots have a sweet roughish taste. They are principally recommended in aperient spring drinks, for what is called purifying and sweetening the blood.

GRANATI *petala floris et cortex fructus:* [*L. E.*] *Punica granatum Lin.* The rind of the pomegranate, called *malicorium*, and the petals of the flowers, called *balaustine.*

A prickly tree or shrub, with deep red flowers, fruit nearly as big as a moderate orange, with a thick rough rind, brownish without, yellowish within, and contains a red juicy pulp. A native of the southern parts of Europe, Florida, and the East.

The pomegranate tree is sometimes met with in our gardens; but the fruit, for which it is chiefly valued, rarely comes to such perfection as in warmer climates. The fruit has the general qualities of the other sweet summer fruits, allaying heat, quenching thirst, and gently loosening the belly. The rind is a strong astringent, and as such is occasionally made use of; and the flowers are possessed of astringency in a less degree.

The rind and flowers have both been successfully employed as astringents, both externally and internally; in fomentations, gargles, and given in diarrhœas, and dysenteries, and other cases where restringents are necessary. The dose in powder is from ʒss. to a dram—in infusion or decoction, to half an ounce.

MED. VIRT. JUICE *refrigerant.* FLOWERS and RIND *astringent.*

GRATIOLÆ *herba. Gratiolæ officinalis Lin.* Hedge hyssop; the herb [*E. L.*]

This is a low perennial plant, with oblong, finely serrated leaves, set in pairs on the stalks, without pedicles; in their bosoms come forth solitary, whitish, tubulous, irregular flowers, followed by roundish, pointed capsules, full of small seeds; it is a native of the southern parts of Europe, grows usually in wet meadows, and is raised in some of our gardens. The herb has no smell, but an intensely bitter nauseous taste, both dry and fresh; though the expressed juice is less bitter than the residuum: water extracts best its virtues, which are strongly purgative, nor does drying much weaken them. Hedge-hyssop is certainly a powerful and active cathartic: some it vomits, and now and then it is said to salivate; it is considered also as *deobstruent, anthelmintic,* and *diuretic.* In leucophlegmasia, dropsy, mania, worms, melancholy, &c. it has often proved more successful than the common remedies. It is given in different forms in powder, infusion, and extract.

An infusion of ʒij. or ʒss. in powder is strongly purgative. The extract is given in small doses at first, and gradually increased from gr. i. to xxx. in a day. The infusion or extract of the leaves is most suitable to those for whom great and sudden evacuations are not necessary. Half a scruple of the leaves with five grains of gentian, BERGIUS has given with success three times a day, in the relapses of bilious fevers, and autumnal quartans. From half a scruple to half a dram of the root, which is intensely bitter and subastringent, acts powerfully; and is most proper for those labouring

under dropsy, mania, melancholy, or afflicted with worms.

MED. VIRT. *Emetic* and *Cathartic.*

GUAIACI *lignum, cortex, gummi, resina. L. E. Guaiaci officinalis Lin.* Guaiacum, a tree growing in the warmer parts of the Spanish West Indies; its wood, bark, and resin called gum guaiacum [*L. E.*]

The wood is very ponderous, of a close compact texture; the outer part is of a yellow colour, the heart of a deep blackish green, pale, and brown colours: the bark is thin, smooth, externally of a dark greyish hue: both have a lightly aromatic, bitterish, pungent taste; the bark is somewhat the weaker. The resin (which exudes from incisions made in the trunk of the tree) is brought to us in irregular masses, usually friable, of a dusky greenish, and sometimes of a reddish cast, with pieces of the wood among them: its taste is more acrid and pungent than that of the wood or bark.

Their general virtues are those of a *warm stimulating medicine:* they *strengthen the stomach* and *other viscera;* and *remarkably promote the urinary and cuticular discharge:* hence in *cutaneous defedations*, and *other disorders proceeding from obstructions of the excretory glands*, and *where sluggish serous humours abound*, they are eminently useful: *rheumatic* and *other pains* have often been relieved by them. The resin is the most active of these drugs; and the efficacy of the others depends upon the quantity of this part contained in them: the resin is extracted from the wood in part by watery liquors, but much more perfectly by spirituous ones; the watery extract of this wood, kept in the shops, proves not only less in quantity, but considerably weaker, than one made with spirit. This latter extract is of the same quality with the native resin, and differs from that brought to us only in being purer. The gum or extracts are given from a few grains to a scruple or half a dram: which latter dose proves for the most part considerably purgative.

Many are the virtues attributed to this wood and gum resin, whose properties are similar, inasmuch as the wood depends upon the quantity of the gum resin it contains. It is certainly *diaphoretic, stimulant, diuretic*, and *purgative:* and has been given in a variety of diseases; as the lues venerea, gout, cuticular diseases, chronic rheumatism, scrophula, and some scirrhous diseases. It is considered to be very diffusible in the system, and thereby have a considerable power in stimulating the extreme vessels every where. In torpid habits, it is a singularly useful medicine, and has its powers much increased by its union with volatile substances, and often with some of the mercurial preparations.

Decoction of this wood and the bark was formerly confided in as an alterative and cure for the syphilis, and scorbutic rheumatism; and also in cutaneous foulnesses, and herpetic eruptions. The wood generally forms one of the principal ingredients in diet drinks: the gum-resin may be given from six grains to twenty at a dose; but the latter will be apt to purge briskly.

MED. VIRT. *Aperient — Stimulant—Diaphoretic*—and *Diuretic.*

PREP. *Extract— Tincture—Gum-resin.*

GUMMI ARABICUM [*L. E.*] *Ex Mimosa nilotica Lin.* Gum Arabic; a concrete gum, exuding from the Egyptian acacia tree. This is brought to us from Turkey, in small irregular masses or strings, of a pale yellowish colour. The true gum Arabic is rarely to be met with in the shops; gum senega or senica, which comes from the coast of Guinea, being usually sold for

it; this greatly resembles the other, and perhaps, as Dale conjectures, exudes from a tree of the same kind: it is generally in large pieces, rough on the outside; and in these circumstances possibly consists the only difference betwixt the two; although the former is held to be the purer and finer gum, and therefore preferred for medicine; and the latter the stronger, more substantial and cheaper, and consequently more employed for mechanic uses. The virtues of this gum are the same with those of gummy and mucilaginous substances in general: it is given, from a scruple to two drams, in hoarseneſſes, a thin acrimonious state of the juices, and where the natural mucus of the intestines is abraded.

MED. VIRT. *Mucilaginous.*

GUMMI TRAGACANTHÆ [*L. E.*] *Astragalus Tragacantha Lin. S. P.* The gum of the tragacanth, a thorny bush growing in Crete, Asia, and Greece. This gum is of a much stronger body than the foregoing, and does not so perfectly dissolve in water. A dram will give a pint of water the consistence of a syrup, which a whole ounce of gum Arabic is scarce sufficient to do. Hence its use for forming troches, and the like purposes, in preference to the other gums.

The compound powder which bears this name, is of service in hectic coughs, and diarrhœas, by sheathing the throat, stomach, and intestines, against thin acrimonious humours.

MED. VIRT. *Demulcent.*

HÆMATITES lapis. Hæmatites, or bloodstone.

This is an elegant iron ore, extremely hard, of a dark reddish or yellowish colour: it is found either along with the other ores of iron, or in distinct mines by itself. With regard to its medical virtues, we conceive they do not vary from those experienced from rust and the common croci of iron, notwithstanding the extraordinary opinion which many have entertained of it; as of its curing ulcers of the lungs, which Geoffroy says hæmatites dries and heals.

HEDERÆ ARBOREÆ folia, gummi seu resina: Hederæ Helicis Lin. Ivy; the leaves, resin called gum hederæ.

This is a climbing shrubby plant, growing commonly from the trunks of trees, or on old walls. The leaves have very rarely been given internally, notwithstanding they are recommended (in the *Ephem. natur. curiof.* vol. ii. obſ. 120.) *against the atrophy of children:* their taste is nauseous, acrid, and bitter. Externally they have sometimes been employed for *drying and healing ichorous sores*, and likewise *for keeping issues open* The berries were supposed by the ancients to have a purgative and emetic quality: later writers have recommended them in small doses, as diaphoretics and alexipharmacs; and Mr. Boyle tells us, that in the London plague the powder of them was given with vinegar, with good success, as sudorific, It is probable the virtue of the composition was rather owing to the vinegar than to the powder. The resin was ranked by the ancients, (if their δα τε κισσε was the same with our *gummi hederæ*) among the depilatories; from this class, to which it certainly had no title, it has since been removed to that of conglutinaters of wounds, to which it has no very just one.

HEDERÆ TERRESTRIS *folia. Glecomæ hederaceæ Lin.* Ground ivy; the leaves [*E.*]

Ground-ivy is a low plant, frequent in hedges and shady places. It has an aromatic, though not very agreeable smell; and a quick,

bitterish, warm taste. This herb is an useful *corroborant*, *aperient*, and *detergent*; and hence stands recommended against *laxity*, *debility*, and *obstructions of the viscera*; some have had a great opinion of it for *cleansing* and *healing ulcers of the internal parts*, *even of the lungs*; and for *purifying the blood*. It is customary to infuse the dried leaves in malt liquors; a practice not to be commended, though it readily communicates its virtue, and likewise helps to fine them down: scarce any other herb has this effect more remarkably than ground-ivy.

It has chiefly been given in *pulmonary* and *nephritic complaints*; and is a favourite with the poor in *obstinate coughs*. It is chiefly drank in form of tea, and sweetened with honey; however, it does not appear to have much efficacy.

MED. VIRT. *Aperient* and *Corroborant*.

HELLEBORASTER. *Helleborus fœtidus Lin. folia* [*L.*] Stinking bear's-foot; the leaves *S. P.*

In many parts of England this grows wild, in meadows, shady places, and under hedges. The root is perennial, fibrous, outwardly black, within whitish, and of a bitter, acrid taste. The stem is two or three feet high, round, hard, branched, with numerous leaves, bird-footed, all on the stem, on long pedicles, each segment somewhat oblong, serrated, pointed, and of a deep green. They emit, when fresh, on being handled, a disagreeable smell, and have a bitterish very acrid taste, of which they lose a little by drying.

The flowers, which appear in April, and are placed on the extremities of the stem and branches, consist of five large, round, greenish petals, with many stamina, whose tops are flattened. The seeds are roundish, black, and inclosed in membranous pods. They are given in form of powder, decoction, and juice made into a syrup.

The powder has a strong purgative effect, and is frequently given to children by the common people to destroy worms, in doses of from six to fifteen grains; in decoction ʒj. or two drams is a very sharp purge: the juice may be made into syrup, and to this, or a decoction of the leaves, an equal portion of tincture of rhubarb is to be added, of which ʒj. is to be given going to bed, or from ʒj. to ʒij. in the morning for two or three successive days, to children from two to six years of age: in general, such a dose as will excite vomiting, it has been thought, is the best. However, the helleborastER is to be used with great caution, being violent in its operation; and we have had some instances of deleterious consequences from its incautious exhibition. This has also been considered as useful in some asthmatic and hypochondriacal disorders.

MED. VIRT. *Emetic—Purgative—Anthelmintic.*

PREP. *Powder—Decoction—Syrup.*

HELLEBORI ALBI *radix: Veratri albi Lin. S. P.* White hellebore; the root [*L. E.*]

This plant grows spontaneously in Switzerland, and the mountainous parts of Germany. The root has a nauseous, bitterish, acrid taste, burning the mouth and fauces: wounded when fresh, it emits an extremely acrimonious juice, which, mixed with the blood by a wound, is said to prove very dangerous: the powder of the dry root, applied to an issue, occasions violent purging: snuffed up the nose, it proves a strong and not always a safe sternutatory. This root, taken internally, acts with extreme violence as *an emetic*, and has been observed, *even in a small*

dose, to occasion convulsions, and *other terrible disorders*. The ancients sometimes employed it in very obstinate cases, and always made this their last resource. Modern practice seems to have almost entirely rejected its internal use, though some have lately ventured upon so large a dose as a scruple, in maniacal cases, and found good effects from it, after the stronger antimonial preparation had been given in vain. It is however now seldom given internally; it is in a great measure confined to external uses, in diseases of the skin; as the *scabies*, and *different prurient eruptions*, *herpes*, *morbus pediculosus*, *lepra*, *scrophula*, &c. and in many of these it has been successfully employed both externally and internally. As this is a very irritating medicine, and may, from being injudiciously applied, produce very dangerous effects, it should be had recourse to only in desperate cases, and should be begun with in a dilute state, in small doses, gradually increasing them according to their effects.

MED. VIRT. *Violently Emetic — Sternutatory.*

PREP. *Tincture.*

HELLEBORI NIGRI *radix: Hellebori nigri Lin. S. P.* Black hellebore; the root [*L. E.*]

This plant grows wild in the mountainous parts of Switzerland, Austria, and Stiria: the earliness of its flowers, which sometimes appear in December, has gained it a place in our gardens.

In some parts of Germany, a species of black hellebore has been made use of, which not unfrequently produces violent, and sometimes deleterious effects: this the Wirtemberg college particularly caution against, though without mentioning any marks by which it may be distinguished, or even giving the precise name of the plant. It appears to be the *fetid black hellebore of C. B.* called in England, where it grows wild, *setterwort*, *settlewort*, or *bastard hellebore*. The roots of this may be distinguished from the officinal sort by their being less black. The roots of the *poisonous aconites resemble in appearance those of the black hellebore;* and in the Breslaw Collections we find some instances of fatal effects occasioned by mistaking the former for the latter: these also are happily discoverable by their colour: *the aconitum being lighter coloured than even the palest of the black hellebores.* The faculty of Paris, by allowing the use of one of the paler hellebores (the green flowered, which grows wild in England, and is called by our farriers peg-root) have in some measure deprived the shops of the benefit of this criterion: but the London college *have directed the darkest coloured of all the roots of this class.* Since, therefore, the two noxious roots which the buyer is most apt to mistake for this, are distinguishable from it by their colour, but have no other external mark by which they may be with certainty known, *particular regard ought to be had to this circumstance; only the deepest black being chosen, and all the paler roots rejected.*

The taste of hellebore is acrid and bitter. Its acrimony, as Dr. Grew observes, is first felt on the tip of the tongue, and then spreads immediately to the middle, without being much perceived on the intermediate part: on chewing it for a few minutes, the tongue seems benumbed, and affected with a kind of paralytic stupor, as when burnt by eating any thing too hot: the fibres are more acrimonious than the head of the root from which they issue. Black hellebore root, taken from fifteen grains to half a dram, proves a strong cathartic, and, as such, has been celebrated for

the cure of maniacal, and other diſorders, proceeding from what the ancients called *atra bilis*: in which caſes, medicines of this kind are doubtleſs occaſionally of uſe, though they are by no means poſſeſſed of any ſpecific power. It does not however appear, that our black hellebore acts with ſo much violence as that of the ancients: whence many have ſuppoſed it to be a different plant: and indeed the deſcriptions which the ancients have left us of their hellebore, do not agree with any of the ſorts uſually taken notice of by modern botaniſts. Another ſpecies has been diſcovered in the eaſtern countries, which Tournefort diſtinguiſhes by the name of *helleborus niger orientalis, ampliſſimo folio, caule præalto, flore purpuraſcente*, and ſuppoſes to be the true ancient hellebore, from its growing in plenty about mount Olympus, and in the iſland Anticyra, celebrated of old for the production of this antimaniacal drug: he relates, that a ſcruple of this ſort, given for a doſe, occaſioned convulſions.

Our hellebore is at preſent looked upon principally as an alterative, and in this light is frequently employed, in ſmall doſes, *for attenuating viſcid humours, promoting the uterine and urinary diſcharges*, and *opening inveterate obſtructions of the remoter glands*: it often proves a *very powerful emmenagogue in plethoric habits*, where ſteel is ineffectual or improper. An extract made from this root with water is one of the mildeſt, and, for the purpoſes of a cathartic, the moſt effectual preparation of it; this operates ſufficiently, without occaſioning the irritation with which the pure reſin is accompanied. A tincture drawn with proof ſpirit contains the whole virtue of the hellebore, and ſeems to be one of the beſt preparations of it when deſigned for an alterative. It has alſo been recommended in dropſies, and ſome cutaneous diſeaſes. The doſe of the powdered root is from three to ten grains; of the extract, from ten grains to four or more; and of the tincture a tea ſpoonful twice a day. The extract, joined with equal parts of gum myrrh, and a twentieth part of powder of carduus benedictus, forms *Bacher's* famous tonic pill (which ſee in the third part of this work), of which from one to thirty grains in a day, according to the ſtrength of their action, and the conſtitution of the patient, are to be exhibited.

MED. VIRT. *A powerful alterative*, and *emmenagogue*.

PREP. *Extract — Tincture — Powder*.

HEPATICÆ NOBILIS herba: Anemone hepatica Lin. Noble liverwort; the herb.

This herb has a place in our gardens on account of the beauty and early appearance of its flowers. It is a cooling, gently reſtringent herb; and hence recommended in a lax ſtate of the fibres as a corroborant.

MED. VIRT. *Cooling* and *Corroborant*.

HERMODACTYLUS. Iris tuberoſa Lin. Hermodactil; a root brought from Turkey. It is of the ſhape of a heart flatted, of a white colour, compact, yet eaſy to cut or powder; of a viſcous ſweetiſh taſte, with a light degree of acrimony.

Hermodactils were of great repute among the ancients as a cathartic; but thoſe we now meet with in the ſhops have very little purgative virtue. Neumann declares he never found them to have any effect at all.

MED. VIRT. *Purgative*; but doubtful.

HERNIARIÆ folia: Herniaria glabra Lin. Rupture-wort; the leaves.

This is a low herb, growing wild in ſandy and gravelly grounds. It is a very mild reſtringent, and may, in ſome degree, be ſerviceable in diſorders proceeding from a weak flaccid ſtate of the viſcera: to the virtue for which it has been moſt celebrated, it has little title—that of curing hernias.

MED. VIRT. *Aſtringent.*

HIPPOCASTANUM. *Ph. Edin. Æſculus Hippocaſtanum Lin.* Horſe-cheſnut [*E.*]

The fruit of this tree, which is a trilocular capſule, containing two ſeeds in each cell, has been given as food to ſheep; and ſteeped in water, ſo as to extract its bitterneſs, is ſaid to fatten poultry. It falls ſpontaneouſly into a ſaponaceous gluten, which has been uſed inſtead of ſoap for waſhing linen. No writer mentions its medical application: but the Edinburgh college have admitted it on the recommendation of Dr. Gardiner, who ſays, that three or four grains of the powder, ſnuffed up the noſtrils in the evening, operate next morning as an excellent ſternutatory: even the infuſion or decoction of this fruit produces the ſame effect, and thereby proves very beneficial in obſtinate inflammations of the eyes, and ſome complaints of the head, by the diſcharge produced from the noſe.

The bark of the horſe-cheſnut has been propoſed in Italy, according to Haller, as a ſubſtitute to the Peruvian bark in the cure of intermittents; and the experiment has proved ſucceſsful (*). Indeed it has been ſaid, where the Peruvian bark was indicated, that the cheſnut tree bark has afforded equal, if not ſuperior, advantage; but it muſt be taken from thoſe branches which are neither very old nor very young; and exhibited under ſimilar forms and doſes as directed with reſpect to the Peruvian bark. It rarely diſagrees with the ſtomach; but its aſtringent effects generally require the occaſional exhibition of ſome aperient medicine.

MED. VIRT. *Corroborant* and *Errhine.*

HIPPOSELINI folia, radix, ſemen: Hippoſelini Theophraſti. Alexanders; the leaves, root, and ſeeds.

This is an umbelliferous plant, differing from the others of that claſs, in bearing a large tumid black ſeed: it grows by the ſea ſide, upon rocks. In medical qualities it agrees with *apium* (ſmallage), except that the *hippoſelinum* is ſomewhat ſtronger.

HORDEI *ſemen: Hordei diſtichi Lin. S. P.* Common barley [*L. E.*]

HORDEUM GALLICUM *ſive* MUNDATUM. French barley, or the common barley freed from the ſhell.

HORDEUM PERLATUM *dictum* [*L.*] Pearl barley; prepared in Germany and Holland, by grinding the ſhelled barley into little round granules, which appear of a kind of pearly whiteneſs.

Barley, in its ſeveral ſtates, is more cooling, leſs glutinous, and leſs nutritious, than wheat or oats; among the ancients, decoctions of it were the principal aliment and medicine in acute diſeaſes.

MED. VIRT. *Cooling.*

HORMINI SATIVI, ſeu Sclareæ, folia, ſemen: Salviæ ſclareæ Lin. Garden clary; the leaves and ſeeds.

Theſe have a warm, bitteriſh, pungent taſte; and a ſtrong, not very agreeable ſmell: the touch diſcovers in the leaves a large quantity of glutinous or reſinous matter. They are principally re-

(*) Stirp. Helvet. L. 442.

commended *in the fluor albus*, and *other female weakneſſes*, in *hyſteric diſorders*, and *in flatulent colics*.

MED. VIRT. *Corroborant*.

HYOSCYAMI NIGRI *Lin. folia*. The common wild, or black henbane; the leaves [*E*.]

This vegetable is a native of England, and grows commonly amongſt rubbiſh, about villages, road ſides, &c. and flowers in June. It has long been conſidered as one of the moſt deleterious of the narcotic claſs of medicines to which it belongs; but though it is poſſeſſed of very powerful action, ſtill there is little doubt but by judicious management it may become a very efficacious remedy in many caſes.

The ſmell of the hyoſcyamus is ſtrong and peculiar, and the leaves, when bruiſed, emit ſomewhat of the odour of tobacco; this ſmell is ſtill ſtronger when the leaves are burnt; and on burning they ſparkle with a deflagration ſomewhat reſembling that of nitre; but to the taſte they are mild, and mucilaginous; ſtill when taken in ſufficient quantity, are capable of producing terrible ſymptoms, ſuch as appearances of intoxication, attended with wild delirium, remarkable dilatation of the pupils of the eyes, and convulſions. This plant was well known to the ancients, and its effects as an anodyne were experienced by DIOSCORIDES; and it has been uſed in this view both externally and internally by many ſubſequent practitioners, particularly Celſus; and in hæmorrhagic diſeaſes the ſeeds were ſucceſsfully given by PLATER, FORESTUS, and BOYLE. For a long time however afterwards its uſe was laid aſide, till again introduced into practice by Stoërck, who gave it with ſucceſs in internal convulſions and ſpaſms, palpitations of the heart, madneſs, melancholy, epilepſy, inveterate head-aches, hæmoptyſis; and a troubleſome cough which attended the laſt-mentioned complaint, was completely appeaſed by the repeated uſe of the extract. — Collin extended the doſe to twenty-four or thirty grains a day; though Stoërck, and ſome others, recommend this extract in the doſe of one grain or two; but Cullen never diſcovered its anodyne effects, till he had proceeded to doſes of eight or ten grains, nay, ſometimes to fifteen, nay, even to twenty.

In fine, the hyoſcyamus is found often an agreeable anodyne, and hypnotic, and particularly in conſtitutions where opium will not agree, becauſe it is leſs binding to the belly: in other reſpects its virtues ſeem to be ſimilar to thoſe of opium. It ſhould however never be increaſed to very full doſes, becauſe it has been found, when thus given, it more readily produces delirium than opium, and in many caſes gives turbulent and unrefreſhing ſleep.

The leaves have been applied in the way of poultice, to reſolve ſcirrhous tumours, and to remove ſome pains of the arthritic and rheumatic kind. In melancholy, mania, epilepſy, and various convulſive affections, it has not been found to produce any powerful effects, nor ſuperior to what have been experienced by the adminiſtration of opium.

MED. VIRT. *Narcotic*.

PREP. *Extract — Cataplaſm — Powder*.

HYPERICI *folia, flores, ſemen: Hyperici perforati Lin. S. P.* St. John's wort; the leaves, flowers [*L*.] and ſeeds [*E*.]

This plant grows wild in woods and uncultivated places throughout England. The leaves are without foot-ſtalks, and placed in pairs; they are entire, oval, and beſet

with a great number of minute transparent vesicles, which have the appearance of small perforations through the disc, and hence the name *perforatum*. Its taste is rough and bitterish; the smell disagreeable. Hypericum has long been celebrated as a *corroborant*, *diuretic*, and *vulnerary*; but more particularly in *hysterical*, *hypochondriacal*, and *maniacal disorders*: it has been reckoned of such efficacy in the latter, as to have thence received the name of *fuga dæmonum*. It was also recommended INTERNALLY for *wounds*, *bruises*, *ulcers*, *spitting of blood*, *bloody urine*, *agues*, and *worms*; EXTERNALLY as an *anodyne*, *detergent*, and *discutient*; however, it is now rarely brought into practice. It is observable, that the flowery tops tinge expressed oil of a red colour (which very few vegetable substances will do), and communicate a blood-red to rectified spirit.

MED. VIRT. *Diuretic — Sudorific — Alterant.*

HYPOCISTIDIS succus inspissatus: Asari Hypocistidis Lin. Juice of hypocistis.

Hypocistis is a fleshy production, growing in the warmer climates from the roots of different kinds of cisti. Its inspissated juice is an *astringent*, similar to acacia, but somewhat stronger. At present it is scarce otherwise made use of than as an ingredient in some of the old compositions.

MED. VIRT. *Astringent.*

HYSSOPI *folia*: *Hyssopi officinarum cæruleæ sive spicatæ. C. B.* Hyssop; the leaves [*E.*]

The leaves of hyssop have an aromatic smell, and a warm pungent taste. Besides the general virtues of aromatics, they are particularly recommended in *humoral asthmas*, *coughs*, and *other disorders of the breast and lungs*; and said to *promote expectoration*. An infusion of the leaves is chiefly drank as tea, sweetened with honey or sugar: in contusions, and for removing blackness occasioned by the extravasated fluids, this has been recommended in form of poultice and fomentation.

MED. VIRT. *Aromatic — Pectoral.*

JALAPIUM [*L. E.*] *Convolvuli Jalapæ Lin.* Jalap.

Jalap is the root of an American convolvulus, brought to us in thin transverse slices from Xalapa, a province of New Spain. Such pieces should be chosen as are most compact, hard, weighty, dark-coloured, and abound most with black circular striæ. Slices of briony root are said to be sometimes mixed with those of jalap: *these may be easily distinguished by their whiter colour and less compact texture.* This root has no smell, and very little taste upon the tongue; but when swallowed, it affects the throat with a sense of heat, and occasions a plentiful discharge of saliva.

Jalap in substance, taken in a dose of about *half a dram* (less or more, according to the circumstances of the patient) in *plethoric*, or *cold phlegmatic habits*, *proves an effectual*, and *in general a safe purgative*, performing its office mildly, seldom occasioning nausea or gripes, which too frequently accompany the other strong cathartics. In *hypochondriacal disorders*, and *hot bilious temperaments*, *it gripes violently*, if the jalap be good; but rarely takes due effect as a purge. An *extract*, made by water, *purges almost universally*, but weakly; and at the same time *has a considerable effect by urine*: the root remaining after this process, gripes violently. *The pure resin*, prepared by spirit of wine, *occasions most violent gripings*, and *other terrible symptoms*, but scarce *proves at all cathartic*; *triturated*

with ſugar, or with almonds into the form of an emulſion, or diſſolved in ſpirit and mixed with ſyrups, it purges plentifully in a ſmall doſe, without occaſioning much diſorder: the part of the jalap remaining after the ſeparation of the reſin yields to water *an extract*, which has no effect as a cathartic, *but operates powerfully by urine.*

Frederick Hoffman particularly cautions againſt giving this medicine to children, and aſſures us, that it will deſtroy appetite, weaken the body, and perhaps occaſion even death. In this point this celebrated practitioner was probably deceived: children, whoſe veſſels are lax, and food ſoft and lubricating, bear theſe kinds of medicines, as Geoffroy obſerves, better than adults.

Jalap united with cryſtals of tartar, and well triturated, or alſo with hard ſugar, forms a very eaſy and pleaſant purgative; for it will operate in leſſer doſes than when taken by itſelf, and at the ſame time very moderately, and without griping. Jalap, united with double its weight of ſalts of tartar, forms the compound powder of jalap; which may be taken in doſes of from two ſcruples to four, the ſimple powder only in half that quantity, which is ſuppoſed equal to ten or fifteen grains of the extract, or about ʒij. of the tincture; mixed with calomel it is conſidered a good anthelmintic; and a hydragogue, and given in dropſies.

It is not proper to adminiſter it in acute fevers, or in hot or dry conſtitutions; for in theſe, like the reſt of acrid and irritating purgatives, it aggravates the intenſe and often inflammatory heat in the viſcera; and produces a ſparing, nay, indeed, frequently not any evacuation at all. It is a moſt agreeable purgative in *cold conſtitutions*, and *ſuch as abound with ſerous fluids*, particularly in *dropſy*, *anaſarca*, and and *cachexy*. Thus far GEOFFROY: though Dr. CULLEN ſays, that he never knew it heating except when given in very large doſes.

MED. VIRT. *Cathartic.*

PREP. *Compound Powder — Extract — Reſin* — and *Tincture.*

JAPONICA TERRA, *ſive catechu. Mimoza Catechu Lin. Suppl. P.* [*L. E.*]

An inſpiſſated vegetable juice, prepared in the Eaſt-Indies from the fruit, as is ſuppoſed, of the areca palm-tree. It is dry and pulverable, outwardly of a reddiſh colour, inwardly of a ſhining dark brown, almoſt black, with ſome caſt of red. When pure, it diſſolves totally in water, and almoſt totally in rectified ſpirit. As we uſually meet with it, a conſiderable quantity of ſandy matter is left by both theſe menſtrua. This medicine is a *mild aſtringent*, and *frequently employed as ſuch in alvine fluxes*, *uterine profluvia*, in *laxity* and *debility of the viſcera* in general, and in *coughs proceeding from thin acrid defluxions.* It is often ſuffered to diſſolve leiſurely in the mouth as a topical aſtringent for laxities and exulcerations in the gums, for aphthous ulcers in the mouth, and ſimilar affections. Its taſte is more agreeable than that of moſt other ſubſtances of this claſs; chewed for ſome time, it leaves a kind of ſweetiſhneſs in the mouth. The troches and tincture, kept in the ſhops, are very elegant preparations of it.

JASMINI flos: Jaſmini officinalis Lin. Jaſmine; the flowers.

This is a ſmall tree, commonly planted in our gardens. The flowers have a ſtrong ſmell, which is liked by moſt people; expreſſed oils extract their fragrance by infuſion; and water elevates ſomewhat of it in diſtillation; but no ef-

ſential oil has hitherto been obtained from them: the diſtilled water, kept for a little time, loſes its odour. As to their medical virtues, the preſent practice expects not any from them, notwithſtanding they have been recommended *for promoting delivery, curing ulcerations of the uterus*, &c.

MED. VIRT. *Stimulant.*

ICHTHYOCOLLA. *Acipenſer ruthenus et Huſo L. Syſt. Nat.* Fiſh-glue, or iſing-glaſs [*L.*]

This is a ſolid glutinous ſubſtance, obtained from a large kind of fiſh, of the ſturgeon kind, caught in the ſeas of Muſcovy. The ſkin, and ſome other parts of the animal, are boiled in water, the decoction inſpiſſated to a proper conſiſtence, and then poured out ſo as to form thin cakes; theſe are either further exſiccated till perfectly dry, or cut whilſt ſoft into ſlices, which are afterwards bent, or rolled up into ſpiral, horſe-ſhoe, and other ſhapes. But it has lately been declared by Mr. Jackſon to be the air-bladder, inteſtines, and other membranous parts of fiſhes freed from their natural mucus, rolled up, and dried. This glue is more employed for mechanic purpoſes than in medicine. It may be given in *a thin acrimonious ſtate of the juices*, after the ſame manner as the vegetable gums and mucilages; regard being had to their different diſpoſition to putreſcence.

It is given in fluor albus, continued diarrhœa, and other weakneſſes, boiled into a jelly with milk. —A ſtrong ſolution in water, when ſpread on ſilk, forms an elegant plaſter, which joined with reſins and balſams takes the name of *court-plaſter*.

IMPERATORIÆ *radix: Imperatoriæ oſtruthium Lin.* Maſter-wort; the root [*E.*]

This is a native of the Alps and Pyrenean mountains, and ſome parts of Germany, whence we are ſupplied with roots ſuperior in aromatic flavour to thoſe raiſed in our gardens. The ſmell of this root is very fragrant; its taſte bitteriſh, warm, and pungent, glowing in the mouth for a long time after it has been chewed. This ſimple, though undoubtedly an elegant aromatic, is not regarded in the preſent practice: it is ſcarcely ever directed in extemporaneous preſcription, and the only officinal compoſition it has a place in, is the plague-water of the Edinburgh Pharmacopœia. Its flavour is ſimilar to that of angelica, but ſtronger.

MED. VIRT. *Aromatic.*

IPECACUANHA [*L. E.*] A root brought from the Spaniſh Weſt-Indies.

It is divided into two ſorts, Peruvian and Brazilian: but the eye diſtinguiſhes three, aſh-coloured or grey, brown, and white. The *aſh-coloured*, or Peruvian ipecacuanha of the ſhops, is a ſmall wrinkled root, bent and contorted into a great variety of figures, brought over in ſhort pieces, full of wrinkles, and deep circular fiſſures, quite down to a ſmall white woody fibre that runs in the middle of each piece: the cortical part is compact, brittle, looks ſmooth and reſinous upon breaking: it has very little ſmell; the taſte is bitteriſh and ſubacrid, covering the tongue, as it were, with a kind of mucilage. The *brown* is ſmall, and ſomewhat more wrinkled than the foregoing, of a brown or blackiſh colour without, and white within; this is brought from Brazil. The *white* ſort is woody, has no wrinkles, and no perceptible bitterneſs in taſte. The firſt ſort (the aſh-coloured or grey ipecacuanha) is that uſually preferred for medicinal uſe. The brown has been ſometimes obſerved, even in a ſmall doſe, to

produce violent effects. The white, though taken in a large one, has ſcarce any effect at all: Mr. Geoffroy calls this ſort baſtard ipecacuanha, and complains that it is an impoſition upon the public. To what ſpecies of plant the ipecacuanha belongs, has not as yet been determined. Geoffroy, Neumann, Dale, and Sir Hans Sloane, inform us, that the roots of a kind of apocynum (dog's bane) are too frequently brought over inſtead of it: and inſtances are given of ill conſequences following from the uſe of theſe roots. If the marks above laid down, particularly the aſh-colour, bitterneſs, deep wrinkles, and bitteriſh taſte, be carefully attended to, all miſtakes of this kind may be prevented.

Ipecacuanha was firſt brought into Europe about the middle of the laſt century, and an account of it publiſhed about the ſame time by Piſo; but it did not come into general uſe till about the year 1686, when Helvetius, under the patronage of Lewis XIV. introduced it into practice. *This root is one of the mildeſt and ſafeſt emetics* we are acquainted with; and has this peculiar advantage, *that if it ſhould not operate by vomit, it paſſes off by the other emunctories.* It was firſt introduced among us with the character of *an almoſt infallible remedy in dyſenteries* and *other inveterate fluxes;* as alſo in *diſorders proceeding from obſtructions of long ſtanding:* nor has it loſt much of its reputation by time. *In dyſenteries, it almoſt always produces happy effects,* and often performs a cure in a very ſhort ſpace of time. *In other fluxes of the belly, in beginning dyſenteries,* and *ſuch as are of a malignant kind,* or *where the patient breathes a tainted air,* it has not been found equally ſucceſsful. In theſe caſes, it is neceſſary to continue the uſe of this medicine for ſeveral days, and to join with it opiates, diaphoretics, and the like. This root, *given in ſubſtance, is as effectual, if not more ſo than any of the preparations of it:* the pure reſin acts as a ſtrong irritating emetic, but is of little ſervice in dyſenteries; whilſt an extract prepared with water is almoſt of equal ſervice in theſe caſes with the root itſelf, though it has little effect as an emetic. Geoffroy concludes hence, that the chief virtue of ipecacuanha in dyſenteries depends upon its gummy ſubſtance, which lining the inteſtines with a ſoft mucilage, when their own mucus has been abraded, occaſions their exulcerations to heal, and defends them from the acrimony of the juices: and that the reſinous part, in which the emetic quality reſides, is required, where the morbific matter is lodged in the glands of the ſtomach and inteſtines. But if the virtues of this root were entirely owing to its mucilaginous or gummy part, pure gums, or mucilages, might be employed to equal advantage. Water, aſſiſted by a boiling heat, takes up from all vegetables a conſiderable portion of reſinous along with the gummy matter. If the ipecacuanha remaining after the action of water be digeſted with pure ſpirit, it will not yield half ſo much reſin as at firſt: ſo that the aqueous extract differs from the crude root only in degree, being proportionably leſs reſinous, and having leſs effect, both as an emetic, and in the cure of dyſenteries. The virtues of ipecacuanha, in this diſorder, depend upon its promoting perſpiration, the freedom of which is here of the utmoſt importance, and an increaſe of which, even in an healthful perſon, is generally obſerved to ſuppreſs the evacuation by ſtool. In dyſenteries, the ſkin is for the moſt part dry and tenſe, and perſpiration obſtructed; the common dia-

phoretics pafs off without effect through the inteftinal canal: fmall dofes of this root have been adminiftered with the beft effects, proving both laxative and diaphoretic: but ipecacuanha, if the patient, after a puke or two, be covered up warm, brings on a plentiful fweat. After the removal of the dyfentery, it is neceffary to continue the ufe of the medicine for fome time longer, in order to prevent a relapfe. For this purpofe, a few grains, divided into feveral dofes, fo as not to occafion any fenfible evacuation, may be exhibited every day; by which means the cure is effectually eftabliffed. And indeed fmall dofes, given even from the beginning, have been often found to have better effects in the cure of this difeafe than larger ones. Geoffroy informs us, from his own experience, that he has obferved ten grains of the powder to act as effectually as a fcruple or two; and therefore confines the dofe betwixt fix and ten grains: it has lately been found, that even fmaller dofes prove fufficiently emetic. The only officinal preparation of this root is a tincture made in wine.

Dr. Akenfide remarks, that where nothing contraindicates repeated vomiting, he knows no medicine fo effectual as ipecacuanha, in *fpafmodic afthmas*. In violent paroxyfms, a fcruple procures relief immediately; where the difeafe is habitual, from three to five grains every morning, or from five to ten every other morning, may be given for a month or fix weeks. It has alfo been fucceffully ufed in hæmorrhages: in menorrhagia one third of, or half a grain given every four hours, has been faid to effect a cure. In catarrhal, or even confumptive cafes, as well as in various ftates of fever fmall dofes have been found of great ufe.

Intermittents have been cured by giving five grains, or enough to excite naufea, an hour before the acceffion of the fit was expected. They have alfo been fucceffully treated by ipecacuanha given as an emetic at the time of the acceffion, or at the end of the cold ftage. When combined with opium, it affords us the moft ufeful and active fweating medicine of which we are in poffeffion.

A full dofe of ipecacuanha in powder is one fcruple, as an emetic; as a diaphoretic, from half a grain to three: and of ipecacuanha wine, in the firft intention, from ʒij. to ʒxij.; in the latter, from from twenty to forty drops with a fourth part or more of tincture of opium.

MED. VIRT. *Emetic — Diaphoretic.*

PREP. *Powder — compound Powder — Tincture.*

IRIDIS FLORENTINÆ *radix: L. S. P.* Florentine orris; the root [*L. E.*]

There are feveral varieties of this plant cultivated in our gardens on account of the elegance of their flowers. The roots, when recent, have a bitter, acrid, nauleous tafte, and taken into the body prove *ftrongly cathartic;* and hence the juice is recommended *in dropfies*, in a dofe of three or four fcruples. By drying they lofe this quality, yet ftill retain a fomewhat pungent, bitterifh tafte: their fmell in this ftate is of the aromatic kind; thofe produced in the warmer climates have a very grateful flavour, approaching to that of March violets: hence the ufe of the Florentine iris in perfumes, and for flavouring liquors. In the dried ftate in which we have it, it is confidered as a very infignificant *expectorant.*

JUGLANS. *Juglans regia L. S. P.* Walnut; the unripe fruit [*L.*]

A watery extract prepared from the unripe fruit of this tree gathered at the accustomary time of pickling, has an acrid, bitterish, slightly aromatic taste, not disagreeable, and is employed chiefly as an anthelmintic. For this purpose a solution of the extract is dissolved in half an ounce of cinnamon water, of which from twenty to thirty drops are given at first thrice a day to infants two or three years old, and afterwards from forty to fifty, for six or eight days; the third or fifth day giving a purgative, with or without calomel.

MED. VIRT. *Opening* and *Anthelmintic.*

PREP. *Inspissated Juice.*

JUNIPERI baccæ, cacumen.—*Juniperi communis Lin.* Juniper; the berries and tops [*L. E.*]

This is an evergreen shrub, growing upon heaths and hilly grounds in all the parts of Europe: the wood and resin are not at present made use of for medicinal purposes: the berries are brought from Holland, where this shrub is very plentiful.

Juniper berries have a strong, not disagreeable smell; and a warm, pungent, sweet taste, which, if they be long chewed, or previously well bruised, is followed by a bitterish one. The *pungency* seems to reside in the bark; the *sweet* in the juice; the *aromatic flavour* in oily vesicles, spread through the substance of the pulp, and distinguishable even by the eye; and the *bitter* in the seeds: the fresh berries yield, on expression, a rich, sweet, honey-like, aromatic juice; if previously pounded so as to break the seeds, the juice proves tart and bitter.

These berries are useful *carminatives* and *stomachics*; are chiefly used for their *diuretic* effects; and are considered also as *diaphoretics.* The liquor remaining after the distillation of the oil, passed through a strainer, and gently exhaled to the consistence of a rob, proves likewise a medicine of great utility, and in many cases is perhaps preferable to the oil, or berry itself. Hoffman is expresly of this opinion, and strongly recommends it *in debility of the stomack* and *intestines*, and says it is particularly of service *to old people who are subject to these disorders*, or *labour under a difficulty with regard to the urinary excretion*: this rob is of a dark, brownish yellow colour, a balsamic sweet taste, with a little of the bitter, according as the seeds in the berry have been more or less bruised.

Cullen is of a very different opinion. He thinks this rob an inert substance, and that the berries derive all their properties from the essential oil, which is like that of turpentine, but of a more agreeable odour: — this oil in doses of two or three drops is found to be an active stimulant. The berries are chiefly taken in infusion, to which is added a proper proportion of gin, and this is thought to form a proper drink for *hydropic patients.*

MED. VIRT. *Carminative* — *Stomachic*—and *Diuretic.*

PREP. *A compound Spirit* — and *Essential Oil.*

KERMES. Coccus quercûs cocciferæ Lin. Kermes; the grain.

These grains appear, when fresh, full of small, reddish ovula, or animalcules, of which they are the nidus. On expression, they yield a red juice, of a bitterish, somewhat rough and pungent taste, and a not unpleasant smell: this is brought to us from the south of France. The grains themselves are cured by sprinkling with vinegar before exsiccation: this prevents the exclusion of the ova, and kills such of the animals as are al-

ready hatched; otherwiſe, they change into a winged inſect, leaving the grain an empty huſk.

Kermes, conſidered as a medicine, is a *grateful, very mild reſtringent*, and *corroborant*. In this light it was looked upon by the Greeks. The Arabians added a *cordial virtue*. European writers alſo have in general recommended it for *exhilarating the ſpirits*, and *againſt palpitations of the heart*; but more particularly *for promoting birth*, and *preventing abortion*. I have known, ſays Geoffroy, many women, who had never reached the end of pregnancy, made joyful mothers by the uſe of pills compoſed of *kermes*, *germin ovor. exſiccat.* and *confectio de hyacintho* (a compoſition containing ſome vegetable aſtringents and aromatics, together with gold and ſilver leaf, four precious ſtones, and other ingredients of leſs value): three of theſe pills muſt be taken for the firſt doſe, and this repeated three times, at the interval of twice three hours; after which three pills more are to be taken every morning on the three laſt days of the moon in every month till delivery. Notwithſtanding this aſſertion, we conceive our readers will with us believe, that neither the kermes, nor its auxiliaries, are to be much depended on.

MED. VIRT. *Aſtringent — Corroborant.*

PREP. *Confection.*

KINO. *Gummi rubrum aſtringens* Dris Fothergill *in Med. Obſ. Kino* [*L. E.*] Red aſtringent gum from Gambia: ſuppoſed to exude from inciſions made in the trunks of certain trees called *pan de ſangue*, growing in the inland parts of Africa.

It is very friable, ſo as to be crumbled in pieces by the hands; of an opake dark reddiſh colour inclining to black; when reduced to powder, of a deep brick red. It has a reſemblance to catechu, but is more red and aſtringent. Great part of it diſſolves readily in the mouth, diſcovering a ſtrong but grateful aſtringency. The red aſtringent gum from New South Wales is very ſimilar to kino.

It has been uſeful in ſome uterine hæmorrhages, particularly after child-bearing.

It is ſoluble in aqueous and ſpirituous menſtrua. The Edinburgh college have now received this gum as an officinal, and have directed a tincture, in which two ounces of it are diſſolved in a pound and an half of proof ſpirit. One part of kino united with three parts of alum, Dr. Cullen ſays, has proved one of the moſt powerful aſtringents with which he was ever acquainted. This compoſition may be given from five to fifteen grains or more every four hours in uterine and pulmonary hæmorrhage. Forty grains of gum arabic added to ʒj. of kino and a proper quantity of ſyrup of white poppy, forms an agreeable aſtringent linctus; of which a tea-ſpoonful may be taken occaſionally.

It is recommended in *diſorders from laxity and acrimony*, *habitual diarrhœas*, *fluor albus*, and *ſeminal weakneſſes*.

MED. VIRT. *Aſtringent.*

PREP. *Tincture — Styptic Powder.*

LAC. Milk.

Milk appears to be a vegetable juice, with little or nothing of an animal nature. The quality and uſes of this ſoft nutritious liquor are in general well known: we ſhall therefore, in this place, only give an account of ſome experiments, pointing out the alterations it undergoes from different admixtures, and the difference in quality of the milk of different animals.

New milk mixes uniformly with common water, the mineral chaly-

beate waters, wines and malt liquors that are not acid, weak vinous ſpirits, ſolutions of ſugar, ſoaps, and neutral ſalts; but not with oils expreſſed or diſtilled. Acids both mineral and vegetable coagulate it; as alſo do fixt and volatile alkalies, and highly rectified ſpirit of wine: the curd made by acids is in part reſolved again by alkaline liquors, as that made by alkalies is by acids. Neutral ſalts, nitre in particular, preſerve it from coagulating ſpontaneouſly; and likewiſe render it leſs eaſily coagulable by acids.

The human milk is the ſweeteſt of theſe liquors, and that of aſſes next to it. This latter is the moſt dilute of them all; on ſuffering it to coagulate ſpontaneouſly, the curd ſcarce amounted to two drams, from twelve ounces, whilſt that of cows' milk was five times as much: the coagulum of aſſes' milk, even when made by acids, forms only into fine light flakes which ſwim in the ſerum; that of goats' milk concretes into more compact maſſes, which ſink.

Upon evaporating twelve ounces of	There remained of dry matter drams.	From which water extracted a ſweet ſaline ſubſtance, amounting, when exſiccated, to drams.
Cows' milk	13	$1\frac{1}{2}$
Goats' milk	$12\frac{1}{2}$	$1\frac{1}{2}$
Human milk	8	6
Aſſes' milk	8	6

The ſaline ſubſtance obtained from aſſes' milk was white, and ſweet as ſugar; that of the others brown or yellow, and conſiderably leſs ſweet; that of cows' milk, the leaſt ſweet of all. It appears, therefore, that aſſes' milk contains more ſerum, and much more of a ſaccharine ſaline matter, than that of cows and goats; and that theſe two abound moſt with unctuous groſs matter: hence theſe are found to be moſt nutritious, whilſt the firſt proves moſt effectual as an aperient and detergent.

The inſpiſſated reſiduum of milk, digeſted with about as much water as was waſted in the evaporation, yields an elegant kind of whey, more agreeable in taſte, and which keeps better, than that made in the common manner. This liquor promotes the natural ſecretions in general, and, if its uſe be duly continued, does good ſervice in ſcorbutic, and other diſorders proceeding from thick phlegm and obſtructions of the viſcera.

There are conſiderable differences in the milk of the ſame animal, according to its different aliment. Dioſcorides relates, that the milk of goats, who feed on the ſcammony plant and ſpurges proved cathartic: and examples are given in the Acta Haffnienſia of bitter milk from the animal's having eaten wormwood. It is a common obſervation, that cathartics and ſpirituous liquors given to a nurſe affect the child: and that the milk of animals feeding on green herbs is much more dilute than when they are fed with dry ones. Hoffman, from whom moſt of the foregoing obſervations are taken, carries this point ſo far, as to direct the animal to be dieted according to the diſeaſe for which its milk is to be drank.

Milk in a medicinal view is con-

ſidered as an emollient, an analeptic, and corroborant.—Butter-milk, as containing a ſweet and acid, is certainly laxative, though not ſtrongly ſo without large quantities have been taken.

LACCA, gummi-reſina: Croton lacciferum Lin. Lac, gum-reſin.

This is a ſort of wax, of a red colour, collected in the Eaſt-Indies by certain inſects, and depoſited on ſticks faſtened for that purpoſe in the earth. It is brought over either adhering to the ſticks, or in ſmall tranſparent grains, or in ſemi-tranſparent flat cakes: the firſt is called *ſtick-lack*, the ſecond *ſeed-lac*, and the third *ſhell-lac*. On breaking a piece of ſtick-lac, it appears compoſed of regular cells like the honeycomb, with ſmall corpuſcles of a deep red colour lodged in them. Theſe are the young inſects, and to theſe the lac owes its tincture; for when freed from them its colour is very dilute. The ſhell and ſeed lacs, which do not exhibit any inſects or cellular appearance upon breaking, are ſuppoſed to be artificial preparations of the other: the ſeed ſort is ſaid to be the ſtick-lac bruiſed and robbed of its more ſoluble parts; and the ſhell to be the ſeed lac, melted and formed into cakes. The *ſtick-lac therefore is the genuine ſort, and ought alone to be employed for medicinal purpoſes.* This concrete is of great eſteem in Germany and other countries, *for laxity* and *ſponginess of the gums*, proceeding from cold, or a ſcorbutic habit. For this uſe the lac is boiled in water, with the addition of a little alum, which promotes its ſolution: or a tincture is made from it with rectified ſpirit. This *tincture is recommended alſo internally in the fluor albus*, and in *rheumatic* and *ſcorbutic diſorders*: it has a grateful ſmell, and a not unpleaſant, bitteriſh, aſtringent taſte: in the Edinburgh Pharmacopœia, a tincture is directed to be made with ſpirit of ſcurvy-graſs. The principal uſe of lac among us is in certain mechanic arts as a colouring drug, and for making ſealing-wax.

MED. VIRT. *Aſtringent.*

PREP. *Tincture.*

LACTUCA VIROSA. *Lin. Strong-ſcented Lettuce* [*L.*]

The upper leaves of this plant are jagged about the edges, the lower are not. In Britain it is indigenous, found in hedges and by the ſide of ditches, and flowers in June. It differs widely in its quality from the garden lettuce; it ſmells ſtrongly of opium, and appears to participate in no ſmall degree of its virtues: the narcotic powers reſide in its milky juice. It is ſaid to *quench thirſt*, to be *greatly laxative*, *powerfully diuretic*, ſomewhat *diaphoretic*, and not diſagreeable to the ſtomach; but during its operation plentiful dilution is allowed. It is given in form of inſpiſſated juice, in ſmall doſes, and recommended in dropſies: though in that diſeaſe of long ſtanding from viſceral obſtructions, it has been adminiſtered to the quantity of half an ounce in the day. Out of twenty-four dropſical patients, according to the account of Dr. Collin of Vienna, twenty-three were cured.

MED. VIRT. *Diuretic — Diaphoretic — Laxative.*

PREP. *Inſpiſſated Juice.*

LADANUM [*L.*]

This is a reſinous ſubſtance exuding upon the leaves of the *ciſtus Cretica Lin.* This reſin is ſaid to have been formerly collected from the beards of goats who brouzed the leaves of the ciſtus: at preſent, a kind of rake, with ſeveral ſtraps or thongs of ſkins fixed to it, is drawn lightly over the ſhrub, ſo as to take up the unctuous juice, which is afterwards ſcraped off

with knives. It is rarely met with pure, even in the places which produce it; the duſt, blown upon the plant by the wind, mingling with the tenacious juice. The inhabitants are alſo ſaid to mix with it a certain black ſand. In the ſhops two ſorts are met with: the better (which is very rare) is in dark-coloured, almoſt black maſſes, of the conſiſtence of a ſoft plaſter, which grows ſtill ſofter upon being handled; of a very agreeable ſmell, and of a light pungent bitteriſh taſte: the other ſort is harder, not ſo dark-coloured, in long rolls coiled up: this is of a much weaker ſmell than the former, and has a large admixture of a fine ſand, which in the ladanum examined by the French academy made up three-fourths of the maſs. Rectified ſpirit of wine almoſt entirely diſſolves pure ladanum, leaving only a ſmall portion of gummy matter which has no taſte or ſmell: and hence this reſin may be thus excellently purified for internal purpoſes. This is only uſed externally; the emplaſtrum ladani forms an elegant ſtomach plaſter, and from its moderate adheſive quality eaſily admits of being taken off, to renew the volatile eſſentials.

LAMII ALBI folia, flores: White archangel, or dead nettle; the leaves and flowers.

This grows wild in hedges; and flowers in April and May. The flowers have been particularly celebrated in uterine fluors, and other female weakneſſes, as alſo in diſorders of the lungs; but they appear to be of very weak virtue.

LAPATHUM. Dock; the roots.

We have ten or eleven docks growing wild in England, the roots of moſt of which are brought to market promiſcuouſly; though two have been generally directed by phyſicians in preference to the others. Theſe are:

OXYLAPATHUM: Rumex acutus Lin. The dock with long, narrow, ſharp-pointed leaves, not curled up about the edges. [*E.*]

HYDROLAPATHUM: *Rumex aquaticus Lin.* The great water-dock [*E.*]

The leaves of the docks gently looſen the belly, and have ſometimes been made ingredients in decoctions for *removing a coſtive habit.* The roots are celebrated for the cure of *ſcorbutic* and *cutaneous diſorders*, both exhibited internally, and applied externally in ointments, cataplaſms, and fomentations. — Muntingius publiſhed a treatiſe on theſe plants in the year 1681, in which he endeavours to prove, that our great water-dock is the *herba Britannica* of the ancients: and indeed the deſcription which Dioſcorides gives of the latter, does not ill agree to the former. This author therefore attributes to the *hydrolapathum* all the virtues aſcribed of old to the *Britannica*, particularly recommending it in the ſcurvy and all its ſymptoms. Where this diſorder is of very long ſtanding, ſo as not to yield to the *hydrolapathum* alone, he directs a compoſition, by the uſe of which, he ſays, even the venereal lues will, in a ſhort time, be effectually cured. Six ounces of the roots of the water-dock, with two of ſaffron; and of mace, cinnamon, gentian root, liquorice root, and black pepper, each three ounces (or, where the pepper is improper, ſix ounces of liquorice), are to be reduced into coarſe powder, and put into a mixture of two gallons of wine, with half a gallon of ſtrong vinegar, and the yolks of three eggs; and the whole digeſted, with a moderate warmth, for three days, in a glazed veſſel, cloſe ſtopt: from three to ſix ounces of this liquor are to be taken every morning on an empty ſtomach, for fourteen or twenty days, or longer.

It has been considered as a powerful antiscorbutic, taken internally: and a strong decoction of it is said to put a stop to eating ulcers in the mouth and tonsils, cures spongy gums, &c. BOERHAAVE, from his own experience, extols it as useful in scorbutic, rheumatic, and cutaneous disorders; also in disorders from obstructed viscera. It is said to have been evidently useful in assisting the stomach in the office of digestion; and the root dried and powdered is reported to be a powerful antiseptic. This has also been recommended as an excellent dentrifice. Should the powder be disagreeable to the stomach, a decoction of half a pound of the bark of the root boiled in six pints of water till reduced to four, will answer every purpose; of which half a pint should be taken warm four times a day. — However, notwithstanding the high character it has maintained, there are some physicians who do not think it materially differs from other astringents; and are therefore very doubtful about the great virtues ascribed to it.

MED. VIRT. *Alterant* and *Laxative.*

LAVENDULÆ *flores: Lavendulæ spicæ Lin.* Lavender; the flowers [*E. L.*]

There are different varieties of these plants; but all have a fragrant smell, and a warm, pungent, bitterish taste: the broad-leaved sort is the strongest in both respects, and yields in distillation thrice as much essential oil as the other; its oil is also hotter, and specifically heavier. Hence in the southern parts of France, where both kinds grow wild, this only is made use of for the distillation of what is called oil of spike. The narrow-leaved is the sort commonly met with in our gardens.

Lavender is a warm aromatic; and, whether given internally, or externally applied, it is a powerful stimulant to the nervous system. It is principally recommended in *vertigoes, palsies, tremors, suppression of the menstrual evacuations;* and in general in *all disorders of the head, nerves,* and *uterus,* proceeding from a weakness of the solids, and lentor or sluggishness of the juices. It is sometimes also used externally in fomentations *for paralytic limbs.* The distilled oil is particularly celebrated for *destroying the pediculi inguinales* and other cutaneous insects. If soft spongy paper dipt in this oil, either alone, or mixed with that of almonds, be applied at night to the parts infested by insects, they will certainly, says Geoffroy, be all found dead in the morning.

MED. VIRT. *Cordial—Aromatic—Nervous—Stimulant.*

PREP. *Spirit—Compound Spirit—Essential Oil.*

LAURI *folia, baccæ: Lauri nobilis Lin.* The bay-tree; its leaves and berries [*L. E.*]

These are generally brought from the Straits, though the tree bears the colds of our own climate. They have a moderately strong aromatic smell, and a warm, bitterish, pungent taste: the berries are stronger in both respects than the leaves, and afford in distillation a larger quantity of aromatic essential oil; they yield also an almost insipid oil to the press, in consequence of which they prove unctuous in the mouth. These simples are warm *carminative medicines,* and sometimes *exhibited in this intention against flatulent colics;* and likewise *in hysterical disorders.*

Bergius, who recommends them only in hysterics, considers them also as *stomachic, resolvent, emmenagogue, diuretic,* and *diaphoretic.* Indeed they have long been thought to act with peculiar power on the uterine system, and therefore are we cautioned against their use in

pregnancy. However, they are ſeldom uſed but in fomentations and cataplaſms.

MED. VIRT. *Carminative* and *Antiſpaſmodic.*

PREP. *Eſſential Oil*—Doſe, one to five drops.

LENTISCUS: *Piſtachia Lentiſcus Lin.* The lentiſc, or maſtich tree; the wood.

This tree, or ſhrub, is a native of the warm climates, but bears the common winters of our own. The wood is brought to us in thick knotty pieces, covered with an aſh-coloured bark, and white within, of a rough, ſomewhat pungent, taſte, and an agreeable though faint ſmell; the ſmaller tough ſprigs are both in taſte and ſmell the ſtrongeſt. This wood is accounted a *mild balſamic reſtringent;* a decoction of it is in the German ephemerides dignified with the title of vegetable *aurum potabile*, and ſtrongly recommended in *catarrhs*, *nauſeæ*, and *weakneſs of the ſtomach;* for *ſtrengtheniug the tone of the viſcera in general*, and *promoting the urinary ſecretion.*

This is the tree which in the iſland Chio affords the reſin called maſtich. See MASTICHE.

MED. VIRT. *Aſtringent—Tonic—Diuretic.*

LEVISTICI *radix*, *ſemen*, *herba. Ligueticum Leviſticum.* Lovage; the herb, root, and ſeed [*E.*]

This is a large umbelliferous plant, cultivated with us in gardens. The root nearly agrees in quality with that of angelica: the principal difference is, that the lovage root has a ſtronger ſmell, and a ſomewhat leſs pungent taſte, accompanied with a more durable ſweetneſs: the ſeeds are rather warmer than the root. Theſe ſimples, though certainly capable of being applied to uſeful purpoſes, are not at preſent regarded: neither of them is directed in extemporaneous preſcription, and the root enters no officinal compoſition.

MED. VIRT. *Aromatic.*

LICHEN CINEREUS TERRESTRIS: Lichen caninus Lin. Aſh-coloured ground liverwort.

This conſiſts of pretty thick digitated leaves, flat above, of a reticular texture underneath, and faſtened to the earth by ſmall fibres: the leaves when in perfection are of an aſh-colour; by age they become darker-coloured or reddiſh. It is met with on commons and open heaths, where it quickly ſpreads on the ground. Dr. Mead informs us, that this plant grows in all countries, and has been brought over from America along with the Peruvian bark: that it is found at all times, but ought to be gathered from autumn to winter, as being then in its freſheſt vigour

This ſimple is ſaid to be a *warm diuretic;* but the taſte diſcovers in it little or no warmth. It is chiefly celebrated for its virtue *in the cure of the diſorders occaſioned by the bite of a mad dog.* An account of the remarkable effects in theſe caſes of a powder compoſed of the dried leaves and pepper, was communicated to the Royal Society by Mr. Dampier, and publiſhed in the Philoſophical Tranſactions, No. 237. This powder was afterwards inſerted (in the year 1721) into the London Pharmacopœia, under the title of *pulvis antilyſſus*, at the deſire of an eminent phyſician, who had great experience of its good effects. Some years after, the ſame gentleman publiſhed and diſperſed a paper containing the method of cure, which he had in a great number of inſtances conſtantly found ſucceſsful. In this paper, the directions were to the following effect: "Let "the patient be blooded nine or "ten ounces; and afterwards take "a dram and a half of the pow-"der every morning faſting, for

"four mornings ſucceſſively, in "half a pint of cows' milk, warm. "After theſe four doſes are taken, "the patient muſt go into the cold "bath, or a cold ſpring or river, "every morning faſting, for a "month; he muſt be dipt all "over, but not ſtay in (with his "head above water) longer than "half a minute, if the water be "very cold: after this he muſt go "in three times a week for a fort-"night longer." In the year 1745, the world was favoured with a new edition of the Mechanical Account of Poiſons, in which we find the ſame method of cure again recommended, as having, in a courſe of thirty years' experience, never failed of ſucceſs; where it had been followed before the hydrophobia begun. It is greatly to be wiſhed, that the efficacy of this medicine in preventing theſe terrible diſorders were abſolutely certain, and proved by inconteſtable facts. Inſtances have been produced of its proving unſucceſsful; and the many examples of the fatality of the diſeaſe which continually occur, ſeem arguments either of the inefficacy of the medicine, or of a ſtrange negligence in applying it. We ſhall only further obſerve, that Boerhaave, who is in general ſufficiently liberal in the commendation of remedies, ranks this among thoſe inſignificant trifles, upon which whoever ſhall depend will find himſelf deceived. — Indeed, from the ſenſible qualities of this lichen, it does not ſeem to be poſſeſſed of any uſeful degree of medicinal virtue.

LICHEN ISLANDICUS, *Lin. Herba.* Eryngo-leaved, or eatable, Liverwort [*E.*]

This is a native of Britain, and grows particularly on the mountains, both in the Lowlands and Highlands of Scotland, and in Wales. It is extremely mucilaginous, has a bitter and ſomewhat aſtringent taſte, and is conſidered as a *laxative in its recent ſtate*; but its bitter and aperient quality is ſomewhat deſtroyed by drying, or by ſlightly infuſing in water. The Icelanders make a flour of it called *ſialgras*, either by firſt waſhing the plant, and cutting it into ſmall pieces, or by drying it by the fire, or in the ſun, then putting it into a bag, which is well beaten, and laſtly working it into flour by ſtamping. This forms a tolerably grateful and agreeable food. As a medicine SCOPOLI and HALLER recommended it in *coughs* and *conſumptions*, and it has proved efficacious in *diarrhœas* and *dyſentery*. Dr. KERR found it ſo ſucceſsful in *dyſentery*, that, after the repeated adminiſtration of emetics and cathartics, he never uſed any other medicine; to which though he occaſionally added opium. Dr. CRICHTON has an high opinion only of it in two ſpecies of conſumption: the *phthiſis hæmoptoica*, and the *phthiſis pituitoſa* vel *mucoſa*; for by the uſe of this he has ſeen patients get ſo far the better, as to be diſmiſſed from the hoſpitals cured. It is given in decoction, boiling ℥iſs in 2 ℔. of milk, *over a ſlow fire, exactly one quarter of an hour.* If milk diſagrees, water may be uſed. Three or four ounces of this are to be taken frequently in a day. It ſeems highly probable that it may be uſeful; for it ſtrengthens the digeſtive powers, is extremely nutritious, and is poſſeſſed of demulcent and inſpiſſating powers.

MED. VIRT. *Nourihing — Antiſeptic — Laxative.*

LIGNUM RHODIUM. *Geniſta canarienſis Lin.* [*E.*] Roſewood, a wood or root, brought from the Canary iſlands.

The writers on botany and the materia medica are much divided about the lignum rhodium, not only with regard to the plant which

affords it, but likewiſe in their accounts of the drug itſelf, and have deſcribed under this name ſimples manifeſtly different. This confuſion ſeems to have ariſen from an opinion, that the rhodium and aſpalathus are the ſame; whence different woods brought into Europe for the aſpalathus were ſold again by the name of rhodium.

As to aſpalathus, the ancients themſelves diſagree; Dioſcorides requiring by this appellation the wood of a certain ſhrub freed from the bark, and Galen the bark of a root. At preſent, we have nothing under this name in the ſhops. What was ſold among us as aſpalathus, was a pale-coloured wood brought from the Eaſt Indies, and more commonly called calambour.

The lignum rhodium of the ſhops is uſually in long crooked pieces, full of knots, which, when cut, appear of a yellow colour like box, with a reddiſh caſt; the largeſt, ſmootheſt, moſt compact, and deepeſt coloured pieces ſhould be choſen; and the ſmall, thin, or pale ones rejected. The taſte of this wood is lightly bitteriſh, and ſomewhat pungent; its ſmell very fragrant, reſembling that of roſes: long kept, it ſeems to loſe its ſmell; but, on cutting, or rubbing one piece againſt the other, it ſmells as well as at firſt. Diſtilled with water, it yields an odoriferous eſſential oil, in very ſmall quantity. Rhodium is at preſent in eſteem only upon account of its oil, which is employed as an high and agreeable perfume in ſcenting pomatums, and the like. But if we may reaſon from analogy, this odoriferous ſimple might be advantageouſly applied to nobler purpoſes: a tincture of it in rectified ſpirit of wine, which contains in a ſmall volume the virtue of a conſiderable deal of the wood, bids fair to prove a cordial not inferior perhaps to any thing of this kind.

LIGNUM TINCTILE CAMPECHENSE [*L. E.*] *Hæmatoxylum campechianum Lin.* Campeachy or logwood; a wood brought from Campeachy in the bay of Honduras.

The wood of this tree is of a ſolid texture, and of a dark red colour, has an aſtringent ſweet taſte, and is brought to us in junks, or logs, of about three feet in length. It was, for a long time, uſed only by the dyers; but has been brought into medicinal uſe as an *aſtringent* and *corroborant*. It has been found peculiarly efficacious in *diarrhœas*, alſo in the *latter ſtages of dyſentery*, when the obſtructing cauſes are removed; for it obviates the extreme laxity of the inteſtines uſually brought on by the repeated evacuations. It tinges the ſtools, and ſometimes the urine, but does not appear to colour the bones of animals.

MED. VIRT. *Aſtringent.*

PREP. *Extract.*

LILII ALBI *radix, flores: Lilii candidi Lin.* White lily; the roots and flowers [*E.*]

This is cultivated in gardens, more for the beauty of its flowers, than medicinal uſe. The root, which is extremely mucilaginous, boiled with milk or water, has been uſed as an emollient and ſuppurating cataplaſm; but it is probable that poultices formed of bread, or of farina, poſſeſs every property attributed to the white-lily root.

LILII CONVALLIUM radix, flores: Convallariæ majalis Lin. Lily of the valley, or May lily; the roots and flowers. This grows wild in woods and ſhady places, flowering in May.

The flowers of theſe plants are ſaid to be cephalic and nervine. They have a pleaſant ſweet ſmell,

which they impart by infusion to expressed oils, and give over in distillation both to water and spirit; but no essential oil has been hitherto obtained from them. Etmuller says, that the distilled spirit is more fragrant than the water. The roots of the wild lily are very bitter: dried, they are said to prove a gentle errhine; as also the flowers.

MED. VIRT. *Cephalic* and *nervine.*

LIMONUM *succus, cortex: C. B. Citri medicæ Lin.* Lemons; their juice, yellow rind, and its essential oil, called essence of lemons. [*L. E.*]

The juice of lemons is similar in quality to that of oranges, from which it differs little otherwise than in being more acid. Hence this is employed always where a strong vegetable acid is required. Dr. WHYTT found the juice of lemons to allay hysterical palpitations of the heart, after various other medicines had been ineffectual; and also this juice, or that of oranges, taken to the quantity of four or six ounces a day, has sometimes been found a remedy in the jaundice. The yellow peel is an elegant aromatic, and is frequently employed in stomachic tinctures and infusions: it is considerably less hot than orange-peel, and yields in distillation with water less quantity of essential oil. Its flavour is nevertheless more perishable, yet does not arise so readily with spirit of wine; for a spirituous extract made from lemon-peel possesses the aromatic taste and smell of the subject in much greater perfection than an extract prepared in the same manner from the peels of oranges.

MED. VIRT. *Aromatic — Antiscorbutic — Cordial.*

PREP. *Essential oil — Syrup.*

LINGUÆ CERVINÆ folia: Asplenii Scolopendrii Lin. Hartstongue: the leaves.

This plant consists of a number of long narrow leaves, without any stalk: it grows upon rocks and old walls, and remains green all the year. The leaves have a roughish somewhat mucilaginous taste, like that of the maiden-hair, but more disagreeable. They are recommended in *obstructions of the viscera*, and for *strengthening their tone*; and have sometimes been made use of for these intentions, either alone, or in conjunction with maiden-hair, or the other plants called capillary.

MED. VIRT. *Aperient.*

LINI CATHARTICI *folia. Lin.* Purging flax, or mill-mountain; the leaves.

This is a very small plant, not above four or five inches high, found wild upon chalky hills, and in dry pasture-grounds. Its virtue is expressed in its title; an infusion in water or whey of a handful of the fresh leaves, or a dram of them in substance when dried, are said to purge without inconvenience.

MED. VIRT. *Cathartic.*

LINI SATIVI *semen: usitatissimi Lin.* Common flax, the seed, called linseed [*L. E.*]

Linseed yields to the press a considerable quantity of oil; and, boiled in water, a strong mucilage. Infusions and decoctions of these seeds are commonly made use of, like other vegetable mucilages, in *hoarseness*, *coughs*, and *pleuritic symptoms*, which frequently prevail in catarrhal affections; they are also recommended in *nephritic pains* and *strangurie*s. One spoonful of the seed unbruised is said to be a proper quantity for one quart of water. The powder of these seeds are employed in *emollient* and *maturating* cataplasms. The expressed oil is supposed to be of a more healing and balsamic nature than other oils of this class, and therefore has been very generally employed in *pulmonary complaints*, also in *colics* and *costiveness*.

They have alſo been employed in Aſia, and, in times of ſcarcity, in Europe, *as food*, but are not agreeable, or in general wholeſome. Tragus relates, that thoſe who fed on theſe ſeeds, in Zealand, had the hypochondres much diſtended, and the face and other parts ſwelled, in a ſhort time; and that not a few died of theſe complaints.

MED. VIRT. *Emollient.*

PREP. *Expreſſed oil — Infuſion — and Decoction.*

LOBELIÆ *radix: Lobeliæ* [*E.*] *Lobeliæ ſiphiliticæ Lin.* Blue Cardinal-Flower.

The whole plant has a milky juice, and ſomething of a rank ſmell. It grows in moiſt places in Virginia, and bears the winters of our climate.

The root of this plant conſiſts of white fibres, a line in thickneſs, and about two inches in length. It reſembles tobacco in taſte, which dwells on the tongue, and is apt to excite vomiting. It was long a famous ſecret among the North American Indians for the cure of the venereal diſeaſe. The ſecret was purchaſed by Sir William Johnſon, and has been made public in the writings of Bartram, Kalm, and others.

A decoction is made of a handful of the roots in three meaſures of water. Half a meaſure is taken in the morning faſting, and repeated in the evening; and the doſe is gradually increaſed till its purgative effects become too violent, when the medicine is a for a time to be intermitted, and then renewed till a perfect cure be effected. One doſe daily is ſufficient during the latter part of the treatment; and the regimen, during the whole proceſs, is to be equally ſtrict with that obſerved in a courſe of mercurial ſalivation. From the third day, the ulcers are to be well waſhed twice daily with the decoction; and it is ſaid that, when they are very deep and foul, the Indians ſprinkle them with powder of the internal bark of the *ceanothus americanus*, the New-Jerſey tea-tree.

Notwithſtanding the character this plant bears, it has never been confirmed in Britain, nor even in Virginia; for in both countries recourſe is almoſt univerſally had to mercury in the lues.

MED. VIRT. *Alterant* and *detergent.*

PREP. *Decoction.*

LOPEZIANA *Indica Radix: e Janne Lopez denominata, Gaubii Adverſar.* Cap. VI. The root of an unknown tree brought to us from Batavia. It is met with in pieces of different thickneſs and diameter. The woody part is whitiſh, and very light; ſofter, more ſpongy, and whiter next the bark, including a denſer, ſomewhat reddiſh medullary part.

The bark is rough, wrinkled, brown, ſoft, and as it were woolly, pretty thick, covered with a thin paler cuticle.

It has no remarkable ſmell or taſte. On boiling in water, no odour is emitted; and the ſtrained liquor, which is of a yellow hue, is almoſt inſipid, only impreſſing the tongue with a very light obſcure bitteriſhneſs; and without viſcidity. Rectified ſpirit is tinged by this root of a brown colour, but acquires no particular taſte.

It is regarded in the Eaſt Indies as a medicine of extraordinary efficacy in *diarrhœas*; and the learned Gaubius in his Adverſaria has publiſhed an account of ſome experiments made with it, which in ſome degree confirm its reputation.

MED. VIRT. *Tonic.*

LUJULÆ *folia: Oxalis Acetoſellæ Lin.* Wood ſorrel; the leaves [*L. E.*]

This is a ſmall plant, growing wild in woods. In taſte and medical qualities it is ſimilar to the

common ſorrel, but conſiderably more grateful, and hence is preferred by the London college. Boiled with milk, it forms an agreeable whey; and beaten with ſugar, a very elegant conſerve, which has been for ſome time in the ſhops. (See ACETOSA.)

It is uſed to cool the mouth, fauces, and primæ viæ, in bilious remitting fevers, and alſo employed with medicines of the tonic and antiſcorbutic claſs.

MED. VIRT. *Aſtringent — Antiſcorbutic.*

PREP. *Whey—Conſerve.*

LUPINI albi ſemen: Lin. White lupins; the ſeeds.

Theſe have a leguminous taſte, accompanied with a diſagreeable bitter one. They are ſaid to be anthelmintic, both internally taken, and applied externally.

MED. VIRT. *Anthelmintic.*

LUPULUS: Humulus Lupulus Lin. Hops; the looſe leafy heads on the tops of the ſtalks.

Theſe form one of the moſt agreeable of the ſtrong bitters, and have a warm aromatic taſte, though rarely employed for any medicinal purpoſes. Their principal conſumption is in malt liquors, which they render leſs glutinous and diſpoſe to paſs off more freely by urine.

The Spaniards order one pound of hop-roots to be boiled in a gallon of water till it is reduced to ſix pints, half a pint of which they drink every morning in bed for the cure of the *lues venerea.*

MED. VIRT. *Stomachic — Diuretic.*

LYCOPERDON: Lycoperdon Boviſta Lin. Puff-ball, or duſty Muſhroom.

This fungus is found in dry-paſture grounds. It ſeems to be nearly of the ſame quality with the agaric of the oak, and has, like it, been employed for *reſtraining external hæmorrhages* and *other fluxions.* The fine duſt, with which it becomes filled by age, has been applied alſo in the ſame intentions.

MED. VIRT. *Styptic.*

MACIS [*L. E.*] Mace; one of the coverings of the nutmeg (See *Nux moſchata*). This ſpice, conſidered as the ſubject both of medicine and of pharmacy, agrees nearly with the nutmeg. The principal difference is, that mace is ſomewhat leſs aſtringent, yields to the preſs a more fluid oil, and in diſtillation a more volatile one. What is called in the ſhops expreſſed oil of mace, is prepared not from this ſpice, but from the nutmeg.

MED. VIRT. *Aromatic.*

MAJORANÆ *Herba: Origani Majoranæ Lin. S. P.* Sweet marjoram; the herb [*L. E.*]

Marjoram is raiſed annually in our gardens for culinary as well as medicinal uſes; the ſeeds are commonly procured from the ſouthern parts of France, where the plant grows wild. It is a moderately warm aromatic, yielding its virtues both to aqueous and ſpirituous liquors by infuſion, and to water in diſtillation. It is principally celebrated in *diſorders of the head* and *nerves*, and *in the humoural aſthmas and catarrhs of old people.* An eſſential oil of the herb is kept in the ſhops. The powder of the leaves proves an agreeable errhine, and enters the officinal ſternutatory powder.

MED. VIRT. *Aromatic — Errhine.*

MALVÆ *folia, flores: Malvæ ſylveſtris Lin. S. P.* Mallow; the leaves and flowers [*L. E.*]

Theſe have a ſomewhat mucilaginous ſweetiſh taſte. The leaves are ranked the firſt of the four emollient herbs: they were formerly of ſome eſteem, in food, for looſening the belly; at preſent, decoctions of them are ſometimes employed *in dyſenteries, heat* and

ſharpneſs of urine, and in general *for obtunding acrimonious humours.*

MED. VIRT. *Emollient.*

MALA. Apples.

All the ſorts of apples have the common quality of cooling and abating thirſt: the more acid kinds looſen the belly; the auſtere have rather a contrary effect.

MED. VIRT. *Cooling* and *laxative.*

MANNA [*L. E.*] *Ex Fraxino Orno Lin.* The juice of certain trees of the aſh kind (growing in Italy and Sicily), either naturally concreted on the plants, or exſiccated and purified by art. There are ſeveral ſorts of manna in the ſhops. The larger pieces, called *flake manna*, are uſually preferred; though the ſmaller grains are equally as good, provided they be white, or of a pale yellow colour, very light, of a ſweet not unpleaſant taſte, and free from any viſible impurities. Some people injudiciouſly prefer the fat honey-like manna to the foregoing: this has either been expoſed to a moiſt air, or damaged by ſea or other water. This kind of manna is ſaid to be ſometimes counterfeited by a compoſition of ſugar and honey, mixed with a little ſcammony: there is alſo a *factitious manna*, which is white and dry, ſaid to be compoſed of ſugar, manna, and ſome purgative ingredient, boiled to a proper conſiſtence; this may be diſtinguiſhed by its weight, ſolidity, untranſparent whiteneſs, and by its taſte, which is different from that of manna.

Manna is *a mild, agreeable laxative*, and may be given with ſafety to children and pregnant women: nevertheleſs, in ſome particular conſtitutions, it acts very unkindly, producing flatulencies and diſtenſion of the viſcera; theſe inconveniencies may be prevented by the addition of any grateful warm aromatic. Manna operates ſo weakly, as not to produce the full effect of a cathartic, unleſs taken in large doſes; and hence it is rarely given in this intention by itſelf. It may be commodiouſly diſſolved in the purging mineral waters, or joined to the cathartic ſalts, ſena, rhubarb, or the like. Geoffroy recommends acuating it with a few grains of emetic tartar; the mixture is to be divided into ſeveral doſes, each containing one grain of the emetic tartar: by this management, he ſays, bilious ſerum will be plentifully evacuated, without any nauſea, gripes, or other inconvenience. It is remarkable, that the efficacy of this drug is greatly promoted (if the account of Valliſnieri deſerves credit) by a ſubſtance which is itſelf very ſlow of operation, caſia. (See CASIA.)

MED. VIRT. *Laxative.*

MARRUBII *folia: Marrubii albi vulgaris Lin. S. P.* White horehound; the leaves [*L. E.*]

Theſe have a very ſtrong, not diſagreeable ſmell, and a roughiſh very bitter taſte. Beſides the virtues which they poſſeſs in common with other ſtrong bitters, they are ſuppoſed to be peculiarly ſerviceable in *humoural aſthmas* and *coughs, cachexy, hyſteria*, the *yellow jaundice proceeding from a viſcidity of the bile*, and *other chronical diſorders.* They are doubtleſs an uſeful *aperient* and *deobſtruent, promote the fluid ſecretions in general*, and, *liberally taken, looſen the belly.*

Its doſe in powder, ʒj; expreſſed juice a ſpoonful or two; infuſion, half an handful.

MED. VIRT. *Tonic* and *diuretic.*

MARI SYRIACI folia: Teucrium Marum Lin. Syrian herb maſtich; the leaves [*L. E.*]

This is a ſmall ſhrubby plant, growing ſpontaneouſly in Syria, Candia, and other warm climates, and cultivated with us in gardens. The leaves have an aromatic bitter-

ish taste; and, when rubbed betwixt the fingers, a quick pungent smell, which soon affects the head, and occasions sneezing: distilled with water, they yield a very acrid, penetrating essential oil, resembling one obtained by the same means from scurvy-grass. These qualities point out the uses to which this plant might be applied; at present, it is little otherwise employed than in cephalic snuffs. It is an ingredient in the *pulvis asari comp.* of the London Pharmacopœia.

MED. VIRT. *Aromatic—Errhine.*

MASTICHE [*L. E.*] *Pistachia Lentiscus Lin. S. P.* Mastich; a resin exuding from the lentisc tree (see LENTISCUS), and brought from Chio, in small, yellowish transparent grains or tears, of an agreeable smell, especially when heated or set on fire. This resin is recommended in *old coughs, dysenteries, hæmoptoës, weakness of the stomach*, and, in general, *in all debilities and laxity of the fibres.* Geoffroy directs an aqueous decoction of it to be used for these purposes: but water extracts little or nothing from this resin; rectified spirit almost entirely dissolves it. The solution tastes very warm and pungent. It is now, though, very rarely prescribed.

MED. VIRT. *Corroborant.*

MATRICARIÆ folia, flores: Matricariæ Parthenii Lin. Common wild featherfew or feverfew; the leaves and flowers.

This plant is a celebrated *antihysteric.* Simon Paulli relates, that he has experienced most happy effects from it in *obstructions of the uterine evacuations.* I have often seen, says he, from the use of a decoction of matricaria and chamomile flowers with a little mugwort, hysteric complaints instantly relieved, the discharge succeed plentifully, and the patient, from a lethargic state, return as it were into life again. Matricaria is likewise recommended in many other disorders, as a warm stimulating bitter: all that bitters and carminatives can do, says Geoffroy, may be expected from this. It is undoubtedly a medicine of some use in these cases, though not perhaps equal to chamomile flowers alone, with which the matricaria agrees in sensible qualities, except in being weaker.

MED. VIRT. *Aperient — Antispasmodic.*

MECHOACANNÆ radix: Convolvuli Mechoacannæ Lin. The root of an American convolvulus, brought chiefly from Mechoacan, a province of Mexico, in thin slices like jalap, but larger, and of a whitish colour. It was first introduced among us (about the year 1524) as *a purgative* universally safe, and capable of evacuating all morbific humours from the most remote parts of the body. As soon as jalap became known, Mechoacan gradually lost its reputation, which it has never since been able to retrieve. It is nevertheless by some still deemed an *useful cathartic.* It has very little smell or taste, and is not apt to offend the stomach; its operation is slow, but effectual and safe. Geoffroy affirms, that there is scarce any purgative accompanied with fewer inconveniencies. It seems to differ from jalap only in being weaker; the resins obtained from both have nearly the same qualities, but jalap yields five or six times as much as Mechoacan. Hence it is found necessary to exhibit the latter in six times the dose of the former, to produce the same effects.

MED. VIRT. *Cathartic.*

MEL [*L. E.*] Honey.—Honey is a vegetable juice, obtained from the honey-comb, either by separating the combs, and laying them flat upon a sieve, through which the honey spontaneously percolates; or by including the comb in can-

vas bags, and forcing the honey out by a preſs. The former ſort is the purer; the latter is found to contain a good deal of the matter of which the comb is formed, and many other impurities. There is another ſort ſtill inferior to the two foregoing, obtained by heating the combs before they are put into the preſs. The beſt ſort is thick, of a whitiſh colour, an agreeable ſmell, and a very pleaſant taſte: both the colour and flavour differ according to the plants from which the bees collect it: that of Narbonne in France, where roſemary abounds, is ſaid to have a very manifeſt flavour of that plant, and to be imitable by adding to other honey an infuſion of roſemary flowers. Honey, conſidered as a medicine, is a very *uſeful detergent* and *aperient, powerfully diſſolving viſcid juices,* and *promoting the expectoration of tough phlegm.* Honey has been ſaid to have afforded great benefit to ſome aſthmatic people, but then it has been adminiſtered in the quantity of ſome ounces in the day; hence it is adviſed, where good effects are wiſhed to be produced, to be uſed to a conſiderable extent as an article of diet. In ſome particular conſtitutions it has an inconvenience of griping or proving purgative; this is ſaid to be in ſome meaſure prevented by previouſly boiling the honey.

MED. VIRT. *Aperient* and *detergent.*

MELILOTI folia, flores: Trifolii Meliloti officinalis Lin. Melilot; the leaves and flowers.

This grows wild in hedges and among corn; and has likewiſe, for medicinal uſes, been cultivated in gardens. The green herb has no remarkable ſmell; when dry, a pretty ſtrong one: the taſte is roughiſh, bitter, and, if long chewed, nauſeous. A decoction of this herb has been recommended *in inflammations of the abdomen*; and a decoction of the flowers *in the fluor albus.* But modern practice rarely employs it any otherwiſe than in emollient and carminative glyſters, and in fomentations, cataplaſms, and the like; and in theſe not often. It formerly gave name to one of the officinal plaſters, which received from the melilot a green colour, but no virtue.

MED. VIRT. *Emollient — Carminative.*

MELISSÆ *folia: Meliſſæ officinalis Lin.* Balm; the leaves [*L. E.*]

This plant, when in perfection, has a pleaſant ſmell, ſomewhat of the lemon kind: and a weak roughiſh aromatic taſte. The young ſhoots have the ſtrongeſt flavour: the flowers, the herb itſelf when old, or produced in very moiſt rich ſoils or rainy ſeaſons, are much weaker both in ſmell and taſte. Balm is appropriated, by the writers on the Materia Medica, to the *head, ſtomach,* and *uterus*; and in all diſorders of theſe parts is ſuppoſed to do extraordinary ſervice. So high an opinion have ſome of the chemiſts entertained of balm, that they have expected to find in it a medicine which ſhould prolong life beyond the uſual period. The preſent practice, however, holds it in no great eſteem, and ranks it (where it certainly deſerves to be) among the *weaker corroborants.* In diſtillation, it yields an elegant eſſential oil, but in exceeding ſmall quantity; the remaining decoction taſtes roughiſh. Strong infuſions of the herb, drunk as tea, and continued for ſome time, have done ſervice in a *weak lax ſtate of the viſcera*: theſe liquors, lightly acidulated with juice of lemons, turn of a fine reddiſh colour, and prove *an uſeful,* and *to many a very grateful drink, in dry parching fevers.* It is chiefly uſed in infuſion as a diluent in acute febrile affections, and, when acidulated with lemon-juice, makes a very pleaſant drink.

MED. VIRT. *Aromatic.*

MELONUM semen: Cucumis melo Lin. Melons: the seeds. These stand among the four greater cold seeds. They have been sometimes used, with the others of that class, as cooling and emollient; but are at present little taken notice of.

MED. VIRT. *Refrigerant* and *emollient.*

MENTHÆ PIPERITIDIS *herba: Mentha piperita Lin. S. P.* Peppermint; the herb [*L. E.*] This plant grows wild in some parts of England, in moist watery places, but is much less common than the other sorts. The leaves have a more penetrating smell than any of the other mints, and a much warmer, pungent, glowing taste like pepper, sinking as it were into the tongue. The principal use of this herb is *in flatulent colics, languors, hysterical affections, retchings,* and other *dyspeptic symptoms,* acting as a cordial, and often producing immediate relief, from its stomachic, antispasmodic, and carminative qualities. It seems to act as soon as taken, and extend its effects through the whole system, instantly communicating a glowing warmth. Water extracts the whole of the pungency of this herb by infusion, and elevates it in distillation.

MED. VIRT. *Aromatic — Cordial.*

PREP. *Distilled water — Spirit — Essence — Essential oil.*

MENTHÆ SATIVÆ *folia: Menthæ viridis Lin. S. P.* Garden or spearmint; the leaves [*L. E.*]

The leaves of mint have a warm, roughish, somewhat bitterish taste; and a strong, not unpleasant, aromatic smell. Their virtues are those of a *warm stomachic* and *carminative:* in *loss of appetite, nauseæ, continual retchings to vomit,* and (as Boerhaave expresses it) *almost all paralytic weaknesses of the stomach,* there are few simples perhaps of equal efficacy. In *colicky pains,* the *gripes to which children are subject, lienteries,* and *other kinds of immoderate fluxes,* this plant frequently does great service. It likewise proves beneficial in many *hysteric cases,* and affords an useful cordial in *languors* and *other weaknesses* consequent upon delivery. The same virtues are in fact to be attributed to the *mentha sativa,* as to the *piperitis,* though perhaps its powers may be less efficacious. Dr. CULLEN says "It acts very powerfully on the parts to which it is applied immediately, and therefore considerably on the stomach; invigorating all its functions. It acts especially as an antispasmodic, and therefore relieves pain and colic depending upon spasm. It will also stop vomiting depending upon such a cause; but there are many cases of vomiting in which it is of no service; and in these cases, any wise depending upon inflammatory irritation in the stomach itself or in other parts of the body, it aggravates the disease, and increases the vomiting. As for its possessing the power of resolving coagulated milk in the breasts, or being an antaphrodisiac, he considers it as possessing no such powers." The best preparations are *a strong infusion made from the dry leaves in water* (which is much superior to one from the green herb), or rather a tincture or extract prepared with rectified spirit. These possess the whole virtues of the mint. The essential oil and distilled water contain only the aromatic part; the expressed juice only the astringency and bitterishness, togegether with the mucilaginous substance common to all vegetables.

MED. VIRT. *Aromatic — Cordial.*

PREP. *A distilled Water — Spirit — Essential Oil — Essence.*

MERCURIALIS herba: Mercurialis annuæ Lin. Herb mercury.

This stands among the five emol-

lient herbs; and in this intention is ſometimes made uſe of in glyſters.

There is another ſort of mercurialis growing in woods and hedges, which, though recommended by ſome botanic writers, as having the ſame virtues with the foregoing, and as more palatable, has been found poſſeſſed of noxious qualities. (See *Raii Synopſ.* edit. 3. page 138. *Phil. Tranſ. abr. Lowthorp.* ii. 640.) This may be diſtinguiſhed from the foregoing, by its being a perennial plant, larger, having its leaves rough, and the ſtalk not at all branched, and is commonly called with us dog's mercury.

MED. VIRT. *Emollient — Laxative.*

MEI ATHAMANTICI radix: Æthuſæ Mei Lin. Spignel; the root.

Spignel is an umbelliferous plant, found wild in Italy, and the warmer parts of Europe, and ſometimes alſo in England. The roots have a pleaſant aromatic ſmell, and a warm, pungent, bitteriſh taſte: in virtue they are ſimilar to the *leviſticum*, from which this root ſeems to differ only in being weaker, and ſomewhat more agreeable. It is an uſeful *aromatic* and *carminative*, though at preſent little regarded.

MED. VIRT. *Aromatic — Carminative.*

MEZEREI *radicis cortex: Daphnes Mezerei Lin.* Mezereon, or ſpurge-olive; bark of the root [*L. E.*]

This ſhrub is a native of England, and found wild in the woods of ſome counties. It is ſaid to grow plentifully in ſome woods near Andover in Hampſhire, and alſo about Laxfield in Suffolk; but it is generally cultivated in gardens, on account of the beauty and early appearance of its flower, which is of a purple colour, ſometimes pale red and white, blowing in February and March, ſometimes earlier, and has the ſmell of an hyacinth. This plant is extremely acrid, eſpecially when freſh; and, if retained in the mouth, excites great and long-continued heat and inflammation, particularly of the throat and fauces. In France the bark is recommended as an application to the ſkin, which under certain management produces a continued ſerous diſcharge, without bliſtering, and is thus rendered uſeful in many chronic diſeaſes of a local nature.

The bark of the root is the part chiefly in uſe, two drams of which with half an ounce of bruiſed liquorice are boiled in three pints of water till reduced to two; of this from four to eight ounces are taken four times a day. This has been found very efficacious for *reſolving venereal nodes and the thickening of the membrane covering the perioſtrum from other cauſes.* It is ſaid alſo to cure *other remains of the venereal diſeaſe*, which mercury in large quantities had failed to do. Dr. CULLEN found a *caſe of ulcerations in many different parts of the body*, where mercury had failed, entirely cured by the uſe of mezereon decoction for two or three weeks. Dr. HOME has not only found this decoction cure *ſcirrhous tumours remaining after the venereal diſeaſe*, and after the uſe of mercury, but that it *healed ſome ſcirrhous tumours from other cauſes*: and CULLEN has frequently employed it in *ſeveral cutaneous eruptions*, and ſometimes with ſucceſs. The conſiderable and long-continued irritation produced in the throat when mezereon is chewed, induced Dr. Withering to order a patient troubled *with a difficulty of ſwallowing, ſeemingly occaſioned by a paralytic affection*, to chew a thin ſlice of the root as often as ſhe could bear it; by which in about a month ſhe recovered her power of ſwallowing, though the complaint had been of three years' ſtanding.

MED. VIRT. *Stimulant* and *cathartic.*

MILII ſemen: Panici miliacei Lin. Millet; the ſeed.

Theſe ſeeds are frequently employed in food, but hardly ever as medicines: they are ſufficiently nutritious, and not difficult of digeſtion.

MILLEFOLII *folia: Achilleæ Millefolii Lin.* Milfoil, or yarrow; the leaves [*E.*]

This grows plentifully about the ſides of fields, and on dry commons, flowering during the greateſt part of the ſummer. The leaves have a rough bitteriſh taſte, and a faint aromatic ſmell. Their virtues are thoſe of a *very mild aſtringent*, and as ſuch they ſtand recommended *in hæmorrhages both internal and external, diarrhœas, debility and laxity of the fibres*; and *in ſpaſmodic hyſterical affections.* In theſe caſes, ſome of the Germans have a very high opinion of this herb, particularly Stahl, who eſteemed it a very *effectual aſtringent*, and, in his language, one of the moſt certain *tonics* and *ſedatives.* Its virtues are extracted in great perfection by proof ſpirit; water takes up its aſtringency and bitterneſs, but little of its aromatic flavour; tinctures made in rectified ſpirit contain both, though rather weaker than thoſe in proof-ſpirit.

The flowers of milfoil are conſiderably ſtronger in aromatic flavour than the leaves; in diſtillation, they yield a ſmall quantity of eſſential oil, of an elegant blue colour.

The roots, taken up in the ſpring, have an agreeable warm, pungent taſte. Dr. Grew ſays they reſemble *contrayerva*, and imagines they might in ſome meaſure ſupply its place. This, however, is greatly to be doubted, ſince there is ſuch a remarkable difference betwixt the two, that, whilſt one retains its taſte for a length of time after it has been brought to us from America, the taſte of the other is in great meaſure loſt by drying.

MED. VIRT. *Mildly aſtringent* and *aromatic.*

MILLEPEDÆ [*L. E.*] *Oniſcus Aſellus L. S. N.* Woodlice, hoglice, ſlaters.

Theſe inſects are found in cellars, under ſtones, and in cold moiſt places: in the warmer countries they are rarely met with. Millepedes have a faint diſagreeable ſmell, and a ſomewhat pungent, ſweetiſh, nauſeous taſte. They have been highly celebrated in *ſuppreſſions of urine, in all kinds of obſtructions of the bowels, in the jaundice, weakneſs of ſight*, and *a variety of other diſorders.* Whether they have any juſt title to theſe virtues, is greatly to be doubted: thus much is certain, that their real effects come far ſhort of the character uſually given of them. They have been ſwallowed in large numbers, an hundred twice a day, without producing any effect on the urinary paſſages, or doing any ſervice to the complaint for which they were adminiſtered; they therefore are not now much depended on.

MED. VIRT. *Diuretic — Deobſtruent.*

PREP. *Dried and powdered — Wine.*

MORI *fructus: Mori nigræ.* The mulberry tree; its fruit [*L.*]

This tree is a native of Italy, but now cultivated in moſt parts of Europe, not only for the grateful fruit it affords, but for the purpoſe of ſupplying ſilk-worms with the leaves, upon which they feed. Its fruit is rather eaten for pleaſure than uſed as a medicine; it has the common qualities of the other ſweet fruits, *abating heat, quenching thirſt*, and *promoting the groſſer ſecretions.* The bark of the roots has an acrid, bitter taſte, and poſſeſſes a cathartic

power. It has been ſucceſsfully uſed as a vermifuge, particularly in caſes of tænia. Doſe, half a dram of the powder.

MED. VIRT. FRUIT — *Refrigerant* — BARK OF THE ROOT — *Anthelmintic* — *Cathartic.*

PREP. *Syrup.*

MOSCHUS [*L. E.*] *Moſchus moſchiferus Lin. S. N.* Muſk.

Muſk is a grumous ſubſtance like clotted blood, found in a little bag ſituated near the umbilical region of a particular kind of animal met with in China, Tartary, and the Eaſt-Indies: the beſt muſk is brought from Tonquin, an inferior ſort from Agria and Bengal, and a ſtill worſe from Ruſſia.

Fine muſk comes to us in round thin bladders, which are generally about the ſize of a pigeon's egg, covered with ſhort brown hairs, well filled, and without any appearance of having been opened. The muſk itſelf is dry, with a kind of unctuoſity, of a dark reddiſh brown or ruſty blackiſh colour, in ſmall round grains, with very few hard black clots, and perfectly free from any ſandy or other viſible foreign matter. If chewed, and rubbed with a knife on paper, it looks ſmooth, bright, yellowiſh, and free from grittineſs. Laid on a red-hot iron, it catches flame, and burns almoſt entirely away, leaving only an exceeding ſmall quantity of light greyiſh aſhes. If any earthy ſubſtances have been mixed with the muſk, the quantity of the reſiduum will readily diſcover them.

Muſk has a bitteriſh ſubacrid taſte; a fragrant ſmell, agreeable at a diſtance, but when ſmelt near, ſo ſtrong as to be diſagreeable, unleſs weakened by the admixture of other ſubſtances. If a ſmall quantity be infuſed in ſpirit of wine in the cold for a few days, it imparts a deep, but not red tincture: this, though it diſcovers no great ſmell of the muſk, is nevertheleſs ſtrongly impregnated with its virtues; a ſingle drop of it communicates to a whole quart of wine a rich muſky flavour. The degree of flavour which a tincture drawn from a known quantity of muſk communicates to vinous liquors, is perhaps one of the beſt criteria for judging of the goodneſs of this commodity. Neumann informs us, that ſpirit of wine diſſolves ten parts out of thirty of muſk, and that water takes up twelve; that water elevates its ſmell in diſtillation, whilſt pure ſpirit brings over nothing.

Muſk is a medicine of great eſteem in the eaſtern countries: among us, it has been for ſome time pretty much out of uſe, even as a perfume, on a ſuppoſition of its occaſioning vapours, &c. in weak females, and perſons of a ſedentary life. It appears, however, from late experience, to be, when properly managed, a remedy of great ſervice even againſt thoſe diſorders which it has been ſuppoſed to produce. Dr. Wall has communicated (in the Philoſophical Tranſactions, N° 474) an account of ſome extraordinary effects of muſk *in convulſive* and *other diſeaſes*, which have too often baffled the force of medicine. The doctor obſerves, that the ſmell of perfumes is often of diſſervice, where the ſubſtance taken inwardly, and in conſiderable quantity, produces the happieſt effects: that two perſons labouring under *a ſubſultus tendinum, extreme anxiety*, and *want of ſleep, from the bite of a mad dog*, by taking two doſes of muſk, each of which was ſixteen grains, were perfectly relieved from their complaints. He likewiſe obſerves, that *convulſive hiccups*, attended with the worſt ſymptoms, were removed by a doſe or two, of ten grains:

and that in ſome caſes, where this medicine could not, on account of ſtrong convulſions, be adminiſtered to the patient by the mouth, it proved of ſervice when injected as a glyſter. He likewiſe adds, that, under the quantity of ſix grains, he never found much effect from it; but that, taken to ten grains and upwards, it never fails to produce a mild diaphoreſis, without at all heating or giving any uneaſineſs; that, on the contrary, it *eaſes pain, raiſes the ſpirits*, and, after the ſweat breaks out, the patient uſually falls into a refreſhing ſleep; that he never met with any hyſterical perſon, how averſe ſoever to perfumes, but could take it, in the form of a bolus, without inconvenience. To this paper is annexed an account of ſome further extraordinary effects of muſk, obſerved by another gentleman. Repeated experience has ſince confirmed its efficacy in theſe diſorders. I have myſelf frequently given it with remarkable ſucceſs; and ſometimes increaſed the doſe as far as twenty grains, every four hours, with two or three ſpoonfuls of the muſk julep between. Beſides what Dr. Wall has ſaid in favour of muſk, we ſhall add Dr. CULLEN's opinion, who maintains that muſk is one of the moſt *powerful antiſpaſmodics* with which we are acquainted. It is moſt effectual when given in ſubſtance, and muſt be adminiſtered in large doſes from ten to thirty grains; and even when theſe large doſes are found to be effectual, they muſt be repeated at ſhort intervals, till the diſeaſe is entirely ſubdued. Muſk is to be judged of by the ſtrength of its odour, and, in proportion to this only, to be an effectual remedy. Dr. CULLEN once procured immediate relief to a patient labouring under *ſevere headach and delirium from the gout*, by adminiſtering fifteen grains of genuine muſk at a doſe. He alſo relieved a gentleman afflicted *with a ſpaſm of the pharynx, preventing deglutition, and almoſt reſpiration*, by muſk, when other remedies had failed; and as the diſeaſe continued to recur at times for ſome years after, it was only obviated or relieved by the uſe of muſk. It has given relief in ſeveral circumſtances *of the gout, when retrocedent, affecting the ſtomach, lungs, and particularly the head*, when adminiſtered in large doſes, or at leaſt by repeating them after ſhort intervals. In fine, muſk ſeems to be adapted *to all caſes of convulſive diſorders* which are to be cured by opiates. In *tetanus* it is combined with opium, in the *rabies canina* with mercury.

MED. VIRT. *Antiſpaſmodic—diaphoretic.*

PREP. *Mixture*, or *Julep.*

MYROBALANI. Myrobalans, dried fruits brought from the Eaſt-Indies; their outward part, freed from the ſtone.

Five kinds of myrobalans were formerly directed as officinals, but are not uſed in the preſent practice.

All the myrobalans have a low degree of purgative virtue. They have alſo an aſtringent quality, diſcoverable by the taſte, from their uſe among the Indians for tanning leather, and from their ſtriking a black colour with chalybeate ſolutions. In conſequence of this, they are ſuppoſed to *ſtrengthen the bowels after their operation as a cathartic is over.* Nevertheleſs their purgative virtue is ſo inconſiderable, that practitioners have for a long time laid them entirely aſide in that intention; and the college of Edinburgh, as well as that of London, has now rejected them from the catalogue of officinal ſimples.

MED. VIRT. *Purgative.*

MYRRHA [*L. E.*] Myrrh.

Myrrh is a concrete gummy reſinous juice brought from the Eaſt-

Indies, in ſmall lumps or drops, of various colours and magnitudes. The beſt ſort is of a brown or reddiſh yellow colour, ſomewhat tranſparent; of a lightly pungent, bitter taſte, with an aromatic flavour, though not ſufficient to prevent its proving nauſeous to the palate; and a ſtrong not diſagreeable ſmell. The medical effects of this aromatic bitter are, *to warm and ſtrengthen the viſcera*, and *diſſolve thick, tenacious juices*; it frequently occaſions a mild diaphoreſis, and promotes the fluid ſecretions in general.

Hence it proves ſerviceable in languid caſes, *diſeaſes arising from a ſimple inactivity, thoſe female diſorders which proceed from a cold, mucous, ſluggiſh diſpoſition of the humours, ſuppreſſions of the uterine diſcharges, cachectic diſorders*, and *where the lungs and thorax are oppreſſed by viſcid phlegm.* Myrrh is likewiſe ſuppoſed in a peculiar manner to *reſiſt putrefaction in all parts of the body*; and in this light ſtands recommended in *malignant, putrid*, and *peſtilential fevers*, and *in the ſmall-pox*, in which laſt it is ſaid to accelerate the eruption.

Given in moderate doſes, it promotes appetite and digeſtion, for it manifeſtly ſtimulates the ſtomach; but taken in larger quantity, as half a dram or two ſcruples, it raiſes a diſagreeable heat in the ſtomach; and at the ſame time occaſions a frequency of the pulſe, and a ſenſe of heat over the whole body. When therefore adminiſtered in conſumptions, in ſome of which caſes it has been ſtrongly recommended, it ſhould be given in moderate doſes only. It has been ſpeciouſly propoſed, that myrrh in ſubſtance ſhould be given to be chewed in the mouth, and no part of it ſwallowed but what is diſſolved in the ſaliva.

Rectified ſpirit extracts the fine aromatic flavour and bitterneſs of this drug, and does not elevate any thing of either in evaporation. The gummy ſubſtance left by this menſtruum has a diſagreeable taſte, with ſcarce any thing of the peculiar flavour of the myrrh: this part diſſolves in water, except ſome impurities which remain. In diſtillation with water, a conſiderable quantity of a ponderous eſſential oil ariſes, reſembling in flavour the original drug.

MED. VIRT. *Antiſpaſmodic* and *corroborant.*

PREP. *Tincture.*

NARDUS INDICA: Andropogon Nardus Lin. Indian nard, or ſpikenard, brought from the Eaſt-Indies.

This is a congeries of ſmall fibres iſſuing from one head, and matted cloſe together, ſo as to form a bunch about the ſize of the finger, with ſome ſmall ſtrings at the oppoſite end of the head. The matted fibres (which are the part choſen for medicinal purpoſes) are ſuppoſed by ſome to be the head or ſpike of the plant, by others the root: they ſeem rather to be the remains of the withered ſtalks, or the ribs of the leaves. Sometimes entire leaves and pieces of ſtalks are found among them. We likewiſe now and then meet with a number of theſe bunches iſſuing from one root.

Spikenard has a warm, pungent, bitteriſh taſte; and a ſtrong, not very agreeable ſmell. It is *ſtomachic* and *carminative*; and ſaid to be *alexipharmac, diuretic*, and *emmenagogue.*

NASTURTII AQUATICI *herba: Siſymbrii Naſturtii Lin. S. P.* Water-creſſes: the freſh herb [*L. E.*]

This plant grows wild in rivulets, and the clearer ſtanding waters; its leaves remain green all the year, but are in greateſt perfection in the ſpring. They have a quick pungent ſmell (when rub-

bed betwixt the fingers) and an acrid taste, similar to that of *cochlearia*, but weaker. As to their virtues, they are among the *milder aperient antiscorbutics*. Hoffman has a mighty opinion of this plant, and recommends it as of singular efficacy for *accelerating the circulation, strengthening the viscera, opening obstructions of the glands, promoting the fluid secretions*, and *purifying the blood and humours*: for these purposes, the expressed juice, which contains the peculiar taste and pungency of the herb, may be taken in doses of an ounce or two, and continued for a considerable time.

The water-cresses are frequently eaten as sallad, and taken in this way daily for a considerable time, under the idea of being a good corrector of the blood and humours. The *nasturtium hortense*, or garden-cresses, possess the same virtues, but in a much weaker degree.

MED. VIRT. *Aperient — Antiscorbutic.*

NEPETÆ folia: Nepetæ Catariæ Lin. Nep, or cat-mint; the leaves.

This plant is commonly cultivated in our gardens, and is sometimes also found growing wild in hedges and on dry banks. It is a moderately aromatic plant, of a strong smell, resembling a mixture of mint and pennyroyal; of the virtues of which it likewise participates.

MED. VIRT. *Aromatic—Cordial.*

NEPHRITICUM LIGNUM: Guilandina Moringa Lin. Nephritic wood.

This is an American wood, brought to us in large, compact, ponderous pieces, without knots, of a whitish or pale yellow colour on the outside, and dark-coloured or reddish within: the bark is usually rejected. This wood imparts to water or rectified spirit a deep tincture, appearing, when placed betwixt the eye and the light, of a golden colour, in other situations blue. Pieces of another wood are sometimes mixed with it, which give only a yellow colour to water. The nephritic wood has scarce any smell, and very little taste. It stands recommended *in difficulty of urine, nephritic complaints*, and *all disorders of the kidneys* and *urinary passages*; and is said to have this peculiar advantage, that it does not, like the warmer diuretics, heat or offend the parts. Practitioners however have not found these virtues warranted by experience.

MED. VIRT. *Diuretic.*

NICOTIANÆ *folia: Nicotianæ Tabaci Lin. S. P.* Tobacco; the leaves [*L. E.*]

This plant was first brought into Europe, about the year 1560, from the island of Tobago in America; and is now cultivated for medicinal use, in our gardens. The leaves are about two feet long, of a pale green colour whilst fresh, and, when carefully dried, of a lively yellowish. They have a strong, disagreeable smell, like that of the narcotic plants; and a very acrid burning taste. Taken internally, they prove *virulently cathartic and emetic*, occasioning almost intolerable cardialgic anxieties. By boiling in water, their virulence is abated, and at length destroyed: an extract made by long coction is recommended by Stahl and other German physicians, as *a safe and most effectual aperient, expectorant, detergent*, &c. but this medicine, which is extremely precarious and uncertain in strength, has never come into esteem among us. Tobacco is sometimes used externally in unguents, *for destroying cutaneous insects, cleansing old ulcers*, &c. Beaten into a mash with vinegar or brandy, it has sometimes proved serviceable for *removing hard tumours of the hypochondres*. An account is given in the

Edinburgh Eſſays of two caſes of this kind cured by it.

There is another ſort of tobacco found wild on dunghills, in ſeveral parts of England. This is called by C. Bauhine *nicotiana minor*, by Gerard *hyoſcyamus luteus*. *Nicotiana ruſtica Lin.* It ſeems to agree in quality with the hyoſcyamus formerly mentioned, though (as Dale informs us) often ſubſtituted in our markets for the true tobacco; from which it may be diſtinguiſhed by the leaves being much ſmaller, and the flowers not reddiſh as thoſe of the officinal ſort, but of a yellowiſh green colour.

Of late, however, the Nicotiana Tabaci, beſides the virtues attributed to it above, has been found to be an uſeful and powerful diuretic, given in the form of watery infuſion and tincture, which are made in the following manner: infuſe one ounce of dried Virginia tobacco leaves in one pint of proof ſpirit, or water; let it ſtand for four days; from thirty to ſixty drops or more, to be increaſed by five, eight, or ten drops, to a ſuitable doſe, to be taken two hours before dinner, and at bed-time, in a little cinnamon or any other kind of aromatic water, or in common water; the doſe one fourth leſs at noon than in the morning. In delicate habits it ſhould be cautiouſly adminiſtered. From the uſe of this, many caſes of dropſy and dyſury have been relieved, and ſome effectually cured. In fume and infuſion, by way of glyſter, it has been uſed with effect, againſt coſtiveneſs, in *incarcerated hernia*, *iliac paſſion*, and *worms*, particularly the aſcarides.

Med. Virt. *Violently emetic* — *Cathartic*—and *Narcotic*.

Prep. *Infuſion* — *Tincture* — *Extract* — *Fume* — *Glyſter*.

NIGELLÆ ſemen: Nigellæ ſativæ Lin. Fennel flower; the ſeeds. This plant is ſown annually in ſome of our gardens; the ſeeds moſt eſteemed are brought from Italy. They have a ſtrong, not unpleaſant ſmell; and a ſubacrid, ſomewhat unctuous, diſagreeable taſte. They ſtand recommended as *aperient*, *diuretic*, &c. but have long been ſtrangers to practice, and are by ſome ſuſpected to have noxious qualities.

Med. Virt. *Aperient* and *Diuretic*.

NITRUM: *Kali nitratum* [*L. E.*] Nitre, or ſaltpetre; a ſalt, extracted, in Perſia and the Eaſt Indies, from certain earths that lie on the ſides of hills; and artificially produced in ſome parts of Europe, from animal and vegetable matters rotted together (with the addition of lime and aſhes) and expoſed for a length of time to the air, without the acceſs of which, nitre is never generated. The ſalt extracted from the earths, &c. by means of water, is purified by colature and cryſtallization.

Pure nitre diſſolves in about ſix times its weight of water, and concretes again into colourleſs tranſparent cryſtals; their figure is that of an hexagonal priſm, terminated by a pyramid of an equal number of ſides. It readily melts in the fire; and, in contact with fuel, deflagrates with a bright flame and conſiderable noiſe; after the detonation is over, a large quantity of alkaline ſalt is found remaining. The taſte of nitre is ſharp, penetrating, and bitteriſh, accompanied with a ſenſation of coldneſs.

Nitre is a medicine of celebrated uſe in many diſorders. Beſides the *aperient quality* of neutral ſalts in general, it has a manifeſtly *cooling one*, by which *it quenches thirſt*, and *abates febrile heats* and *commotions of the blood*. It has one great advantage above the refrigerating medicines of the acid kind, that it

does not coagulate the animal juices; *blood*, which is coagulated by all the mineral acids, and *milk*, &c. by acids of every kind, are *by nitre rendered more dilute*, and preserved from coagulation. It nevertheless somewhat *thickens the thin, serous, acrimonious humours*, and occasions an uniform mixture of them with such as are more thick and viscid; by these means preventing the ill consequences which would otherwise ensue from the former, though it has not, as Junckner supposes, any property of really obtunding acrimony. This medicine for the most part *promotes urine; sometimes gently loosens the belly;* but in cold phlegmatic habits, very rarely has this effect, though given in large doses: *alvine fluxes, proceeding from too great acrimony of the bile or inflammation of the intestines*, are suppressed by it: *in choleric and febrile disorders*, it *generally excites sweat;* but in malignant cases, where the pulse is low, and the strength lost, it retards this salutary evacuation and the eruption of the exanthemata.

Dr. Stahl has written an express treatise upon the medical virtues of nitre, in which he informs us, from his own experience, *that this salt, added to gargarisms employed in inflammations of the fauces in acute fevers, thickens the salival moisture upon the palate and fauces into the consistence of a mucus*, which keeps them moist for a considerable time; whereas, if nitre be not added, a sudden dryness of the mouth immediately ensues; that *in nephritic complaints, the prudent use of nitre is of more service than any of the numerous medicines usually recommended in that disease;* that nitre *gives great relief in suppression and heat of urine*, whether simple or occasioned by a venereal taint; that it is of great service *in acute and inflammatory pains of the head, eyes, ears, teeth*, &c. *in all erysipelatous affections*, whether particular or universal, and likewise *in chronic deliria;* that *in diarrhœæ happening in petechial fevers*, nitre mixed with absorbents and diaphoretics had the best effects, always putting a stop to the flux, or rendering the evacuation salutary; that *in diarrhœæ happening in the small-pox*, it had been employed with the like success, two doses, or three at most (consisting of two, three, or four grains each, according to the age, &c. of the patient) given at the interval of two or three hours, putting a stop to the flux, after the bezoardic powders, both with and without opium, had been given without success. The same author recommends this salt likewise as a medicine of singular service *in choleras attended with great anxieties and heat of the blood; in the flatulent spasmodic heart-burns* familiar to hypochondriacal people; and *the loss of appetite, nausea, vomiting*, &c. which *gouty persons are sometimes seized with when the pains of the feet*, &c. *suddenly remit*. In cases of this last kind, the use of nitre surely requires great caution, although the author assures us, that no bad consequences are to be feared from it. Nevertheless he observes, that in phthisis and ulcerous affections, it has been found to be of no service; and that therefore its use may be superseded in these complaints. Indeed in disorders of the lungs in general, it is commonly reckoned to be rather hurtful than beneficial.

By some, nitre is much recommended in hæmoptysis, or other active hæmorrhages, not from any astringent power it may possess, but from its diminishing the activity of the sanguiferous system. With gouty stomachs it is apt to disagree, and, when given in large doses, to occasion spasmodic affections of that organ, and to debili-

tate and depreſs hypochondriac and nervous habits.

It is given from five to thirty grains, with equal quantities of ſugar, or gum arabic well powdered, and diſſolved in barley water or thin gruel, and adminiſtered repeatedly as a refrigerant, in acute fevers, and other inflammatory diſorders; though it may be given with great ſafety, and generally to better advantage, in large quantities; the only inconvenience is its being apt to ſit uneaſy on the ſtomach. Some have affirmed, that this ſalt loſes half its weight by fuſion, and conſequently that one part of melted nitre is equivalent to two of the cryſtals; but it did not appear, upon ſeveral careful trials, to loſe ſo much as one twentieth of its weight.

MED. VIRT. *Diuretic — Diaphoretic—Refrigerant.*

PREP. *An acid Spirit — Decoction — Troches.*

NUX MOSCHATA [*L. E.*] *Myriſtica officinalis Lin.* The *kernel*, called *nutmeg*, of the *fruit*; the *eſſential oil*; its *expreſſed oil*, commonly called *oil of mace*. Macis, *Mace.*

Nutmegs are the kernels of a roundiſh nut which grows in the Eaſt Indies. The outſide covering of this fruit is ſoft and fleſhy, like that of a walnut, and ſpontaneouſly opens when the nut grows ripe; immediately under this lies the mace (See MACIS) which forms a kind of reticular covering; through the fiſſures whereof appears a hard woody ſhell that includes the nutmeg. Theſe kernels have long been made uſe of both for medicinal and culinary purpoſes, and deſervedly looked upon as a *warm agreeable aromatic.* They are ſuppoſed likewiſe to have *an aſtringent virtue*; and are employed in that intention *in diarrhœæ* and *dyſenteries.* Their aſtringency is ſaid to be increaſed by torrefaction, but this does not appear to the taſte: this treatment certainly deprives the ſpice of ſome of its finer oil, and therefore renders it leſs efficacious to any good purpoſe; and, if we may reaſon from analogy, probably abates its aſtringency. Nutmegs are ſuppoſed to be *aromatic*, *ſtomachic*, *aſtringent*, and *anodyne*; but they ſhould not be uſed in large quantities; as they are apt to affect the head, and exerciſe ſo great an hypnotic power as to prove extremely dangerous, according to the accounts given by BONTIUS and CULLEN: therefore in apoplectic and paralytic caſes, this ſpice may be very improper.

Nutmegs diſtilled with water afford a large quantity of eſſential oil, reſembling in flavour the ſpice itſelf; after the diſtillation, an inſipid ſebaceous matter is found ſwimming on the water; the decoction, inſpiſſated, gives an extract of an unctuous, very lightly bitteriſh taſte, and with little or no aſtringency. Rectified ſpirit extracts the whole virtue of nutmegs by infuſion, and elevates very little of it in diſtillation: hence the ſpirituous extract poſſeſſes the flavour of the ſpice in an eminent degree.

Nutmegs yield to the preſs (heated) a conſiderable quantity of limpid yellow oil, which in cooling concretes into a ſebaceous conſiſtence. In the ſhops we meet with three ſorts of unctuous ſubſtances, called oil of mace, though really expreſſed from the nutmeg. *The beſt* is brought from the Eaſt Indies, in ſtone jars; this is of a thick conſiſtence, of the colour of mace, and an agreeable fragrant ſmell; *the ſecond ſort*, which is paler coloured and much inferior in quality, comes from Holland in ſolid maſſes, generally flat, and of a ſquare figure; *the third*, which is the worſt of all, and uſually called

common oil of mace, is an artificial compoſition of ſevum, palm-oil, and the like, flavoured with a little genuine oil of the nutmeg. Theſe oils yield all that part in which their aromatic flavour reſides, in diſtillation to water, and to pure ſpirit by infuſion: the diſtilled liquor and ſpirituous tincture nearly reſemble in quality thoſe prepared immediately from the nutmeg.

MED. VIRT. *Aromatic — Cordial — Hypnotic — Stomachic.*

PREP. *An eſſential Oil—Expreſſed Oil, called Oil of Mace—A ſpirituous Water.*

NUX PISTACHIA: Piſtachia vera Lin. Piſtachio.

This is a moderately large nut, containing a kernel of a pale greenifh colour, covered with a reddiſh ſkin. The tree which produces it, grows ſpontaneouſly in Perſia, Arabia, and ſeveral iſlands of the Archipelago: it bears likewiſe the colds of our own climate, ſo as to have produced fruit not inferior to that which we receive from abroad. Piſtachio nuts have a pleaſant, ſweet, unctuous taſte, reſembling that of almonds. They are ranked amongſt the *analeptics*, and are by ſome much eſteemed in *certain weakneſſes*, and *in emaciated habits.*

MED. VIRT. *Emollient—Analeptic.*

NYMPHÆÆ ALBÆ radix, flores. Lin. White water lily; the root and flowers.

This grows in rivers and large lakes, flowering uſually in June. The roots and flowers have a rough, bitteriſh, glutinous taſte (the flowers are the leaſt rough); and, when freſh, a diſagreeable ſmell, which is in a great meaſure loſt by drying: they are recommended in *alvine fluxes, gleets*, and the like. The roots are ſuppoſed by ſome to be in an eminent degree *narcotic*, but on no very good foundation. Lindeſtolpe informs us, that in ſome parts of Sweden, they were in times of ſcarcity uſed as food, and did not prove unwholeſome.

MED. VIRT. *Aſtringent* and *Corroborant.*

ŒNANTHE Crocata Lin. Hemlock dropwort. This is a large umbelliferous plant, growing in ditches and other moiſt places; with pinnated leaves, reſembling thoſe of celery or chervil, and ribbed ſtalks. Its roots afford the eaſieſt mark of diſtinction, which are white, thick, and ſhort, and grow ſeveral together, forming a kind of bunch.

The hemlock dropwort has long been known as a *moſt dangerous poiſon*; the moſt virulent, perhaps, that this country produces. Its roots or leaves, eaten by miſtake, have frequently proved fatal, occaſioning violent ſickneſs and vomiting, rigors, convulſions, delirium, and other terrible affections of the nervous ſyſtem. Dr. Pulteney has publiſhed a caſe in the Philoſophical Tranſactions, vol. LXII. in which this plant, uſed by miſtake inſtead of the water-parſnep, proved remarkably efficacious in removing an inveterate ſcorbutic complaint, which had reſiſted a variety of other remedies. The doſe firſt given was a common ſpoonful of the juice of the root, which at the firſt exhibition produced very alarming effects. This was afterwards reduced to three tea-ſpoonfuls; which quantity was perſiſted in a conſiderable time, and then changed for a tea of the leaves. The medicine never proved purgative, but was *diuretic*. It always occaſioned a degree of vertigo, accompanied, when the juice itſelf was taken, with nauſea and ſickneſs.

In Edinburgh it is ſaid to have been formerly brought into prac-

tice; and, from experiments made with the infusion of the leaves, it has been thought highly useful in promoting the menstrual discharge. However, from the active powers of this medicine, great caution is requisite in its administration; for if given in too large doses, it may prove destructive.

MED. VIRT. *A virulent Poison—Emmenagogue.*

PREP. *Juice—Infusion.*

OLIVÆ, *earunque oleum: Olea Europæa Lin. S. P.* The olive tree; the fruit and its oil [*L. E.*]

This tree grows in the southern parts of France, in Spain, Italy, and other warm countries: with us it is usually preserved in the green-houses of the curious, though it will bear our ordinary winters in the open air, and produce very good fruit. Olives have an acrid, bitter, extremely disagreeable taste: pickled (as we receive them from abroad) they prove less disagreeable; the Lucca olives, which are smaller than the others, have the weakest taste; the Spanish, or larger, the strongest; the Provence, which are of a middling size, are generally the most esteemed.

The oil obtained from this fruit has no particular taste or smell, and does not greatly differ in quality from oil of almonds. Authors make mention of two sorts of this oil; one, expressed from the olives when fully ripe, which is our *common oil olive:* the other, before it has grown ripe; this is called *oleum immaturum*, and *omphacinum*. Nothing is met with in the shops under this name; and Lemery affirms, that there is no such oil; unripe olives yielding only a viscid juice to the press. From the ripe fruit, two or three sorts are obtained, differing in degree of purity: the purest runs by light pressure: the remaining magma, heated and pressed more strongly, yields an inferior sort, with some dregs at the bottom, called *amurca*. All these oils contain a considerable portion of aqueous moisture, and a mucilaginous substance, which subject them to run into a putrid state: to prevent this, the preparers add some sea-salt, which, imbibing the aqueous and mucilaginous parts, sinks with them to the bottom; by these means, the oil becomes more homogene, and consequently less susceptible of alteration. In its passage to us, some of the salt, thrown up from the bottom by the shaking of the vessel, is sometimes mixed with and detained in the oil, which, in our colder climate, becomes too thick to suffer it freely to subside; and hence the oil is sometimes met with of a manifestly saline taste.

MED. VIRT. *Emollient.*

OLIBANUM [*L. E.*] *Juniperus lycia Lin.* A gummy resin, brought from Turkey and the East Indies, usually in drops or tears, like those of mastich, but larger, of a pale yellowish, and sometimes reddish colour; a moderately warm pungent taste, and a strong, not very agreeable smell. This drug has received many different appellations, according to its different appearances: the single tears are called simply *olibanum*, or *thus:* when two are joined together, they have been called *thus masculum*, and when two were very large, *thus fœmininum*. Sometimes four or five, about the bigness of filberds, are found adhering to a piece of the bark of the tree from which they exuded; these have been named *thus corticosum;* the finer powder which rubs off from the tears in the carriage, *mica thuris;* and the coarser powder, *manna thuris*. This drug is not however in any of its states what is now called *thus* or frankincense in the shops. (See THUS.)

Olibanum consists of about equal parts of a gummy and resinous substance, the first soluble in water, the other in rectified spirit. With regard to its virtues, many have been attributed to it, particularly in *disorders of the head and breast*, in *alvine and uterine fluxes*: but its real effects in these cases are far from answering the promises of the recommenders. Riverius is said to have had large experience of the good effects of this drug in *pleurisies*, especially *epidemic ones*: he directs a scooped apple to be filled with a dram of olibanum, then covered and roasted under the ashes; this is to be taken for a dose, three ounces of carduus water drank after it, and the patient covered up warm in bed: in a short time, he says, either a plentiful sweat or a gentle diarrhœa will ensue, which carry off the disease. Geoffroy informs us, that he has frequently made use of this medicine, after venæsection, with good success; but acknowledges that it has sometimes failed. Its dose is from one to two scruples. It is now seldom used; its place being better supplied by myrrh, and other articles of the resinous kind.

MED. VIRT. *Slightly Astringent.*

OPIUM [*L. E.*] Opium.

This juice has not yet been collected in any quantity in Europe. Egypt, Persia, and some other provinces of Asia, have hitherto supplied us with this commodity: in those countries, large quantities of poppies are cultivated for this use. The opium prepared about Thebes in Egypt, hence named Thebaic opium, has been usually esteemed the best; but this is not now distinguished from that collected in other places. This juice is brought to us in cakes or loaves, covered with leaves and other vegetable matters, to prevent their sticking together: it is of a solid consistence, yet somewhat softish and tenacious, of a dark reddish-brown colour in the mass, and, when reduced into powder, yellow; of a faint disagreeable smell, and a bitterish taste, accompanied with a pungent heat and acrimony.

The general effects of this medicine are, to *relax the solids*, and *render them less sensible of irritation*, to *cheer the spirits*, *ease pain*, *procure sleep*, *promote perspiration* and *sweat*, but restrain all other evacuations. When its operation is over, the pain and other symptoms which it had for a time abated, return; and generally with greater violence than before, unless the cause has been removed by the diaphoresis or relaxation which it occasioned.

The operation of opium is generally attended with a slow, but strong and full pulse, a dryness of the mouth, a redness and slight itching of the skin: and followed by a degree of nausea, a difficulty of respiration, lowness of the spirits, and a weak languid pulse.

The principal indications of opium are, great watchfulness, immoderate evacuations proceeding from acrimony and irritation, cramps or spasmodic contractions of the nerves, and violent pains of almost every kind. In these cases, opiates procure at least a temporary relief, and an opportunity for other medicines, properly interposed, to take effect.

Opium sometimes defeats the intention of the physician, and, instead of producing rest, occasions great anxiety, vomiting, &c. *Taken on a full stomach, it often proves emetic.* Where the patient is exhausted by excessive evacuations, it occasions generally great lowness. It has been observed to operate more powerfully in persons of a lax habit, than in the opposite circumstances. Whilst it usefully restrains preternatural discharges proceeding from

irritation, it proves injurious in those that arise from a contrary cause, as in the colliquative diarrhœæ attending hectic fevers. By relaxing, taking off strictures, and occasioning a paralysis of particular parts, it often promotes such evacuation as those parts are concerned in. Boerhaave observes, that it sometimes enables the ureters to allow an easy passage even to the calculus: but this effect is by no means constant.

When opium is so managed as to procure sweat, it will tend to remove the inflammatory state of the system, and may prove generally useful; which is proved by the cure of the acute rheumatism from the exhibition of the compound powder of ipecacuanha. Though the use of opium is forbid in the first stage of the eruptive fever of the small-pox; as at this period of the disease the pulse is often found to be languid, and the countenance pale, though pains in the head and loins are at the same time very severe: these symptoms, with restlessness and other signs of irritability, which appear for some days after the attack of the disease, are considerably relieved by opium; to which are usually added camphor and tartarised antimonial wine, taking care to keep the body open. In *hæmorrhages* excited by irritation, *unattended with inflammation*, opium is useful. In *dysentery* it may be occasionally employed to moderate the violence of the symptoms, though not considered as a remedy. In *the latter stages of diarrhœa*, when the acrimony producing it has been carried off in a great measure, opium is an efficacious remedy. In *cholera* and *pyrosis*, it is chiefly to be relied upon. Joined with laxatives it is employed in *colic*; and, doubtless, by relieving the spasm, often prevents ileus, and inflammation: nay, indeed, it is frequently found to allay the vomiting, the spasms, the pain, and sometimes to diminish the inflammation, and prevent the gangrene of the strangulated gut, in *ileus* and in *incarcerated hernia*. In different species of *tetanus* opium is successful, and affords relief to various spasmodic and convulsive symptoms occurring in several diseases, as asthma, epilepsy, dyspepsia, hypochondriasis, rabies canina, chorea sancti Viti, mania, &c. &c.

In intermittents, opium has been strongly recommended, as an effectual means of stopping the recurrence of the febrile paroxysms, and has been given before the fit, in the cold stage, in the hot fit, and during the interval, with the best effects; producing immediate relief, and in a short time curing the patient; without leaving those abdominal obstructions which have been ascribed to the bark. But in these fevers the best practice perhaps is to unite opium with the bark, which enables the stomach to bear the latter in larger doses, and adds considerably to its efficacy.

With regard to the dose of opium, one grain is generally a sufficient, and often too large a one; maniacal persons, and those who have been long accustomed to take it, require three or more grains to have the due effect: but its dose varies in different persons, and in different states of the same person. A quarter of a grain will in one adult produce effects which ten times the quantity will not do in another: and a dose that might prove fatal in colic or cholera, would not be perceptible in many cases of tetanus, or mania. The lowest fatal dose to those unaccustomed to take it is four grains: but a dangerous dose is so apt to produce vomiting that it seldom

occaſions death. Injected up the rectum, it has all the effects of opium taken into the ſtomach; but double the quantity is to be employed to anſwer the purpoſe. Applied to the naked nerves of animals, it produces immediate torpor, and loſs of power in all the muſcles with which the nerves communicate. Among the eaſtern nations, who are habituated to opium, a dram is but a moderate doſe. Garcias relates, that he knew one who every day took ten drams. Thoſe who have been long accuſtomed to its uſe, upon leaving it off are ſeized with great lowneſs, languor, and anxiety; which are relieved by having again recourſe to opium, and, in ſome meaſure, by wine or ſpirituous liquors.

Opium, taken into the ſtomach in an immoderate doſe, proves a narcotic poiſon, producing vertigo, tremors, convulſions, delirium, ſtupor, ſtertor, and finally fatal apoplexy.

Opium is partially ſoluble in water, and in rectified ſpirit: proof ſpirit, wine, and vinegar, totally diſſolve it; the impurities only being left. The ſolutions in proof ſpirit and wine have the ſame effects with the juice in ſubſtance; with this difference, that they exert themſelves ſooner in the body, and are leſs apt to leave a nauſea on the ſtomach. A tincture made in rectified ſpirit is ſuppoſed to operate, in an equal doſe, more powerfully than the foregoing liquors. Geoffroy informs us, from his own experience, that, whilſt the watery and vinous ſolutions occaſioned pleaſant quiet ſleep, a tincture drawn with pure ſpirit brought on a phrenſy for a time. *Alkaline ſalts diminiſh the ſoporific virtue of this medicine: fixt alkalies render it diuretic, whilſt volatile ones determine its action chiefly to the cutaneous pores. Acids almoſt entirely deſtroy its power.* Many have endeavoured to correct ſome imaginary ill qualities of this drug, by toaſting it, by fermentation, by long continued digeſtions, by repeated diſſolutions and diſtillations. Theſe proceſſes, though recommended by many writers, do not promiſe any ſingular advantage: they may indeed weaken the opium; but by theſe very means become prejudicial, rendering the medicine more uncertain in its operation, and the doſe more undetermined.

Opium applied externally gives eaſe in many pains, but does not, as ſome have ſuppoſed, ſtupify the part, or render it inſenſible of pain: uſed immoderately, it is ſaid to produce the ſame ill effects as when taken to exceſs internally.

MED. VIRT. *Sedative—Cordial.*

OPOPANAX: *Paſtinaca Opopanax Lin. S. P.* Opopanax [*L.*]

A concrete gummy reſinous juice, obtained from the roots of an umbelliferons plant, which grows ſpontaneouſly in the warmer countries, and bears the colds of this. The juice is brought from Turkey and the Eaſt Indies, ſometimes in round drops or tears, but more commonly in irregular lumps, of a reddiſh yellow colour on the outſide, with ſpecks of white, inwardly of a paler colour, and frequently variegated with large white pieces. It has a peculiar ſtrong ſmell, and a bitter, acrid, ſomewhat nauſeous taſte. Its virtues are thoſe of an attenuating and aperient medicine. Boerhaave frequently employed it, along with ammoniacum and galbanum, in *hypochondriacal diſorders, obſtructions of the abdominal viſcera, ſuppreſſions of the menſtrual evacuations* from the ſluggiſhneſs of mucous humours, and a want of due elaſticity of the ſolids; and in *aſthmas*, eſpecially when connected with a phlegmatic habit of body: in theſe intentions it is an uſeful

ingredient in the *pilulæ* galb. comp. and compound powder of myrrh of the London Pharmacopœia, but is not employed in any compoſition of the Edinburgh. It may be given by itſelf in the doſe of a ſcruple, or half a dram: a whole dram proves, in many conſtitutions, gently purgative.

MED. VIRT. *Attenuant* — *Stimulant.*

ORIGANI *folia: Origani vulg. Lin. S. P.* Wild marjoram; the leaves [*L.*]

This is met with upon dry chalky hills, and in gravelly ſoils, in ſeveral parts of England. It has an agreeable ſmell, and a pungent taſte, warmer than that of the garden marjoram, and much reſembling thyme, with which it ſeems to agree in virtue. An eſſential oil diſtilled from it is kept in the ſhops; which has been uſed for eaſing pain of carious teeth, by dropping it on cotton, and inſerting it in the cavity of the aching tooth. The dried leaves, uſed inſtead of tea, are ſaid to be extremely grateful.

MED. VIRT. *Aromatic.*

PREP. *Eſſential Oil.*

There is another ſort of *origanum* called *Creticum*, whoſe flowers, or rather flowery tops, are ſometimes brought to us from Candy. Theſe have an agreeable aromatic flavour, ſomewhat ſtronger than the common ſort.

ORYZÆ ſemen: Oryzæ ſativæ Lin. Rice; the ſeeds freed from the outward ſkin. Theſe are brought chiefly from Carolina, where the plant is cultivated in large quantities; but they are the product of different countries, particularly of the Eaſt Indies. They are ſufficiently nutritious, and afford an uſeful food in *diarrhœæ*, *dyſenteries* and other diſorders from a thin acrimonious ſtate of the juices.

MED. VIRT. *Emollient* — *Refrigerant.*

PÆONIÆ radix, flores, ſemen: Pæoniæ officinalis Lin. Male and female peony; the roots, flowers, and ſeeds.

Theſe plants are cultivated in our gardens on account of the beauty of their flowers; the female, which is the larger and more elegant, and for this reaſon the more common, is the only one with which the ſhops are ſupplied. In quality they are ſcarce ſenſibly different; and hence they may be taken promiſcuouſly. The roots and ſeeds of peony have, when recent, an unpleaſant ſcent, approaching to that of the narcotic plants; and a ſomewhat glutinous ſubacrid taſte, with a ſlight degree of bitterneſs and aſtringency: the leaves alſo diſcover an aſtringent quality both to the taſte, and by changing chalybeate ſolutions of a purple colour: the flowers have little taſte, and a very faint, not agreeable ſmell. The parts which have chiefly been uſed for medicinal purpoſes, are the roots and ſeeds. Theſe are looked upon as *emollient*, *corroborant*, and *ſlightly anodyne*; and ſuppoſed to be of ſervice in *ſome kinds of obſtructions*, *eroſions of the viſcera*, *heat of urine*, *pains in the kidneys*, and the like. The virtue for which they are chiefly celebrated, is that of *curing ſpaſmodic and epileptic complaints*; which many have been abſurd enough to believe that the root of this plant would do by being worn about the neck.

MED. VIRT. *Emollient* — *Antiſpaſmodic.*

PALMÆ *oleum: Cocos butyracea Lin.* Palm-oil [*E.*]

This oil is obtained from the kernels of the fruit of a ſpecies of palm-tree, which is a native of the coaſt of Guinea and Cape Verd

islands. From these places it has been transplanted into Jamaica and Barbadoes. The oil, as brought to us, is about the consistence of an ointment, and of an orange colour; a strong, not disagreeable smell, but very little taste. By long keeping, it loses its high colour, and becomes white; when it ought to be rejected, as no longer fit for use. The inhabitants of the Guinea coast are said to make this oil part of their food, and to employ it for the same purposes as we do butter. With us, it is rarely given inwardly, and used only in some external applications, *for pains and weakness of the nerves, cramps, sprains*, and the like. The common people apply it to the *cure of chilblains*, and, when early made use of, not without success.

MED. VIRT. *Emollient — Anodyne.*

PREP. *Expressed Oil.*

PAPAVERIS ALBI *capita : Papaveris somniferi Lin.* The large garden poppy, with white flowers and seeds; or the white poppy; its heads [*L. E.*]

The heads and stalks of these plants contain a milky juice, which may be collected in considerable quantity, by slightly wounding them when almost ripe. This juice, exposed for a few days to the air, thickens into a stiff tenacious mass, agreeing in quality with the opium brought from abroad. (See OPIUM.) The juices of the white and black poppies appear to be similar to one another; the only difference is in the quantity afforded, which is generally in proportion to the size of the plants. The larger, or white poppy, is the sort cultivated by the preparers of opium in the eastern countries, and for medicinal uses in this.

Poppy-heads, boiled in water, impart to the menstruum their narcotic juice, together with the other juices which they have in common with vegetable matters in general. The liquor strongly pressed out, suffered to settle, clarified with whites of eggs, and evaporated to a due consistence, yields about one fifth, or one sixth, the weight of the heads, of extract. This possesses the virtues of opium; but requires to be given in double its dose to answer the same intention, which it is said to perform without occasioning a nausea and giddiness, the usual consequences of the other. (See the *Edinburgh Essays abridg.* vol. i. pag. 158 and 132.) A strong decoction of the heads, mixed with as much sugar as is sufficient to reduce it into the consistence of a syrup, becomes fit for keeping in a liquid form; this is an useful anodyne, and often succeeds in procuring sleep, where opium fails. Both these preparations are very useful, though liable to variation in point of strength: nor does this inconvenience seem avoidable by any care in the prescriber, or the operator; since the poppy-heads themselves (according to the degree of maturity, and the soil and season of which they are the produce) contain different proportions of the narcotic matter to the other juices of the plant; as has been observed in the "Pharmacopœia reformata."

The white poppy heads are often used for fomentations, and externally applied; but are more frequently added to the *decoctum pro fomento.*

The seeds of the poppy are by many reckoned soporific. Juncker says, they have the same quality with those of hyoscyamus, and Herman looks upon them as a good substitute to opium; mistaken probably by an observation which holds in many plants, that the seeds are more efficacious than the vessels in which they are contained.

The seeds of the poppy have

nothing of the narcotic juice which is lodged in their covering, and in the ſtalks; an oil expreſſed from them has been uſed for the ſame purpoſes as oil olive; and the ſeeds themſelves taken as food. Their taſte is ſweetiſh and farinaceous.

MED. VIRT. *Anodyne.*

PREP. *Syrup—Extract.*

PAPAVERIS ERRATICI, *ſeu Papaveris rhœad s Lin. S. P. flores.* Red poppy, or corn-roſe; the greater of the hairy wild poppies, with deep red flowers and dark-coloured ſeeds; its flowers [*L.*]

The flowers of this plant yield upon expreſſion a deep red juice, and impart the ſame colour by infuſion to aqueous liquors. A ſyrup of them is kept in the ſhops: this is valued chiefly for its colour; though ſome expect from it a lightly anodyne virtue.

PARALYSIS flores: Primulæ veris Lin. Cowſlip; the flowers.

This plant grows wild in marſhes and moiſt meadows. The flowers appear in April; they have a pleaſant ſweet ſmell, and a ſubacrid, bitteriſh, ſomewhat aſtringent taſte. An infuſion of them, uſed as tea, is recommended as a *mild corroborant*, in *nervous complaints*, and *in ſome female diſorders proceeding from a deficiency of the menſtrual purgations.*

MED. VIRT. *Corroborant* and *Antiſpaſmodic:* but poſſeſſed of ſlight power.

PAREIRA BRAVA [*L.*] *Ciſſampelos Pareira Lin.*

This is the root of an American convolvulus, brought to us from Brazil, in pieces of different ſizes, ſome no bigger than a man's finger, others as large as a child's arm. It is crooked, and variouſly wrinkled on the ſurface; outwardly of a dark colour, internally of a dull yellowiſh, and interwoven with woody fibres, ſo that, upon a tranſverſe ſection, a number of concentric circles appear, croſſed with fibres, which run from the centre to the circumference. It has no ſmell; the taſte is a little bitteriſh, blended with a ſweetneſs like that of liquorice. This root is highly extolled by the Brazilians and Portuguese, in a great variety of diſeaſes, particularly againſt ſuppreſſions of urine, nephritic pains, and the calculus. In the two firſt, Geoffroy ſays he has given it with good ſucceſs, and that the patient was almoſt inſtantly relieved by it, a copious diſcharge of urine ſucceeding. He likewiſe obſerved large quantities of gravel, and even ſmall ſtones, voided after its uſe. This effect he attributes not to any lithontriptic power, but to its diſſolving the viſcid mucus by which the ſabulous matter had been detained. He likewiſe relates, that he has had frequent experience of the good effects of this root in deterging and healing ulcers of the kidneys and bladder, where the urine came away purulent and mucous, and could not be voided at all without extreme pain; by the uſe of the pareira, the urine ſoon became clear, and of a due conſiſtence, and was evacuated freely; and, by joining to this medicine balſam of copaiba, the ulcer perfectly healed. The attenuating quality, which he had diſcovered in this root, induced him to make trial of it in other diſeaſes proceeding from tenacious juices; and in theſe likewiſe it fully anſwered his expectations. In humoral aſthmas, where the lungs are ſtuffed up, and the patient almoſt ſuffocated by thick phlegm, an infuſion of pareira, after many other medicines had proved ineffectual, occaſioned a plentiful expectoration, and ſoon completed a cure. In the jaundice proceeding from thick bile, it did excellent ſervice: but in another icterical caſe, where the

liver was ſwelled and hard, this medicine did no good. His doſe of the root in ſubſtance is from twelve grains to half a dram; in decoction two or three drams in a pint, for three doſes, one to be given every half hour, and afterwards at longer intervals. He cautions againſt too large doſes, for fear of heating or inflaming the kidneys; but it is ſaid by others that one ounce has been taken without producing any ſuch effect.

The preſent mode of adminiſtering it is in decoction, of four drams boiled in three pints of water till reduced to one, ſweetened with honey, of which a tea-cupful is to be taken every three or four hours; or from fifteen to thirty grains of the powder twice or thrice a day.

MED. VIRT. *Attenuant — Diuretic—Lithontriptic.*

PARIETARIÆ *folia: Parietariæ officinalis Lin. S. P.* Pellitory of the wall; the leaves [*L. E.*]

This is a ſmall plant growing upon old walls; of an herbaceous, ſubſaline taſte, without any ſmell. It is one of the five emollient herbs, and in this intention is occaſionally made uſe of. The expreſſed juice has been given in the doſe of three ounces as a diuretic.

MATHIOLUS tells us, that this, ſweetened with ſugar, had a powerful effect this way: and BARBEIRAC, that a decoction of this plant and uva urſi was found of great uſe in clearing the urinary paſſages of viſcid mucus and ſabulous concretions; though it is now very rarely uſed.

MED. VIRT. *Emollient — Diuretic.*

PASTINACA *ſativa Lin.*

PASTINACA *ſylveſtris*; Parſneps.

The roots of the garden parſnep are uſed as food, and prove *ſufficiently nutritious.* The ſeeds of both the garden and wild parſnep are ſlightly *aromatic;* thoſe of the wild are ſtrongeſt; however they are rarely employed.

MED. VIRT. *Aromatic—Emollient.*

PENTAPHYLLI *radix: Potentillæ reptantis Lin. S. P.* Cinquefoil; the root [*L.*]

This grows plentifully in hedges, and by road-ſides. The root is *moderately aſtringent:* and as ſuch is ſometimes given internally *againſt diarrhœæ* and *other fluxes;* and *employed in gargariſms for ſtrengthening the gums,* &c. The cortical part of the root may be taken, in ſubſtance, to the quantity of a dram: the internal part is conſiderably weaker, and requires to be given in double the doſe to produce the ſame effect.

MED. VIRT. *Aſtringent.*

PERSICARIÆ URENTIS *folia: Polygonum hydropiper Lin.* Biting arſmart, lakeweed, or water pepper; the leaves.

This ſort is readily diſtinguiſhable, by its pungent, biting, pepper-like taſte. Its virtues are thoſe of an acrid ſtimulating medicine: in *phlegmatic* habits, it *promotes the urinary diſcharge,* and has frequently done good ſervice in *ſcorbutic complaints.* The freſh leaves are ſometimes applied externally *for cleanſing old fiſtulous ulcers,* and *conſuming fungous fleſh:* for theſe purpoſes they are ſaid to be employed by the farriers, among whom they have been principally made uſe of.

MED. VIRT. *Diuretic — Detergent.*

PERSICÆ MALI *flores: Amygdalæ Perſicæ Lin.* The peach-tree; its flowers and kernels.

Peach-flowers have an agreeable ſmell, and a bitteriſh taſte: diſtilled, without any addition, by the heat of a water-bath, they yield one-ſixth their weight, or more, of a whitiſh liquor, which, as Mr. Bolduc obſerves, communicates to a large quantity of other liquids

a flavour like that of the kernels of fruit. An infusion in water of half an ounce of the fresh gathered flowers, or a dram of them when dried, sweetened with sugar, proves for children *an useful laxative* and *anthelmintic*. The leaves of the tree are, in this intention, somewhat more efficacious, though less agreeable. The *fruit* has the same quality with the other sweet fruits, that of *abating heat, quenching thirst*, and *gently loosening the belly*.

MED. VIRT. *Laxative — Anthelmintic — Refrigerant*.

PERUVIANUS CORTEX [*L. E.*] *Cinchona officinalis Lin.* — It is thus called from the Countess of Cinchon, who was the first person of distinction recovered from a tertian fever by this remedy. Peruvian bark: the bark of a tall slender tree, growing in Peru. It is brought to us in pieces of different sizes, sometimes rolled up into short thick quills, and sometimes flat. The outside is brownish, and generally covered in part with a whitish moss; the inside is of a yellowish, reddish, or rusty iron colour. It has a slightly aromatic smell, somewhat musty, yet not disagreeable; a bitterish, astringent taste, which dwells long upon the tongue, accompanied with a degree of aromatic warmth. The small, thin, flat pieces, are by some accounted the best; by others, the quill sort, with the roughest coat, especially if of a bright cinnamon colour on the inside; though the large flat pieces, whether rough or smooth, of a lighter or darker colour, are often of equal goodness. *The best bark is that which is strongest in smell and taste: this likewise proves friable between the teeth, and does not separate into fibres; it breaks, not shivery, but close and smooth.*

The virtues of this bark, as a febrifuge, were discovered by the Indians about the year 1500. Europe did not become acquainted with it till 1649: nor was it received into general practice till several years after this; some ill consequences, ensuing from its imprudent use, having brought it for a time into disrepute. At present, it is looked upon as the most *effectual remedy in intermittent fevers of almost every kind*, and safe in all ages and constitutions; provided it be judiciously and seasonably administered, and due regard be had to the circumstances of the disease. The modern practice, previous to the use of this medicine, usually gives an emetic at the beginning of a paroxysm. In some cases a cathartic, and in plethoric habits venæsection, are premised. These render the bark not only more safe, but likewise more certain and speedy in its operation. Where these evacuations are neglected, or not sufficiently plentiful, the disease, if of long standing, scarce yields to the *cortex*; or if it appear at length subdued, yet the patient does not recover his strength, and soon suffers a relapse. The use of the bark is begun at the end of a paroxysm, and repeated, in the quantity of half a dram (more or less, according to the circumstances of the patient), every third or fourth hour during the intermission. — Some practitioners prefer giving it just before the fit, some during the fit, others after the fit. Dr. CULLEN says: "I am satisfied, giving a large dose immediately before the time of accession is the most proper practice; but as that dose must not be under two drams of the pale bark, so there are some stomachs that will not even bear that quantity, or a larger that might be necessary. It is commonly, therefore, convenient to give small doses, but to give them every hour, for some hours near to the time of ac-

ceſſion." Some order it in the quantity of an ounce between the fits, and this mode of procedure is conſidered by Dr. DUNCAN as, upon the whole, preferable, from being beſt ſuited to moſt ſtomachs. It may indeed be given from the very commencement of the diſeaſe without any previous evacuation; and it is to be continued not only till the paroxyſms ceaſe, but till the natural appetite, ſtrength, and complexion returns; but it commonly anſwers better after emptying the alimentary canal, particularly the ſtomach.

In remittent fevers, eſpecially during the time of remiſſion, the bark may alſo be employed with great ſucceſs. In typhus, of the nervous or putrid kind, the bark is very generally uſed, as well ſuited to counteract the debility, or putreſcency, which marks the progreſs of the diſorder. In theſe epidemic fevers, there is one ſtate however not unfrequently preſent wherein the bark may be hurtful, that is when there are ſymptoms of congeſtion, or topical inflammation of the head, manifeſted by head-ach, redneſs of the eyes, and phrenitic delirium. And whenever delirium is accompanied with much ſubſultus tendinum, or frequent convulſive twitchings of the limbs, Dr. CULLEN thinks opium in large doſes is the only remedy upon which we can depend. *Where the fever is of the bilious kind, and accompanied with great heat, a little nitre is joined.* In all caſes, moderate exerciſe generally promotes its effect. At firſt, it uſually looſens the belly, and ſometimes operates as if a cathartic had been taken; and by theſe means ſupplies the omiſſion of evacuation before its exhibition. If the purging continue, the medicine does not anſwer the purpoſes intended by it. In ſuch caſe, a little opium is added, which effectually ſuppreſſes the flux. If after this the patient continues too coſtive, recourſe is had to glyſters. The looſeneſs, however, ought not to be ſtopt too ſoon: on the contrary, where the bark does itſelf produce this effect, it is neceſſary, as Dr. Mead informs us, to join to it a little rhubarb, ſo as to occaſion for a time two ſtools a day; by theſe means the diſeaſe is more effectually cured, and leſs ſubject to be followed by a dropſy, or ill habit of body. After a dram or two of rhubarb have been taken, it is to be diſcontinued, and the bark exhibited by itſelf. After the fever has been removed, the medicine is continued for ſome time longer, to prevent a relapſe; and evacuations, unleſs abſolutely neceſſary, abſtained from. The diſeaſe is nevertheleſs ſeldom completely cured before ſome very conſiderable evacuation, either by ſtool, urine, or perſpiration, enſues: if this do not ſucceed ſpontaneouſly, cathartics, diuretics, or diaphoretics, are given in conjunction with the bark, otherwiſe the patient continues weak, and without appetite, till either the diſeaſe returns, or changes into one of a different kind.

In *ſymptomatic agues*, *hectic* and *purulent fevers*, *cacochymic habits*, and where *the hypochondres* are *ſwelled and diſtended*, *this medicine is improper*, and for the moſt part prejudicial. Its manifeſt aſtringency forbids its uſe in obſtructions of the abdominal viſcera, or ſuppreſſions of any critical evacuation; until the obſtruction be firſt removed, or the evacuation have had its due courſe.

In *acute*, *inflammatory*, or *malignant fevers*, the bark does not ſeem to have any good effect. Nevertheleſs, in *the decline* of long nervous fevers, or after a remiſſion, when from bad habit, old age, fa-

tigue, or the like, the patient is extremely weak, and the pulſe low, the *cortex* proves a medicine of excellent ſervice; provided there be no extravaſation, that the veſſels remain entire, and pus be not already formed.

Peruvian bark has likewiſe been found *eminently ſerviceable in gangrenes and mortifications*, proceeding either from an internal or external cauſe. In all the caſes of this kind, where it proved ſucceſsful, it occaſioned a kind of ſuppuration, which degenerated when the uſe of the medicine was diſcontinued, and again turned kindly upon reſuming it. Some have been hence induced *to try the cortex in variolous caſes*, where either the puſtules did not rightly ſuppurate, or the petechiæ ſhowed a diſpoſition to a gangrene; and here likewiſe it anſwered the expectation: the empty veſicles filled with matter, watery ſanies changed into thick white pus, the petechiæ became gradually of a pale colour, and at length diſappeared, and the pox began to turn ſooner than was expected. See the *Edinburgh Medical Eſſays*.

Though this medicine is recommended in the confluent ſmall-pox, to promote the riſing of the puſtules; yet there are ſome practitioners extremely converſant with this diſeaſe, who reject the opinion. But after the maturation of the puſtules is completed, or where ſymptoms of putreſcency, or a diſſolved ſtate of the blood ſupervenes, the bark cannot be too liberally employed.

Beſides the diſeaſes above enumerated, bark is recommended in the following: *ulcerated ſore throat*, *ſcarlatina maligna*, *dyſentery*, *all hæmorrhages of the paſſive kind*, *eryſipelas*; *ſome caſes of dropſy*, when unattended with any particular local affection; *ſcrophula*, *ill-conditioned ulcers*, *rickets*, *ſcurvy*, *certain ſtages of the phthiſis pulmonalis*, and, in fine, in all caſes where the conſtitution is in a debilitated ſtate, and requires to be invigorated by giving tone and vigour to the ſyſtem; and perhaps it is theſe to which bark owes its power and efficacy.

The bark *has been applied likewiſe*, and *not without ſucceſs*, to *the cure of periodic head-achs*, *hyſteric*, and *hypochondriac fits*, and other diſorders, which have regular intermiſſions. By its aſtringency and aromatic quality, it *ſtrengthens the whole nervous ſyſtem*, and proves *uſeful in weakneſs of the ſtomach*, and *ſundry chronical diſorders proceeding from too great laxity of the fibres*. In *obſtinate uterine fluxes*, and *old gleets*, bark joined with chalybeates has good effects.

The bark has been of late much employed in acute rheumatiſm, particularly after the violence of the diſeaſe has been in ſome meaſure moderated by the antiphlogiſtic treatment, or when evident remiſſions take place. But it has been ſucceſsful in ſome, when given even while the inflammatory ſymptoms prevailed to a very conſiderable degree, according to the teſtimony of ſome of the attendants on the London hoſpital.

The virtues of Peruvian bark reſide chiefly in a reſinous ſubſtance, and hence are extracted in perfection by rectified ſpirit. By ſtrong coction in water, the reſin is melted out, and mingled with the water; which, whilſt hot, appears tranſparent, but in cooling grows turbid, and depoſits great part of the reſin to the bottom. Water elevates in diſtillation the aromatic part of the bark; pure ſpirit brings over nothing. Hence an aqueous extract proves not only leſs in quantity, but likewiſe inferior in quality to one made with rectified ſpirit.

Proof ſpirit extracts the virtues of this drug in tolerable perfection, in the cold; heat enables it to take up more than it can retain when cold. Spirit of ſal ammoniac, prepared with fixt alkaline ſalts, gains very little from the *cortex*, either with or without heat; the ſpirit prepared with quicklime, and the dulcified ſpirit, in a few hours becomes ſtrongly impregnated with its ſmell and taſte.

The ſubſtances uſually joined with bark in preſcription ſeem calculated either to promote its efficacy, or merely for reducing it into the intended form; without much regard to its agreeableneſs, and the conveniency of taking it. This is nevertheleſs a point of great conſequence, as its taſte, and the quantity which is neceſſary, make the patient too frequently loath it, before enough has been taken to produce the deſired effect. If deſigned to be given in the ſolid form of a bolus, electuary, &c. *it ſhould be made up*, not, as is cuſtomary, with ſyrups, but *with mucilages*: with the former, it ſticks about the mouth and fauces, whence its taſte remains for a conſiderable time; with the latter, it paſſes freely, ſcarce leaving any taſte in the mouth. Aromatics do not prevent the taſte of the bark from diſcovering itſelf; *extract of liquorice very effectually conceals it.* The extract of logwood alſo, joined to that of bark, and a proper quantity of mucilage, form a very elegant and agreeable compoſition.

MED. VIRT. *Tonic.*

PREP. *Powder—Extract—Tinctures—Decoction.*

But the beſt form in which it can be given is the powder; for here the conſtituent parts are in the moſt effectual proportion.

PERUVIANUS CORTEX RUBER: Red Peruvian Bark.

The red bark, as it is called, is in much larger and thicker pieces than the common. Moſt of the pieces are concave, though not rolled together like the quilled bark. They break ſhort, like the beſt common bark, and appear evidently compoſed of three layers. The outer is thin, rugged, frequently covered with a moſſy ſubſtance, and of a reddiſh brown colour. The middle is thicker, more compact, and of a darker colour: it is very brittle and reſinous. The innermoſt layer is more woody and fibrous, and of a brighter red. In powdering this bark, the middle layer, which ſeems to contain the greateſt proportion of reſinous matter, does not break ſo readily as the reſt: a circumſtance to be attended to, leſt the moſt active part ſhould be left out of the fine powder.

This red bark to the taſte diſcovers all the peculiar flavour of the Peruvian bark, but much ſtronger than the common officinal ſort.

With reſpect to medical properties, from numerous and repeated trials it appears, *that the red bark poſſeſſes the ſame virtues with the common, but in a much higher degree.* A ſingle half ounce of this has radically cured an obſtinate intermittent, where many ounces of the other kind had either had no effect, or merely a temporary one.

There have been lately diſcovered in the province of *Santa-Fe*, four degrees and a half north of the equator, two kinds of the cinchona, one of which appears to be the ſame with the red bark of Peru; the other, one of the white ſpecies. This is a fortunate diſcovery, as it points out a new ſtore of this moſt valuable medicine, when the ancient ones ſhall be exhauſted.

PERUVIANUS CORTEX FLAVUS: Yellow bark.

This bark, lately introduced into practice, is ſuppoſed to be a ſpecies of cinchona, growing in the

interior parts of America, in a mountainous country, the ſame as that deſcribed by MURRAY under the title of *Cortex Chinæ* — vel *Chinchinæ regius* — ſeu *Cortex Chinæ flavus*, of which he gives the following deſcription. "The bark conſiſts of flattiſh pieces about the length of the finger, the breadth of the thumb, and a line in thickneſs. Its colour is yellowiſh, inclining to that of the ruſt of iron. It partakes more of the ferruginous colour on its external than on its internal ſurface, owing to the cloſe adheſion of the epidermis to the bark. Both in its fracture and on its ſurface, it appears fibrillous, breaking ſo eaſily between the fingers that it may be rubbed into a yellow powder. In taſte it is intenſely bitter, with a ſlight degree of aſtringency."

This, like the Peruvian bark, gives out its virtues to water by infuſion or decoction; to proof or rectified ſpirit; and extracts may be made of it by the ſame modes. Its virtues are the ſame, but in a ſtronger degree than either the common or the red bark, and therefore equally efficacious in much ſmaller doſes. It is applicable to the ſame caſes as the others. Its doſe is from ℈ſs to ℈ij of the powder; and of the extract half the quantity will be ſufficient.

PETROLEUM: *Bitumen petroleum Lin. S. N.* Rock-oil [*E.*]

This is a general name for ſundry liquid bitumens, or mineral oils, which ſpontaneouſly exude from the earth, or from clefts of rocks. Theſe oils are found in almoſt all countries, but in greateſt quantities in the warmer ones. Some are met with in different parts of England; and many of our common bituminous minerals, as pit-coal, &c. afford, on diſtillation, oils not greatly different.

The fineſt ſort of this commodity comes from the dutchy of Modena in Italy, where three different kinds are found; *the beſt* is almoſt as clear, fluid, and tranſparent as water, of a highly penetrating, yet not diſagreeable ſmell, ſomewhat like that of rectified oil of amber: the *ſecond ſort* is of a clear yellow colour, not ſo fluid as the former, leſs penetrating, and partaking more of the oil of amber ſmell: *the third*, or *worſt*, is of a blackiſh red colour, of a thicker conſiſtence, and more diſagreeable than the two foregoing. The firſt of theſe is very rarely met with in the ſhops; the ſecond, mixed with a little of the third, and ſome ſubtile oils, is uſually ſent us inſtead of it. Petroleum readily catches fire, and, if pure, burns entirely away: diſtilled, it becomes ſomewhat more pellucid than before (a ſmall quantity of yellowiſh matter remaining) and loſes much of its natural ſmell. It unites with the eſſential oils of vegetables, not at all with vinous ſpirits. The finer ſorts are ſo light as to ſwim upon the moſt highly rectified ſpirit of wine.

Petroleum is at preſent very rarely employed as a medicine, though, if the finer kinds could be procured genuine, they ſhould ſeem to deſerve ſome notice: they are more agreeable than the oil of amber, and milder than that of turpentine; of the virtues of both of which they participate. They are principally recommended by authors for external purpoſes, *againſt pains* and *aches in paralytic complaints*, and for *preventing chilblains*. For theſe intentions, ſome of the more common mineral oils have been made uſe of with good ſucceſs; an oil extracted from a kind of ſtone-coal has been cried up among the common people, under the name of Britiſh oil, for rheumatic pains, &c.

even this is often counterfeited by a ſmall portion of oil of amber added to the common expreſſed oil.

MED. VIRT. *Anodyne — Corroborant.*

PETROLEUM BARBADENSE. Barbadoes tar.

This is thicker than the foregoing petrolea, and nearly of the conſiſtence of common tar. It is of a reddiſh black colour, a diſagreeable ſmell, leſs pungent than the other ſorts. This bitumen is found in ſeveral of our American iſlands, where it is eſteemed by the inhabitants of great ſervice *as a ſudorific*, and in *diſorders of the breaſt and lungs*; though, in caſes of this kind attended with inflammation, it is certainly improper. They likewiſe apply it *externally as a diſcutient*, and *for preventing paralytic diſorders.* Among us it is rarely uſed, and not often to be met with genuine.

MED. VIRT. *Diſcutient — Sudorific.*

PETROSELINI VULGARIS *ſemen, radix: Apii petroſelini Lin. S. P.* Common parſley; the roots and ſeeds [*L. E.*]

This plant is commonly cultivated for culinary purpoſes. The ſeeds have an aromatic flavour, and are occaſionally made uſe of as *carminatives*, &c. The root of parſley is one of the five aperient roots, and in this intention is ſometimes made an ingredient in apozems and diet-drinks: if liberally uſed, it is apt to occaſion flatulencies, and thus, by diſtending the viſcera, produces a contrary effect to that intended by it; the taſte of this root is ſomewhat ſweetiſh, with a ſlight degree of warmth and aromatic flavour. They are ſaid to be *aperient* and *diuretic*; and have been employed to relieve nephritic pains, and obſtructions of urine. The bruiſed leaves have been uſed as ſucceſsfully as a diſcutient poultice in many ſorts of tumours. It is remarkable that facts have been adduced, to prove, that parſley, though ſo frequently eaten, has in ſome conſtitutions produced epilepſy, or at leaſt aggravates epileptic fits in thoſe who are ſubject to them. It has been ſuppoſed alſo to produce inflammation in the eyes.

MED. VIRT. *Aperient — Aromatic — Diſcutient.*

PEUCEDANI *radix: Peucedani officinalis Lin.* Hog's-fennel, or ſulphur-wort; the root.

This plant grows wild by the ſea ſhores, and in moiſt ſhady places. The roots have a ſtrong diſagreeable ſmell, ſomewhat reſembling that of ſulphureous ſolutions; and an unctuous, ſubacrid, bitteriſh taſte. They are looked upon as *ſtimulating* and *attenuating*, and ſuppoſed *to promote expectoration* and *urine*: the expreſſed juice was employed by the ancients, as *an errhine in lethargic diſorders.* The preſent practice pays no regard to them in any intention.

PIMPINELLÆ SAXIFRAGÆ *radix.* Burnet ſaxifrage; the root [*E.*]

Three ſorts of this plant are taken notice of by medical writers:

1. *Pimpinella ſaxifraga major, umbella candida C. B.* This is the ſpecies celebrated by the German writers under the name of *pimpinella alba*: it is not very common in this country, and therefore our markets have been generally ſupplied with the following.

2. *Pimpinella ſaxifraga minor foliis ſanguiſorbæ Raii. Tragoſelinum alterum majus Tourn.* This is not unfrequently met with in dry paſture grounds.

3. *Pimpinella ſaxifraga minor C. B. foliis diſſectis Hiſt. Oxon.* This ſort is the moſt common in the fields about London: it grows taller than the others, but the leaves are leſs.

All theſe plants ſeem to be poſ-

ſeſſed of the ſame qualities, and to differ only in external appearance; and even in this their difference is ſo inconſiderable, that Linnæus has joined them into one, under the general name of *pimpinella*.

The roots of pimpinella have a grateful, warm, very pungent taſte, which is entirely extracted by rectified ſpirit; in diſtillation, the menſtruum ariſes, leaving all that it had taken up from the root, united into a pungent aromatic reſin. This root promiſes, from its ſenſible qualities, to be a medicine of conſiderable utility; though little regarded in common practice. Stahl, Hoffmann, and other German phyſicians, are extremely fond of it, and recommend it as an excellent *ſtomachic*, *reſolvent*, *detergent*, *diuretic*, *diaphoretic*, and *alexipharmac*. They frequently gave it, and not without ſucceſs, in *ſcorbutic* and *cutaneous diſorders*, *foulneſs of the blood and juices*, *tumours* and *obſtructions of the glands*, and *diſeaſes proceeding from a deficiency of the fluid ſecretions in general*. Boerhaave directs the uſe of this medicine in *aſthmatic* and *hydropic caſes*, where the ſtrongeſt reſolvents are indicated: the form he prefers is a watery infuſion; but the ſpirituous tincture poſſeſſes the virtues of the root in much greater perfection.

By ſeveral writers it is recommended as a ſtomachic, and in all caſes where pituitous humours are thought to prevail, not only in aſthmas and dropſies, but alſo in *catarrhal coughs*, *hoarſeneſs*, and the *angina ſeroſa*. HOFFMAN conſiders it as an excellent *emmenagogue*. In the way of gargle it has been employed for diſſolving viſcid mucus, and to ſtimulate the tongue when that organ becomes paralytic. In ſubſtance, a ſcruple may be given for a doſe; in infuſion, to two drams.

MED. VIRT. *Diaphoretic — Diuretic — Antiſcorbutic*

PIPER LONGUM *Lin S. P.* [*L. E.*] Long pepper. This is the fruit of a plant growing alſo in the Eaſt Indies. It is of a cylindrical figure, about an inch and a half in length; the external ſurface appears compoſed of numerous minute grains diſpoſed round the fruit in a kind of ſpiral direction.

All the peppers have a pungent ſmell, and a very hot biting taſte. The long ſort, which is the hotteſt and ſtrongeſt, is moſt frequently made uſe of for medicinal purpoſes; the black, as being more grateful, for culinary ones; the white, which is the weakeſt of the three, is rarely employed for either. The warmth and pungency of theſe ſpices reſides chiefly in their reſinous part; their aromatic odour in an eſſential oil. The genuine diſtilled oil ſmells ſtrong of the pepper, but has very little acrimony; the remaining decoction, inſpiſſated, yields an extract conſiderably pungent. A tincture made in rectified ſpirit is extremely hot and fiery; a few drops of it ſet the mouth as it were in a flame.

PIPER NIGRUM *Lin. S. P.* [*L. E*]. Black pepper.

This ſpecies of pepper grows ſpontaneouſly in the Eaſt Indies, but does not arrive at perfection without the aid of culture. It is cultivated with ſuch ſucceſs in Malacca, Java, and eſpecially at Sumatra, that from theſe iſlands pepper is exported to every part of the world where a regular commerce has been eſtabliſhed. The black pepper is gathered probably before it is fully ripe, and exſiccated in the ſun. The WHITE PEPPER is the ripe and perfect berries ſtripped of their outward coats. For this purpoſe the berries are ſteeped for about

a fortnight in water, till by ſwelling their outward coverings burſt, after which they are eaſily ſeparated, and the pepper is carefully dried in the ſame manner as the former. Pepper which has fallen to the ground over-ripe, loſes its outer coat, and is ſold as an inferior white pepper.

Black pepper is generally uſed as an aromatic, and ſtimulant, is warming to the ſtomach, and heats the whole ſyſtem, though it has been ſuppoſed to produce that effect in a leſs degree than any of the other aromatics. It has been ſucceſsfully employed in ſome caſes of vertigo, and in paralytic and arthritic diſorders. Given in large doſes, it has been found a remedy for intermittents; but its uſe in theſe has, in ſome inſtances, introduced fatal conſequences.

MED. VIRT. *Highly aromatic* and *ſtimulant.*

PIPER JAMAICENSE: *Myrtus Pimenta Lin. S. P.* [*L. E.*] Pimento, or Jamaica pepper.

This is the produce of our own plantations. It is the fruit of a large tree growing ſpontaneouſly in the mountainous parts of Jamaica, called by Sir Hans Sloane, *myrtus arborea, aromatica, foliis laurinis.* The ſmell of this ſpice reſembles a mixture of cinnamon, cloves, and nutmegs: its taſte approaches to that of cloves, or a mixture of the three foregoing; whence it has received the name of *all-ſpice.* The ſhops have been for ſome time accuſtomed to employ this aromatic as a ſuccedaneum to the more coſtly ſpices, and from them it has been introduced into our hoſpitals. It yields a large quantity of a pleaſant eſſential oil, which ſinks in water. To rectified ſpirit it imparts by maceration and digeſtion the whole of its virtue, but little or nothing by diſtillation. Pimento can ſcarcely be conſidered as a medicine: it is however an agreeable aromatic, not unfrequently employed with ſeveral drugs requiring ſuch a grateful adjunct.

MED. VIRT. *Aromatic.*

PREP. *Diſtilled Water — Spirit — Eſſential Oil.*

PIPER INDICUM [*L. E.*] *Capſicum annuum Lin. S. P.* Guinea pepper, or capſicum; the fruit.

This is an annual plant cultivated in our gardens; it ripens its red pods in September or October. The taſte of capſicum is extremely pungent and acrimonious, ſetting the mouth as it were on fire. It has been chiefly employed for culinary purpoſes, but lately adopted as a medicine; and in the climates of which it is a native, we are told that a free uſe of it is a ſalutary practice, being found *to ſtrengthen the ſtomach, aſſiſt digeſtion,* and *correct the putreſcent colliquation of the humors,* ſo common in hot climates. As an aromatic of the moſt acrid and ſtimulant kind, it certainly may be found efficacious in ſome paralytic and gouty caſes, or to promote excitement, where the bodily organs are languid and torpid.

Dr. MACKITRICK directs it to be given to the extent of ſix or eight grains, under the form of pills, or of tincture, made by infuſing half an ounce in a pound of rectified ſpirit, and giving this from one to three drams, diluted, for a doſe. It has been ſucceſsfully exhibited in *cynanche maligna,* and in what the doctor calls *cachexia africana,* which he conſiders as the moſt frequent and fatal prediſpoſitions to diſeaſe among Negroes.

In *inveterate intermittents,* BERGIUS gave the ſeeds of capſicum with great ſucceſs in the following manner:—To ſix grains of Indian pepper he added two ſcruples of bayberries, which he divided into

three parts, one of which was taken in the beginning of the first shivering fit, the second the day after at the same hour, and the third dose on the third day.

What we call the Cayenne pepper, now much used at our tables, is the fruit of the Bird-pepper, the *capsicum baccatum* of Linnæus, and differs not materially from that above described.

MED. VIRT. *Strongly Stimulant.*

PREP. *Tincture — Powder.*

PIX LIQUIDA: *Pinus sylvestris, Lin.* [*L. E.*] Tar; a thick, black, unctuous substance, obtained from old pines and fir-trees, by burning them with a close smothering heat. It differs from the native resinous juice of the trees in having received a disagreeable impression from the fire, and containing a portion of the saline and other juices united with the resinous and oily; by the mediation of these, a part of the terebinthinate oil proves dissoluble in aqueous liquors, which extract little or nothing from the purer turpentines. Water impregnated with the more soluble parts of tar, proves, in consequence of this hot pungent oil, warm and stimulating. It sensibly *raises the pulse and quickens the circulation.* By these qualities, in cold languid phlegmatic habits, it *strengthens the solids, attenuates viscid juices, opens obstructions of the minuter vessels,* and *promotes perspiration* and *the fluid secretions in general;* whilst in hot bilious temperaments it disposes to inflammation, and aggravates the complaints which it has been employed to remove.

Tar is properly an empyreumatic oil of turpentine, and has been used as a medicine both internally and externally. Water impregnated with the more soluble parts of tar in the following manner—"To two pounds of tar add one gallon of water, and let them be well stirred together, then suffer them to settle for two days, and afterwards pour off the clear liquor—was called tar-water, of which from a pint to a quart was drank in the course of twenty-four hours. This was a popular remedy in many diseases both acute and chronic; in *small-pox, scurvy-ulcers, fistulas, rheumatism, asthma, coughs, cutaneous complaints,* &c. And though its medicinal effects were greatly exaggerated by Bishop Berkely, Prior, and others, yet Dr. CULLEN confesses that he found in many cases the preparation a valuable medicine, and that it appeared to *strengthen the tone of the stomach,* to *excite appetite, promote digestion,* and to cure *all symptoms of dyspepsy.* At the same time it manifestly promotes the excretions, particularly that of urine—from all which it is obvious that this medicine may be highly useful in many diseases of the system. Externally the tar-ointment has been successfully used in many cutaneous complaints.

Dr. CULLEN mentions a case of a *lepra ichthyosis* cured by an ointment made by basting a leg of mutton, whilst roasting, with tar, and mixing the gravy procured by running a skewer into the mutton during the process, with the tar. This was rubbed all over the body for three or four nights successively, whilst the same body-linen was worn all the time; and this is alleged to be a remedy in several cases of lepra.

MED. VIRT. *Stimulant — Attenuant.*

PREP. *Tar-water — Ointment.*

PIX BURGUNDICA [*L. E.*] Burgundy pitch. This is of a solid consistence, yet somewhat soft, of a reddish brown colour, and more agreeable in smell than the foregoing. Geoffroy relates, that it is composed of gallipot (a solid whitish resin which separates from some of the *terebinthinæ* as they run from the tree) melted with

common turpentine and a little of its diſtilled oil. Dale informs us, from the relation of a gentleman who ſaw the preparation of this commodity in Saxony (whence we are chiefly ſupplied with it), that it is no more than the common turpentine boiled a little.

This is chiefly employed for external uſes in *inveterate coughs, affections of the lungs,* and *other internal complaints.* Plaſters of this reſin, by acting as a topical ſtimulant, are frequently found of conſiderable ſervice. In ſome caſes it excites even veſications; but in general it produces only redneſs upon the parts to which it is applied, with a ſlight degree of moiſture exuding from them.

MED. VIRT. *Gently warming.*

PLANTAGINIS LATIFOLIÆ *folia, ſemen: Plantaginis majoris Lin.* [*E.*] Common broad-leaved plantane, called *ſeptinervia*, from its having ſeven large nerves or ribs running along each leaf; the narrow-leaved ſort has only five ribs, and hence is named *quinquenervia.* They are both common in fields, and by road-ſides. The leaves are *ſlightly aſtringent*, and *the ſeeds ſaid to be ſo*; and hence they ſtand recommended in *hæmorrhages,* and other caſes where medicines of this kind are proper. The leaves, bruiſed a little, are the uſual application of the common people to ſlight fleſh wounds, and cutaneous ſores.

In *phthiſical complaints, ſpitting of blood,* and *in various fluxes,* both alvine and hæmorrhagic, they have been uſed, though the ſeeds ſeem better adapted to relieve *pulmonary affections,* becauſe they are more mucilaginous. The roots have alſo been recommended for the cure of *tertian intermittents.* An ounce or two of the expreſſed juice, or the ſame quantity of a ſtrong infuſion, may be exhibited for a doſe. In agues the doſe ſhould be doubled, and given at the commencement of the fit. Plantane has been alleged to be a cure *for the bite of the rattle-ſnake:* but for this there is probably very little foundation, although it is one of the principal ingredients in the remedy of the negro Cæſar, for the diſcovery of which he received a conſiderable reward from the Aſſembly of South Carolina.

MED. VIRT. *Aſtringent.*

PLUMBUM [*L.*] Lead.

This is the heavieſt of the metals except gold. It melts in a moderate heat, and, if kept in fuſion, is ſoon converted partly into fume and partly into an aſh-coloured calx *(plumbum uſtum)*; this, expoſed to a ſtronger fire, in ſuch a manner that the flame may play upon its ſurface, becomes firſt yellow, and afterwards of a deep red *(minium* or red lead); if in this proceſs the fire be ſuddenly raiſed to a conſiderable height, the calx melts, aſſumes the appearance of oil, and on cooling forms a ſoft leafy ſubſtance of a yellowiſh or reddiſh colour *(litharge)*. The proper menſtruum of this metal is aquafortis: the vegetable acids likewiſe diſſolve it, but in very ſmall quantity; a quart of diſtilled vinegar will not take up a dram. Expoſed to the ſteam of vinegar, it is by degrees corroded into a white powder *(ceruſſe)*, which is conſiderably more eaſy of ſolution. The calces of lead diſſolve, by heat, in expreſſed oils; theſe mixtures are the baſis of ſeveral officinal plaſters and unguents. Cryſtals of this metal made with diſtilled vinegar (called, from their ſweetiſh taſte, *ſugar* of lead), and a tincture drawn from theſe and green vitriol, are likewiſe kept in the ſhops.

Preparations of lead, given internally, are ſuppoſed to incraſſate the fluids, abate inflammations, and

restrain venereal diseases. The sugar is a strong astringent, and has been used, it is said, with success, in hæmorrhages, the fluor albus, seminal gleets, &c. The tincture is recommended for the like purposes; and for checking immoderate sweats in phthisical cases. The internal use of this metal is nevertheless full of danger, and ought never to be ventured upon unless in desperate cases, after other medicines have been employed without taking effect: it often occasions violent colics; and though it should not prove immediately hurtful, its ill consequences are sure, though slow: tremors, spasms, or lingering tabes, too frequently follow.

Mr. Goulard, a surgeon of Montpellier, wrote a treatise, some few years ago, professedly on the external use of lead, which has been the means of greatly extending the use of it. The basis of his preparations is what he calls the extract of lead, which is a solution of litharge in strong vinegar, by boiling it gently to the consistence of a thin syrup, and, after it has stood to settle, the clear part is to be poured off for use. A small portion of this, diluted in a large quantity of soft water, makes his *vegeto-mineral water*, which is employed as a *lotion* or *fotus*, or *boiled with bread to make a cataplasm*. The extract is likewise combined with unguentous matters into a variety of forms. These preparations have been found of great utility in *various cases of inflammation, particularly of the erysipelatous kind*, and in those in consequence *of burns and scalds*. Their application has not, in the opinion of most practitioners, been observed to produce any of those affections of the nervous system, which characterise the poisonous effects of lead taken internally.

Notwithstanding much has been said against the internal use of lead, particularly by Sir George Baker in the London Medical Observations, and in the hands of ignorance it certainly may be considered as a very dangerous medicine, nay, in fact, a poison, occasioning colics, contracted limbs, tremors, palsies, &c.; still, employed by the prudent and skilful, it is a most useful medicine, as an *astringent* and *refrigerant*, and *antispasmodic*, and never produces any bad effects if coupled with opium, and a purgative be given every second or third day. However, if it does not prove efficacious in a short time, its use should be desisted from.

MED. VIRT. *Astringent—Antispasmodic—Refrigerant.*

PREP. *Aq. litharg. acetat.—Cerussa acetata.*

POLYPODII radix: Polypodii vulgaris Lin. Polypody; the root.

Polypody is a capillary plant, growing upon old walls, the trunks of decayed trees, &c. That found upon the oak is generally preferred, though not sensibly different from the others. The roots are long and slender, of a reddish-brown colour on the outside, greenish within, full of small tubercles, which are resembled to the feet of an insect; whence the name of the plant. The taste of these roots is sweetish and nauseous.

Polypody has been employed in medicine for many ages; nevertheless its virtues remain as yet to be determined. The ancients held it to be a *powerful purger of melancholic humours*; by degrees, it came to be looked upon as *an evacuator of all humours in general*: at length it was supposed *only to gently loosen the belly*; and afterwards even this quality was denied it: succeeding physicians declared *it to be astringent*; of this number is Boerhaave, who esteems it *moderately styptic*, and *antiscorbutic*. For our own part, we

have had no direct experience of it: nor is it employed in practice. It is probable that (as Juncker supposes) *the fresh root may loosen the belly*, and *that it has not this effect when dry.*

MED. VIRT. *Laxative.*

POPULI NIGRÆ gemmæ: Populi nigræ Lin. The black poplar; its buds.

The black poplar is a large tree, growing wild in watery places; it is easily raised, and very quick of growth. The young buds or rudiments of the leaves, which appear in the beginning of spring, abound with a yellow, unctuous, odorous juice. They have hitherto been employed chiefly in an ointment, which received its name from them; though they are certainly capable of being applied to other purposes. A tincture of them made in rectified spirit, yields, upon being inspissated, a fragrant resin superior to many of those brought from abroad.

MED. VIRT. *Aromatic.*

PORRI radix: Allii porri Lin. Leeks; the root. This participates of the virtues of garlick, from which it differs chiefly in being much weaker.

PORTULACÆ semen: Portulaceæ oleraceæ Lin. Purslane; the seeds.

This herb is cultivated in gardens for culinary uses. The seeds are ranked among the lesser cold seeds, and have sometimes been employed in emulsions, and the like, along with the others of that class.

MED. VIRT. *Refrigerant.*

PRUNELLÆ folia: Prunellæ vulg. Lin. Self-heal; the leaves.

This plant grows wild in meadows and pasture-grounds, and produces thick spikes of purplish flowers during the latter part of the summer. It has an herbaceous roughish taste: and hence stands recommended in *hæmorrhages* and *alvine fluxes*; it has been principally celebrated as *a vulnerary*, whence its name; and *in gargarisms for aphthæ* and *inflammations of the fauces.*

MED. VIRT. *Attenuant—Detergent.*

PRUNUS GALLICA: *Prunus domestica Lin.* French or common prunes [*L. E.*] This is the plum called by our gardeners the little black damask plum.

The medical effects of the common prunes are, to *abate heat*, and *gently loosen the belly;* which they perform by lubricating the passage, and softening the excrement. They are of *considerable service in costiveness accompanied with heat or irritation, which the more stimulating cathartics would tend to aggravate.* Where prunes are not of themselves sufficient, their effects may be promoted by joining with them a little rhubarb or the like: to which may be added some carminative ingredient, to prevent their occasioning flatulencies. Prunelloes have scarce any laxative quality: these are mild grateful refrigerants, and, by being occasionally kept in the mouth, usefully allay the thirst of hydropic persons.

All our garden plums are eaten at table; and when sufficiently ripe, and taken in a moderate quantity, prove a pleasant and wholesome food; but in the immature state they are more liable to produce colicky pains, diarrhœa, or cholera, than any other fruit of this class. Medicinally, they are emollient, cooling, and laxative, especially the French prunes which are imported here in their dried state from Marseilles.

MED. VIRT. *Cooling—Aperient.*

PRUNUS SYLVESTRIS: *Pruni spinosæ Lin. S. P.* Sloes; the fruit of the common black thorn, or sloe-bush [*L. E.*]

Thefe have a very rough, auftere tafte, efpecially before they have been mellowed by frofts. The juice of the unripe fruit, infpiffated to a proper confiftence, is called *acacia Germanica*, and ufually fold in the fhops for the true Egyptian acacia. It is *equally aftringent with the Egyptian fort*, but has more of a fharp or tartifh tafte, without any thing of the fweetifh relifh of the other.

Sloes have been recommended in *diarrhœas, hæmorrhageous affections*, and as gargles, *in tumefactions of the tonfils* and *uvula*—they are confidered as the moft powerful of the *fructus acerbi*; and have often been found an *agreeable aftringent* by Dr. CULLEN.—The flowers, with their calyces, are *moderately* purgative; and for this purpofe an ounce infufed in a fufficient quantity of water, or whey, was experienced to be a pleafant and ufeful laxative. The powdered bark in dofes of a dram is faid to *cure the ague*. The tender leaves dried are fometimes ufed as a fubftitute for tea, and the beft that has been yet ufed. Letters written upon linen or woollen with the juice of this fruit will not wafh out.

MED. VIRT. *Aftringent.*

PREP. *Infpiffated juice—Conferve.*

PSYLLII femen: Plantaginis Pfyllii Lin. Fleawort; the feeds.

This is a fort of plantane, growing wild in the warmer climates, and fometimes met with in our gardens. It differs from the common plantanes in having its ftalks branched, with leaves upon them; hence it is named by Ray *plantago cauliferà*. The feeds have been ufually brought from the fouth of France; they are fmall, but fuppofed to refemble in fhape a flea, whence the Englifh name of the plant. Thefe feeds have a naufeous, mucilaginous tafte: boiled in water, they yield a confiderable quantity of mucilage, which is fometimes made ufe of in emollient glyfters and the like. Alpinus relates, that among the Egyptians this *mucilage is given in ardent fevers*, and that it generally *either loofens the belly or promotes fweat.*

MED. VIRT. *Emollient—Laxative.*

PTARMICÆ radix: Achilleæ Ptarmicæ Lin. Sneezewort, or baftard pellitory; the root.

This grows wild upon heaths and in moift fhady places; the flowers, which are of a white colour, come forth in June and July. The roots have an acrid fmell, and a hot biting tafte. *Chewed they occafion a plentiful difcharge of faliva;* and, when powdered and fnuffed up the nofe, *provoke fneezing.* Thefe are the only intentions to which they have been ufually applied.

MED. VIRT. *Errhine—Stimulant.*

PULEGII *folia: Menthæ pulegii Lin. S. P.* Pennyroyal; the leaves [*L. E.*]

This plant grows fpontaneoufly in feveral parts of England upon moift commons, and in watery places; trailing upon the ground, and ftriking roots at the joints. Our markets have been for fome time fupplied with a garden fort, which is larger than the other, and grows upright.

Pennyroyal is a warm, pungent herb, of the aromatic kind, fimilar to mint, but more acrid and lefs agreeable. It has long been held in great efteem, and not undefervedly, as *an aperient* and *deobftruent*, particularly *in hyfteric complaints*, and *fuppreffions of the uterine purgations.* For thefe purpofes, the diftilled water is generally made ufe of, or, what is of equal efficacy, an infufion of the leaves. It is obfervable, that both water and rectified fpirit extract the virtues of this herb by infufion, and likewife ele-

vate greateſt part of them in diſtillation.

The penny-royal certainly poſſeſſes the properties of the other mints; it is ſuppoſed, however, to be leſs efficacious as a ſtomachic, but more uſeful as *a carminative* and *emmenagogue*. BOYLE and others tell us that it has been ſucceſsfully uſed in the *hooping cough*; but the great uſe for which it has been long employed is *promoting the uterine evacuations*. HALLER recommends an infuſion of the herb with ſteel in white wine, with this intention, which he never knew fail of ſucceſs; though CULLEN is of opinion that *mint* is in every reſpect a *more effectual remedy* than penny-royal.

MED. VIRT. *Aromatic—Emmenagogue.*

PREP. *Simple-Water—Spirit—Eſſential oil.*

PULEGII CERVINI folia: Menthæ cervinæ Lin. Harts penny-royal; the leaves.

This ſpecies is met with, though not very often, in our gardens. It is ſomewhat ſtronger, yet rather more agreeable, than the foregoing both in taſte and ſmell.

PULSATILLA NIGRICANS, *Anemone pratenſis Lin.* [*E.*] Meadow anemone or Paſque flower: a ſpecies of anemone, much reſembling the pulſatilla vulgaris: but its flower is leſs, and of a darker hue. It is a native of the ſouth of Germany, and other neighbouring countries.

All the anemones have a conſiderable degree of acrimony; but this ſeems to poſſeſs the largeſt ſhare. The whole plant, when chewed, impreſſes the tongue with a ſharp, burning, durable taſte; the root is milder than the other parts. On diſtilling the plant with water, the liquor which comes over is ſtrongly impregnated with its virtues; and the remaining extract is alſo conſiderably active.

Dr. Stœrck of Vienna, from numerous trials, celebrates its efficacy *in various chronic diſeaſes of the eye*, particularly amauroſis, cataract, opacity of the cornea, proceeding from various cauſes; in *venereal nodes* and *nocturnal pains*; in *foul ulcers with caries*; in *ſerpigo*; *ſuppreſſed menſes*; *indurated glands*; *melancholy*, and *palſy*. Many German phyſicians have tried with ſucceſs the effects of this medicine in diſeaſes of the eyes; whilſt others ſpeak of its inefficacy, though the plant was tried in doſes conſiderably beyond what Stœrck had recommended: notwithſtanding which, Dr. Cullen ſtill adviſes it to be uſed, particularly in that diſeaſe ſo frequently otherwiſe incurable, the amauroſis.

The doſe of the diſtilled water is half an ounce twice a day; of the extract, reduced to a powder with ſugar, five or ſix grains.

MED. VIRT. *Emetic—Diuretic—Cathartic.*

PREP. *Powder—Diſtilled-water—Extract.*

PYRETHRI *radix*: *Anthemis Pyrethri Lin. S. P.* Pellitory of Spain; the root [*L. E.*]

This plant, though a native of the warm climates, bears the ordinary winters of this; and often flowers ſucceſſively from Chriſtmas to May. The roots alſo grow larger with us than thoſe with which the ſhops are uſually ſupplied from abroad.

Pellitory root has no ſenſible ſmell; its taſte is very hot and acrid, but leſs ſo than that of arum or dracunculus: the juice expreſſed from it has ſcarce any acrimony, nor is the root itſelf ſo pungent, when freſh, as after it has been dried. Water, aſſiſted by heat, extracts ſome ſhare of its taſte; rec-

tified ſpirit the whole: neither of them elevates any thing in diſtillation. The principal uſe of pyrethrum in the preſent practice *is as a maſticatory*, for *promoting the ſalival flux*, and *evacuating viſcid humours from the head and neighbouring parts.* By theſe means it often *relieves the tooth-ach, ſome kinds of pains of the head, rheumatic complaints of the face, lethargic complaints*, and *paralyſis of the tongue.*

MED. VIRT. *Stimulant—Aromatic.*

QUASSIA: *Quaſſia amara Lin. S. P.* Quaſſy; wood, root, and bark. [*L. E.*]

The root of a tree growing in Surinam, which is as thick as a man's arm. Its wood is whitiſh, hard, ſolid, and tough, becoming yellowiſh on expoſure to the air. It is taken both from the trunk and branches cut tranſverſely; it is marked with parallel capillary rays, from the centre to the circumference, and many hollowed points ſpread over the whole diſc; it is covered with a thin bark of a pale white, eaſily ſeparated, often ſpotted with black—lightiſh and brittle. The thicker the pieces, the more compact the wood, though light for its ſize; the lighter internally the more bitter. It is not unuſual to ſee ſpots or ſtripes aſh-coloured, brown, or even of a deep blue or black, in different parts of the ſurface; where this unuſual colour deſcends deep, the wood is almoſt inſipid and ſoft, whence ſome corruption may be ſuſpected. The wood of the trunk is to be preferred to that of the branches; and that of the root, which is ſaid to be of a deeper colour, to that of the trunk. The thicker pieces are always to be preferred to the ſmaller. Quaſſy has no ſenſible ſmell; its taſte is that of a pure bitter, without aſtringency, and not nauſeous; more intenſe and durable than that of almoſt any known ſubſtance. It communicates its bitter to watery infuſions and decoctions; and its ſpirituous tinctures are all equally bitter, of a pale yellow hue, which is not blackened by the addition of martial vitriol.

The *flowers* are uſed by the natives, and looked upon by them as *an excellent ſtomachic.* The root was a ſecret remedy uſed by a negro, named Quaſſi, in the fatal fevers of that country, from whom it was purchaſed by Daniel Rolander, a Swede, who returned in 1756. A confirmation of its medical powers appears in a letter from Mr. Farley, a practitioner in Antigua, printed in the Phil. Tranſact. vol. LVIII. He found it *remarkably efficacious in ſuppreſſing vomitings, ſtopping a tendency to putrefaction*, and *removing fevers.* It may be uſed in infuſion or extract; the latter, made into pills, on account of the intenſe bitterneſs of the drug, is preferable for delicate ſtomachs.

It is by modern practitioners eſteemed to poſſeſs *tonic, ſtomachic*, and *antiſeptic* powers, and therefore employed *in loſs of tone, anorexia hypochondriaſis, epidemic intermittents*, and *remittent fevers.* It has alſo been found effectual for *producing appetite, aſſiſting digeſtion, expelling flatulency*, and *removing habitual coſtiveneſs, produced from debility of the inteſtines*, and *common to a ſedentary life.*

MED. VIRT. *Stomachic* and *Tonic.*

PREP. *Extract.*

Its doſe—ʒj. of the raſped root infuſed in ℔j of cold water for 24 hours; or in boiling water for an hour; from ℥j to ℥iv given ſeveral times a day.

QUERCUS *cortex*: *Quercus robur Lin. S. P.* Oak-tree; the bark [*E. L.*]

The aſtringent effects of the oak

were ſufficiently known to the ancients, by whom different parts of it were uſed: but the bark only is now appropriated to medicinal purpoſes. They manifeſt a taſte of ſtrong aſtringency, accompanied with a moderate bitterneſs, qualities extracted both by water and rectified ſpirit. From theſe qualities it has been recommended in agues, for reſtraining hæmorrhages, alvine fluxes, and other immoderate evacuations. A decoction of it has been uſed as a fomentation in procidentia recti et uteri; in ſlight tumefactions of the mucous membrane of the fauces, in prolapſus uvulæ, and cynanche tonſillaris, to which ſome people are liable upon the leaſt expoſure to cold. Gargles made of this bark have been employed with advantage; and in many caſes theſe, early applied, have appeared uſeful in preventing thoſe diſorders: but, perhaps, they are rendered more efficacious by adding a ſmall portion of alum to them. This bark has been ſuppoſed by ſome to be not leſs efficacious than the Peruvian bark, eſpecially in the form of extract; but this is believed by a very few, if any at preſent, though it is not doubted but that the bark may have the power of curing ſome intermittents.

MED. VIRT. *Strongly aſtringent.*

PREP. *Extract.*

QUERCUS MARINA: Fucus veſiculoſus Lin. Sea-Wrack or Sea-Oak: a ſoft, very ſlippery, marine plant, common upon rocks that are left dry at the ebb tide; with the leaves ſomewhat reſembling in ſhape thoſe of the oak tree; the ſtalks running along the middle of the leaves, and terminated by watery bladders containing either air or a ſlippery fluid. The veſicles begin in March to fill with a thin juice; and about the end of July they burſt, and diſcharge a matter as thick as honey.

Dr. Ruſſel relates, that he found this plant an uſeful aſſiſtant to *ſea-water in the cure of diſorders of the glands:* that he gave it in powder to the quantity of a dram, and that in large doſes it nauſeated the ſtomach; that by burning in the open air it was reduced into a black ſaline powder *; which ſeemed, as an internal medicine, greatly to excel the officinal burnt ſponge; which was uſed with benefit, *as a dentifrice*, for *correcting laxities of the gums*: that the juice of the veſicles, after ſtanding to putrefy, yields, on evaporation, an acrid pungent ſalt, amounting to about a ſcruple from two ſpoonfuls; that *the putrefied juice, applied to the ſkin, ſinks in immediately, excites a ſlight ſenſe of pungency, and deterges like a ſolution of ſoap: that one of the beſt applications for diſcuſſing hardneſs, particularly in the decline of glandular ſwellings, is a mixture of two pounds of the juicy veſicles, gathered in July, with a quart of ſea-water, kept in a glaſs veſſel for ten or twelve days, till the liquor comes near to the conſiſtence of very thin honey.* The parts affected are to be rubbed with the ſtrained liquor twice or thrice a day, and afterwards waſhed clean with ſea-water.

MED. VIRT. *Aſtringent — Detergent.*

RAPHANI RUSTICANI *radix: Cochleariæ Armoraciæ Lin. S. P.* Horſe-radiſh; the root. [*L. E.*]

This plant is ſometimes found wild about river-ſides, and other moiſt places; for medicinal and culinary uſes, it is cultivated in gardens. It flowers in June, but

* Æthiops vegetabilis D. Ruſſel.

rarely perfects its ſeeds in this country. Horſe-radiſh root has a quick pungent ſmell, and a penetrating acrid taſte; it nevertheleſs contains in certain veſſels a ſweet juice, which ſometimes exudes upon the ſurface. By drying, it loſes all its acrimony, becoming firſt ſweetiſh, and afterwards almoſt inſipid. If kept in a cool place, covered with ſand, it retains its qualities for a conſiderable time. The medical effects of this root are to *ſtimulate the ſolids, attenuate the juices*, and *promote the fluid ſecretions*. It ſeems to extend its action through the whole habit, and affect the minuteſt glands. It has frequently done ſervice in ſome kinds of ſcurvies and other chronic diſorders proceeding from a viſcidity of the juices, or obſtructions of the excretory ducts. Sydenham recommends it likewiſe in dropſies, particularly thoſe which ſometimes follow intermittent fevers. Both water and rectified ſpirit extract the virtues of this root by infuſion, and elevate them in diſtillation. Along with the aqueous fluid, an eſſential oil ariſes, poſſeſſing the whole taſte and pungency of the horſe-radiſh.

The root of this plant is only employed, and proves a powerful ſtimulant, whether uſed externally, or internally; in the former mode, it readily inflames the ſkin, and may be employed with advantage in palſy and rheumatiſm; but ſhould its application be long continued, it produces bliſters. Internally taken, it may be ſo managed as to cure hoarſeneſs: take one dram of the root freſh, ſcraped down; to which add four ounces of boiling water in a glaſs veſſel cloſely ſtopped; and let it infuſe for two hours; then add double its weight of ſugar, to form a ſyrup. A tea-ſpoonful or two of this ſyrup ſwallowed gradually, at leaſt repeated two or three times, will often very ſuddenly give effectual relief in hoarſeneſs: received into the ſtomach, it acts as a ſtimulant, and promotes digeſtion. Infuſed in water, and a portion of this infuſion being taken with a large draught of warm water, it readily proves emetic; and may either be employed by itſelf to excite vomiting, or to aſſiſt the operation of any other emetics.

Infuſed in water and taken into the ſtomach, it proves ſtimulant to the nervous ſyſtem; and is thereby uſeful in palſy: in large quantities it proves heating to the whole body, and uſeful in chronic rheumatiſm, whether ariſing from ſcurvy or other cauſes. If the root is exhibited cut into ſmall pieces, and ſwallowed without chewing, a large quantity may be taken, even a table ſpoonful; and thus taken every morning for a month together, it will be extremely uſeful in arthritic caſes, which Cullen ſuppoſes, upon the experiments that have been tried, to be of the rheumatic kind. The matter of horſe-radiſh, carried into the blood-veſſels, paſſes readily into the kidneys, and proves a powerful diuretic, and therefore uſeful in dropſy; and by promoting both urine and perſpiration, it has long been known as one of the moſt powerful antiſcorbutics. An infuſion of horſe-radiſh in milk has been ſaid to make one of the ſafeſt and beſt coſmetics.

Med. Virt. *Stimulant — Attenuant.*

RHABARBARUM [*L. E.*] *Rheum palmatum Lin. S. P.* Rhubarb; the root of a plant of the dock kind, which grows ſpontaneouſly in China, and endures the colds of our own climate. The propagation of this plant has lately been extended to our gardens, and with a degree of ſucceſs which promiſes

in time to ſuperſede the foreign root. Two ſorts of rhubarb are met with in the ſhops. *One* is imported from Turkey and Ruſſia, in roundiſh pieces freed from the bark, and a hole through the middle of each; they are externally of a yellow colour, and on cutting appear variegated with lively reddiſh ſtreaks. *The other*, which is leſs eſteemed, comes immediately from the Eaſt Indies, in longiſh pieces, harder, heavier, and more compact than the foregoing. *The former ſort*, unleſs kept very dry, is apt to grow mouldy and worm-eaten; *the latter* is leſs ſubject to theſe inconveniencies. Some of the more induſtrious artiſts are ſaid to fill up the worm-holes with certain mixtures, and to colour the outſide of the damaged pieces with powder of the finer ſorts of rhubarb, and ſometimes with cheaper materials: this is often ſo nicely done, as effectually to impoſe upon the buyer, unleſs he very carefully examines each piece. The marks of good rhubarb are, *that it be firm and ſolid*, and *not flinty; that it be eaſily pulverable*, and *appear, when powdered, of a fine bright yellow colour*: that, *upon being chewed, it impart to the ſpittle a ſaffron tinge, without proving ſlimy or mucilaginous in the mouth.* Its taſte is ſubacrid, bitteriſh, and ſomewhat aſtringent; the ſmell ſlightly aromatic.

Rhubarb is *a mild cathartic*, which operates without violence or irritation, and may be given with ſafety even to pregnant women and children. Beſides its purgative quality, *it is celebrated for an aſtringent one*, by which *it ſtrengthens the tone of the ſtomach and inteſtines*, and *proves uſeful in diarrhœa and diſorders proceeding from a laxity of the fibres.* Rhubarb in ſubſtance operates more powerfully as a cathartic than any of the preparations of it, watery tinctures purge more than the ſpirituous ones; *whilſt the latter contain in greater perfection the aromatic, aſtringent*, and *corroborating virtues* of the rhubarb. The doſe, when intended as a purgative, is from a ſcruple to a dram or more.

The Turkey rhubarb is, among us, univerſally preferred to the Eaſt India ſort, though this latter is, for ſome purpoſes at leaſt, equal to the other. It *is manifeſtly more aſtringent*, but has *ſomewhat leſs of an aromatic flavour.* Tinctures drawn from both with rectified ſpirit, have nearly the ſame taſte. On diſtilling off the menſtruum, the extract left from the tincture of the Eaſt-India rhubarb proved conſiderably the ſtronger. They are both the produce of the ſame climate, and probably the roots of the ſame plant taken up at different ſeaſons, or cured in a different manner.

When given in a large doſe, it will occaſion ſome griping, as other purgatives do; but it is hardly ever heating to the ſyſtem, or ſhows the other effects of the more draſtic purgatives. It joins well with that of neutral laxatives, and both together operate in a leſſer doſe than either of them would do ſingly. The purgative quality is accompanied with a bitterneſs, which is often uſeful in reſtoring the tone of the ſtomach, when it has been loſt; and for the moſt part its bitterneſs makes it fit more eaſy on the ſtomach than many other purgatives do. The uſe of rhubarb in ſubſtance for keeping the body regular is by no means proper; as the aſtringent undoes what the purgative had done: but if the rhubarb is chewed in the mouth, and no more is ſwallowed than what the ſaliva diſſolved, the purpoſe may be anſwered; and, in this way employed, *it is very uſeful to dyſpeptic perſons.* The uſe of rhubarb in a ſolution produces

nearly ſimilar effects; becauſe the aſtringent quality is not ſo largely extracted, as to operate ſo powerfully as when the rhubarb is employed in ſubſtance.

MED. VIRT. *Cathartic—Stomachic.*

PREP. *Toaſted—Watery infuſion—Spirituous and vinous Tinctures.*

RHAPONTICI radix: Rhei Rhapontici Lin. Rhapontic; the root of a large roundiſh-leaved dock, growing wild on the mountain Rhodope in Thrace, whence it was brought into Europe, about the year 1610, by Alpinus: it bears the hardeſt winters of this climate, and is not unfrequent in our botanic gardens. The root of this plant (which appears evidently to have been the rhubarb of the ancients) is by ſome confounded with the modern rhubarb, though conſiderably different both in appearance and quality. The rhapontic is of a duſky colour on the ſurface, of a looſe ſpongy texture; *conſiderably more aſtringent*, but *leſs purgative than rhubarb*; in this latter intention, two or three drams are required for a doſe.

MED. VIRT. *Laxative.*

RHODODENDRON CHRYSANTHEMUM, *herba. Lin.* [*E.*] This plant is a new ſpecies of the rhododendron of Linnæus, diſcovered by profeſſor Pallas; a ſhrub growing near the tops of the high mountains in Siberia.

It is called by the natives *chei*, or tea, from their commonly drinking a weak infuſion of it, as we do of the Chineſe plant of that name. A ſtronger preparation of it is, however, uſed by them as a powerful medicine in *arthritic* and *rheumatic diſorders.* Two drams of the ſtalks and leaves together they infuſe in nine or ten ounces of boiling water for a night, in the heat of an oven. This is drunk next morning for a doſe; which occaſions heat, thirſt, a degree of intoxication, with a ſingular uneaſy kind of ſenſation, and a ſort of vermiculation in the affected parts. The patient is not permitted to quench the thirſt this medicine occaſions; as liquids would produce vomiting, and diminiſh the effect of the remedy. In a few hours, all diſagreeable ſymptoms go off, commonly with two or three ſtools; and the patient finds his diſeaſe greatly relieved. A repetition of the doſe twice or thrice generally completes the cure.

It is not only recommended in rheumatic and gouty caſes, but even in venereal ones; and now generally employed in chronic rheumatiſm in various parts of Europe. The leaves, which are the parts directed for medicinal uſe, have a bitteriſh ſubaſtringent taſte, and, as well as the bark and young branches, manifeſt a degree of acrimony. Taken in large doſes, they prove a narcotic poiſon; they produce thoſe ſymptoms which are occaſioned by many of the order Solonaceæ.

Dr. Home has made trial of this remedy in the infirmary at Edinburgh, and the reſult of his trials, as publiſhed in his Clinical Caſes and Experiments, is, that it is *a very powerful ſedative, remarkably diminiſhing the frequency of the pulſe*; but that it was not peculiarly efficacious in removing the acute rheumatiſm.

MED. VIRT. *Powerfully ſedative.*

PREP. *Powder—Decoction.*

RIBESIÆ *fructus: Ribes rubrum Lin. S. P.* Red currant-buſh; the berries [*L.*]

Theſe have a cool, acidulous, ſweet taſte, ſufficiently agreeable both to the palate and ſtomach.

The medical qualities of red currants appear to be ſimilar to thoſe of the other ſubacid fruits, which

are esteemed to be moderately *refrigerating*, *antiseptic*, *attenuant*, and *aperient*. HOFFMAN and BOERHAAVE had great confidence in the efficacy of this fruit in *obstinate visceral obstructions;* also of the white currant, which is nothing more than a species of the red, with properties perfectly analagous. They may be used with considerable advantage *to allay thirst*, *in most febrile disorders; to lessen an increased secretion of bile;* and *to correct a putrid* and *scorbutic state of the fluids, especially in sanguine temperaments;* but in constitutions of a contrary kind they are apt to occasion flatulency and indigestion. The juice is a most agreeable acid in punch. The juice of red currants with sugar is a common beverage at Paris, where it is generally preferred to orgeat or lemonade.

MED. VIRT. *Refrigerant—Detergent.*

PREP. *Jelly.*

RIBES NIGRUM *Lin. S. P.* Black Currant-bush; the fruit [*L.*]

This is a native of Britain, delights in swampy grounds, and flowers in May. The fruit is larger than those of the red currant, and we are told, that in some parts of Siberia they grow to the size of a hazel nut. This has the properties in common with the subacid fruits, and is also said to be peculiarly useful in sore throats, and to possess a diuretic power in a very considerable degree. Certainly as gargles, from the sensible qualities of this fruit, they seem calculated to be of service in inflammatory angina; but the proofs of their diuretic power want confirmation. BERGIUS considers the leaves of the black currant, which are extremely fragrant, to be *detergent*, *repellent*, and *diuretic*.

Both the fruit of this and the red currant afford a pleasant wine; and that made of the former is said by HALLER to be excellent, not inferior to any made of the true grape, when it is kept to a proper age.

An infusion of the leaves of this bush is said to have the taste of green tea; and, when prepared from the young leaf, is to some people peculiarly agreeable.

MED. VIRT. *Refrigerant — Detergent.*

PREP. *Syrup — Inspissated juice.*

RICINUS: *Ricinus communis Lin. S. P.* Palma Christi — Oil of the seed, called CASTOR OIL. [*L.E.*]

This plant, called also *Negro Oil-bush*, grows spontaneously in most of the West-India islands. The seed is generally less than a common horse-bean, ovate, compressed on one side, covered with a brittle shell, speckled with brown and yellow, containing a white kernel inclosed in a white membrane; when fresh, bitterish, and, after some time, exciting a mild sense of heat. This shell is said to have a strong degree of acrimony not discoverable by the taste, to which it seems insipid, but by its effects on other parts.

These seeds contain a large quantity of oil; which is obtained either by boiling them after being bruised in water, and skimming off the oil which rises to the surface, or by expression. That obtained by the former process loses its sweetness from the heat, is whiter, less purgative, and disposed to grow rancid sooner. That oil is the best which is *thick*, *viscid*, *greenish*, *somewhat opake*, *almost insipid*, or *sweet*, *leaving no sensation of acrimony in the throat;* that is not so good which is *very white*, *transparent*, and *of a saffron colour.*

This oil is one of the most agreeable purgatives which can be employed; for it operates sooner after the exhibition than any other, commonly in two or three hours. It seldom gripes, and commonly gives

one, two, or three ſtools only. It is well ſuited *to caſes of coſtiveneſs*, and even to caſes of *ſpaſmodic colic, vomiting, iliac paſſion, aſthma* from the fumes of lead, and in *dyſenteries*. In the Weſt Indies it is found one of the moſt certain remedies *in the dry belly-ach*, or *colica pictorum*. It has alſo been experienced to be an uſeful medicine *in various febrile complaints, bilious colics, nephritic caſes, worms*, eſpecially the *tape-worm*.

It ſeldom heats or irritates the rectum, therefore well ſuited to *hæmorrhoidal perſons*. In large doſes it ſometimes creates great nauſea, to prevent which, in the Weſt Indies they give it with rum: but the beſt mode is to mix it well with one part of tincture of ſena and three of the oil; it is leſs nauſeous to the taſte and ſits eaſier on the ſtomach. The common doſe to infants is a dram, or more; half an ounce to an adult; but many require a double doſe.

Of this medicine, if it be frequently repeated, the doſe may be diminiſhed gradually. Some, after repeatedly taking it, have found that two drams act as fully at laſt as half an ounce did at firſt.

MED. VIRT. *Laxative — Anthelmintic.*

PREP. *Expreſſed oil.*

ROSA DAMASCENA: *Roſa centifolia Lin.* The damaſk roſe [*L. E.*]

This elegant flower is common in our gardens. Its ſmell is very pleaſant, and almoſt univerſally admired; its taſte bitteriſh and ſubacrid. In diſtillation with water, it yields a ſmall portion of a butyraceous oil, whoſe flavour exactly reſembles that of the roſes. This oil, and the diſtilled water, are very *uſeful* and *agreeable cordials*. Hoffman ſtrongly recommends them as of *ſingular efficacy for raiſing the ſtrength, cheering and recruiting the ſpirits*, and *allaying pain*; which they perform without raiſing any heat in the conſtitution, rather abating it when inordinate. Damaſk roſes, beſides their cordial aromatic virtue, which reſides in their volatile parts, have *a mildly purgative one*, which remains entire in the decoction left after the diſtillation. This, with a proper quantity of ſugar, forms an agreeable laxative ſyrup.

MED. VIRT. *Aromatic — Gently laxative.*

PREP. *Diſtilled water — Syrup.*

ROSA RUBRA: *Roſa gallica Lin.* The red roſe [*L. E.*]

This has very little of the fragrance of the foregoing pale ſort; and, inſtead of its purgative quality, a *mild, gratefully aſtringent* one, eſpecially before the flower has opened. This is conſiderably improved by haſty exſiccation; but both the aſtringency and colour are impaired by ſlow drying. Some of the Arabian phyſicians, particularly AVICENNA and MESUE, eſteemed this highly in *phthiſical caſes*, and mention ſome inſtances of its ſucceſs. RIVERIUS has alſo recited ſeveral others. But as the uſe of the conſerve of this flower was conſtantly joined with that of milk, and other farinacea, the recoveries could not be imputable to the roſes alone, though it may be ſuppoſed they contributed much towards them from their mild aſtringent and corroborant virtues.

MED. VIRT. *Aſtrigent* and *corroborant.*

PREP. *Infuſion — Honey — Conſerve.*

ROSMARINI *ſummitates, et flores: Roriſmarini officinalis Lin. S. P.* Roſemary; the tops and flowers [*L. E.*]

This is a native of Spain, Italy, and the ſouthern parts of France, where it grows in great abundance upon dry gravelly grounds; in the like ſoils it thrives beſt with us,

and likewiſe proves ſtronger in ſmell, than when produced in moiſt rich ones. This obſervation obtains in almoſt all the aromatic plants.

Roſemary has a fragrant ſmell, and a warm pungent bitteriſh taſte, approaching to thoſe of lavender. The leaves and tender tops are ſtrongeſt; next to theſe the cup of the flower; the flowers themſelves are conſiderably the weakeſt, but moſt pleaſant. Aqueous liquors extract great ſhare of the virtues of roſemary leaves by infuſion, and elevate them in diſtillation; along with the water ariſes a conſiderable quantity of eſſential oil, of an agreeable ſtrong penetrating ſmell. Pure ſpirit extracts in great perfection the whole aromatic flavour of the roſemary, and elevates very little of it in diſtillation; hence the reſinous maſs, left upon abſtracting the ſpirit, proves an elegant aromatic, very rich in the peculiar qualities of the plant. The flowers of roſemary give over great part of their flavour in diſtillation with pure ſpirit; by watery liquors, their fragrance is much injured; by heating, deſtroyed.

Roſemary is conſidered as a *ſtimulant and corroborant of the nervous ſyſtem*, and has been recommended in various affections ſuppoſed to proceed from debilities and torpid action of the brain and nervous ſyſtem, as in *particular headachs, deafneſs, giddineſs, palſies*, &c. and in ſome *hyſterical* and *dyſpeptic ſymptoms*. But the ſtimulant virtue of the roſemary is not ſuppoſed to be powerful enough to reach the ſanguiferous ſyſtem. It has however the character of an *emmenagogue*, and is by BERGIUS conſidered alſo as a *reſolvent* and *nervous corroborant*, and *uſeful in chloroſis*. By many people an infuſion of the leaves is drank as tea for breakfaſt.

MED. VIRT. *Aromatic* and *cordial*.

PREP. *Eſſential oil — Spirit*, called Hungary water.

RUBIÆ *radix: Rubiæ tinctorum Lin. S. P.* Madder; the root [*L. E.*]

Madder is raiſed in ſome of our gardens for medicinal purpoſes: it was formerly cultivated among us, in quantity, for the uſe of the dyers, who are at preſent ſupplied from Holland and Zealand. It has little or no ſmell; a ſweetiſh taſte, mixed with a little bitterneſs. The virtues attributed to it, are thoſe of a *detergent*, *deobſtruent*, and *diuretic*, whence it has been uſually ranked among the opening roots, and recommended *in obſtructions of the viſcera, particularly of the kidneys and liver, in coagulations of the blood from falls or bruiſes, in the jaundice, and beginning dropſies*. It has alſo been recommended as an emmenagogue, and in ricketty affections. With regard to its diuretic effect, CULLEN does not think that always certain, never having occurred to him. As a remedy for the *jaundice*, it has the authority of SYDENHAM. As an *emmenagogue* it has been given by Dr. HOME in doſes from ʒj to ʒſs of the powder, or two ounces of the decoction, three or four times a day — though this medicine failed with Dr. CULLEN, and ſeveral other practitioners.

It is obſervable, that this root, taken internally, tinges the urine of a deep red colour; and in the Philoſophical Tranſactions we have an account of its producing a like effect upon the bones of animals who had it mixed with their food. All the bones, particularly the more ſolid ones, were changed, both externally and internally, to a deep red; but neither the fleſhy nor cartilaginous parts ſuffered any alteration: ſome of theſe bones, ma-

cerated in water for many weeks together, and afterwards ſteeped and boiled in ſpirit of wine, loſt none of their colour, nor communicated any tinge to the liquors. This root appears therefore to be poſſeſſed of great ſubtilty of parts, whence its medical virtues ſeem to deſerve inquiry.

MED. VIRT. *Deobſtruent — Detergent.*

RUBI IDÆI *fructus, Lin. S. P.* The raſpberry-buſh; the fruit [*L.*]

This ſhrub is common in our gardens; and has likewiſe, in ſome parts of England, been found wild. It flowers in May, and ripens its fruit in July. Raſpberries have a pleaſant ſweet taſte, accompanied with a peculiarly grateful flavour; on account of which they are chiefly valued. As to their virtues, *they moderately quench thirſt, abate heat, ſtrengthen the viſcera*, and *promote the natural excretions.*

MED. VIRT. *Refrigerant.*

PREP. *Syrup.*

RUBI VULGARIS folia, fructus: Rubi fructicoſi Lin. S. P. The bramble, or black-berry buſh; its leaves and fruit.

The ſhrub is frequently found wild in woods and hedges. The berries have a faint taſte, without any thing of the agreeable flavour of raſpberries: the leaves are ſomewhat aſtringent.

RUSCI, ſive Bruſci, radix: Ruſci aculeati Lin. Butcher's-broom, or knee-holly; the root.

This is a ſmall prickly plant, ſometimes found wild in woods. The root has a ſoft ſweetiſh taſte, which is followed by a bitteriſh one. It is one of the five aperient roots; and in this intention is ſometimes made an ingredient in apozems and diet-drinks, *for opening ſlight obſtructions of the viſcera, purifying the blood and juices, and promoting the fluid ſecretions.*

MED. VIRT. *Aperient.*

RUTÆ *herba: Rutæ graveolentis Lin.* Broad-leaved rue; the herb [*L. E.*]

This is a ſmall ſhrubby plant, met with in gardens, where it flowers in June, and holds its green leaves all the winter. We frequently find in the markets a narrow-leaved ſort, which is cultivated by ſome in preference to the other, becauſe its leaves appear variegated, during the winter, with white ſtreaks.

Rue has a ſtrong, ungrateful ſmell, and a bitteriſh, penetrating taſte. The leaves, when in full vigour, are extremely acrid, inſomuch as to inflame and bliſter the ſkin, if much handled. With regard to their medicinal virtues, they are *powerfully ſtimulating, attenuating* and *detergent;* and hence, *in cold phlegmatic habits, they quicken the circulation, diſſolve tenacious juices, open obſtructions of the excretory glands*, and *promote the fluid ſecretions.* The writers on the materia medica in general have entertained a very high opinion of the virtues of this plant. Boerhaave is full of its praiſes, particularly of the eſſential oil, and the diſtilled water cohobated or re-diſtilled ſeveral times from freſh parcels of the herb. After ſomewhat extravagantly commending other waters prepared in this manner, he adds, with regard to that of rue, that the greateſt commendation he can beſtow upon it, falls ſhort of its merit: "What medicine (ſays he) can be *more efficacious for promoting ſweat and perſpiration, for the cure of the hyſteric paſſion*, and *for expelling poiſon?*" Notwithſtanding this authority, the reſiſting contagion, or expelling it when taken into the machine, are held to be abſolutely without foundation. However, it is doubtleſs a powerful ſtimulant of the fœtid kind, and has, like them, *attenuant, deobſtruent*, and *antiſpaſmodic powers*, adapted

to phlegmatic habits, or weak and hysterical constitutions suffering from retarded or obstructed secretions. An extract made by rectified spirit contains, in a small compass, the whole virtues of the rue; this menstruum taking up by infusion all the pungency and flavour of the plant, and elevating nothing in distillation. With water, its peculiar flavour and warmth arise; the bitterness, and a considerable share of the pungency, remaining behind.

MED. VIRT. *Stimulant* — *Attenuant* and *detergent*.

PREP. *Extract*.

SABINÆ *folia seu summitates: Juniperi Sabinæ Lin. S. P.* Savin; the leaves or tops [*L. E.*]

This is an evergreen shrub, clothed with small, somewhat prickly leaves. It does not produce fruit till very old, and hence has been generally reputed barren. The leaves have a bitter, acrid, biting taste; and a strong disagreeable smell: distilled with water, they yield an essential oil, in larger quantity (as Hoffman observes) than any other known vegetable, the turpentine-tree alone excepted.

Savin is a *warm irritating aperient medicine*, heats and stimulates the whole system; is *capable of promoting sweat*, *urine*, and *all the glandular secretions;* and is found of service *in obstructions of the uterus*, or *other viscera*, proceeding from a laxity and weakness of the vessels, or a cold sluggish indisposition of the juices.

It is certainly a powerful and active medicine, and the most efficacious in the Materia Medica as an *emmenagogue*. BERGIUS not only considers it as an *emmenagogue*, but capable of *procuring abortion*, and *increasing the circulation of the blood*. When it fails to promote the catamenia, as it sometimes does, it is to be ascribed generally to its being exhibited in too small doses. It should be given from a scruple to a dram twice a day, and is well suited to the debile, but improper in plethoric habits, from its heating quality; and therefore in them repeated bleedings are necessary before its exhibition.

Externally, savin is recommended to cleanse *foul ulcers*, take off *syphilitic warts*, &c.

MED. VIRT. *Stimulating*—*Aperient*.

PREP. *Essential oil* — *Extract* — *Compound powder*.

SACCHARUM NON PURIFICATUM. Soft sugar.

SACCHARUM PURIFICATUM, vel BISCOCTUM. Double-refined sugar [*L. E.*]

SACCHARUM CANDUM. Sugar-candy.

Sugar is the essential salt of the *arundo saccharifera*, a beautiful large cane growing spontaneously in the East Indies, and some of the warmer parts of the West, and cultivated in great quantity in our American plantations. The expressed juice of the cane is clarified with the addition of lime-water (without which it does not assume the form of a true sugar) and boiled down to a due consistence; when, being removed from the fire, the saccharine part concretes from the grosser unctuous matter called treacle, or melasses. This, as yet impure or brown sugar, is farther purified in conical moulds, by spreading moist clay on the upper broad surface: the watery moisture, slowly percolating through the mass, carries with it considerable part of the remains of the treacly matter. This clayed sugar, imported from America, is by our refiners dissolved in water, the solution clarified by boiling with whites of eggs and despumation, and, after due evaporation, poured into moulds: as soon

as the ſugar has concreted, and the fluid part drained off, the ſurface is covered with moiſt clay as before. The ſugar, thus once refined, by a repetition of the proceſs, becomes the double-refined ſugar of the ſhops. The candy, or cryſtals, are prepared by boiling down ſolutions of ſugar to a certain pitch, and then removing them into a hot room; with ſticks ſet acroſs the veſſel for the ſugar to ſhoot upon. Theſe cryſtals prove of a white or brown colour, according as the ſugar was pure or impure.

The uſes of ſugar as a ſweet are ſufficiently well known. The impure ſorts contain an unctuous or oily matter, in conſequence of which they prove emollient and laxative. The cryſtals are moſt difficult of ſolution, and hence are propereſt where this ſoft lubricating ſweet is wanted to diſſolve ſlowly in the mouth.

There can be no doubt but ſugar in its crude ſtate affords a conſiderable degree of nouriſhment, both as combined with various vegetable matters, and as ſeparated by art. Thoſe animals which wholly feed upon it in the ſugar-iſlands become remarkably corpulent; and the negro children, whoſe diet happens to be ſometimes, for a ſeaſon, confined to melaſſes, are eaſily diſtinguiſhed from others by their ſuperior bulk. They are, however, more diſpoſed to worms, and are likewiſe leſs active and healthy. In Aſia, elephants and other animals are fed upon ſugar. That the liberal uſe of ſugar has however to many ſtomachs greatly impaired the digeſtive powers, and laid the foundation for various complaints, is highly probable; but at the ſame time it muſt be admitted, that ſeveral indulge largely in this article with impunity at leaſt, if not with advantage. BERGIUS ſtates ſugar to be *ſaponaceous—edulcorant—relaxant—pectoral—vulnerary—antiſeptic* and *nutrient*. CULLEN claſſes it with the *attenuantia*. In *catarrhal affections*, honey and ſugar are frequently employed: it has been uſed with advantage in *calculous complaints*; and, from its known power of preſerving animal and vegetable ſubſtances from putrefaction, it has been given as an *antiſeptic*.

MED. VIRT. *Emollient—Laxative.*

PREP. *Syrupus ſimplex.*

SAGAPENUM [*L. E.*] a concrete juice brought from Alexandria, either in diſtinct tears, or run together in large maſſes. It is outwardly of a yellowiſh colour, internally ſomewhat paler, and clear like horn, grows ſoft upon being handled, and ſticks to the fingers; its taſte is hot and biting; the ſmell diſagreeable, by ſome reſembled to that of a leek, by others to a mixture of aſafetida and galbanum.

Sagapenum is an uſeful *attenuant*, *deobſtruent*, and *antiſpaſmodic*, and frequently preſcribed either alone, or in conjunction with ammoniacum, or galbanum, *for opening obſtructions in the viſcera*, and *in hyſterical diſorders ariſing from a deficiency of the menſtrual purgations*. It likewiſe *deterges the pulmonary veſſels*, and *proves of conſiderable ſervice in ſome kinds of aſthmas*, where the lungs are oppreſſed by viſcid phlegm. It is moſt commodiouſly given in the form of pills. From five grains to half a dram may be given every night or oftener, and continued for ſome time. When ſagapenum is ſcarce, the druggiſts uſually ſupply its place with the larger and darker-coloured maſſes of bdellium, broken into pieces; which are not eaſily diſtinguiſhed from it.

SAGO, *Cycas circinalis Lin.* This is the produce of an oriental tree, called by C. Bauhine *palmam referens arbor farinifera*. The medullary part of the tree is beaten with

water, and made into cakes, which are uſed by the Indians as bread: theſe reduced into granules, and dried, are the ſago brought to us. It is moderately nutritious, though not perhaps ſuperior to our own grain. With water, milk, or broth, it forms an agreeable jelly, and is much uſed in phthiſical and convaleſcent caſes.

SAL AMMONIACUS: *Ammonia muriata.* Sal ammoniac [*L. E.*]

This is an artificial ſaline concrete, ſaid to be prepared by ſublimation from the ſoot of cow-dung. It is brought to us from Egypt, in large round cakes, convex on one ſide, and concave on the other; and ſometimes in conical loaves. On breaking, they appear compoſed of needles, or ſtriæ, running tranſverſely. The beſt are almoſt tranſparent, colourleſs, and free from any viſible impurities: thoſe moſt commonly met with are of a grey yellowiſh colour on the outſide, and ſometimes black, according as the matter is more or leſs impure. The taſte of this ſalt is very ſharp and penetrating. It diſſolves in twice its weight, or a little leſs, of water: and upon evaporating a part of the menſtruum, concretes again into long ſhining ſpicular, or thin fibrous plates, like feathers.

Sal ammoniac appears from experiments to be compoſed of marine acid united with a volatile alkali; hence called *ammonia muriata.* If mingled with fixed ſalts, or abſorbent earths, and expoſed to a moderate fire, a large quantity of pure volatile ſalt ſublimes, the acid remaining united with the intermedium; if treated in the ſame manner with quicklime, an exceeding penetrating volatile ſpirit ariſes, but no ſolid ſalt is obtained. Expoſed alone to a conſiderable heat, it ſublimes entire, without any alteration of its former properties: ground with certain metallic ſubſtances, it elevates ſome part of them along with itſelf, and concretes with the remainder into a maſs, which readily flows into a liquor in a moiſt air. This appears in moſt reſpects ſimilar to a ſaturated ſolution of the metal made directly in ſpirit of ſalt.

Pure ſal ammoniac is a perfectly neutral ſalt, *capable of attenuating viſcid humours*, and *promoting a diaphoreſis*, or *the urinary diſcharge*, according to certain circumſtances in the conſtitution, or as the patient is managed during the operation. *If a dram of the ſalt be taken, diſſolved in water*, and the patient kept warm, it generally *proves ſudorific;* by moderate exerciſe, or walking in the open air, its *action is determined to the kidneys; a large doſe gently looſens the belly; and a ſtill larger proves emetic.* This ſalt is recommended by many as an *excellent febrifuge*, and by ſome has *been held a great ſecret* in *the cure of intermittents.* It is undoubtedly *a powerful aperient*, and *ſeems to paſs into the minuteſt veſſels;* and, as ſuch, may in ſome caſes be of ſervice, either alone, or joined with bitters, or the bark, where the latter would by itſelf produce dangerous obſtructions, or aggravate thoſe already formed. This ſalt is ſometimes employed externally *as an antiſeptic*, and *in lotions and fomentations*, for œdematous tumours: as alſo *in gargariſms for inflammations of the tonſils, and for attenuating and diſſolving thick viſcid mucus.* Some uſe it in form of lotion, in certain ulcers, and for removing common warts.

MED. VIRT. *Deobſtruent—Sudorific—Diuretic.*

SAL CATHARTICUS AMARUS: *Magneſia vitriolata* [*L. E.*]

The bitter purging ſalt; extracted from the bitter liquor remaining after the cryſtallization of common

ſalt from ſea-water. It was firſt prepared as a cheap ſubſtitute to the ſalt of the Epſom and other purging mineral waters, from which it does not conſiderably differ, either in ſenſible qualities or medical effects. We uſually meet with it in minute cryſtals, of a ſnowy appearance; diſſolved in water, and cryſtallized afreſh, it concretes, if properly managed, into larger ones, of a rectangular priſmatic figure, reſembling thoſe of the artificial cathartic ſalt of Glauber, for which they are ſometimes ſubſtituted in the ſhops.

All theſe ſalts have a penetrating bitteriſh taſte: they diſſolve in leſs than an equal weight of water: in a moderate heat, they melt, bubble up into bliſters, and ſoon change into a white ſpongy maſs, with the loſs of above half their weight. This calx taſtes bitterer than the ſalts did at firſt, and almoſt totally diſſolves again in water. The acid of theſe ſalts is chiefly the vitriolic: the baſis of the natural is a fine abſorbent earth; of the artificial, an alkaline ſalt, the ſame with the baſis of ſea-ſalt. Hence, upon adding alkaline ſalts to a ſolution of the ſalts of Glauber, no change enſues: whilſt the ſalts obtained from the purging waters, or the bittern of marine waters, grows milky upon this addition, and depoſit their earth, the alkaline ſalt being taken up its place.

The ſal catharticus is *a mild and gentle purgative*, operating with ſufficient efficacy, and in general with eaſe and ſafety, *rarely occaſioning any gripes, ſickneſs*, or *the other inconveniencies with which purgatives of the reſinous kind are too often accompanied. Six or eight drams* may be diſſolved *for a doſe* in a proper quantity of common water; or four, five, or more, in a pint, or quart, of the purging waters. *Theſe liquors may likewiſe be ſo managed as to promote evacuation by the other emunctories.* If the patient be kept warm, they *increaſe perſpiration;* by moderate exerciſe in a cool air, *the urinary diſcharge.*

MED. VIRT. *Laxative.*

PREP. *Magneſia.*

SAL COMMUNE: *Sal muriaticus: Soda muriata* [*L. E.*] Common, or alimentary ſalt. This is a neutral ſalt, differing from moſt others in occaſioning drought when ſwallowed. It diſſolves in ſomewhat leſs than three times its weight of water; the ſolution ſlowly evaporated, and ſet to ſhoot, affords cubical cryſtals, which unite together into the form of hollow truncated pyramids. Expoſed to the fire, it crackles and flies about, or decrepitates, as it is called; ſoon after it melts, and appears fluid as water. A ſmall quantity of this ſalt, added to the nitrous acid, enables it to diſſolve gold, but renders it unfit for diſſolving ſilver. If a ſolution of ſilver be poured into liquors containing even a minute portion of common ſalt, the whole immediately grows turbid and white; this phænomenon is owing to the precipitation of the ſilver.

This ſalt is either found in a ſolid form in the bowels of the earth, or diſſolved in the waters of the ſea or ſaline ſprings.

1. *Sal gemmæ.* Rock ſalt. This is met with in ſeveral parts of the world, but in the greateſt plenty in certain deep mines, of prodigious extent, near Cracow, in Poland; ſome is likewiſe found in England, particularly in Cheſhire. It is for the moſt part very hard, ſometimes of an opake ſnowy whiteneſs, ſometimes of red, green, blue, and other colours. When pure, it is perfectly tranſparent and colourleſs; the other ſorts are purified by ſolution in water and cryſtallization, in order to fit them for the common uſes of ſalt.

2. *Sal marinus.* The ſalt extracted from ſea-water and ſaline ſprings. Sea-waters yield from one-fiftieth to one-thirtieth their weight of pure ſalt. Several ſprings afford much larger quantities; the celebrated ones of our own country at Nantwich, Northwich, and Droitwich, yield (according to Dr. Brownrigg) from one-ſixth to ſomewhat more than one-third. There are two methods of obtaining the common ſalt from theſe natural ſolutions of it; the one, a haſty evaporation of the aqueous fluid till the ſalt begins to concrete, and fall in grains to the bottom of the evaporating pan, whence it is raked out, and ſet in proper veſſels to drain from the brine or bittern: the other, a more ſlow and gradual evaporation, continued no longer than till a ſaline cruſt forms on the top of the liquor, which, upon removing the fire, ſoon begins to ſhoot, and run into cryſtals of a cubical figure. In the warmer climates, both theſe proceſſes are effected by the heat of the ſun. The ſalts obtained by them differ very conſiderably: that got by a haſty evaporation is very apt to relent in a moiſt air, and run per deliquium; an inconvenience to which the cryſtallized ſalt is not ſubject: this latter is likewiſe found better for the preſerving of meat, and for ſundry other purpoſes.

Common ſalt, in ſmall quantities, is ſuppoſed *to be warming, drying*, and *to promote appetite* and *digeſtion. In large doſes*, as half an ounce, *it proves cathartic.* It is ſometimes uſed *to check the operation of emetics*, and *make them run off by ſtool*; and *as a ſtimulus in glyſters.*

MED. VIRT. *Stimulant--Cathartic.*

SALEP, a celebrated reſtorative among the Turks, is probably the prepared root of certain plants of the orchis kind. This drug, as ſometimes brought to us, is in oval pieces, of a yellowiſh white colour, ſomewhat clear and pellucid, very hard, and almoſt horny, of little or no ſmell, and taſting like gum tragacanth. Satyrion root, boiled in water, freed from the ſkin, and afterwards ſuſpended in the air to dry, gains exactly the ſame appearance; the roots thus prepared diſſolve in boiling water into a mucilage. Geoffroy, who firſt communicated this preparation of orchis, recommends it *in conſumptions*, in *bilious dyſenteries, diarrhœas, dyſury, calculous complaints*, and *diſorders of the breaſt proceeding from an acrimony of the juices.*

Salep, as an article of diet, is conſidered to be extremely nutritious. An ounce of this powder with the ſame quantity of portable ſoup which is dried, diſſolved in two quarts of water, will be ſufficient ſubſiſtence for a man for one day; it forms a rich thick jelly. Beſides the complaints above ſpecified, ſalep is recommended in the ſymptomatic fever ariſing from abſorption of pus, from ulcers in the lungs, wounds, and from amputations: and uſed plentifully is an admirable demulcent, and well adapted to reſiſt the diſſolution of the craſis of the blood, which is evident in theſe caſes. The propereſt time for gathering the root is when the ſeed is formed and the ſtalk is ready to fall, becauſe the new bulb, of which the ſalep is made, is then arrived at its full maturity.

MED. VIRT. *Coagulant* and *corroborative.*

SALIX [*E.*] *Salix fragilis Lin.* Common white willow: a pretty large tree, frequent in woods and moiſt places; it differs from the other willows, in the oblong pointed ſerrated leaves being hoary on both ſides, though moſt ſo on the lower, and in the branches being brittle.

The bark of this tree poſſeſſes a

considerable degree of bitterness and astringency, and has lately been found an *useful medicine in agues*, of which many persons have been cured by taking a dram of the powdered bark every four hours during the intermissions; though in some cases it was necessary to join to it a little Peruvian bark (see the Philosophical Transactions for the year 1763). It has however been thought a good substitute for the bark, and has upon trial stopt the paroxysms of intermittents, and has been recommended in other cases requiring tonic and astringent remedies.

MED. VIRT. *Corroborant.*

SALVIÆ *officinalis folia. Lin. S. P.* Sage, or sage of virtue; the leaves [*L. E.*]

There are different varieties of sage common in our gardens, and flower in May and June: the green and red common sages differ no otherwise than in the colour of the leaves; the seeds of one and the same plant produce both: the small sort is a distinct species; its leaves are narrower than the others, generally of a whitish colour, and never red; most of them have at the bottom a piece standing out on each side in the form of ears. Both sorts are *modetately warm aromatics, accompanied with a slight degree of astringency and bitterness;* the small sort is the strongest, the large most agreeable.

In ancient times sage was celebrated as a medicine of great efficacy, insomuch that its name was derived from its salutary qualities —*Cur moriatur homo, cui salvia crescit in horto? — Salvia salvatrix, naturæ conciliatrix — Salvia cum rutâ faciunt tibi pocula tuta.* But at present few practitioners consider it as an article of much importance in the materia medica.

Its real effects are, to *moderately warm and strengthen the vessels;* and hence, *in cold phlegmatic habits,* it *excites appetite,* and *proves serviceable in debilities of the stomach and nervous system.* The best preparation for these purposes is an infusion of the dry leaves, drunk as tea; or a tincture, or extract, made with rectified spirit, taken in proper doses; these contain the whole virtues of the sage; the distilled water and essential oil, only its warmth and aromatic quality, without any thing of its roughness or bitterishness. Aqueous infusions of the leaves, with the addition of a little lemon juice, prove *an useful diluting drink in febrile disorders, of an elegant colour,* and sufficiently acceptable to the palate.

Infused in spirits or wine, Van Swieten found it remarkably efficacious in stopping night sweats; and a strong infusion of sage in warm water has been found to answer the same purpose. He also found it useful in restraining too great a flow of milk from the breasts of women after they had weaned their children. And from the experiments of ETHINGER it is discovered to have a considerable share of antiseptic power.

MED. VIRT. *Stimulant — Astringent.*

SAMBUCI *flores, baccæ, cortex interior: Sambuci nigræ Lin.* Common black-berried elder; the inner bark, flowers, and berries [*L. E.*]

This is a large shrub, frequent in hedges. It flowers in May, and ripens in September. The INNER GREEN BARK of its trunk has scarcely any smell, and very little taste; on first chewing, it impresses a degree of sweetishness, which is succeeded by a slight acrimony, which continues for some time, and which it imparts both to watery and spirituous menstrua. It is *strongly cathartic,* and is recommended as an *effectual hydragogue.* Three handfuls boiled in one quart of milk and

water to a pint, of which one half is to be taken at night, and the other in the morning, and repeated for several days, usually operates both upwards and downwards; and from these evacuations its utility is derived. Or an infusion of it in wine, or the expressed juice, in the dose of half an ounce, or an ounce, is said to purge moderately, and in *small doses to prove an efficacious deobstruent*, capable of promoting all the fluid secretions. The *young buds, or rudiments of the leaves, are strongly purgative*, and act with so much violence as to be deservedly accounted unsafe. The FLOWERS are very different in quality: these have an agreeable aromatic flavour, which they give over in distillation with water, and impart by infusion to vinous and spirituous liquors. Infusions made from the fresh flowers are gently laxative and aperient; when dry, they are supposed to be diaphoretic; and particularly useful in erysipelatous and cuticular disorders. Externally they are used in fomentations, in glysters, and for making an ointment. The BERRIES have a sweetish, not unpleasant taste: nevertheless, eaten in substance, they offend the stomach: the expressed juice, inspissated to the consistence of a rob, *proves an useful aperient medicine; it opens obstructions of the viscera, promotes the natural evacuations*, and, if continued for a length of time, *does considerable service in sundry chronical disorders*. It is observable, that this juice (which in its natural state is of a purplish colour) tinges vinous spirits of a deep red.

The *berries* are said to be poisonous to poultry, and the *flowers* to peacocks. If turnips, cabbages, fruit-trees, or corn, which are subject to blight from a variety of insects, are whipped with the green leaves and branches of elder; the insects will not attack them.

MED. VIRT. *Cathartic—Aromatic—Aperient.*

PREP. *Ointment—Inspissated juice.*

SANGUIS DRACONIS [*L.E.*] Dragon's-blood, a resin brought from the East-Indies, either in oval drops, wrapped up in flag leaves, or in large masses, composed of smaller tears. The writers on the materia medica in general give the preference to the former, though the latter is not unfrequently of equal goodness; the fine dragons-blood of either sort breaks smooth, free from any visible impurities, of a dark red colour, which changes, upon being powdered, into an elegant bright crimson. Several artificial compositions, coloured with the true dragons-blood, or Brazil wood, are sometimes sold in the room of this commodity: some of these dissolve, like gums, in water; others crackle in the fire, without proving inflammable; whilst *the genuine sanguis draconis readily melts and catches flame, and is not acted on by watery liquors*. It totally dissolves in pure spirit, and tinges a large quantity of the menstruum of a deep red colour: it is likewise soluble in expressed oils, and gives them a red hue, less beautiful than that communicated by anchusa. This drug, in substance, has no sensible smell or taste; when dissolved, it discovers *some degree of warmth and pungency*. It is usually looked upon *as a gentle astringent*, and sometimes directed as such, in extemporaneous prescription, *against seminal gleets*, the *fluor albus*, and *other fluxes*: in these cases, it produces the general effects of resinous bodies, *slightly incrassating the fluids*, and *somewhat strengthening the solids*. It is also astringent, and used in uterine hæmorrhages, with alum; but now gives place to a more efficacious gum resin, called KINO, that by excision exudes from an African tree called *Pau de sang*.

MED. VIRT. *Astringent.*

SANTALUM CITRINUM [*E.*] Yellow saunders: a pale yellowish wood brought from the East Indies; of a pleasant smell, and a bitterish aromatic taste, accompanied with an agreeable kind of pungency. This elegant wood might undoubtedly be applied to valuable medical purposes, though at present very rarely made use of. It is scarcely ever directed in extemporaneous prescription. Distilled with water, it yields a fragrant essential oil, which thickens, in the cold, into the consistence of a balsam. Digested in pure spirit, it imparts a rich yellow tincture; which being committed to distillation, the spirit arises, without bringing over any thing considerable of the flavour of the saunders. The residuum contains the virtue of six times its weight of the wood. Hoffman looks upon this extract as *a medicine of similar virtues to ambergris;* and recommends it as *an excellent restorative in great debilities.*

SANTALUM RUBRUM [*L. E.*] *Pterocarpus Santolinus Lin. S. P.* Red saunders; a wood brought from the East Indies, in large billets, of a compact texture, a dull red, almost blackish, colour on the outside, and a deep brighter red within. This wood has no manifest smell, and little or no taste. It has been commended as *a mild astringent*, and *a corroborant of the nervous system;* but these are qualities that belong only to the yellow sort.

The principal use of red saunders is as a colouring drug; it communicates a deep red to rectified spirit, but gives no tinge to aqueous liquors: a small quantity of the resin, extracted by means of spirit, tinges a large one of fresh spirit, of an elegant blood red. There is scarce any oil, that of lavender excepted, to which it communicates its colour. Geoffroy, and others, take notice, that the Brazil woods are sometimes substituted for red saunders; and the college of Brussels are in doubt whether all that is sold among them for saunders, be not really a wood of that kind. According to the account which they have given, their saunders is certainly the Brazil wood; the distinguishing character of which is, that it imparts its colour to common water.

SANTONICUM [*L. E.*] *Artemisia santonicum Lin. S. P.* The top, commonly called *worm-seed.* The produce of a plant of the wormwood or mugwort kind, growing in the Levant.

It is a small, light, chaffy seed-like appearance, composed as it were of a number of thin membranous coats, of a yellowish colour, an unpleasant smell, and a very bitter taste. These are celebrated for anthelmintic virtues (which they have in common with other bitters), and are sometimes taken in this intention, either along with melasses, or candied with sugar: their unpleasant taste renders the form of a powder or decoction inconvenient. They are not very often met with genuine in the shops.

They are also considered as *stomachic* and *emmenagogue.* The quality of destroying worms has been attributed solely to their bitterness: but from the experiments of BAGLIVI and REDI, they possess some other more powerful property; for, immersed in a strong infusion of these seed-like tops, worms were killed in five, seven, or eight hours; whilst in the infusion of wormwood and that of agaric, they continued to live more than thirty hours.

To adults, the dose in substance is from one to two drams twice a

day; but the ſpirituous extract is the moſt eligible preparation.

MED. VIRT. *Anthelmintic.*

PREP. *Extract.*

SAPO [*L. E.*] *Sapo ex oleo olivæ et natro confectus* [*L.*] White Spaniſh ſoap [*E.*]

SAPO MOLLIS. Common ſoft ſoap.

SAPO NIGER, ſeu Melanoſmegma. Black ſoft ſoap.

Soap is compoſed of expreſſed vegetable oils, or animal fats, united with alkaline lixivia. The WHITE HARD SOAP is made with the finer kinds of oil olive; the COMMON SOFT SORT, with coarſer oils, fat, tallow, or a mixture of all theſe; and THE BLACK (as is ſaid) with train oil.

The purer hard ſoap is the only ſort intended for internal uſe. This triturated with oily or reſinous matters, renders them ſoluble in water, and hence becomes an uſeful ingredient in pills compoſed of reſins, promoting their diſſolution in the ſtomach, and union with the animal fluids; but gum mucilage is found to anſwer the purpoſe better. Boerhave was a great admirer of ſoap; and in his private practice ſeldom preſcribed any reſinous pills without it; unleſs where an alkaleſcent or putrid ſtate of the juices forbade its uſe. From the ſame quality, ſoap likewiſe ſeems well fitted for diſſolving ſuch oily or unctuous matters as it may meet with in the body, *attenuating viſcid juices, opening obſtructions of the viſcera,* and *detergying all the veſſels it paſſes through.* It is likewiſe a *powerful menſtruum for the human calculus:* a ſolution of it in lime water is *one of the ſtrongeſt diſſolvents that can be taken with ſafety into the ſtomach;* the virtue of this compoſition is conſiderably greater than the aggregate of the diſſolving powers of the ſoap and lime water when unmixed.

Acids ſhould never be uſed with ſoap, becauſe they decompound it, by uniting with the alkaline ſalt, and thus ſeparating it from the oil. In moderate quantity, ſoap ſeldom can enter the circulation in its perfect ſtate; becauſe, as there always is more or leſs of an acid in the ſtomach, the ſoap muſt be decompounded. It is therefore conſidered as a *very good corrector of acidity in the primæ viæ.* If therefore any ſervice is to be expected from ſoap as a deobſtruent and detergent, it muſt be given in larger doſes than are commonly preſcribed, or they ſhould be much more frequently repeated.

Soap united with rectified ſpirit, camphor, and eſſential oils, forms an agreeable external application for ſuperficial tumours, or others more deeply ſeated, ſtrains, bruiſes, &c.

The ſoft ſoaps are more penetrating and acrimonious than the hard. The only medical uſe of theſe is for ſome external purpoſes.

MED. VIRT. *Reſolvent — Stimulating.*

PREP. *Plaſter — Liniment — Balſam — Pills.*

SAPONARIÆ folia, radix: Saponariæ officinalis Lin. Soapwort, or bruiſewort; the herb and root.

This grows wild, though not very common, in low wet places, and by the ſides of running waters; a double-flowered ſort is frequent in our gardens. The leaves have a bitter, not agreeable taſte; agitated with water, they raiſe a ſaponaceous froth, which is ſaid to have nearly the ſame effects with ſolutions of ſoap itſelf in taking out ſpots from cloths, and the like. The roots taſte ſweetiſh, and ſomewhat pungent; and have a light ſmell like thoſe of liquorice: digeſted in rectified ſpirit, they yield

a ſtrong tincture, which loſes nothing of its taſte or flavour in being inſpiſſated to the conſiſtency of an extract. This elegant root has not come much into practice among us, though it promiſes, from its ſenſible qualities, to be a medicine of conſiderable utility. It is greatly eſteemed by the German phyſicians *as an aperient*, *corroborant*, and *ſudorific*; and preferred by the college of Wirtemberg, Stahl, Neumann, and others, to ſarſaparilla.

MED. VIRT. *Aperient — Corroborant — Sudorific.*

SARCOCOLLA [*L.*] *Pinæa ſarcocolla Lin.* A concrete juice, brought from Perſia and Arabia, in ſmall, whitiſh, yellow grains, with a few of a reddiſh, and ſometimes of a deep red colour, mixed with them; the whiteſt tears are preferred, as being the freſheſt. Its taſte is bitter, accompanied with a dull kind of ſweetneſs. This drug diſſolves in watery liquors, and appears to be chiefly of the gummy kind, with a ſmall mixture of reſinous matter. It is principally celebrated for *conglutinating wounds and ulcers* (whence its name σαρκοκολλα fleſh-glue), a quality to which neither this, nor any other drug, has a juſt title.

MED. VIRT. *Vulnerary.*

SARSAPARILLA [*L. E.*] *Smilax Sarſaparilla Lin. S. P.* A root brought from the Spaniſh Weſt Indies. It conſiſts of a great number of long ſtrings hanging from one head. The long roots (the only part made uſe of) are about the thickneſs of a gooſe-quill, or thicker, flexible, compoſed of fibres running their whole length, ſo that they might be ſtript into pieces from one end to the other. They have a glutinous, bitteriſh, not ungrateful taſte; and no ſmell. This root was firſt brought into Europe by the Spaniards, about the year 1563, with the character of *a ſpecific for the cure of the lues venerea*, which made its appearance a little before that time, and *likewiſe of ſeveral obſtinate chronic diſorders.* Whatever good effects it might have produced in the warmer climates, it proved unſucceſsful in this; inſomuch that many have denied it to have any virtue at all. It appears however from experience, that, though greatly unequal to the character which it bore at firſt, it is in ſome caſes of conſiderable uſe *as a ſudorific*, where more acrid medicines are improper. Dr. CULLEN ſays, "Were I to conſult my own experience alone, I ſhould not give this root a place in the materia medica; for, tried in every ſhape, I never have found it an effectual medicine in ſiphylis, or any other diſeaſe: ſtill it is frequently uſed by other phyſicians, who appear to have a high opinion of its efficacy; and, though they do not allow that it will alone cure the lues venerea, they aſſert that, given with mercury, the cure becomes more expeditious. In moſt of the London hoſpitals it is frequently in uſe; and patients, after the uſe of mercury, have been known to be reſtored much ſooner to their health by this root, than could be accompliſhed by any other known medicine, *eſpecially when given in powder.*"

In *rheumatic affections*, *ſcrophula*, and *cutaneous affections*, or where the acrimony of the fluids prevails, this root is recommended; but ſhould be continued in large doſes for a conſiderable time; viz. two drams of the powder with half a pint of a ſtrong decoction, twice a day.

The preparations are *a decoction* and *extract* made with water; a decoction of half an ounce of the root, or a dram of the extract, which is equivalent thereto, may be taken for a doſe.

MED. VIRT. *Alterant — Diaphoretic.*

PREP. *Decoction—Extract.*

SASSAFRAS [*L. E.*] *Laurus sassafras Lin. S. P.* Wood, root, and its bark: brought to us in long straight pieces, very light, and of a spongy texture, covered with a rough fungous bark; outwardly of an ash-colour, inwardly of the colour of rusty iron. It has a fragrant smell, and a sweetish, aromatic, subacrid taste: the bark tastes much stronger than any other part; and the small twigs stronger than the large pieces. As to the virtues of this root, it is *a warm aperient, diuretic, diaphoretic,* and *corroborant;* and frequently employed, with success, *for purifying and sweetening the blood and juices.* For these purposes, infusions made from the rasped root or bark, may be drunk as tea. In some constitutions, these liquors, by their fragrance, are apt, on first taking them, to affect the head: in such cases they may be advantageously freed from their flavour by boiling; a decoction of sassafras, boiled down to the consistence of an extract, proves simply *bitterish* and *subastringent.* Hoffman assures us, that he has frequently given *this extract* to the quantity of a scruple at a time with remarkable success, *for strengthening the tone of the viscera in cachexies;* as *also in the decline of intermittent fevers,* and *in hypochondriacal spasms.* Sassafras yields in distillation an extremely fragrant oil, of a penetrating pungent taste; so ponderous (notwithstanding the lightness of the drug itself) as to sink in water. Rectified spirit extracts the whole taste and smell of sassafras: and elevates nothing in evaporation; hence the spirituous extract proves the most elegant and efficacious preparation, as containing the virtue of the root entire.

It is however now thought to be of very little importance, and seldom employed but in conjunction with other more efficacious medicines. The only officinal preparation is the essential oil, which may be given from two to ten drops for a dose.

MED. VIRT. *Alterant — Aperient —Corroborant.*

SATUREIÆ herba: Satureiæ hortensis Lin. Summer savoury; the herb.

This herb is raised annually in gardens for culinary purposes. It is a very pungent warm aromatic; and affords, in distillation with water, a subtile essential oil, of a penetrating smell, and very hot, acrid taste. It yields little of its virtues by infusion to aqueous liquors: rectified spirit extracts the whole of its taste and smell, and elevates nothing in distillation.

SATYRII MARIS *radix: Orchis masculæ Lin.* Orchis; the root [*E.*]

This plant is frequent in shady places and moist meadows: each plant has two oval roots, of a whitish colour, a viscid sweetish taste, and a faint unpleasant smell. They abound with a glutinous slimy juice. With regard to their virtues, like other mucilaginous vegetables, *they thicken the thin serous humours* and *defend the solids from their acrimony:* they have also been celebrated, though on no very good foundation, for analeptic and aphrodisiac virtues: and frequently made use of in these intentions.

SCAMMONIUM: *Convolvulus Scammonia Lin. S. P.* [*L. E.*] Scammony; a concrete juice extracted from the roots of a large climbing plant growing in Asiatic Turkey. The best comes from Aleppo, in light, spungy masses, easily friable, of a shining ash colour verging to black; when powdered, of a light grey or whitish colour. An inferior sort is brought

from Smyrna, in more compact, ponderous pieces, of a darker colour, and full of ſand and other impurities. This juice is chiefly of the reſinous kind: rectified ſpirit diſſolves five ounces out of ſix, the remainder is a mucilaginous ſubſtance mixed with droſs: proof ſpirit totally diſſolves it, the impurities only being left. It has a faint unpleaſant ſmell; and a bitteriſh ſomewhat acrimonious taſte.

Scammony is an *efficacious* and *ſtrong purgative*. Some have condemned it as unſafe, and laid many ill qualities to its charge; the principal of which is, that its operation is uncertain, a full doſe proving ſometimes ineffectual, whilſt at other times a much ſmaller one occaſions dangerous hypercatharſes. This difference however is owing entirely to the different circumſtances of the patient, and not to any ill quality, or irregularity of operation in the medicine. Where the inteſtines are lined with an exceſſive load of mucus, the ſcammony paſſes through, without exerting itſelf upon them; where the natural mucus is deficient, a ſmall doſe of this or any other reſinous cathartic irritates and inflames. Many have endeavoured to abate the force of this drug, and correct its imaginary virulence, by expoſing it to the fume of ſulphur, diſſolving it in acid juices, and the like: but this could do no more than deſtroy as it were a part of the medicine, without making any alteration in the reſt. Scammony in ſubſtance, judiciouſly managed, ſtands not in need of any corrector: if triturated with ſugar or with almonds, as we have formerly recommended for other reſinous purgatives, it becomes ſufficiently ſafe and mild in operation. It may likewiſe be conveniently diſſolved, by trituration, in a ſtrong decoction of liquorice, and then poured off from the feces. The college of Wirtemberg aſſures us, that by this treatment it becomes mildly purgative, without being attended with gripes, or other inconveniencies: and that it likewiſe proves inoffenſive to the palate. The common doſe of ſcammony is from three to twelve grains.

Med. Virt. *Strongly cathartic.*

Prep. *Pulv. e ſcamm. comp.* — *Pulv. e Scamm. comp. c. Aloe* — *Pulv. e ſcamm. c. Calomel.* — *Pulv. e ſena comp.* — *Extract. colocynth. comp.* — *Pilul. e colocynth. cum aloe.*

SCILLÆ *radix: Scillæ maritimæ Lin. Sp. P.* The ſquill, or ſea-onion; its root [*L. E.*]

This is a ſort of onion, growing ſpontaneouſly upon dry ſandy ſhores in Spain and the Levant, whence the root is annually brought into Europe. It ſhould be choſen *plump*, *ſound*, *freſh*, and *full of a clammy juice*. Some have preferred the red ſort, others the white, though neither deſerves the preference to the other; the only difference perceivable betwixt them, is that of the colour. This root is to the taſte very nauſeous, intenſely bitter and acrimonious: much handled, it exulcerates the ſkin. With regard to its medical virtues, *it powerfully ſtimulates the ſolids*, and *attenuates viſcid juices*, and by theſe qualities *promotes expectoration*, *urine*, and (if the patient be kept warm) *ſweat*. If the doſe be conſiderable, it *proves emetic*, and ſometimes *purgative*. But ſhould it be frequently repeated, it not only excites nauſea, tormina, and violent vomiting; but it has been known to produce ſtrangury, bloody urine, hypercatharſis, cardialgia, hæmorrhoids, convulſions, with fatal inflammation and gangrene of the ſtomach and bowels. Notwithſtanding all which, under proper manage-

ment, in certain cases and constitutions, it may be made a medicine of great practical utility, and of real importance in many obstinate diseases. In *dropsical* cases it has long been esteemed one of the most certain and effectual diuretics with which we have been acquainted, and usually employed in *humoral asthmas*, as an expectorant. The diuretic effects of squills have been supposed to be promoted by the addition of some mercurial, particularly a solution of corrosive sublimate. As a diuretic the best form is powder, as being less liable to nauseate the stomach; though, perhaps, when slight nausea does attend the exhibition, it has been observed to be most efficacious. From the constant repetition of the squill, the dose may be gradually increased, and the intervals of the exhibition shorter; and if to this opium is added, it will prevent its purgative effect, and determine more freely to the kidneys: and when it takes this course, it will be of use, and generally safe, during the exhibition, to increase the usual quantity of drink.

The principal use of this medicine is *where the primæ viæ abound with mucous matter*, and *the lungs are oppressed by tenacious phlegm*. Dr. Wagner, (in his Clinical Observations) *recommends it given along with nitre, in hydropical swellings*, and *in the nephritis*: and mentions several cures which he performed, by giving from four to ten grains of the powder for a dose, mixed with a double quantity of nitre. He says, that, thus managed, it almost always operates as a diuretic, though sometimes it vomits or purges. The most commodious form for the taking of squills, unless when designed as an emetic, is that of a bolus or pill: liquid forms are to most people too offensive, though these may be rendered less disagreeable both to the palate and stomach, by the addition of aromatic distilled waters. This root yields the whole of its virtues both to aqueous and vinous menstrua, and likewise to vegetable acids.

MED. VIRT. *Powerfully diuretic — Expectorant — Stimulant.*

PREP. *Syrup — Oxymel — Pills Conserve — Vinegar.*

SCORDII *folia. Tucri Scordii Lin. S. P.* Water-germander; the leaves [*L. E.*]

This is a small, somewhat hairy plant, growing wild in some parts of England, though not very common; the shops are generally supplied from gardens. It has a bitter taste, and a strong disagreeable smell. Scordium is of no great esteem in the present practice, notwithstanding the *deobstruent, diuretic*, and *sudorific virtues* for which it was formerly celebrated.

MED. VIRT. *Deobstruent—Diuretic — Sudorific* — but doubtful.

SCORZONERÆ radix: Scorzoneræ hispanicæ Lin. Viper-grass; the root.

Scorzonera is met with only in gardens. The roots abound with a milky juice, of a bitterish subacrid taste; and hence may be of some service, for *strengthening the tone of the viscera*, and *promoting the fluid secretions*. They were formerly celebrated as alexipharmics, and for throwing out the measles and small-pox; but have now almost entirely lost their character.

MED. VIRT. *Cordial* and *stimulant* — but doubtful.

SCROPHULARIÆ VULGARIS Lin. folia, radix. Fig-wort; the leaves and root.

This herb grows wild in woods and hedges: the roots are of a white colour, full of little knobs or protuberances on the surface. This appearance gained it formerly some repute against scrophulous disorders and the piles; and hence

it received its name: but modern practitioners expect no ſuch virtues from it. It has a faint unpleaſant ſmell, and a ſomewhat diſagreeable taſte.

SEBESTENA: Cordia Myxa Lin. A ſort of plum, brought half-dried from the Eaſt-Indies: it is of a dark or blackiſh brown colour, with whitiſh or aſh-coloured cups; the fleſh ſticks cloſe to the ſtone, which contains ſometimes one and ſometimes two kernels. This fruit has a ſweet, very glutinous taſte: and hence has been employed *for ſoftening acrimonious humours*, in *ſome kinds of hoarſeneſs*, and in *coughs from thin ſharp defluxions*. At preſent it is not often met with in the ſhops.

Med. Virt. *Emollient.*

SEDI ACRIS Lin. herba recens. Wall-ſtone-crop, or pepper; the recent plant.

This ſpecies of the ſedum is a ſmall perennial, ſucculent, green plant, growing on the tops of walls and roofs of houſes. It has a faint ſmell, and at firſt an herbaceous taſte; but it afterwards ſhows conſiderable acrimony, exciting a ſenſe of biting heat in the mouth and fauces. In its recent ſtate it is very active, proving *emetic*, *purgative*, and *diuretic*. The expreſſed juice taken to the quantity of half an ounce has been ſaid to prove a very diuretic medicine; but the plant in its dried ſtate ſeems to loſe all its activity. Though ſcarcely at all employed in medicine, from the powers it poſſeſſes, it appears worthy ſome attention.

Med. Virt. *Emetic — Purgative — Diuretic.*

SENNÆ *folia:* [*L. E.*] *Caſſia Senna Lin. S. P.* the leaves of a ſhrubby plant cultivated in Perſia, Syria, and Arabia; whence they are brought, dried and picked from the ſtalks, to Alexandria in Egypt; and thence imported into Europe. They are of an oblong figure, ſharp-pointed at the ends, about a quarter of an inch broad, and not a full inch in length, of a lively yellowiſh green colour, a faint not very diſagreeable ſmell, and a ſubacrid, bitteriſh, nauſeous taſte. Some inferior ſorts are brought from Tripoli and other places; *theſe may eaſily be diſtinguiſhed by their being either narrower, longer, and ſharper-pointed*; or *larger, broader, and round-pointed, with ſmall prominent veins*; or *large and obtuſe, of a freſh green colour, without any yellow caſt.*

Senna is a very uſeful *cathartic*, operating mildly, and yet effectually: and, if judiciouſly doſed and managed, rarely occaſioning the ill conſequences which too frequently follow the exhibition of the ſtronger purges. The only inconveniencies complained of in this drug are, its being apt to gripe, and its nauſeous flavour. The *griping* quality depends upon a reſinous ſubſtance, which, like the other bodies of this claſs, is naturally diſpoſed to adhere to the coats of the inteſtines: the more this reſin is divided by ſuch matters as take off its tenacity, the leſs adheſive, and conſequently the leſs irritating and griping it will prove; and the leſs it is divided, the more griping. Hence *ſenna given by itſelf, or infuſions made in a very ſmall quantity of fluid, gripe ſeverely and purge leſs than when diluted by a large portion of ſuitable menſtruum, or divided by mixing the infuſion with oily emulſions.* The ſmell of ſenna reſides in its more volatile parts, and may be diſcharged by lightly boiling infuſions of it made in water: the liquor thus freed from the peculiar flavour of the ſenna, may be eaſily rendered grateful to the taſte, by the addition of any proper aromatic tincture or diſtilled water. If ſenna is infuſed in the infuſum amarum, a leſs quantity of ſenna is

neceſſary for a doſe, than when infuſed in water. Though if one dram of ſenna be infuſed in four ounces of water, it rarely occaſions any griping, and will be found to anſwer the purpoſes of a common cathartic. The taſte is well covered by coriander ſeeds; but cardamoms, ginger, or ſome of the warmer aromatics, are ſaid to be more effectual.

MED. VIRT. *Cathartic.*

PREP. *Simple Infuſion—Tartariſed infuſion—Tincture—Extract—Electuary—Compound powder.*

SENEKA [*L. E.*] *Polygala ſenega Lin. S. P.* Senecka, rattle-ſnake root; the root of a ſpecies of *polygala*, which grows ſpontaneouſly in North America, particularly in Pennſylvania, Canada, Virginia, &c. and bears the winters of our own climate. This root is uſually about the thickneſs of the little finger, variouſly bent and contorted, and appears as if compoſed of joints, whence it is ſuppoſed to reſemble the tail of the animal whoſe name it bears. A kind of membranous margin runs on each ſide, the whole length of the root, and a longitudinal woody fibre through its centre, as in *ipecacuanha. Externally*, it is of a yellowiſh pale brown colour—*internally*, white. The ſmell is weak, but nauſeous, eſpecially when a large quantity is ſhut in a cloſe veſſel. The taſte is warm like white pimpernel, but more acrid, ſubacid, and ſlightly bitter.

This root is not at preſent much known in the ſhops. The Senegaro Indians are ſaid to prevent the fatal effects which follow from the bite of the rattle-ſnake, by giving it internally, and applying it externally to the wound. It has of late been ſtrongly recommended in *pleuriſies, peripneumonies*, and *other inflammatory diſtempers;* but, at the ſame time, repeated bleeding, where neceſſary, is not to be neglected. It has proved uſeful in *rheumatiſm.* In theſe caſes, Lemery, Du Hamel, and Juſſieu, experienced its good ſucceſs. (See the French Memoirs for the years 1738, 1739.) Its more immediate effects are thoſe of *a diuretic, diaphoretic*, and *cathartic;* ſometimes it proves *emetic*, and *ſometimes ſalivates.* The three laſt operations may be occaſionally prevented, by giving the root in ſmall doſes, along with aromatic ſimple waters, as that of cinnamon.

Some have likewiſe employed this root *in hydropic caſes*, and not without ſucceſs. Buovart (in the Memoirs before mentioned, 1744) relates examples of its occaſioning a plentiful evacuation by ſtool, urine and perſpiration, and by theſe means removing the diſeaſe, after the common diuretics and hydragogues had failed. *Where this medicine operates as a cathartic, it generally proves ſucceſsful.* Dr. PERCIVAL thinks it ſometimes uſeful in *hydrops pectoris*, as, beſides its effects as an evacuant, it *acts on the bronchial glands.* It is given in powder and decoction; in the former mode the doſe is from ℈j to ʒſs, two or three times a day; or in form of pills, mixed with extract of liquorice. Where vomiting might be unſafe, the decoction is moſt eligible; one ounce boiled in a pint and a half of water, till reduced to one pint, is ſufficient—one ounce and a half of which decoction may be taken every two or three hours. If it acts by liquifying the blood and juices, without occaſioning a due diſcharge, it ſhould either be abſtained from, or aſſiſted by proper additions.

MED. VIRT. *Cathartic—Diuretic.*

SERICUM et folliculi bombycis. Silk and ſilkworms' bags. Theſe are ſcarce ever made uſe of for any medicinal purpoſes. In their crude ſtate they are certainly very inſignificant: though if burnt in a cloſe

veſſel, after the ſame manner as ſponge, they would probably prove a medicine of ſimilar, and perhaps of ſuperior virtue. They yield a larger quantity of volatile ſalt, than any other animal ſubſtance I know.

SERPENTARIA VIRGINIANA [*L. E.*] *Ariſtolochia ſerpentaria Lin. S. P.* Virginian ſnakeroot; the root of a ſpecies of ariſtolochia, growing in Virginia and Carolina.

It is a ſmall, light, buſhy root, conſiſting of a number of ſtrings or fibres, matted together, iſſuing from one common head; of a browniſh colour on the outſide, and paler or yellowiſh within. It has an aromatic ſmell, like that of valerian, but more agreeable; and a warm, bitteriſh, pungent taſte. This root is a ſtrong *ſtimulant*, poſſeſſed of *tonic*, *diaphoretic*, and *antiſeptic* powers: it has been greatly celebrated as an *alexipharmic*, and *eſteemed one of the principal remedies in malignant fevers and epidemic diſeaſes.* Many have thought cinchona and wine may in every caſe ſuperſede the uſe of ſerpentaria; but when a mixed ſtate of fever has been obſerved to prevail, in which the bark has proved hurtful, this root has evidently had a good effect: and even in intermittent fevers, the bark has been found more efficacious when joined with ſerpentaria, than when given alone. In theſe intentions, it is given in ſubſtance from ten to thirty grains, and in infuſion to a dram or two. Both watery and ſpirituous menſtrua extract its virtue by infuſion, and elevate ſome ſhare of its flavour in diſtillation: along with the water a ſmall portion of eſſential oil ariſes.

MED. VIRT. *Diaphoretic — Tonic — Antiſeptic.*

PREP. *Tincture.*

SERPILLI *folia: Thymi Serpilli Lin.* Mother of thyme; the herb [*E.*]

This a ſmall creeping plant, common on heaths and dry paſture grounds. Its taſte, ſmell, and medical virtues are ſimilar to thoſe of thyme, but weaker; and it has a milder and rather more grateful flavour. It has been thought that this and other aromatic herbs give a flavour to the fleſh of ſheep that feed where theſe plants abound; but it is well known that ſheep refuſe theſe aromatics when they have choice of other paſturage.

SIMAROUBA [*L. E.*] *Quaſſica Simarouba Lin. Sp. P.* a bark with pieces of the wood adhering to it, brought from Guinea, in long tough pieces, of a pale yellowiſh colour, light, tough, and flexible, and of a fibrous texture. It has a ſtrong, bitter, durable taſte, not very ungrateful, without ſmell or manifeſt aſtringency. The bark of the root is eſteemed the beſt, which is diſtinguiſhed by the veſtiges of the fibres cut off. That which is old, woody, of a dark colour, and but ſlightly bitter, ſhould be rejected. Its virtues ſeem more perfectly extracted by cold than boiling water; the cold infuſion being rather ſtronger in taſte than the decoction. It has been of great uſe in an *epidemic dyſentery*, which neither yielded to purgatives nor aſtringents, and was ſaid to be made worſe by ipecacuanha, which raged at Paris in 1718. It has been obſerved to be ſucceſsful in *epidemic dyſentery*, but more certain and ſpeedy in *fluxes of blood* and *bloody matter*, than when the diſcharge was bilious. It has alſo been efficacious in *chronical diarrhœas of ſeveral ſpecies*; in *habitual dyſenteric colic*; in *chronical hepatic flux*; in *lientery*; in *leucorrhœa*; and *for worms.* A decoction of half a dram is given for a doſe, and repeated at intervals of three or four hours; it is

alſo given in powder from ℈ſs. to ʒſs, or more, ſeveral times a day. To enſure ſucceſs, *ſimarouba*, like other active medicines, requires ſome judgment in its exhibition. Under ſome circumſtances, cleanſing the primæ viæ with proper evacuants is previouſly neceſſary; in others, bleeding, &c. &c.

MED. VIRT. *Antiſeptic—Tonic.*

SINAPEOS *ſemen: Sinapi nigrum Lin. S. P.* Muſtard; the ſeeds [*L. E.*]

This plant is ſometimes found wild; but for culinary and medicinal uſes is cultivated in gardens. Muſtard, by its acrimony and pungency, *ſtimulates the ſolids*, and *attenuates viſcid juices;* and hence ſtands deſervedly recommended for *exciting appetite, promoting digeſtion, increaſing the fluid ſecretions:* by ſtimulating the fibres, it proves a general remedy in *paralytic* and *rheumatic affections.* If taken in conſiderable quantity, *it opens the body*, and increaſes the urinal diſcharge; hence found uſeful in *dropſical complaints.* Half an ounce of unbruiſed muſtard-ſeed, or as much as an ordinary table-ſpoon will contain, does not prove heating to the ſtomach, but ſtimulates the inteſtinal canal, and commonly proves *laxative.* Bergius ſays, that he found muſtard of great efficacy in curing vernal intermittents—He directed a ſpoonful of the whole ſeed to be taken three or four times a-day during the apyrexy; and when the diſeaſe was obſtinate, he added flour of muſtard to the bark. Frequently the powder of muſtard-ſeed is uſed externally as a ſtimulant: but though it ſhews, when freſh, little pungency and much bitterneſs; when it has been moiſtened with vinegar for a day, the eſſential oil is evolved, and it becomes conſiderably more acrid; a circumſtance which ſhould be attended to when deſigned for external uſe; and for the other purpoſes of the acrid plants called antiſcorbutic. It imparts its taſte and ſmell in perfection to aqueous liquors, whilſt rectified ſpirit extracts very little of either: the whole of the pungency ariſes with water in diſtillation. Committed to the preſs, it yields a conſiderable quantity of a ſoft inſipid oil, perfectly void of acrimony: the cake left after the expreſſion is more pungent than the muſtard was at firſt.

MED. VIRT. *Stimulant—Laxative.*

PREP. *Expreſſed Oil—Emollient.*

SIUM-NODIFLORUM *Lin. S. P.—herba.* [*L.*] Water-parſnip; the herb.

It is an indigenous perennial plant, growing in our rivers and ditches, and flowering in July and Auguſt. It was formerly conſidered not only as a *diuretic*, but alſo as an emmenagogue and lithontriptic: at preſent, however, it is not uſed with any of theſe intentions; it is now received as an *antiſcorbutic*, or rather as a corrector of acrid humours, eſpecially when manifeſted by cutaneous eruptions and tumors of the lymphatic ſyſtem. The juice or decoction of this herb is alſo uſed in caſes of *ſcrophula.* Dr. WITHERING gives an account of a lady, ſixty years old, who was cured of an obſtinate cutaneous diſeaſe by taking ten ounces and a half of this juice twice a-day; to adults he has given three or four ounces every morning repeatedly, in ſimilar complaints, with the greateſt advantage. It is not nauſeous, as children take it readily if mixed with milk. The doſes in which it is given neither affect the ſtomach nor bowels.

MED. VIRT. *Uſeful in cutaneous Diſorders.*

SOLANI LETHALIS *folia: Atropæ Belladonnæ Lin.* Deadly nightſhade: the leaves. [*E.*]

This plant grows wild in ſhady waſte grounds. It has been ſuppoſed cooling and diſcutient in external applications, and poiſonous when taken internally. Late experience has ſhewn, that an infuſion of half a grain or a grain of the dried leaves may be taken with ſafety, and that in many caſes may be increaſed by degrees to ſix grains, which is conſidered a large doſe; but this mode of beginning with a ſmall quantity, and increaſing it by degrees, is the ſafeſt mode of exhibiting it; that they generally occaſion ſome conſiderable evacuation, and ſometimes, eſpecially in the larger of the above doſes, alarming nervous ſymptoms, which however ceaſe with the operation of the medicine. The leaves of belladonna were firſt uſed externally to diſcuſs *cancerous* and *ſcirrhous tumors*; and alſo as an *application to ill-conditioned ulcers*. From their ſucceſs in this way, phyſicians were induced to try them internally for the ſame diſorders: and though in many caſes they were ſucceſsful, yet a variety have occurred where the bellodona was tried without advantage; yet from Dr. Cullen we have ſome facts adduced in confirmation of the utility of this plant. He has had a cancer of the lip entirely cured by it; a ſchirroſity of a woman's breaſt, which frequently proceeds to cancer, entirely diſcuſſed by it:—a ſore, a little below the eye, which had put on a cancerous appearance, was much mended by its uſe; but, from the timidity of the patient, ſhe deſiſted from it too ſoon—the ſore grew worſe; but, upon returning to it again, received benefit—ſhe again left off its uſe, and the ſame conſequences of the ſore's growing worſe occurred. Theſe afford certain proofs of its efficacy. The ſenſible effects produced by the internal uſe of this plant, taken in proper doſes, are *uſually by the ſkin, urinary paſſages*, and *ſometimes by ſtool.—In larger doſes*, troubleſome dryneſs in the mouth and throat, giddineſs and dimneſs of ſight are experienced.

The root ſeems to partake of the ſame quality as the leaves, but is leſs virulent. With reſpect to the berries, ſo ſucceſsfully employed as an anodyne by Geſner and others, a ſmall ſpoonful of a ſyrup of the juice was the doſe given. Beſides the complaints above recited, it has been ſaid alſo to be employed with ſucceſs in ſome caſes of *melancholia, mania*, and *epilepſy*.

MED. VIRT. *Powerfully evacuant.*

SPERMA CETI [*L. E.*] *Serum ceti cryſtalliſatum:* An unctuous flaky ſubſtance, of a ſnowy whiteneſs, a ſoft butyraceous taſte, without any remarkable ſmell; ſaid to be prepared from the fat of the brain of the whale, by boiling and purifying it with alkaline lixivia. The virtues of this concrete are thoſe of a mild emollient: it is of conſiderable uſe *in pains* and *eroſions of the inteſtines*, in *coughs proceeding from thin ſharp defluxions*, and, in general, *in all caſes where the ſolids require to be relaxed*, or *acrimonious humours to be ſoftened*. For external purpoſes, it readily diſſolves in oils; and, for internal ones, may be united with aqueous liquors into the form of an emulſion, by the mediation of almonds, gums, or yolk of an egg. Sugar does not render it perfectly miſcible with water; and alkalies, which change other oils and fats into ſoap, have little effect upon ſperma ceti. This drug ought to be kept very cloſely from the air, otherwiſe its white colour ſoon changes into a yellow: and its mild unctuous taſte, into a rancid and offenſive one. After it has ſuffered this diſagreeable alteration, both the colour and quality

may be recovered again by ſteeping it in alkaline liquors, or in a ſufficient quantity of ſpirit of wine.

MED. VIRT. *Emollient.*

SPIGELIA [*L. E.*] *Spigelia marilandica Lin.* Indian Pink: this plant has a perennial fibrous root, whence ariſe ſingle ſtems, beſet with oppoſite oval-lanceolate, entire leaves, and crowned with a ſpike of tubular monopetalous red flowers, with five ſtamina and one piſtil. Each flower is ſucceeded by two round united bivalvular capſules, containing ſeveral ſmall ſeeds. It grows ſpontaneouſly in South Carolina, and other ſouthern provinces of North America.

The uſe of the root of this plant as an anthelmintic, was communicated from the native Indians to the coloniſts; and it has ſince been much employed in that country. The firſt account of its virtues is to be met with in a paper of Dr. LINING's, Vol. I. of the Eſſays Phyſical and Literary; and Dr. GARDEN has confirmed it in Vol. III. of the ſame publication, and has given a figure and particular deſcription of the plant.

The root is given both in powder and infuſion; but the powder is eſteemed moſt efficacious. The doſe is not accurately aſcertained, but extends to from twelve to ſixty or ſeventy grains of the powder; in infuſion it may be given to the quantity of two, three, or four drams, twice a day. It is found to be moſt efficacious when it purges, which it does not always without ſome additions. The exhibition of a vomit previous to the uſe of the Indian pink has proved very ſerviceable. It ſometimes produces diſagreeable effects on the nervous ſyſtem, ſuch as giddineſs, dimneſs of the ſight, and convulſive motions of the muſcles of the eye. It is ſaid to act powerfully as a ſedative in abating the exacerbations of low remittent worm-fevers.

It does not loſe much of its power by keeping, and appears to be moſt efficacious, and pleaſanter in its effects, when given in full than when adminiſtered in ſmall doſes: "For, from the latter," ſays GARDEN, "giddineſs, dimneſs of ſight, convulſions, &c. more frequently follow than from the former; for, from large doſes, he has not known any other effect than its proving emetic and violently cathartic. Should it though produce no effect upon the belly, it is proper to add a grain or two of calomel, or a few grains of rhubarb, to aſſiſt its operation; but he obſerved that the ſame happy effect of evacuating worms did not follow its uſe as when it was purgative without addition."

MED. VIRT. *Anthelmintic.*

SPINÆ CERVINÆ *baccæ: Rhamni cathartici Lin. S. P.* Buckthorn; the berries [*L. E.*]

This tree, or buſh, is common in hedges: it flowers in June, and ripens its fruit in September, or the beginning of October. In our markets, the fruit of ſome other trees, as the *frangula* or black berry-bearing alder, and the *cornus fœmina* or dogberry-tree, have of late years been frequently mixed with, or ſubſtituted for, thoſe of buckthorn. *This abuſe may be diſcovered by opening the berries:* thoſe of buckthorn have almoſt always four ſeeds, the berries of the *frangula* two, and thoſe of the *cornus fœmina* only one. Buckthorn berries, bruiſed on white paper, give it a green tincture, which the others do not. Thoſe who ſell the juice to the apothecaries, are ſaid to mix with it a large proportion of water.

Buckthorn berries have a faint diſagreeable ſmell, and a nauſeous

bitter taste. They have long been in considerable esteem as *cathartics;* and celebrated in *dropsies*, *rheumatisms*, and even *in the gout;* though in these cases they have no advantage over other purgatives, and are more offensive, and operate more churlishly, than many with which the shops are furnished; they generally occasion gripes, sickness, dry the mouth and throat, and leave a thirst of long duration. The dose is about twenty of the fresh berries in substance, and twice or thrice this number in decoction, a dram of the dried berries, an ounce of the expressed juice, or half an ounce of the inspissated juice or rob. But a syrup has been chiefly employed by the physicians who have been in the practice of employing it; who have found, that, in doses of from one ounce to two, it has proved a very powerful purgative, and have therefore prescribed it as an *hydragogue*. In this preparation, the nauseous flavour of the buckthorn is somewhat alleviated by the sugar, and the addition of aromatics.

MED. VIRT. *Strongly cathartic.*

PREP. *Syrup.*

SPIRITUS VINOSUS RECTIFICATUS. [*E. L.*] Rectified spirit of wine; "a spirit distilled "from wine or other fermented "liquors, purified as much as pos-"sible from its fetid smell, and "the phlegm that arises with it in "the first distillation." 100 parts contain 95 parts alcohol, and 5 parts of distilled water. Its specific gravity to that of distilled water is ,835 to 1,000. This purification is effected, by repeating the distillation in a very gentle heat, with certain additions, to keep down the phlegm and the gross oil in which the ill flavour resides. These spirits, from whatever vegetable subjects they have been produced, are, when perfectly pure, the same. They have a hot pungent taste, without any particular flavour; they readily catch flame, and burn entirely away, without leaving any marks of an aqueous moisture behind; distilled by a heat less than that of boiling water, they totally arise, the last runnings proving as flavourless and inflammable as the first: They dissolve essential vegetable oils and resins into an uniform transparent fluid. These spirits are the lightest of almost all known liquors: expressed oils, which swim upon water, sink in these to the bottom: a measure which contains ten ounces by weight of water, will hold little more than eight and a quarter of pure spirit.

The uses of vinous spirits, as menstrua for the virtues of other medicines, we shall see hereafter, and in this place consider only their own. Pure spirit *coagulates all the fluids of animal bodies*, except urine, and *hardens the solid parts*. Applied externally, *it strengthens the vessels, thickens the juices in them*, and thus *powerfully restrains hæmorrhages*. It *instantly contracts the extremities of the nerves it touches*, and *deprives them of sense and motion*; by these means easing them of pain, but at the same time destroying their use. Hence employing spirituous liquors in fomentations (notwithstanding the specious titles of vivifying, heating, restoring mobility, resolving, dissipating, and the like, usually attributed to them) may sometimes be attended with unhappy consequences. These liquors, received undiluted into the stomach, *produce the same effects*, thickening the fluid, and contracting all the solid parts which they touch, and destroying, at least for a time, their use and office: *if the quantity be considerable, a palsy or apoplexy follows*, which ends in death. Taken in small quantity, and duly diluted,

they brace up the fibres, raise the spirits, and *promote agility*: if further continued, *the senses are disordered, voluntary motion destroyed*, and *at length the same inconveniences brought on as before*. Vinous spirits therefore, in small doses, and properly diluted, may be applied to useful purposes in the cure of diseases; whilst in larger ones, or if their use be long continued, they act as a poison of a particular kind.

MED. VIRT. *Cordial — Stimulant.*

SPIRITUS VINOSUS TENUIOR. Proof spirit: [*L. E.*] "the same spirit, containing an ad-"mixture of an equal quantity of "water: the best proof spirit is "that distilled from French wine; "but for common uses may be em-"ployed the spirit drawn from me-"lasses or the syrupy matter that "runs from sugar in the purifica-"tion, commonly called melasses "spirit." 100 parts of this contain 55 parts of alcohol, and 45 parts of distilled water. Its specific gravity is to that of distilled water as ,930 to 1,000. The spirits usually met with under the name of proof, are those distilled from different fermented liquors, freed from their phlegm and ill flavour only to a certain degree. Their purity with regard to flavour may be easily judged from the taste, especially if the spirit be first duly diluted. It were to be wished, that we had a certain standard with regard to their strength, or the quantity of water contained in them; a circumstance which greatly influences sundry medicinal preparations, particularly the tinctures: for, as pure spirit dissolves the resin and volatile oil, and water only the gummy and saline parts of vegetables, it is evident that a variation in the proportions wherein these are mixed, will vary the dissolving power of the menstruum, and consequently the virtue of the preparation. The common methods of estimating the quantity of phlegm contained in these spirits, are liable to uncertainty: it should therefore seem necessary for the nicer purposes, and where a perfectly flavourless proof spirit is required, to make use of the pure rectified spirit, mixed with a certain determined proportion of water; equal quantities of these liquors, whether taken by weight or measure, compose a spirit somewhat weaker than what has been generally looked upon as proof: the exact proportions are, one hundred parts by weight of pure spirit, and eighty-six of water.

MED. VIRT. *Cordial — Stimulant.*

SPONGIA [*L. E.*]: *Spongia officinalis Lin. S. N.* Sponge; a soft, light, very porous and compressible substance, readily imbibing water, and distending thereby. It is found adhering to rocks, particularly in the Mediterranean sea, about the islands of the Archipelago. It is generally supposed to be a vegetable production: nevertheless some observations, lately made by Jussieu, give room to suspect that it is of animal origin. Chemical experiments favour this supposition; analysed, it yields the same principles with animal substances in general: the volatile salt is in larger quantity than I have obtained from any animal matter, except the bags of the silk-worm. On this salt, generated by fire, which is just formed, and combined with its own oil and an earthy matter, seem to depend the virtues of the officinal *spongia usta*. It is given in *scrophulous* and *cutaneous disorders*, particularly in *the bronchocele*, by placing half a dram of it, mixed up with a sufficient quantity of honey, under the tongue, and gradually swallowing it for six successive nights, administering a purge every eighth

day; but it may be more conveniently given in form of lozenges in all ſuch caſes. It is alſo ordered in form of powder and infuſion, as *an abſorbent againſt acidities in the primæ viæ.* It ſhould never be rubbed in a braſs mortar, becauſe it is apt to acquire an emetic quality from its ſalt eroding the metal. Its doſe is from 20 to 40 grains, or more, twice a day, joined with two or three grains of powdered rhubarb—to an infant from 5 to 8 grains, with one of rhubarb.

Crude ſponge, from its property of imbibing and diſtending by moiſture, is ſometimes made uſe of as a tent for *dilating wounds and ulcers.* In order to fit it for theſe purpoſes, the ſponge ſhould be immerſed in melted wax, and kept under preſſure till cool, and then it may be eaſily formed into tents, ſo as to be introduced where neceſſary. And from the gradual melting of the wax in conſequence of the heat of the part, a dilatation takes place of courſe.

Sponge adheres ſtrongly to the mouths of wounded veſſels; and when retained by proper compreſſion, it has *prevented conſiderable bleedings*, preferably to agaric, or puff-ball.

MED. VIRT. *Attenuant*, internally — Externally, *aſtringent.*

STANNUM [*L. E.*] Tin is the lighteſt and eaſieſt of fuſion of all the metals. Heated, it becomes ſo brittle as to fall in pieces by a blow; and by agitation (when juſt ready to melt) into a powder: hence the officinal method of pulveriſing this metal, to be deſcribed in its place. The proper menſtruum of tin is the marine acid, or aqua regis: vegetable acids likewiſe diſſolve it in conſiderable quantity, though it has long been ſuppoſed not to be at all ſoluble in them, unleſs previouſly well calcined.

With regard to the virtues of this metal, it *was formerly accounted a ſpecific in diſorders of the uterus and lungs;* a calx of tin and antimony is ſtill retained in ſome diſpenſatories, under the name of an antihectic: but theſe are virtues, to which it certainly has little claim. It has of late been celebrated, on better foundation, *as an anthelmintic*; and ſaid to deſtroy ſome kinds of worms which elude the force of many other medicines. Poſſibly the cauſe of this effect may be very different from what may be ſuſpected, an admixture of a portion of arſenic.

Tin has a ſtrong affinity with arſenic: inſomuch that when once united therewith, the arſenic, notwithſtanding its volatility in other circumſtances, cannot be totally expelled either by ſlow calcination, or by a vehement fire. Almoſt all the ores of tin contain more or leſs of this poiſonous mineral, which is not entirely ſeparable in the common proceſſes by which the ores are run down, or the metal further purified. Filings of tin held in the flame of a candle, emit a thick fume, ſmelling of garlic; which ſmell is univerſally held, in mineral ſubſtances, to be a certain criterion of arſenic. HENCKEL has diſcovered a method of ſeparating actual arſenic from tin; this is effected by ſolution in aqua regia and cryſtallization: Mr. Margraff has (in a volume of the Berlin Memoirs) given a farther account of this proceſs; and relates, that, from the tins uſually reputed pure, he has obtained one eighth their weight of cryſtals of arſenic. Much has been ſaid againſt its medical uſe, on account of its affinity with arſenic: but in form of powder, or filings, it has been repeatedly adminiſtered in large doſes of from ℥ſs to an ounce, particularly againſt the *tænia* or *tape-worm*; which proves that either the quantity of

arſenic contained therein is too inſignificant, or that it is too intimately combined therewith, to do any great harm. To *children* it is commonly given two or three times a-day, mixed with treacle, in doſes of from 10 to 40 grains; and to *adults*, from 1 to 2 or 3 drams or more.

MED. VIRT. *Anthelmintic.*

PREP. *Powder* or *Filings.*

STAPHISAGRIÆ *ſemen: Delphinii Staphiſagriæ Lin. S. P.* Staveſacre; the ſeeds. [*L. E.*]

Theſe are large rough ſeeds, of an irregularly triangular figure, of a blackiſh colour on the outſide, and yellowiſh or whitiſh within. They are uſually brought from Italy; the plant is not very common in this country, though it bears our ſevereſt colds. They have a diſagreeable ſmell, and a very nauſeous, bitteriſh, burning taſte. Staveſacre was employed by the ancients as a cathartic; but it operates with ſo much violence both upwards and downwards, and is ſo liable to inflame the throats, that its internal uſe has been, among the generality of practitioners, for ſome time laid aſide. It is chiefly employed, in external applications, for ſome kinds of cutaneous eruptions, and for deſtroying lice and other inſects; inſomuch that it has from this virtue received its name, in different languages; *herba pedicularis — herbe aux poux — lauskraut — louſewort.*

MED. VIRT. *Violently cathartic, taken internally — externally, deſtructive to lice* and *other inſects.*

STŒCHAS: *Lavendula Stœchas Lin.* Arabian ſtœchas, or French lavender flowers.

This is a ſhrubby plant, conſiderably ſmaller than the common lavender: the flowery heads are brought from Italy and the ſouthern parts of France. They are very apt to grow mouldy in the paſſage, and, even when they eſcape this inconvenience, are generally much inferior to thoſe raiſed in our gardens. The beſt ſtœchas which we receive from aboard, has no great ſmell or taſte. POMET affirms, that ſuch as the ſhops of Paris are ſupplied with, is entirely deſtitute of both; whilſt that of our own growth, either whilſt freſh, or when carefully dried, has a very fragrant ſmell, and a warm, aromatic, bitteriſh, ſubacrid taſte; diſtilled with water, it yields a conſiderable quantity of a fragrant eſſential oil; to rectified ſpirit it imparts a ſtrong tincture, which inſpiſſated proves an elegant aromatic extract. This aromatic plant is rarely met with in preſcription.

There is another plant called ſtœchas, which from the beauty and durability of its flowers has of late years had a place in our gardens, and whoſe aromatic qualities render it worthy of one in the ſhops; this is the *gnaphalium arenarium Lin.* Golden ſtœchas, goldilocks, or yellow caſſidony: its flowers ſtand in umbels on the tops of the branches; they are of a deep ſhining yellow colour, which they retain in perfection for many years; their ſmell is fragrant and agreeable, ſomewhat of the muſky kind; their taſte warm, pungent, and ſub-aſtringent; they impart their flavour to water in diſtillation, and by infuſion to rectified ſpirit.

MED. VIRT. *Aromatic.*

STRAMONIUM [*E.*] *Datura Stramonium Lin.* Thorn-Apple: an herbaceous plant, with a thick branched ſtalk, two or three feet high, large ſinuated leaves, and long tubular white or purpliſh flowers, ſucceeded by large prickly, green, fleſhy ſeed-veſſels, which open at the end in four diviſions, and diſcloſe numerous black ſeeds. It flowers in July. It grows indigenous in ſome parts of Britain, amongſt rubbiſh and dunghills.

This plant, which has been long known as a narcotic poiſon, has been introduced into the catalogue of medicines by Dr. Stœrck. An extract made from the expreſſed juice of the leaves is acrid and ſaline to the taſte, and yields chryſtals of nitre on ſtanding. This preparation, given in doſes of from one to five grains twice or thrice a day, is ſaid to be a very powerful remedy in *various convulſive and ſpaſmodic diſorders*, *epilepſy* and *mania*. The accounts of other practitioners have confirmed it; and it has been received into ſome pharmacopœias. The powder of the leaves, or the ſeeds, promiſes to furniſh a more certain and convenient formula than the extract. An ointment prepared from the leaves has been found to give eaſe in external inflammation and hæmorrhoids.

Much as has been ſaid of the efficacy of this plant by Stœrck, and other foreign phyſicians; in Britain we have not heard of its ſucceſs being equal to their report; Dr. Cullen conſiders the ſtramonium as poſſeſſing narcotic powers, but has had no practical experience to fix his opinion on the ſubject; and indeed it has been with us ſo little employed, that the college of phyſicians of London have given it no place in their pharmacopœia. But from its very active powers it merits attention, particularly in deſperate caſes, where all other means have been tried in vain.

Med. Virt. *Narcotic.*

Prep. *Inſpiſſated Juice.*

STYRAX CALAMITA, *Styrax officinalis Lin. S. P.* Storax in the cane. Storax; an odoriferous reſinous ſubſtance, exuding, in the warmer climates, from a tree called *Styrax* mali cotonei folio. It has been cuſtomary to diſtinguiſh three ſorts of ſtorax, though only one is uſually met with in the ſhops.

1. *Styrax calamita*, or ſtorax in the cane, ſo called from its having been formerly brought incloſed in reeds from Pamphylia. It is either in ſmall diſtinct tears, of a whitiſh or reddiſh colour, or in larger maſſes compoſed of ſuch.

2. *Storax in the lump*, or red ſtorax. This is in maſſes of an uniform texture and yellowiſh red or browniſh colour, though ſometimes likewiſe interſperſed with a few whitiſh grains. Of this ſort there has been ſome to be met with in the ſhops, under the name of ſtorax in the tear.

3. The *common ſtorax* of the ſhops is in large maſſes, conſiderably lighter and leſs compact than the foregoing. It appears upon examination to be compoſed of a fine reſinous juice, mixed with a quantity of ſaw-duſt. For what purpoſe this addition is made, I ſhall not here inquire; obſerving only, that it can ſcarcely be ſuppoſed to be done with any fraudulent view, ſince the ſaw-duſt appears at ſight. This common ſtorax is much leſs eſteemed than the two firſt ſorts, though, when freed from the woody matter, it proves ſuperior in point of fragrancy to either of them. Rectified ſpirit, the common menſtruum of reſins, diſſolves the ſtorax, leaving the wood behind: nor does this tincture loſe much of its valuable parts, in being inſpiſſated to a ſolid conſiſtence; whilſt aqueous liquors elevate almoſt all the fragrancy of the ſtorax.

Storax is one of the moſt agreeable of the odoriferous reſins, and may be exhibited to great advantage *in languors* and *debilities of the nervous ſyſtem*. This was with ſome of the ancients a familiar remedy as a *reſolvent*; and particularly uſed in *catarrhal complaints*, *coughs*, *aſthmas*, *menſtrual obſtructions*, &c. and, from its affinity to the balſams, was uſed in *ulcerations of the lungs*, and *other ſtates of pulmonary con-*

ſumption; but in the preſent practice it is totally diſregarded.

MED. VIRT. *Aromatic — Stimulant—Nervine.*

STYRAX LIQUIDA: *Liquidambra Styraciflua Lin.* Liquid ſtorax. What is moſt commonly met with under this name, is a ſoft reſinous ſubſtance, of a grey colour, a weak ſmell, ſimilar to that of the foregoing ſolid ſtorax. It is ſuppoſed to be compounded of ſolid ſtorax, reſin, wine, and oil, beaten up together into a proper conſiſtence. The genuine liquid ſtorax, according to Petiver's account (Phil. Tranſact. No. 313.), is obtained from a tree growing in the iſland of Cobros in the Red Sea. The preparers of this commodity yearly clear off the bark of the tree, and boil it in ſea-water to the conſiſtence of bird-lime; the reſinous matter which floats upon the ſurface, is taken off, liquified again in boiling water, and paſſed through a ſtrainer. The purer part which paſſes through, and the more impure which remains on the ſtrainer, and contains a conſiderable portion of the ſubſtance of the bark, are both ſent to Moco, whence they are ſometimes, though very rarely, brought to us. The former is of the conſiſtence of honey, tenacious, of a reddiſh or aſh brown colour, an acrid unctuous taſte, approaching in ſmell to the ſolid ſtorax, but ſo ſtrong as to be diſagreeable: the other is full of woody matter, and much weaker in ſmell.

Liquid ſtorax is among us ſcarce ever made uſe of in medicine, and not often found in the ſhops; for we have no obſervations on its real virtues. Therefore it has become totally neglected.

SUCCINUM [*L. E.*] Amber; a ſolid, brittle, bituminous ſubſtance, dug out of the earth, or found upon the ſea-ſhores. The largeſt quantities are met with along the coaſts of Poliſh Pruſſia and Pomerania. It is of a white, yellow, or brown colour, ſometimes opaque, and ſometimes very clear and tranſparent: the dark-coloured and opaque ſorts, by digeſtion with certain expreſſed oils and animal fats, become clearer, paler-coloured, more pellucid, and conſiderably harder. Amber boiled in water, neither ſoftens nor undergoes any ſenſible alteration: expoſed to a greater heat, without addition, it melts into a black maſs like ſome of the more common bitumens: ſet on fire, its ſmell reſembles that which ariſes from the finer kinds of pit-coal: diſtilled in a retort, it yields an oil and a volatile acidulous ſalt.

Amber in ſubſtance has very little ſmell or taſte; and hence it has by ſome been reckoned a mere inactive earthy body. It was formerly accounted *an abſorbent*, and as ſuch had a place in the compound powder of crabs-claws. It certainly has no title to this claſs of medicines, as not being acted upon by any acid. It is ſuppoſed to be of ſervice *in the fluor albus, gleets, hyſteric affections*, &c. and in theſe intentions is ſometimes given in the form of impalpable powder, to the quantity of a dram. A tincture of amber made in rectified ſpirit (to which it imparts a bitteriſh aromatic taſte, and a fragrant ſmell) promiſes to be of real ſervice in theſe diſorders. Boerhaave extols this tincture as having incredible efficacy in all *thoſe diſtempers which proceed from weakneſs and relaxation*, and in *hypochondriacal, hyſterical*, and *cold languid caſes*. If part of the ſpirit be abſtracted by a gentle heat, the remainder proves a very elegant aromatic balſam, which is perhaps one of the moſt uſeful preparations obtainable from this concrete.

Amber in a ſtate of powder is now ſcarce ever preſcribed, as it is conſidered an inert ſubſtance in this form; but by diſtillation two ſubſtances are produced, which are found to be active: theſe are the oil, and ſalt; of which an account will be found under their ſpecific titles, in the third part of this work.

SULPHUR: *Sulphuris flores:* Sulphur ſublimed [*L. E.*] Sulphur or brimſtone is a yellow ſubſtance, of the mineral kingdom, fuſible in a ſmall degree of heat, totally volatile in a ſtronger, readily inflammable, burning with a blue flame, which is accompanied with a ſuffocating acid fume. It diſſolves in alkaline liquors and in oils, not in acids, water, or vinous ſpirits.

Greateſt part of the ſulphur met with in the ſhops, is obtained from certain ores by a kind of diſtillation, or artificially compoſed by uniting the vitriolic acid with inflammable matters. At ſome of the Saxon ſulphur-works (whence we are chiefly ſupplied) certain minerals abounding with vitriolic acid, but containing little or no ſulphur, being ſtratified with wood, and the latter ſet on fire, a large quantity of fine ſulphur is produced. It is uſually brought to us in large irregular maſſes, which are afterwards melted and caſt into cylindrical rolls, with the addition of ſome coarſe reſin, flour, or the like; whence the paler colour of the rolls. Sulphur is not alſo unfrequently found native in the earth, ſometimes in tranſparent pieces of a greeniſh or bright yellow colour; but more commonly in opaque grey ones, with only ſome ſtreaks of yellow. This laſt is the ſort which is underſtood by the name SULPHUR VIVUM [*E.*] though that met with under this name in the ſhops is no other than the droſs remaining after the ſublimation of ſulphur. All the ſorts of ſulphur are, when perfectly pure, in no reſpect different from one another: notwithſtanding the preference given by ſome to the more uncommon foſſil ſorts, theſe laſt are of all others the leaſt proper for medicinal purpoſes, as being the moſt ſubject to an admixture of foreign matter, both of the metallic and arſenical kind.

Pure ſulphur *looſens the belly*, and *promotes inſenſible perſpiration: it ſeems to paſs through the whole habit, and manifeſtly tranſpires through the pores of the ſkin*, as appears from the ſulphureous ſmell of perſons who have taken it, and ſilver being ſtained in their pockets of a blackiſh colour, which is the known effect of ſulphureous fumes. It is a *celebrated remedy againſt cutaneous diſeaſes*, both given internally, and externally applied. It has likewiſe been recommended in *coughs*, *aſthmas*, and *other diſorders of the breaſt and lungs*, and particularly in *catarrhs of the chronic kind*. But probably the benefit derived from its uſe is owing to its laxative and diaphoretic powers. It is on theſe accounts, particularly its laxative power, frequently uſed *with great advantage in the piles*, and many other diſeaſes where it is neceſſary to avoid coſtiveneſs.

Though ſulphur is not ſoluble in cold water; boiling water poured upon it, and kept in a cloſe veſſel, obtains ſome impregnation, ſufficient to render it an effectual remedy for *preventing returns of the gout and rheumatiſm*, according to the accounts of ſome writers. Sulphur is never uſed internally in its crude ſtate. The *ſulphur vivum* is advantageouſly uſed *againſt the itch*, in form of ointment. When it is given internally, it is either after it is ſublimed, or precipitated; for accounts of which ſee FLORES SULPHURIS, and SULPHUR PRÆCIPITA-

TUM, in the third part of this Work. The common dose of sulphur rarely exceeds a scruple, though Geoffroy goes as far as two drams. Some have imagined that sulphur used externally is dangerous; that, as it throws the morbific matter outwards, when given inwardly, it must in like manner drive it into the blood, when applied externally. This opinion, which is supported by some late writers, has no just foundation. Sulphur has nearly the same effects, whether used internally or externally. In both cases, the eruptions become frequently more copious after the first use of it.

It is remarkable of this concrete, that, though itself a medicine of considerable efficacy, it nevertheless restrains that of some others of the most powerful kind. *Mercury is rendered*, by the admixture of sulphur, *inactive*; and *the virulent antimonial regulus, almost so*. Hence, when antimonial and mercurial medicines exceed in operation, sulphur has been given for abating their violence; and sometimes restrains their farther action. Even *the corrosive poison arsenic becomes*, by the addition of sulphur, *almost innocent*; and hence if a small proportion of arsenic should be contained in sulphur, it possibly may not receive thence any poisonous qualities.

MED. VIRT. *Laxative—Diaphoretic—Alterant.*

PREP. *Flores Sulph.—Flores Sulph. loti — Sulph. præcipitatum — Oleum sulphuratum.*

TACAMAHACA resina: Populus balsamifera Lin. Tacamahaca tree; the resin. This tree grows spontaneously on the continent of America, and in a sheltered situation bears the winters of our own climate. Two sorts of this resin are sometimes to be met with. The best, called (from its being collected in a kind of gourd-shells) tacamahaca in shells, is somewhat unctuous and softish, of a pale yellowish or greenish colour, an aromatic taste, and a fragrant delightful smell, approaching to that of lavender and ambergris. This sort is very rare: that commonly found in the shops is in semitransparent grains or glebes, of a whitish, yellowish, brownish, or greenish colour, of a less grateful smell than the foregoing. The former is said to exude from the fruit of the tree, the other from incisions made in the trunk. This resin is said to be employed among the Indians, externally, *for discussing and maturating tumours*, and *abating pains and aches of the limbs*.

From the fragrance of the finer sort, it may probably be applicable to different purposes; but at present it is little used, except as an ingredient in some of the warming plaisters.

MED. VIRT. *Discutient — Emollient — Suppurative.*

TAMARINDUS [*L. E.*] *Tamarindus Indica Lin. S. P. fructus.* Tamarind; the fruit of a tree growing in the East and West Indies. It is a pod resembling a bean-cod, including several hard seeds, together with a dark-coloured viscid pulp of a pleasant acid taste: the East-India tamarinds are longer than the West-India sort; *the former* containing six or seven seeds each, *the latter* rarely above three or four. The pulp of these fruits, taken in the quantity of two or three drams, or an ounce or more, *proves gently laxative* or *purgative*; and at the same time, by its acidity, *quenches thirst*, and *allays immoderate heat*, in *various inflammatory complaints*, and *is a corrective of putrid acrimony*; and useful in those disorders of the bilious kind, in which the cathartic, antiseptic,

and refrigerant qualities of the fruit have been found advantageous. It *increases the action of the purgative sweets*, casia and manna, and *weakens that of the resinous cathartics*. Some have supposed it capable of abating the virulence of antimonial preparations; but experience shews, that it has rather a contrary effect, and that all vegetable acids augment their power.

MED. VIRT. *Refrigerant—Laxative.*

TANACETI *folia, flores: Tanaceti vulgaris Lin. S. P.* Tansy; the leaves and flowers [*L. E.*]

Tansy grows wild by road-sides, and the borders of fields, and is frequently also cultivated in gardens, both for culinary and medicinal uses: it flowers in June and July. Considered as a medicine, it is a moderately warm bitter, accompanied with a strong, not very disagreeable flavour. Some have had a great opinion of it *in hysteric disorders*, particularly those proceeding from a deficiency or suppression of the uterine purgations. The leaves and seeds have been of considerable esteem as *anthelmintics;* the seeds are less bitter, and more acrid and aromatic than those of rue, to which they are reckoned similar; or of santonicum, for which they have been frequently substituted.

The virtues of tansy, according to BERGIUS, are *tonic, stomachic, anthelmintic, emmenagogue*, and *resolvent*. Dr. CLARK, in Scotland, found it to be great service in *various cases of the gout*. And Dr. CULLEN says, that he had known several, who had taken it without any advantage in the gout, and some others who reported that they had been relieved from the frequency of the gout.

This plant is given in doses of half a dram or more for a dose, but it has been more commonly taken in infusion, and drunk as tea.

MED. VIRT. *Stimulant — Antispasmodic — Anthelmintic.*

PREP. *Oleum essentiale.*

THAPSI BARBATI *folia: flores. Verbascum Thapsus Lin. S. V.* [*E.*] Mullein; the leaves and flowers.

This is met with by road-sides, and under hedges: it is clothed all over with soft downy leaves, and produces long spikes of yellow flowers in July. The taste discovers in it a glutinous quality; and hence it *stands recommended as an emollient*, and is in some places held *in great esteem in consumptions*. Others have recommended it as *strongly in dysenteric affections*. It has sometimes, though rarely, been employed externally *in ill-conditioned ulcers. Catarrhal coughs*, and *diarrhœa*, however are the complaints for which the mullein has been internally prescribed. Dr. HOME tried them in both, but it was only in the latter that it succeeded. From the cases in which he tried it, he concludes, that it is useful in stopping or diminishing diarrhœas of an old standing; and often in easing the pains of the intestines. They acquire a degree of irritability, and the ordinary irritating causes, aliment, bile, distension from air, keeps up a quicker peristaltic motion, which is obviated by the emollient, and perhaps gently astringent, qualities of this plant. The decoction was prepared of two ounces of the leaves with ℔2 of water.

The flowers of mullein have an agreeable, honey-like sweetness; an extract prepared from them by rectified spirit of wine tastes extremely pleasant.

MED. VIRT. *Emollient.*

TARTARUM [*L. E.*] Tartar is a saline substance, consisting of a vegetable alkali supersaturated with acids and is thrown off from

wines, after fermentation, to the ſides and bottom of the caſk. It proves of a red or white colour, and more or leſs foul or droſſy, according to the colour and quality of the wine; the white is generally looked upon as the pureſt: of either ſort, ſuch as is clean, ſolid, ſomewhat tranſparent, and has its outſide covered over with ſmall ſhining cryſtals, is preferable to ſuch as appears porous, droſſy, opaque, and leſs bright. The virtues of tartar *are thoſe of a mild, cooling, aperient, laxative medicine.* Taken from half an ounce to an ounce, it proves a *gentle*, though *effectual, purgative.* Angelus Sala relates, that he was cured of an habitual colic, by purging himſelf a few times with ſix drams of the crude ſalt, after many other medicines had been tried to no purpoſe. It is purified by diſſolving it in boiling water, and ſeparating the earthy part by filtering the ſolution. On cooling it depoſits irregular cryſtals, containing the colouring matter, which is ſeparated by boiling the maſs with white clay.

The tartar thus purified is called *cream of tartar.* If this be expoſed to a red heat, its acid flies off, and what remains is the vegetable alkali, or ſalt of tartar.

The cream or cryſtals of tartar are in common uſe, as a *laxative*, and *mild cathartic;* they are alſo conſidered as *cooling*, and *diuretic*, and therefore have been much employed in dropſies, and other caſes requiring the antiphlogiſtic treatment. In large doſes, Dr. CULLEN ſays, they act like a purgative in exciting the action of the abſorbents in every part of the ſyſtem, and that more powerfully than happens from the operation of any entirely neutral ſalt; and hence their uſe in the cure of dropſy. They ought to be given in a liquid form, diſſolved in water, of which will be required twenty times the quantity of cold water to one of the cryſtals. The doſe is from one dram to two ounces, according to circumſtances, and ſhould generally be regulated by the effects on the body. If one ounce is to be given in the day, half ſhould be given in the morning and half in the evening. Its effects are generally viſible in two or three weeks; if not, few can be perſuaded to try it longer.

MED. VIRT. *Aperient—Diuretic—Refrigerant.*

TEREBINTHINÆ. Turpentines; reſinous juices extracted from certain trees. There are four kinds of turpentine diſtinguiſhed in the ſhops.

TEREBINTHINA CHIA *Piſtachia Terebinthus Lin. S. P.* Chio, or Cyprus turpentine.

This is generally about the conſiſtence of thick honey, very tenacious, clear and almoſt tranſparent, of a white colour, with a caſt of yellow, and frequently of blue. It has a warm, pungent, bitteriſh taſte; and a fragrant ſmell, more agreeable than any of the other turpentines.

This juice is the produce of an evergreen tree or ſhrub, which grows ſpontaneouſly in the warmer climates, and endures the colds of our own. The turpentine brought to us, is extracted in the iſlands whoſe names it bears, by wounding the trunk and branches a little after the buds have come forth. The juice iſſues limpid, and clear as water, and by degrees thickens into the conſiſtence in which we meet with it. A like juice exuding from this tree in the eaſtern countries, inſpiſſated by a ſlow fire, is of frequent uſe, as a *maſticatory*, among the Perſian ladies, who (as Kæmpfer informs us) are continu-

ally chewing it, in order *to faſten* and *whiten the teeth*, *ſweeten the breath*, and *promote appetite*.

TEREBINTHINA VENETA [*E.*] Venice turpentine.

This is uſually thinner than any of the other ſorts, of a clear, whitiſh, or pale yellowiſh colour, a hot, pungent, bitteriſh, diſagreeable taſte, and a ſtrong ſmell, without any thing of the fine aromatic flavour of the Chian kind.

The true Venice turpentine is obtained from a large tree growing in great abundance upon the Alps and Pyrenean mountains, and not uncommon in the Engliſh gardens. What is uſually met with in the ſhops, under the name of Venice turpentine, comes from New England. Of what tree it is the produce, we have no certain account: the finer kinds of it are in appearance and quality not conſiderably different from the true ſort above deſcribed.

TEREBINTHINA ARGENTORATENSIS. Straſburgh turpentine.

This, as we generally meet with it, is of a middle conſiſtence betwixt the two foregoing, more tranſparent and leſs tenacious than either; its colour a yellowiſh brown. Its ſmell is very fragrant, and more agreeable than that of any of the other turpentines, except the Chian; in taſte it is the bittereſt, yet the leaſt acrid.

This reſin is obtained from the two ſorts of fir-trees, which are the moſt plentiful, and perhaps the only ones that grow ſpontaneouſly in Europe. There is another whoſe reſin is much ſuperior to the common turpentine, and has ſometimes been brought to us from abroad under the name of BALSAMUM CANADENSE. This ſpecies is the *Abies minor, pectinatis foliis, Virginiana conis parvis ſubrotundis Pluk.* Virginian or Canada fir-tree; which, though not a native of this climate, has been found to endure its ſevereſt colds.

This balſam is a tranſparent reſinous juice, of a light amber colour, and pretty firm conſiſtence. It may be conſidered as one of the pureſt of the turpentines, has a very agreeable ſmell, and a warm pungent taſte. It is conſidered by ſome as capable of ſupplying the place of the balſamum copaiva; but that will require ſome time to determine.

TEREBINTHINA COMMUNIS [*L.*] Common turpentine is the coarſeſt, and heavieſt, in taſte and ſmell the moſt diſagreeable, of all the ſorts: it is about the conſiſtence of honey, of an opaque browniſh white colour.

This is obtained from the wild pine, a low unhandſome tree, common in different parts of Europe; this tree is extremely reſinous, and remarkably ſubject to a diſeaſe from a redundance and extravaſation of its reſin, inſomuch that, without due evacuation, it ſwells and burſts. The juice as it iſſues from the tree is received in trenches made in the earth, and afterwards freed from the groſſer impurities by colature through wicker baſkets.

All theſe juices yield in diſtillation with water an highly penetrating eſſential oil, a brittle inſipid reſin remaining behind. With regard to their medical virtues, they *promote urine*, *cleanſe the parts concerned in the evacuation thereof*, and *deterge internal ulcers in general*; and *at the ſame time*, like other bitter hot ſubſtances, *ſtrengthen the tone of the veſſels*: they have an advantage above moſt other acrid diuretics, that *they gently looſen the belly*. Half an ounce or an ounce of Venice turpentine, triturated

with the yolk of an egg, and diffused in water, may be employed in the form of an injection, as the most certain laxative in colics, and other cases of obstinate costiveness. They are principally recommended in *gleets*, and *the fluor albus*: the efficacy in the former of these disorders is ascribed to its inducing some degree of inflammation of the urethra; in proof of which Dr. CULLEN says, that he has had some instances, both of turpentine and the balsam of copaiva producing a manifest inflammation of the urethra, to the degree of occasioning a suppression of urine; but when these effects went off, the gleet which had subsisted for some time before, was entirely cured. By some also they are considered useful in *calculous complaints*: where these last proceed from sand or gravel, formed into a mass by viscid mucous matter, the turpentines, by dissolving the mucus, promote the expulsion of the sand; but where a calculus is formed, they can do no service, and only ineffectually irritate or inflame the parts. In all cases accompanied with inflammation, these juices ought to be abstained from, as this symptom is increased, and not unfrequently occasioned by them. It is observable, that the turpentines impart, soon after taking them, a violet smell to the urine; and have this effect, though applied only externally to remote parts; particularly the Venice sort. This is *accounted the most powerful as a diuretic* and *detergent*; and the Chian and Strasburgh as *corroborants*: the common turpentine, as being the most offensive, is rarely given internally; its principal use is in plasters and ointments among farriers, and for the distillation of the oil, or spirit, as it is called. The dose of these juices is from a scruple to a dram and a half. They are most commodiously taken in the form of a bolus, or dissolved in watery liquors by the mediation of the yolk of an egg or mucilage. Of the distilled oil a few drops are a sufficient dose. This is a most potent, stimulating, detergent diuretic, often greatly heats the constitution, and requires the utmost caution in its exhibition.

It is not only preferred for external use, as a *rubefacient*, &c. but also internally as a *diuretic*; and by PITCAIRN and CHEYNE, as a remedy *for the sciatica*; but few stomachs can bear the doses they direct; it should therefore be begun with in small ones, and gradually increased.

When turpentine is carried into the blood-vessels, it stimulates the whole system; hence its use *in chronic rheumatism*, and in *paralysis*.

MED. VIRT. *Warm Stimulant—Diuretic—Aperient.*

PREP. *Essential Oil.*

THEÆ folia: Thæa bohea et viridis Lin. Tea; the leaves of a shrub cultivated in China.

The several sorts of tea met with among us, are the leaves of the same plant, collected at different times, and cured in a somewhat different manner. The small young leaves very carefully dried, *are the finer green*. The older afford the *ordinary green* and *bohea*. The two first have a sensible flavour of violets; the other, of roses. The former is the natural odour of the plant; the latter, as Neumann observes, is probably introduced by art. Some of the dealers in this commodity in Europe are not ignorant that bohea tea is imitable by the leaves of certain common plants, artificially tinctured, and impregnated with the rose flavour. The taste of both sorts is slightly bitterish, subastringent, and somewhat aromatic. The medical vir-

tues attributed to these leaves are sufficiently numerous, though few of them have any just foundation: little more can be expected from the common infusions, than that of *a diluent*, acceptable to the palate and stomach: the diuretic, diaphoretic, and other virtues which they have been celebrated for, depend more on the quantity of warm fluid, than any particular qualities which it gains from the tea. Nothing arises in distillation from either sort of tea with rectified spirit; water elevates the whole of their flavour.

Good tea in moderate quantity seems to refresh and strengthen; but, if taken in a recent highly flavoured state, and in considerable quantity, its use is apt to be succeeded by weakness, tremors, and other similar consequences resulting from the sedative and narcotic vegetables. Dr. SMITH, in his Experiments on Muscular Action, No. 36; found that an infusion of green tea had the effect of destroying the sensibility of the fauces, and the irritability of the muscles. And from the experiments of Dr. LETTSOM, it appears that green tea, on distillation, gives out an odorous water, which is powerfully narcotic: and Dr. CULLEN, from the observations he has made for fifty years in all sorts of persons, is convinced, that the qualities of tea are *narcotic*, and *sedative*. Notwithstanding which, he does not deny but that it may sometimes shew useful qualities:—It is very possible, that, in certain persons, taken in moderate quantity, it may, like other narcotics in a moderate dose, prove like these *exhilirating*, or have some effect in taking off *irritability*, or in quieting some irregularities of the nervous system. As its bad effects have been often imputed to the warm or rather hot water that accompanies, it so there is no doubt but some of its good effects may also be ascribed to the same cause, and particularly its being often so grateful after a full meal.

MED. VIRT. *Narcotic—Sedative.*

THLAPSIS semen. Thlapsi arvense Lin. Treacle, or mithridate, mustard; the seeds.

Two sorts of thlapsi are used promiscuously; they both grow wild, the latter most plentifully. These seeds have an acrid biting taste like common mustard, with which they agree in medical qualities.

THUS VULGARE, *resina* [*L.*] Common frankincense; a solid, brittle resin, brought to us in little glebes or masses, of a brownish or yellowish colour on the outside; internally whitish, or variegated with whitish specks; of a bitterish, acrid, not agreeable taste, without any considerable smell. It is supposed to be the produce of the pine-tree which yields the terebinthina communis; and to concrete on the surface of the terebinthinate juice soon after it has issued from the plant.

THYMI *folia: Thymi vulgaris Lin.* Common thyme; the leaves [*E.*]

This plant is frequent in our gardens, and flowers in June and July. It has an agreeable aromatic smell, and a warm pungent taste; which it imparts by infusion to rectified spirit, and sends over in distillation with water. Along with the water arises an essential oil, extremely hot and pungent.

BERGIUS considers thyme as *resolvent, emmenagogue, diuretic, tonic, stomachic;* but there is no disease in which its use is recommended. As an aromatic, it may be as useful as lavender, sage, rosemary, &c. It differs little from origanum, and may be put to the same use.

TILIÆ flores: Tiliæ Europææ Lin. The lime or linden tree; its flowers.

The lime-tree has been much valued on account of its quick growth and pleasant shade; it flowers in July, and loses its leaves soon after. The flowers are made use of chiefly on account of their agreeable flavour, which water extracts from them by infusion, and elevates in distillation. Among the writers on the Materia Medica, they have the character of *an antiepileptic*, and *a specific in all kinds of spasms and pains*. Frederick Hoffmann relates, that he knew a chronical epilepsy cured by the use of an infusion of these flowers drunk as tea.

MED. VIRT. *Antispasmodic.*

TORMENTILLÆ *radix: Tormentillæ erectæ Lin. S. P.* Tormentil, or septfoil; the root [*L. E.*]

Tormentil is found wild in woods and on commons. It has long slender stalks, with usually seven long narrow leaves at a joint; the root is for the most part crooked and knotty, of a blackish colour on the outside, and a reddish within. This root has an austere styptic taste, accompanied with a slight kind of aromatic flavour. It *is one of the most agreeable and efficacious of the vegetable astringents*, and is employed with success in all cases where medicines of this class are proper. It is more used, both in extemporaneous prescription and in officinal composition, than any of the other strong vegetable astringents. As the resin it contains is very inconsiderable, it seems more particularly adapted to those cases where the heating and stimulating medicines of this class are less proper, as *phthisical diarrhœa, diarrhœa cruenta.* Given in substance, and in large doses, either by itself or joined with gentian, it has been said to *cure intermittents.* In *hæmorrhages, fluor albus*, and *involuntary micturition*, tormentil-root has been considered advantageous.

In powder, from half a dram to a dram or more, has been given for a dose; but the following decoction has been more frequently prescribed. An ounce and a half of the powdered root is ordered to be boiled in three pints of water to a quart, adding, towards the end of the boiling, a dram of cinnamon. Of the strained liquor, sweetened with any agreeable syrup, two ounces or more may be taken four times a day.

A tincture made from it with rectified spirit possesses the whole astringency and flavour of the root, and loses nothing of either in inspissation.

MED. VIRT. *Astringent.*

TOXICODENDRON: Rhus Toxicondendron Lin. Gen. Plan. Poison-tree, or Poison-wood.

This tree is a native of America, though it has been introduced into England ever since the year 1640. It is extremely noxious, either by handling it or by the smell.

Many people have been poisoned by the smell of the tree when cut down; many while burning it in their fires: they are often swelled and choaked up in a wonderful manner. By handling it many have been made blind for several days. It does not act alike on all; for on some it will not have any effect. The poison of the tree is never mortal, but goes off without any assistance in a few days; *sallad oil*, and *cream, rubbed upon the parts*, expedite the removal of its effects. The first symptoms of its action are a violent itching in the skin, so great as to provoke scratching and rubbing; then succeed inflammation and swelling of the part: sometimes the whole body is swelled and poisoned in this manner; sometimes only a particular part, as the legs; and in this case they often discharge a quantity of serum, and then grow well. The chief use

that is made of the juice of this plant is for dying linen of a black colour. There are several cases of its good effects in paralysis recited by Dr. ALDERSON. The best mode of giving it is in form of powder, beginning with a quarter of a grain, made into a bolus twice a day, and gradually increasing the dose and repetition according to its effects. And it is probable that this medicine may produce good effects in other cases of nervous affections.

TRICHOMANIS *folia : Asplenii Trichomanis Lin.* English maiden-hair; the leaves [*E.*]

This is one of the herbs called, from the smallness of their stalks, capillary. It is found wild in different parts of England, upon old walls, and in shady places. The leaves have a mucilaginous, sweetish, subastringent taste, without any particular flavour; they are esteemed useful *in disorders of the breast proceeding from a thickness and acrimony of the juices*; and are likewise supposed *to promote the expectoration of tough phlegm*, and *to open obstructions of the viscera*. They are usually directed in infusion or decoction, with the addition of a little liquorice. A syrup prepared from them, though it has no place in our Pharmacopœias, is frequently met with in the shops, both as prepared abroad and at home. The syrup brought from abroad has an admixture of orange flower water.

A little of these mixed with water makes a very pleasant draught.

MED. VIRT. *Pectoral.*

PREP. *Syrup.*

TRIFOLII PALUDOSI *folia : Menyanthis trifoliatæ Lin.* Marsh trefoil, or buck-beans; the leaves [*L. E.*]

This plant grows wild in moist marshy places; it has three oval leaves, standing together upon one pedicle which issues from the root; their taste is very bitter, and somewhat nauseous. Marsh trefoil is an *efficacious aperient*, and *deobstruent, promotes the fluid secretions*, and, if liberally taken, *gently loosens the belly*. It has gained great reputation in *scorbutic and scrophulous disorders, in dropsy, jaundice, asthma, rheumatism, worms, gout*: and its good effects in these cases have been warranted by experience. *Inveterate cutaneous diseases* have been removed by an infusion of the leaves, drunk to the quantity of a pint a day, at proper intervals, and continued some weeks. Dr. CULLEN has had frequent experience of their good effects in some of these of herpetic and seemingly cancerous kind. Boerhaave relates, that he was relieved of the gout by drinking the juice mixed with whey.

It is said, that of late years that the leaves of buck-bean has come into common use, as an *alterant* and *aperient*, in *impurities of the humours*, and some *hydropic* and *rheumatic cases*; and as an active and eccoprotic bitter they appear not ill adapted to supply the want of bile in the primæ viæ; and thence may be inferred their use in protracted jaundice, and other biliary obstructions.

From one scruple to ʒji of the leaves in powder, may be given two or three times a day; or perhaps a strong infusion is preferable.

MED. VIRT. *Laxative — Aperient — Alterative.*

TRITICI *farina, amylum : Tritici hyberni L. S. P.* Wheat; the meal, and starch [*L.*] (prepared from the meal by maceration in fresh quantities of water and bran.)

Wheat, a common article of our food, is more glutinous and nutritious than most other kinds of grain. The FLOUR, or the STARCH, prepared from it, forms with water a soft viscid substance, which has

been taken with ſucceſs in *diarrhœas* and *dyſenteries*.

BRAN contains, beſides the huſks or ſhells of the wheat, a portion of its farinaceous matter. This is leſs glutinous than the finer flour, and is ſuppoſed to have a detergent quality. Bran is not unfrequently employed in this intention externally; and infuſed in boiling water, and ſweetened with honey, to which a proper proportion of nitre may be added, taken liberally, is very ſerviceable in catarrhous complaints, and ſlight coughs, occaſioned by what is called catching of cold.

BREAD, that which is good, ſhould be compoſed of flour well kneaded with the lighteſt water, ſeaſoned with a little ſalt, fermented with the fineſt yeaſt, and ſufficiently baked. Unfermented bread is viſcid and glutinous, which properties are deſtroyed by fermentation; and hence the bread becomes more eaſily digeſtible, but at the ſame time it inclines to acidity. That bread which is the lighteſt, and moſt eaſily diſſolved in water, is the moſt wholeſome, digeſted with the greateſt facility, and ſooneſt converted to laudable nutrition. Bread, highly toaſted, not burnt, till it is the colour of coffee, and infuſed, or lightly boiled in water, imparts a deep colour, and a ſufficiently agreeable reſtringent taſte. This liquor, taken as common drink, has done ſervice *in a weak lax ſtate of the ſtomach and inteſtines; and in bilious vomiting* and *purging*, or the *cholera morbus*: examples are related in the Edinburgh Eſſays of ſeveral caſes of this kind cured by it, without the uſe of any other medicine.

MED. VIRT. *Nutritious and glutinous.*

PREP. *Flour, bread, ſtarch,* and *bran.*

TURPETHUM: *Convolvulus Turpethum Lin.* Turbith; the cortical part of the root of an Indian convolvulus, brought to us in oblong pieces, of a brown or aſh colour on the outſide, and whitiſh within. The beſt is ponderous, not wrinkled, eaſy to break, and diſcovers a large quantity of reſinous matter to the eye. Its taſte is at firſt ſweetiſh; chewed for a little time, it becomes acrid, pungent, and nauſeous. This root is *a cathartic*, not of the ſafeſt or moſt certain kind. The reſinous matter, in which its virtue reſides, appears to be very unequally diſtributed; inſomuch that ſome pieces, taken from a ſcruple to a dram, purge violently; while others, in larger doſes, have ſcarce any effect at all. An extract made from the root is more uniform in ſtrength, though not ſuperior or equal to purgatives more common in the ſhops.

MED. VIRT. *Violently cathartic.*

PREP. *Extract.*

TUSSILAGINIS *folia, et flores: Tuſſilaginis farfaræ Lin. S. P.* Coltsfoot: the leaves and flowers [*L. E.*]

This grows wild in watery places, producing yellow flowers in February and March. Theſe ſoon fall off, and are ſucceeded by large roundiſh leaves, hairy underneath. Their taſte is rough and mucilaginous; but they have no remarkable ſmell. The leaves have always been recommended as poſſeſſing *demulcent* and *pectoral virtues*; conſequently eſteemed uſeful in *pulmonary conſumption, coughs, aſthmas*, and *other diſorders of the breaſt and lungs.* FULLER recommends it as a valuable medicine in *ſcrophula*; and Dr. CULLEN found it ſerviceable in ſome *ſtrumous ſwellings*, as did alſo PERCIVAL in hectic *diarrhœa*. It is commonly uſed as tea, or given by way of infuſion, to which liquorice-root, or honey, may be added.

MED. VIRT. *Emollient* and *mucilaginous.*

TUTIA [*E.*] Tutty; an impure ſublimate of zinc, or an argillaceous ſubſtance impregnated therewith, formed into tubulous pieces like the bark of a tree. It is moderately hard and ponderous, of a browniſh colour, and full of ſmall protuberances on the outſide, ſmooth and yellowiſh within. Some pieces have a blueiſh caſt, from minute globules of zinc being thrown up by the heat in its metallic form. Tutty is celebrated as *an ophthalmic*, and frequently employed as ſuch in unguents and collyria. See ZINCUM.

VALERIANÆ SILVESTRIS *radix: Valerianæ officinalis Lin S.P.* Wild valerian; its root [*L. E.*]

This root conſiſts of a number of ſtrings or fibres matted together, iſſuing from one common head; of a whitiſh or pale browniſh colour: its ſmell is ſtrong, like a mixture of aromatics with fetids; the taſte unpleaſantly warm, bitteriſh, and ſubacrid. There is another wild valerian, with broader leaves, of a deeper and ſhining green colour, met with in watery places. Both ſorts have hitherto been uſed indiſcriminately, and Linnæus has joined them into one ſpecies; but the former is conſiderably the ſtronger, and loſes much of its quality if tranſplanted into ſuch ſoils as the other naturally delights in. The roots produced in low watery grounds, have a remarkably faint ſmell in compariſon of the others, and ſometimes ſcarce any at all. Wild valerian grows on open, dry, mountainous places; and taken up in autumn, or winter, has much ſtronger ſenſible qualities than that collected in ſpring and ſummer. The root is a medicine of great uſe in *nervous diſorders*, and is particularly *ſerviceable in epilepſies* proceeding from a debility of the nervous ſyſtem. It was firſt brought into eſteem in theſe caſes by Fabius Columna, who by taking the powdered root, in the doſe of half a ſpoonful, was cured of an inveterate epilepſy, after many other medicines had been tried in vain. But it was given in ſome caſes of epilepſy at the Edinburgh diſpenſary, to the extent of two ounces a day, without any effect. However it has been tried in ſeveral other complaints termed nervous, particularly thoſe produced by increaſed mobility and irritability of the nervous ſyſtem, and has there been highly ſerviceable. BERGIUS conſiders it as *antiſpaſmodic, diaphoretic, emmenagogue, diuretic*, and *anthelmintic*; the firſt of which powers is very well eſtabliſhed; and hence it is recommended in *epilepſy, convulſions, hemicrania, hyſteria*, and dimneſs of ſight; in which laſt caſe FORDYCE recommends it very highly. It ſhould be given in large doſes from ℈j to ʒij or more; in infuſion, from one to two drams. Its unpleaſant flavour is moſt effectually concealed by a ſuitable addition of mace.

MED. VIRT. *Antiſpaſmodic.*

PREP. *Powder — a ſpirituous* and *volatile Tincture.*

VERONICÆ MARIS folia: Veronicæ officinalis Lin. Male ſpeedwell; the leaves.

This is one of the veronicæ which produce their flowers in cluſters at the joints of the ſtalks. It is a rough procumbent plant, not unfrequently met with on dry commons, and in ſandy grounds. In taſte, ſmell, and medical virtues, it is ſimilar to the betonica; though the veronica is commonly ſuppoſed to have more of *an aperient* and *pectoral virtue*, and betony to be rather nervine and cephalic. Hoffman and Joh. Francus have written expreſs treatiſes on this plant, recommending infuſions of it, drunk in the form of tea, as very ſalubrious in many diſorders, *particularly thoſe of the breaſt.*

MED. VIRT. *Aperient — Pectoral.*

VINCETOXICI radix: Asclepiadis Vincetoxici Lin. Swallow-wort, or tame poison; the root.

This is a native of the warmer climates: i is sometimes met with in our gardens, but rarely perfects its seeds. It is reckoned by botanists a species of apocynum, or dogsbane; *from all the poisonous sorts of which it may be distinguished, by yielding a limpid juice, whilst that of the others is milky.* The root has a strong smell, especially when fresh, approaching to that of valerian, or nard; the taste is at first sweetish and aromatic, but soon becomes bitterish, subacrid, and nauseous. This root is esteemed *sudorific, diuretic,* and *emmenagogue,* and frequently employed by the French and German physicians as an *alexipharmic,* sometimes as a *succedaneum to contrayerva:* whence it has received the name of contrayerva Germanorum. Among us it is very rarely made use of: it appears, from its sensible qualities, to be a medicine of much the same kind with valerian, which is indisputably preferable to it.

MED. VIRT. *Sudorific — Antispasmodic.*

VINUM. Wine; the fermented juice of the grape. Among the great variety of wines in common use among us, four are employed in the shops as menstrua for medicinal simples [*L. E.*]

Vinum album, vinum album Hispanicum, Mountain.

Vinum Canarinum, Canary or sack.

Vinum Rhenanum, Rhenish.

Vinum rubrum, Red port.

The uses of these liquors as menstrua and vehicles of the virtues of other medicines, will be given hereafter; in this place we shall consider only their effects on the human body. These are, *to chear the spirits, warm the habit, promote perspiration, render the vessels full and turgid, raise the pulse, quicken the circulation,* and in large quantities to prove *intoxicating* and *sedative.* The effects of the full-bodied wines, are much more durable than those of the thinner; *all sweet wines,* as *Canary,* abound with a glutinous nutritious substance; whilst the others are not nutrimental, or only accidentally so, by strengthening the organs employed in digestion. *Sweet wines* in general do not pass off freely by urine, and heat the constitution more than an equal quantity of any other, though containing full as much spirit; *red port,* and most of the red wines, have an *astringent quality,* by which they *strengthen the tone of the stomach* and *intestines,* and thus *prove serviceable for restraining immoderate secretions: those which are of an acid nature, as Rhenish, pass freely by the kidneys,* and *gently loosen the belly:* it is supposed that these last exasperate or occasion gouty and calculous disorders; and that new wines of every kind have this effect.

All wines, on a chemical investigation, chiefly consist of water, alcohol, a peculiar acid, the aërial acid, tartar, and an astringent gummy resinous matter, in which the colour of the red wine resides, and which is pressed out of the husks of the grapes. They differ from each other in proportion to these ingredients, and particularly in that of alcohol which they contain.

The qualities of wine depend not only upon the difference of the grapes, as containing more or less saccharine matter, and of the acid matter which accompanies it, but also upon the circumstances attending the fermentative process. If the fermentation be incomplete, that is, not carried far enough, the wine may contain a portion of *must,* or unassimilated juice; or if it be too active, or too long protracted, it may be converted into vinegar.

Wine in many diſorders is highly ſerviceable, particularly in fevers of the *typhous kind*, or *of a putrid tendency*, in which it is found to raiſe the pulſe, ſupport the ſtrength, promote a diaphoreſis, and reſiſt putrefaction; and in many caſes it proves of more immediate advantage than bark.

Delirium, which is the conſequence of exceſſive irritability, or of a defective ſtate of nervous energy, is often entirely removed by the free uſe of wine. Thoſe who indulge in the uſe of wine are *leſs ſubject to fevers*, both *of the malignant* and *intermittent kind*. In *putrid ſore throat*, in *the ſmall pox*, when attended with great debility and ſymptoms of putreſcency, in *gangrenes*, in *the plague*, wine is to be conſidered a principal remedy. And in almoſt all caſes of languors, and of great proſtration of ſtrength, wine is experienced to be a more grateful and efficacious cordial than can be furniſhed from the whole claſs of aromatics.

MED. VIRT. *Cordial — Corroborant — Antiputreſcent.*

VIOLÆ *flores: Violæ odoratæ Lin.* The ſingle March violet; its flowers [*L. E.*]

This is often found wild in hedges and ſhady places, and flowers in March; the ſhops are generally ſupplied from gardens. In our markets, we meet with the flowers of a different ſpecies, named by botaniſts *viola martia major hirſuta, inodora*: theſe may be diſtinguiſhed from the foregoing by their being larger, of a pale colour, and no ſmell. The officinal flowers have a very pleaſant ſmell, and a deep purpliſh blue colour, denominated from them violet. They impart their colour and flavour to aqueous liquors: a ſyrup made from the infuſion has long maintained a place in the ſhops, and proves an agreeable and uſeful laxative for children.

This ſyrup is alſo found uſeful in many chemical experiments, to detect an acid, or an alcali; the former changing the blue colour to a red, the latter to a green.

MED. VIRT. *Laxative.*

PREP. *A Syrup.*

* *VIOLÆ Tricoloris folia Lin.* Panſies or hearts-eaſe. This plant has been lately recommended by Dr. Strack, a German phyſician, as *a ſpecific in the cruſta lactea of children.* He directs a handful of the freſh, or half a dram of the dried, leaves to be boiled in half a pint of milk, which is to be ſtrained for uſe. This doſe is repeated morning and evening. He obſerves, that when it has been adminiſtered eight days, the eruption uſually increaſes conſiderably, and the patient's urine acquires a ſmell like that of cats. When the medicine has been taken a fortnight, the ſcurf begins to fall off in large ſcales, leaving the ſkin clean. The remedy is to be perſiſted in, till the ſkin has reſumed its natural appearance, and the urine ceaſes to have any particular ſmell.

VIPERA [*E.*] The viper, or adder, is one of the viviparous reptiles, without feet, about an inch in thickneſs, and twenty or thirty in length. The poiſon of this ſerpent is confined to its mouth. At the baſis of the fangs, or long teeth with which it wounds, is lodged a little bag containing the poiſonous liquid; a very minute portion of which, mixed immediately with the blood, proves fatal. Our viper-catchers are ſaid to prevent the miſchiefs otherwiſe following from the bite, by rubbing oil-olive warm on the part. The fleſh of the viper is perfectly innocent; and ſtrongly recommended as a *medicine of extraordinary ſervice in ſcrophulous, leprous*, and *other obſtinate chronical diſorders:* its virtues, however, in theſe caſes, are probably too much exaggerated. The viper is doubt-

leſs an highly nutritious food; and hence in ſome kinds of weakneſſes, and emaciated habits, is not undeſervedly looked upon as a good reſtorative. To anſwer any valuable purpoſes, freſh vigorous vipers (not ſuch as have been long kept alive after they are caught) ſhould be liberally uſed as food. The wines and tinctures of them can ſcarce be ſuppoſed to receive any conſiderable virtue from the animal; the dry fleſh brought us from abroad, is entirely inſignificant.

MED. VIRT. *Reſtorative.*

VIRGÆ AUREÆ folia: Solidaginis Virgæ aureæ Lin. Golden rod; the leaves.

This is found wild on heaths and in woods, producing ſpikes of yellow flowers in Auguſt. The leaves have a moderately aſtringent bitter taſte, and hence prove ſerviceable in *debility and laxity of the viſcera*, and *diſorders proceeding from that cauſe.*

VISCI QUERNI lignum, folia. Viſci albi Lin. Miſſeltoe; the wood and leaves.

This is a buſhy plant, growing on the trunk and branches of different trees. That met with on the oak is generally preferred, perhaps on account of its being the moſt rare. It may, however, be propagated by art on any trees, by rubbing the berries againſt the bark. This office has hitherto been performed by the thruſh (who feeds on the berries in the winter) in clearing his bill from the ſeeds that ſtick about it. This plant was held in veneration by the ſuperſtition of former ages: it was hung about the neck to prevent witchcraft, and taken internally to expel poiſons. Of late it has been celebrated as a *ſpecific in epilepſies, palſies*, &c. virtues, to which it were greatly to be wiſhed that experience gave any countenance.

VITIS VINIFERA *Lin.* The vine-tree. [*L. E.*] The leaves of this tree were formerly celebrated as aſtringents, but have for a long time been entirely diſregarded: their taſte is herbaceous, with only a ſlight roughneſs. The trunk of the tree, wounded in the ſpring, yields a clear, limpid, watery juice: this tear of the vine has been accounted *excellent for ſore eyes;* and by ſome recommended likewiſe *in arden and malignant fevers*, and *as a diuretic.* The flowers have a pleaſant ſmell, which water elevates from them in diſtillation; along with the water, a ſmall portion of an elegant eſſential oil is ſaid to ariſe, poſſeſſing in great perfection the fragrance of the flowers. The unripe fruit is of a very harſh, rough, ſour taſte: its expreſſed juice, called *verjuice*, was of great eſteem among the ancients, and ſtill continues ſo in ſome places, as *a cooling aſtringent medicine.* A rob and ſyrup were formerly prepared from it. The ripe fruit of grapes, of which there are ſeveral kinds, properly cured and dried, are the raiſins and currants of the ſhops; the juice by fermentation affords wine, vinegar, and tartar; all which have been before treated of.

MED. VIRT. *Aſtringent — Diuretic — Aromatic — Pectoral.*

PREP. *Wine — Vinegar — Tartar —the dried Fruit, or Raiſins.*

VITRIOLUM. Vitriol is a ſaline cryſtalline concrete, compoſed of metal, and an acid ſimilar to thoſe of ſulphur and alum. There are *but three metallic bodies, which this acid is capable of perfectly diſſolving* or *being united with into a cryſtalline appearance* — zinc, copper, and iron. With the firſt it forms a white, with the ſecond a blue, and with the third a green ſalt.

VITRIOLUM ALBUM, ZINCUM VITRIOLATUM [*L. E.*] *White vitriol*, or *vitriol of zinc*; found in the mines of Goſlar, ſometimes in

transparent pieces, but more commonly in form of white efflorescences, which are diſſolved in water, and afterwards reduced by evaporation and cryſtallization into large maſſes. We rarely meet with this ſort of vitriol pure; after the zinc, which is its proper baſis, has been revived by inflammable fluxes, there remains a ſubſtance which is attracted by the magnet, and diſcovers itſelf, on other trials alſo, to be iron: a ſolution of the vitriol depoſits, on ſtanding, an ochery ſediment, which generally gives a blue tincture to volatile alkalies, and hence appears to contain copper. White vitriol is ſometimes given from five or ſix grains to half a dram, *as an emetic;* it operates very quickly, and, if pure, without violence; and hence is an uſeful remedy where poiſon has been ſwallowed. It is ſaid to have been adminiſtered with good effect in doſes of $\frac{1}{4}$ of a grain to a grain, in chin-cough, and other ſpaſmodic affections. *Externally*, it is employed *as an ophthalmic*, and often made the baſis of collyria, as an *aſtringent* and *tonic*, in extemporaneous preſcription for *weak eyes*; and, *by injection, for the fluor albus, gleets*, and *ſeminal weakneſſes*, in the proportion of ʒ ſs. to a pint.

Med. Virt. *Tonic—Aſtringent—Emetic*—See alſo Zincum.

VITRIOLUM CŒRULEUM: *Cuprum vitriolatum* [*L. E.*] *Blue vitriol*, or *vitriol of copper*, falſely called Roman vitriol. Greateſt part of the blue vitriol at preſent met with in the ſhops, is ſaid to be artificially prepared by uniting copper with the vitriolic acid. This ſalt has a highly auſtere, acrid, and very nauſeous taſte. It has been given in ſmall doſes as an emetic in *phthiſis pulmonalis* every morning, or every other morning, and with ſome effect; and alſo in *obſtinate intermittents*, and *as a general tonic*—one quarter of a grain, or more, with five or ten grains of extract of bark, and two or three grains of aromatic powder, three times a day during the intermiſſions.

It has been uſed externally for *ſtopping hæmorrhages*, which it effects by coagulating the blood, and contracting the mouths of the veſſels; and as an *eſcharotic*, for deſtroying proud fleſh—but not ſo proper for that purpoſe as lunar cauſtic; except when the fleſh is extremely looſe and flabby. Lint, ſoaked in a mild ſolution of it and dried, is ſometimes a preferable application. The ſtyptic ſolution is ordered with blue vitriol three drams, alum one dram, diſſolved by boiling in twelve ounces of water, to which are added two drams of vitriolic acid, the whole to be filtered through paper: cloths and doſſils are to be dipped in this liquor and applied.

Med. Virt. *Tonic — Styptic — Eſcharotic.*

Prep. *Aq. Cupri ammoniati* — See alſo Cuprum.

VITRIOLUM VIRIDE: *Ferrum vitriolatum* [*L. E.*] *Green vitriol*, or *vitriol of iron*, commonly called copperas; the Roman vitriol of the Italian and other foreign writers. This is prepared in large quantity at Deptford, by diſſolving iron in the acid liquor which runs from certain ſulphureous pyritæ, expoſed for a length of time to the air. When pure, it is ſimilar in quality to the officinal *ſal martis.*

The green and blue vitriols (as well as the white) are in many places found native in the earth; though, uſually, in this ſtate neither ſort is free from an admixture of the other; hence vitriols are met with of all the intermediate colours betwixt the graſs green of the one and the ſapphire blue of the other. The acid of theſe ſalts has the greateſt affinity with zinc,

next to this with iron, and with copper the leaſt of all. Hence, ſolutions of white vitriol depoſit, on ſtanding, greateſt part of the irony and cupreous matter which they contain, and if ſome freſh zinc be added, the whole. In like manner, upon adding bright poliſhed iron to ſolutions of green vitriol, if it hold any cupreous matter, this will be thrown down. By theſe means the white and green vitriols may be purified from other metallic bodies.

For the medical powers of this chalybeate ſalt, ſee FERRUM.

ULMI *cortex interior: Ulmi campeſtris Lin. S. P.* The elm tree; the inner bark [*L. E.*]

This is a tall tree growing in hedges, moſt plentiful in Middleſex and Worceſterſhire; the bark of which has a mild aſtringent taſte. A decoction of the inner bark has been recommended in various chronical and cutaneous eruptions, and is ſaid to cure the lepra ichthyoſis of SAUVAGES. It is given in decoction, boiling four ounces of the bark neareſt the wood, freſh taken from the tree, in four pints of water to two; half a pint of which is to be adminiſtered two or three times a day; the efficacy of which is increaſed by adding nitre, and occaſionally giving purgatives. In the ſpring the bark ſhould be taken, from the ſmaller, not the ſmalleſt, branches; in autumn, from the branching roots. Its uſe has alſo been propoſed in various other diſeaſes, as *fluor albus*, *rheumatiſm*, *old ulcers*, *cancerous* and *ſcrophulous affections*, *tinea capitis*, &c. In very obſtinate caſes it is neceſſary to perſiſt in the uſe of it for ſome months.

MED. VIRT. *Aſtringent.*

URTICA: *Urtica dioica Lin. S. P. herba.* Stinging-nettle; the plant [*L. E.*]

Though the preſent practice pays very little regard to this plant, yet, if the teſtimony of many reſpectable practitioners is to be credited, it ſeems not devoid of medical utility. The juice taken from two to four ounces is recommended in *nephritic complaints*; in *internal hæmorrhagy*, *hæmoptyſis*, and, joined with equiſetum, in *bloody urine*. The nettle is a common remedy amongſt the people of Brunſwick, in an incipient phthiſis. When the juice is not to be obtained, the powder is uſed mixed with honey or ſugar. *Externally* it has been employed as a *rubifacient*; and this method of cure has been called URTICATION; and found efficacious in reſtoring *excitement to paralytic limbs*, or in other caſes of *torpor*, or *lethargy*. WITHERING tells us, a nettle leaf put upon the tongue, and then preſſed againſt the roof of the mouth, is ſometimes efficacious in ſtopping a bleeding at the noſe.

MED. VIRT. *Rubifacient.*

UVÆ PASSÆ [*L. E.*] *majores.* Raiſins of the ſun; the dried grapes of the *vitis Damaſcena.*

UVÆ PASSÆ *minores.* Currants; the dried grapes of the *vitis Corinthiaca.*

The principal uſe of theſe is as an agreeable ſweet; they impart a very pleaſant flavour both to aqueous and ſpirituous menſtrua. The ſeeds or ſtones are ſuppoſed to give a diſagreeable reliſh, and hence are generally directed to be taken out; but I have not found that they give any taſte at all.

UVÆ URSI *folia: Arbuti uvæ urſi Lin. S. P.* Bear's whortleberry, or trailing arbutus; the leaf [*L. E.*]

This is an evergreen ſhrubby plant, with oblong oval leaves, found on the ſnowy mountains of Germany and Sweden, and on the hills of Scotland. The ſmell of the dried leaves is like that of the extract of liquorice, and they have an

aſtringent and bitter taſte. The uva urſi was employed by the ancients in diſorders where aſtringent medicines were neceſſary; but it had fallen into diſuſe till about the middle of the preſent century, when it firſt drew the attention of phyſicians as an uſeful remedy in *calculous* and *nephritic complaints*; and in almoſt all others to which the urinary organs are ſubject, ſuch as *ulcers of the kidneys* and *bladder*, *cyſtirrhœa*, *diabetes*, *dyſury*, &c. Nay even by ſome it was conſidered as a ſolvent of the human calculi; however, from a multiplicity of experiments it has not appeared to poſſeſs this diſſolving power; yet ſtill it may be conſidered as a valuable remedy, if it only leſſens the torture, and thereby renders life more tolerable. Whatever good effects it produces, they ſeem to be derived *from its aſtringent power*. When given in powder, from fifteen grains to forty, two or three times a day; or in infuſion of ʒj. or ʒij. in a pint of water daily; or in decoction, which, though not ſo agreeable, is more efficacious.

MED. VIRT. *Aſtringent.*

WINTERANI CORTEX [*E.*] Winter's bark; the produce of a tree growing in Jamaica, Barbadoes, &c. called by Sir Hans Sloane *periclymenum rectum*, *foliis laurinis*, *cortice acri aromatico*. It was firſt diſcovered on the coaſt of Magellan, by Capt. Winter, in the year 1567. The ſailors then employed the bark as a ſpice, and afterwards *found it ſerviceable in the ſcurvy*; for which purpoſe it is, at preſent alſo, ſometimes made uſe of in diet-drinks. The true Winter's bark is not often met with in the ſhops, canella alba being generally ſubſtituted for it, and by many reckoned to be the ſame. There is nevertheleſs a conſiderable difference betwixt them in appearance, and a greater in quality: the Winter's bark is in larger pieces, of a more cinnamon-colour, than the canella; and taſtes much warmer and more pungent.

ZEDOARIA [*L. E.*] *Kæmpferia rotunda Lin. S. P.* Zedoary; the root of an Indian plant, brought over in oblong pieces about the thickneſs of the finger, or in roundiſh ones about an inch in diameter. Both ſorts have an agreeable fragrant ſmell, and a warm, bitteriſh aromatic taſte.

In diſtillation with water, it yields an eſſential oil, poſſeſſing the ſmell and flavour of the zedoary in an eminent degree; the remaining decoction is almoſt ſimply bitter. Spirit likewiſe brings over ſome ſmall ſhare of its flavour; nevertheleſs the ſpirituous extract is conſiderably more grateful than the zedoary itſelf.

Its effects as a bitter, or aromatic, are ſo inconſiderable, and as the camphor it contains can avail but little, it is deemed to poſſeſs very little medicinal power.

ZIBETHUM. Civet; a ſoft unctuous ſubſtance, of a white, brown, or blackiſh colour, brought from the Brazils, the coaſt of Guinea, and the Eaſt Indies. It is met with in certain bags, ſituated in the lower part of the belly of an animal ſaid to be of the cat kind. The chief uſe of this drug is in perfumes. It is rarely, if ever, employed for any medicinal purpoſes.

ZINCUM. Zinc [*L. E.*]; a metal, differing from all the other bodies of that claſs, in being inflammable *per ſe*, ſublimable into flowers which afterwards remain fixed in the ſtrongeſt fire, ſoluble in every acid, not miſcible in fuſion with ſulphur, changing copper into a yellow metal, braſs. Several productions of this metal,

though not generally known to be ſuch, are kept in the ſhops; as its rich ore calamine, the white vitriol, the pure white flowers of zinc called pompholyx, and the more impure compound tutty. The preparations of zinc are employed principally in external applications as ophthalmics. The flowers levigated into an impalpable powder, form with oily ſubſtances an uſeful unguent, and with roſe-water, and the like, elegant collyria, for defluxions of thin ſharp humours upon the eyes: they are moderately aſtringent; and act, if the levigation have been duly performed, without acrimony or irritation.

Internally it has been preſcribed in doſes of two grains, gradually increaſed to ſix or more, in epilepſies, hyſteria, chorea ſancti Viti, and other ſpaſmodic affections; but it appears to be a medicine of much uncertainty, and the white vitriol in many caſes has ſeemed to anſwer every purpoſe of zinc. When the zinc is employed, if it does not ſoon anſwer the preſcriber's purpoſe, it ſhould not be long perſevered in, nor given in very large doſes, as, introduced into the body in a certain quantity, it may prove a violent poiſon, agreeably to the experiments of Mr. Hellot.

MED. VIRT. *Antiepileptic — Antiſpaſmodic.*

PREP. from. *White Vitriol — Calamine — Tutty — Flowers.*

ZINGIBER [*L. E.*] *Amomum Zingiber Lin. S. P.* Ginger; a root brought from China and the Eaſt and Weſt Indies; of a fragrant ſmell, and a hot, biting, aromatic taſte. Rectified ſpirit extracts its virtues by infuſion, in much greater perfection than aqueous liquors. The latter elevate its whole flavour in diſtillation, the former little or nothing. Ginger is a very uſeful ſpice, *in cold flatulent colics*, and *in laxity and debility of the inteſtines.* It does not heat ſo much as thoſe of the pepper kind, but its effects are more durable. It is generally conſidered as an aromatic ſtimulant, leſs pungent and heating to the ſyſtem than might be expected from its effects on the organs of taſte. It is chiefly uſed as a *carminative* and *antiſpaſmodic;* and, beſides the affections mentioned above, in torpid and phlegmatic conſtitutions to excite briſker vaſcular action: though it is ſeldom given but in conjunction with other medical ſubſtances.

MED. VIRT. *Aromatic — Stimulant.*

PREP. *Syrup.*

General titles including ſeveral ſimples.

The five opening roots:
- Smallage,
- Aſparagus,
- Fennel,
- Parſley,
- Butchers broom.

The five emollient herbs
- Marſhmallows,
- Mallows,
- Mercury,
- Pellitory of the wall,
- Violets.

The four cordial flowers:	Borage, Bugloſs, Roſes, Violets.
The four greater hot ſeeds:	Aniſe, Caraway, Cummin, Fennel.
The four leſſer hot ſeeds:	Biſhopſweed, Stone parſley, Smallage, Wild carrot.
The four greater cold ſeeds:	Water melons, Cucumbers, Gourds, Melons.
The four leſſer cold ſeeds:	Succory, Endive, Lettuce, Purſlane.
The four capillary herbs:	Maidenhair, Engliſh maidenhair, Wall rue, Ceterach.
The four carminative flowers:	Camomile, Feverfew, Dill, Melilot.

The ſimples of each of the above claſſes have been often employed together, under the reſpective general appellations. This practice has entirely ceaſed among us; and accordingly theſe denominations are now expunged both from the London and Edinburgh Pharmacopœias, though ſtill retained in foreign ones: and as they are referred to very often by ſome phyſicians, and repeatedly mentioned by old writers, ſuffering them to remain might be of ſome uſe.

General rules for the collection and preſervation of ſimples.

ROOTS.

Annual roots are to be taken up before they ſhoot out ſtalks or flowers: *biennial ones*, chiefly in the autumn of the ſame year in which the ſeeds were ſown: *the perennial*, when the leaves fall off, and therefore generally in the autumn. Being waſhed clean from dirt, and freed from the rotten and decayed fibres, they are to be hung up in a warm,

ſhady, airy place, till ſufficiently dried. The thicker roots require to be ſlit longitudinally, or cut tranſverſely into thin ſlices. Such roots as loſe their virtues by exſiccation (or are deſired to be preſerved in a freſh ſtate, for the greater conveniency of their uſe in certain forms) are to be kept buried in dry ſand.

There are two ſeaſons, in which the biennial and perennial roots are reckoned the moſt vigorous, the *autumn* and *ſpring;* or rather the time when the ſtalks or leaves have fallen off, and that in which the vegetation is juſt going to begin again, or ſoon after it has begun; which times are found to differ conſiderably in different plants.

The college of Edinburgh, in the two firſt editions of their Pharmacopœia, directed them to be dug in the ſpring, after the leaves were formed; in the third edition, the autumn is preferred, and this rule is continued in the ſucceeding ones. The generality of roots appear indeed to be moſt efficacious in the ſpring: but as at this time they are alſo the moſt juicy, and conſequently ſhrivel much in drying, and are rather more difficultly preſerved, it is commonly thought moſt adviſable to take them up in autumn. No rule however can be given, that ſhall obtain univerſally. *Arum root* is taken even in the middle of ſummer, without ſuſpicion of its being leſs active than at other ſeaſons; while *angelica root* is inert during the ſummer, in compariſon of what it was in the autumn, ſpring, or winter.

HERBS and LEAVES.

Herbs are to be gathered when the leaves have come to their full growth, before the flowers unfold; but of ſome plants the flowery tops are preferred. — They are to be dried in the ſame manner as roots.

For the gathering of leaves, there cannot perhaps be any univerſal rule, any more than for roots; for though moſt herbs appear to be in their greateſt vigour about the time of their flowering, or a little before, there are ſome in which the medicinal parts are more abundant at an earlier period.

Thus *mallow* and *marſhmallow leaves* are moſt mucilaginous when young, and by the time of flowering approach more to a woody nature. A difference of the ſame kind is more remarkable in the leaves of certain trees and ſhrubs: *the young buds*, or *rudiments of the leaves, of the black poplar tree* have a ſtrong fragrant ſmell, approaching to that of ſtorax; but by the time that the leaves have come to their full growth, their fragrance is exhauſted.

Herbs are directed by moſt of the pharmaceutic writers to be dried in the ſhade; a rule which appears to be very juſt, though it has ſometimes been miſunderſtood. They are not to be excluded from the ſun's *heat*, but from the ſtrong action of the ſolar *light*, by which laſt their colours are very liable to be altered or deſtroyed, much more ſo than thoſe of roots. Slow drying of them in a cool place is far from being of any advantage. *Both their colours and virtues are preſerved in greateſt perfection, when they are dried haſtily, by a heat of common fire as great as that which the ſun can impart:* the juicy ones in particular require to be dried by heat, being otherwiſe ſubject to turn black. Odoriferous herbs, dried by fire till they become friable, diſcover indeed, in this arid ſtate, very little ſmell; not that the odorous matter is diſſipated; but on account of its not being communicated from the

perfectly dry subject to dry air; for as soon as a watery vehicle is supplied, whether by infusing the plant in water, or by exposing it for a little time to a moist air, the odorous parts begin to be extracted by virtue of the aqueous moisture, and discover themselves in their full force.

Of the use of heat in the drying of plants, we have an instance in the curation of tea among the Chinese. According to the accounts of travellers, the leaves, as soon as gathered, are brought into an apartment furnished with a number of little furnaces or stoves, each of which is covered with a clean smooth iron plate. The leaves are spread upon the plates, and kept rolling with the hands till they begin to curl up about the edges; they are then immediately swept off on tables, on which one person continues to roll them, while another fans them that they may cool hastily: this process is repeated two or three times, or oftener, according as the leaves are disposed to unbend on standing.

FLOWERS.

Flowers are to be gathered when moderately expanded, on a clear dry day, before noon. Red roses are taken before they open, and the white heels clipt off and thrown away.

The quick drying, before recommended for the leaves of plants, is more particularly proper for flowers; in most of which both the colour and smell are more perishable than in leaves, and more subject to be impaired by slow exsiccation. Of the flowers which come fresh into the apothecaries' hands, the only ones employed dry in the London Pharmacopœia, are red roses; and these, in all the compositions in which they are used in a dry state, are expressly ordered to be dried hastily *(celeriter arefactæ)*. One of the most valuable aromatics of European growth, saffron, is a part of a flower, dried on paper on a kind of kiln, with a heat sufficient to make it sweat, with care only not to endanger the scorching of it.

It may here be observed, that the virtues of flowers are confined to different parts of the flower in different plants. *Saffron* is a singular production, *growing at the end of the stile or pistil:* the active part of camomile flowers *is the yellowish disk*, or button in the middle; that of lilies, roses, clove-july-flowers, violets, and many others, *the petala* or *flower leaves;* while rosemary has little virtue in any of these parts, the fragrance admired in the flowers of this plant residing chiefly *in the cups*.

SEEDS and FRUITS.

Seeds should be collected when ripe and beginning to grow dry, before they fall off spontaneously. Fruits also are to be gathered when ripe, unless they are ordered to be otherwise [*E.*]

Of the fruits whose collection comes under the notice of the apothecary, there are few which are used in an unripe state: the principal *is the sloe*, whose virtue as a mild astringent is greatly diminished by maturation.—The *fruit of the orange tree* raised in our gardens or green-houses, is sometimes gathered in a state of much greater immaturity, soon after it is formed on the tree, before it has acquired its acid juice; at this time it proves an *elegant aromatic bitter*, greatly resembling what are called Curassao oranges, which appear to be no other than the same fruit gathered at the same period, in a warmer climate.

The rule for collecting seeds is more general than any of the others; all the officinal seeds being in their greatest perfection at the time of

their maturity. As ſeeds contain little watery moiſture, they require no other warmth for drying them than that of the temperate air in autumn. Such as abound with a groſs expreſſible oil, as thoſe commonly called the cold ſeeds, ſhould never be expoſed to any conſiderable heat; for this would haſten the rancidity, which, however carefully kept, they are very liable to contract. Seeds are beſt preſerved in their natural huſks, or coverings, which ſhould be ſeparated only at the time of uſing; the huſk, or cortical part ſerving to defend the ſeed from being injured by the air.

WOODS and BARKS.

The moſt proper ſeaſon for the felling of woods, or ſhaving off their barks, is generally the winter.

The only woods of our own growth retained in the catalogues of ſimples in our pharmacopœias, are the *juniper* and *box*; the former of which is rarely or never kept in the ſhops, or employed in practice; the other is procured from the turner, and it is indifferent at what ſeaſon it has been cut down, being at all times ſufficiently fit for the only uſe it is applied to, the yielding of an empyreumatic oil by diſtillation in a ſtrong fire.

Of the barks of our own growth, the London college has not retained one; in the Edinburgh Pharmacopœia there are ſeveral, viz. thoſe of the aſh tree,—birch tree,—oak, — elm, — ſloe, — wild ſervice, — black alder, — and elder; which, however, have been ſo rarely uſed in medicine, that the ſeaſons of their greateſt perfection cannot be aſcertained from experience. It may be doubted, whether barks be not generally more replete with medicinal matter in the ſummer and ſpring than in winter. The barks of many trees are, in ſummer, ſo much loaded with reſin and gum, as to burſt ſpontaneouſly, and diſcharge the redundant quantity. It is ſaid that the bark of the oak anſwers beſt for the tanners, at the time of the riſing of the ſap in ſpring; and as its uſe in tanning depends on the ſame aſtringent quality for which it is uſed in medicine, it ſhould ſeem to be fitteſt for medicinal purpoſes alſo in the ſpring. It may be obſerved, likewiſe, that it is in this laſt ſeaſon that barks in general are moſt conveniently peeled off.

ANIMALS and MINERALS.

Animals and minerals are to be choſen in their moſt perfect ſtate, unleſs they are ordered otherwiſe.

Whatever virtues theſe bodies may have, they are ſuppoſed to be beſt when they have attained to their common full growth. As there are no diſtinctions of maturity or immaturity in the mineral kingdom, the only rule for directing our choice here muſt be the purity of the ſubjects from any mixture of other bodies. None of them are ever to be uſed in an impure ſtate.

PART III.

PHARMACEUTICAL PREPARATIONS.

CHAPTER I.

THE MORE SIMPLE PREPARATIONS.

QUORUNDAM Aqua non ſolubilium Præparatio. *The preparation of ſome bodies as will not diſſolve in water.*

THESE ſubſtances are firſt to be pulveriſed in a mortar, and then levigated with a little water, upon a hard and ſmooth marble, into an impalpable powder: this is to be dried upon a chalk ſtone, covered with filtering paper, and afterwards ſet by for a few days, in a warm, or, at leaſt, very dry place. *L.*

After this manner are to be prepared,

Ærugo, *verdegris. L.*

Antimonium, *antimony. L. E.*

Chelæ cancrorum, crabs claws. L. E. firſt broken into ſmall pieces, and waſhed with boiling water.

Corallium, *coral. L. E.*

Creta, *chalk. L. E.*

Lapis calaminaris, *calamine ſtone, previouſly calcined for the uſe of thoſe who make braſs. L.* Where this is not to be had, the mineral may be calcined by *heating it three times red-hot, and quenching it as often in water. E.*

Oſtreorum teſtæ, oyſter-ſhells, firſt cleaned from their impurities.

Succinum, *amber. L. E.*

Tutia, *tutty. L. E.*

In preparing antimony, calamine, and tutty, particular care ought to be taken to reduce them into the moſt ſubtile powder poſſible [*L.*] — as the ſenſibility of the parts to which *calamine* and *tutty* are applied, requires them to be freed from any irritating particles; and antimony, unleſs thoroughly comminuted, may not only wound the ſtomach, but paſs off without producing any other ſenſible effect than an increaſe of the groſſer evacuations, whilſt, if reduced to the utmoſt fineneſs, it may become a medicine of conſiderable efficacy.

Where large quantities of the foregoing powders are to be prepared, it is cuſtomary, inſtead of the ſtone and muller, to employ hand-mills made for this uſe, conſiſting of two ſtones, the uppermoſt of which turns horizontally upon the lower, and has an aperture in the middle for the conveniency of ſupplying freſh matter, or of returning that which has already paſſed, till it is reduced to a proper degree of fineneſs.

For the levigation of hard bodies, particular care ſhould be tak-

en, whatever kind of inſtruments is made uſe of, that they be of ſufficient hardneſs, otherwiſe they will be abraded by the powders.

Some few ſubſtances indeed are more advantageouſly levigated with ſpirit of wine than with water. A little ſpirit may be added to the animal ſubſtances, if the weather be very hot and large quantities of them are prepared at once, to prevent their running into putrefaction; an accident which, in thoſe circumſtances, ſometimes happens when they are levigated with water only. Crabs' eyes, which abound with animal gelatinous matter, are particularly liable to this inconvenience.

The moſt ſucceſsful method of obtaining theſe powders of the requiſite tenuity, is, to waſh off the finer parts by means of water, and continue levigating the remainder till the whole becomes fine enough to remain, for ſome time, ſuſpended in the fluid; a proceſs received in the Edinburgh Pharmacopœia, and there directed as follows.

Edinb.

A quantity of water is to be poured upon the levigated powder, in a large veſſel, and the veſſel repeatedly ſhaken, that the finer parts of the powder may be diffuſed through the water: the liquor is then to be poured off, and ſet by till the powder ſettles. The groſs part, which the water would not take up, is to be further levigated, and treated in the ſame manner.

After this method are prepared antimony, calamine, tutty, and chalk.

By this method, which is that commonly practiſed in the preparations of colours for the painter, powders may be obtained of any required degree of tenuity; and without the leaſt mixture of the groſs parts, which are always found to remain in them after long continued levigation. All the coarſer matter ſettles at firſt, and the finer powder continues ſuſpended in the water, longer and longer, in proportion to the degree of its fineneſs. The ſame proceſs may likewiſe be advantageouſly applied to other hard pulverable bodies of the mineral kingdom, or artificial preparations of them; provided they be not ſoluble in, or ſpecifically lighter than, water. The animal and abſorbent powders, crabs' claws, crabs' eyes, oyſter ſhells, chalk, and coral, are not well adapted to this treatment; nor indeed do they require it. Theſe ſubſtances are readily ſoluble in acid juices without much comminution. If no acid be contained in the firſt paſſages, they are apt to concrete with the mucous matter uſually lodged there, into hard indiſſoluble maſſes; the greater degree of fineneſs they are reduced to, the more they are diſpoſed to form ſuch concretions, and enabled to obſtruct the orifices of ſmall veſſels. See page 67.

AXUNGIÆ PORCINÆ, SEVIQUE OVILLI PRÆPARATIO.

The preparation of hog's-lard and mutton ſuet.

Lond.

Chop them into ſmall pieces, and melt them by a gentle heat, with the addition of a little water; then ſtrain them from the membranes.

The uſe of the water is to prevent the fat from burning and turning black; which it does very effectually, though it ſomewhat prolongs the proceſs, and is likewiſe apt to be in part imbibed by the fat. The Edinburgh diſpenſatory directs the fat to be firſt freed from the ſkins, blood veſſels, and fibres, then waſhed in freſh quantities of water till it no longer give the liquor any bloody tinge, afterwards melted, ſtrained, and kept cloſe from the

injuries of the air. The ſhops are uſually ſupplied with theſe fats ready prepared.

MELLIS DESPUMATIO.

The deſpumation or clarifying of honey.

Lond.

Melt the honey in a water-bath, and let the ſcum which ariſes be taken off.

The intention of this proceſs is to purify the honey from wax, or other droſſy matters that have been united with it by the violence of the preſs in its ſeparation from the comb; and from meal and ſuch like ſubſtances, which are ſometimes fraudulently mingled with it. When the honey is rendered liquid and thin by the heat, theſe lighter matters riſe freely to the ſurface.

SCILLÆ EXSICCATIO.

The drying of ſquills.

Lond.

Let the ſquill, cleared from its outer ſkin, be cut tranſverſely into thin ſlices, and dried with a very gentle heat.

By this method, the ſquill dries much ſooner than when only its ſeveral coats are ſeparated, as has been uſually directed; the internal part being here laid bare, which, in each of the entire coats, is covered with a thin ſkin, that impedes the exhalation of the moiſture. The root loſes, in this proceſs, four-fifths of its original weight; the parts which exhale, appear to be merely watery: hence ſix grains of the dry root are equivalent to half a dram of it when freſh; a circumſtance to be particularly regarded in the exhibition of this medicine. A proof of the ſquill being properly dried is its retaining, though friable, its original bitterneſs and acrimony. It is given to adults in doſes of a few grains as an expectorant and diuretic; in ſomewhat larger as an emetic.

SPONGIÆ USTIO.

The burning of ſponge.

Lond.

Beat the ſponge, after cutting it into ſmall pieces; and, when ſeparated from its gritty matter, burn the ſponge in a cloſe iron veſſel, until it becomes black, and eaſily friable: then powder it in a glaſs or marble mortar.

Edin.

Put the ſponge, cut into ſmall pieces, and well freed from adhering gritty matters, *into a cloſe earthen veſſel*; place it on the fire, and let it be ſtirred frequently till it becomes black and friable: then reduce it to a powder in a glaſs or marble mortar.

This medicine, now firſt received in the Diſpenſatory, has been in uſe for a conſiderable time; and employed againſt *ſcrophulous diſorders*, and *cutaneous foulneſſes*, in doſes of a ſcruple and upwards. Its virtues ſeem to depend upon a volatile ſalt, juſt formed, and combined with its own oil: if the ſponge be diſtilled with a ſtronger heat, it yields a large proportion of that ſalt in its proper form. The ſalt is in this preparation ſo far extricated, that if the burnt ſponge be ground in a braſs mortar, it corrodes the metal, ſo as to contract a diſagreeable taint, and ſometimes an emetic quality.

Bees, earthworms, and other animal ſubſtances, have by ſome been prepared in the ſame manner, and recommended in different diſeaſes; but as theſe ſubſtances fall greatly ſhort of ſponge in the quantity of volatile ſalt produced from them by fire, they are probably inferior alſo in medicinal efficacy. Of all the animal matters that have been tried, raw ſilk is the only one which exceeds, or equals, ſponge in the produce of ſalt.

A good deal of addreſs is requi-

ſite for managing this proceſs in perfection. The ſponge ſhould be cut ſmall, and beaten for ſome time in a mortar, that all the ſtony matters may be got out, which, compared with the weight of the ſponge when prepared, will ſometimes amount to a conſiderable quantity. The burning ſhould be diſcontinued as ſoon as ever the matter is become thoroughly black. If the quantity put into the veſſel at once be large, the outſide will be ſufficiently burnt before the inſide is affected; and the volatile ſalt of the former will in part eſcape, before that in the latter is begun to be formed. The beſt method of avoiding this inconvenience, ſeems to be, to keep the ſponge continually ſtirring, in ſuch a machine as is uſed for the roaſting of coffee.

CORNU CERVI USTIO.

The burning of hartſhorn.

Lond.

Burn pieces of hartſhorn until they become perfectly white; then rub them to a very fine powder.

The intention here is, totally to burn out and expel the oil, ſalt, and other volatile parts; ſo as to leave only a white inſipid animal earth. For this purpoſe, a ſtrong fire, and the free admiſſion of air, are neceſſary. The potter's furnace was directed merely for the ſake of convenience; where this is not to be had, any common furnace or ſtove may be made to ſerve. On the bottom of the grate ſpread ſome lighted charcoal, and above this lay the horns. The whole will burn vehemently: the vegetable matter is reduced to aſhes; and the horns are burnt to whiteneſs, ſtill retaining their original form. The horns left after the diſtillation of the volatile ſalt and oil of hartſhorn, are as proper for this uſe as any other; that proceſs only collecting ſuch parts as are here diſſipated in the air.

But hartſhorn is not now conſidered as a pure earth, having been found to be a compound of calcareous earth, and phoſphoric acid. It is the weakeſt of the animal abſorbents, being ſoluble in acids with great difficulty; but whether it be of equal or ſuperior uſe in diarrhœas to more powerful abſorbents, muſt be left to future experience to determine.

PULPARUM EXTRACTIO.

The extraction of pulps.

Lond.

Unripe pulpy fruits, and *ripe ones if dry*, are to be ſet in a moiſt place till they ſoften: then preſs the pulp through a hair ſieve, afterwards boil it over a gentle fire, frequently ſtirring it; then evaporate the water in a water-bath ſaturated with ſea-ſalt, until the pulps are of a proper conſiſtence.

The pod of the Caſſia fiſtularis is to be bruiſed; then boiling water is to be poured upon it, that the pulp may be waſhed out; after this the matter is to be preſſed through a coarſe ſieve, and then through a hair ſieve. This done, the watery part is to be evaporated in a water-bath ſaturated with ſalt, until the pulp is brought to a proper conſiſtence.

The pulps of fruits that are both ripe and freſh, are to be preſſed out through the ſieve, without any previous boiling.

STYRACIS PURIFICATIO.

The purification of ſtorax.

Lond.

Diſſolve the ſtorax in rectified ſpirit of wine, and ſtrain the ſolution; afterwards reduce it to a proper conſiſtence with a gentle heat.

The active part of ſtorax totally diſſolves in ſpirit of wine ſo as to paſs through the filtre, the impurities alone being left. And as theſe active parts do not riſe in diſtillation, the ſpirit may be again recovered, in reducing it to a pro-

per thickneſs. This is a much more elegant mode than ſtraining ſtorax, as formerly preſcribed, by the means of water, and produces a more copious, and equally efficacious ſubſtance.

OPIUM PURIFICATUM.

Purified Opium.

Lond.

Take of opium, cut into ſmall pieces, one pound; proof-ſpirit of wine twelve pints.

Digeſt the opium with a gentle heat, ſtirring it until it is diſſolved, filter the tincture through paper, and diſtil it ſo prepared to a proper conſiſtence.

Purified opium muſt be kept under two forms: SOFT for pills; and HARD, that it may be reduced to powder.

By experiment proof-ſpirit has been found to be the beſt menſtruum for opium; having diſſolved nine-tenths of the crude gum; a much greater proportion than was taken up either by ſpirit of wine or water.

AMMONIACI PURIFICATIO.

The purification of ammoniacum.

Lond.

Boil ammoniacum, if it appears impure, in water until it ſoftens, and preſs it through an hempen cloth: then ſet it by, that the reſinous part may ſubſide.

Evaporate the water, and towards the end of the inſpiſſation mix reſinous part with the gummy.

In the ſame manner ASA FŒTIDA, and the ſimilar reſinous gums, are purified.

Any gum that melts eaſily, as galbanum, may likewiſe be purified by including it in a bladder, and keeping it in boiling water, until the gum becomes ſoft enough to be preſſed from its impurities through a hempen cloth.

In the ſtraining of all the gums, care ſhould be taken, that the heat be neither too great, nor too long continued; otherwiſe a conſiderable portion of their more active volatile matter will be loſt: an inconvenience which cannot, by any care, be wholly avoided. Hence the purer tears, unſtrained, are preferable, for internal uſe, to the ſtrained gums; becauſe that ſome of the gum-reſins purified, in the common way, by ſolution in water, expreſſion and evaporation, are not ſo eaſily ſoluble in aqueous menſtrua before, as after, ſuch depuration. The method of ſoftening the gum in a bladder by external heat, without the addition of water, appears to be the moſt eligible for all thoſe that will admit of being thus liquefied ſufficiently; both as exhalation is prevented during the liquefaction; and the ſtrained gum returns in cooling to its original conſiſtence, without the further heat which is requiſite in the other method for evaporating the water. Opium is perhaps leſs injured by heat than the reſt of the gums, the virtues of this drug ſeeming to reſide more in its fixed than in its volatile parts: it is nevertheleſs expedient, that the ſmell of the opium, which affords an uſeful mark of its genuineneſs, be as much as poſſible preſerved; this, if the quantity of water were large, would be deſtroyed by the long evaporation which would then become neceſſary.

It were to be wiſhed that the conſiſtence to which the ſtrained ſolutions are to be reduced, were determined with more preciſion, particularly in regard to opium, that there might be as little uncertainty as poſſible in its doſe.

MILLEPEDARUM PRÆPARATIO.

Preparation of millepedes.

Lond. Edin.

The millepedes are to be incloſed in a coarſe hempen cloth, and ſuſpended over hot ſpirit of wine,

in a close vessel, till they are killed by the steam, and rendered friable.

This is a convenient way of rendering millepedes pulverable, without endangering any loss of such virtues as they may possess.

The directions given by both colleges are precisely the same, and delivered in almost the same words.

CHAPTER II.

Subſtances extracted from vegetables by expreſſion.

SECT. I.

Expressed and inspissated Juices.

JUICES are obtained from the ſucculent parts of plants, by including them, after being properly cut, bruiſed, &c. in a hair bag, and preſſing them, betwixt wooden cheeks, in the common ſcrew-preſs, as long as any liquor exudes.

The harder fruits require to be previouſly well beaten or ground: but herbs are to be only moderately bruiſed; for if theſe be over bruiſed, a large quantity of the herbaceous matter will be forced out along with the juice. Hempen or woollen bags are apt to communicate a diſagreeable flavour; the threads of theſe likewiſe ſwell in proportion as they imbibe moiſture, ſo as in great meaſure to prevent the free percolation of the juice.

The fluids thus extracted from ſucculent fruits, both of the acid and ſweet kind — from moſt of the acrid herbs, as ſcurvy-graſs and water-creſſes — from the acid herbs, as ſorrel and wood-ſorrel — from the aperient lacteſcent plants, as dandelion and hawkweed — and from ſundry other vegetables, contain great part of the peculiar taſte and virtues of the reſpective ſubjects. The juices, on the other hand, extracted from moſt of the aromatic herbs, as thoſe of mint and the fragrant Turkey balm, commonly called balm of Gilead, have ſcarcely any thing of the flavour of the plants, and ſeem to differ little from decoctions of them, made in water, boiled till the volatile odorous parts have been diſſipated. Many of the odoriferous flowers, as the lily, violet, hyacinth, not only impart nothing of their fragrance to their juice, but have it totally deſtroyed by the previous bruiſing. From want of ſufficient attention to theſe particulars, practitioners have been frequently deceived in the effects of preparations of this claſs: juice of mint has been often preſcribed as a ſtomachic, though it wants thoſe qualities by which mint itſelf, and its other preparations, operate in that intention.

The juices thus forcibly preſſed out from plants, differ from thoſe which flow ſpontaneouſly or from inciſions; theſe laſt conſiſting chiefly of ſuch fluids as are not diffuſed through the whole ſubſtance of the vegetable ſubject, but elaborated in diſtinct veſſels, or ſecreted into particular receptacles. From poppy heads, ſlightly wounded, there iſſues a thick milky liquor, which dries by a moderate warmth, into opium; whilſt the juice obtained from them by preſſure is of a dark green colour, and far weaker virtue.

Juices, newly expreſſed, are generally thick, viſcid, and very impure: by colature, a quantity of groſs matter is ſeparated, the juice becomes thinner, limpid, and better fitted for medicinal purpoſes, though as yet not entirely pure. On ſtanding, it becomes again turbid, and apt to run into a fermentative or putrefactive ſtate. Clarification with whites of eggs renders the juices more perfectly fine;

but there are few that will bear this treatment without a manifeſt injury to their flavour, taſte, and virtue.

The moſt effectual method of purifying and preſerving theſe liquors, is, to let the ſtrained juices ſtand in a cool place, till they have depoſited their groſſer feces, and then gently paſs them ſeveral times through a fine ſtrainer till perfectly clear; when about one-fortieth part their weight of good ſpirit of wine may be added, and the whole ſuffered to ſtand as before: a freſh ſediment will now be depoſited, from which the liquor is to be poured off, ſtrained again, and put into ſmall bottles that have been waſhed with ſpirit and dried. A little oil is to be poured on the ſurface, ſo as very nearly to fill the bottles, and the mouths cloſed with leather, paper, or ſtopt with ſtraw, as the flaſks in which Florence wine is brought to us: this ſerves to keep out duſt, and ſuffers the air, which in proceſs of time ariſes from all vegetable liquors, to eſcape; which air would otherwiſe endanger the burſting of the glaſſes, or, being imbibed afreſh, render their contents vapid and foul. The bottles are to be kept on the bottom of a good cellar or vault, placed up to the necks in ſand. By this method, juices may be preſerved for a year or two; and ſome for a much longer time.

It has already been obſerved, that there are great differences in juices, in regard to their being accompanied, in the expreſſion, with the virtues of the ſubjects: there are equal differences in regard to their preſerving thoſe virtues, and this independently of the volatility of the active matter, or its diſpoſition to exhale. Even the *volatile virtue of ſcurvy-graſs* may, by the above method, be preſerved almoſt entire in its juice for a conſiderable time; while the active parts of the juice of the wild cucumber quickly ſeparate and ſettle to the bottom, leaving the fluid inert. *Juices of arum root, iris root, bryony root,* and *ſundry other vegetables*, throw down in like manner their medicinal parts to the bottom.

SUCCUS COCHLEARIÆ COMPOSITUS,

FORMERLY

SUCCI SCORBUTICI.

Compound juice of ſcurvy-graſs.

Lond.

Take the juice of
Garden ſcurvy-graſs, two pints;
Brooklime,
Water-creſſes—each one pint;
Seville oranges, a pint and quarter.

Mix them together, let them ſtand till the feces have ſubſided, and then either pour the liquor off clear, or paſs it through a ſtrainer.

Edinb.

Take the juice of
Garden ſcurvy-graſs,
Water-creſſes, expreſſed from freſh-gathered herbs,
Seville oranges—of each two pounds:
Spirituous nutmeg-water, half a pound.

Mix them together; let them ſtand till the feces have ſubſided, and pour off the clear liquor.

Both theſe compoſitions are of conſiderable uſe for the purpoſes expreſſed in the title; the orange juice is an excellent aſſiſtant to the ſcurvy-graſs and other acrid and antiſcorbutics, which, when thus mixed, have been found from experience to produce much better effects than when employed by themſelves. *Theſe juices may be taken from an ounce or two to a quarter of a pint, two or three times a day*: they generally increaſe the *urinary ſecretion*, and ſometimes introduce *a laxative habit*. Preſerved with the cautions above mentioned, they

will keep good for a considerable time: though, whatever care be taken, they are found to answer better when fresh; and from the difficulty of preserving them so, they have of late been very much laid aside, especially since we have been provided with more convenient and useful remedies.

INSPISSATED JUICES.

Lond.

When vegetable juices, decoctions, or infusions, are exposed to a continued heat, the fluid part gradually evaporates, carries off such volatile matter with which it was impregnated, and leaves the more fixed in one thickened mass. When this occurs from the evaporation of an expressed juice, it is called *inspissated juice;* when from watery decoctions or infusions, an *extract;* from spirituous tinctures, a *resin*, or *essential extract;* which term, *extract*, is applicable to the whole three.

They are also called *rob*, or *sapa*, when by evaporation the juices, or watery decoction, are reduced only to the consistence of oil or honey; and *balsams*, when spirituous tinctures are reduced to the same consistence.

With regard to inspissation of the juices, we are to consider what effect will be produced by the process respecting the volatility or fixity of the medicinal parts.

Plants which lose their virtue, or part of it, by being dried, will lose the same on their juices being inspissated to dryness; how gentle soever be the heat with which the operation is performed. It must likewise be observed, that the medicinal parts of some juices are kept in a state of perfect solution, by the watery fluid, so as completely to be obtained by it after the liquor has been made fine by settling, straining, or other means; while the medicinal parts of others, not dissoluble by watery menstrua, are only diffused through the liquor, in the same manner as feculencies are, and separate along with these in standing.

There are particular points which ought to be carefully considered in forming preparations from different vegetable substances; as by improper processes the most powerful may be rendered inefficacious.

SUCCUS BACCÆ SAMBUCI SPISSATUS.

Inspissated juice of the elder-berry.

Lond.

Take of the expressed and depurated juice of the elder-berries two pints: inspissate in a water-bath saturated with sea-salt.

The college of Edinburgh, to five pounds of the ripe juice add one pound of the purest sugar, and with a gentle heat evaporate to the consistence of a pretty thick honey.

Each of these preparations keeps well; and both are possessed of aperient powers, generally promoting the natural evacuations by stool, urine, or sweat. The dose, from ʒj. or ʒij. to ℥j. or more: half an ounce diluted with water, is commonly taken at bed-time in common colds.

In the same manner may be inspissated the juice of *black currants*, *lemon*, *deadly night-shade*, *black henbane*, *strong-scented lettuce*, and of *hemlock*, gathered upon the first appearance of the flowers. And under this form the agreeable and useful acid of the two first may be preserved for a considerable length of time, in this concentrated state.

SUCCUS ACONITI SPISSATUS.

Inspissated juice of wolf's-bane.

Edinb.

Bruise the fresh leaves, include them in an hempen bag, and strongly compress them in a press, so that they may give out their juice: let

the juice be evaporated in open veſſels in a water-bath, to the conſiſtence of a *pretty thick* honey; and towards the latter end of the proceſs, let the juice be conſtantly ſtirred that all empyreuma may be avoided. After it has become cold, let it be put up in glazed earthen veſſels, and moiſtened with ſpirits of wine.

In the ſame manner are prepared inſpiſſated juices of the *ſolanum le thale*, or *deadly night-ſhade;* and the *hyoſcyamus*, or *henbane*.

The active parts of theſe plants are obtained in a concentrated ſtate by this proceſs, and in a condition which admits of preparation for a conſiderable length of time, and in which ſtate they are perhaps more frequently uſed than any other; particularly the *hyoſcyamus*, which often proves a good ſuccedaneum for opium, when opium is indicated but diſagrees with the patient —though the aconite and ſolanum has been thought to poſſeſs greater advantage, adminiſtered in the form of powder.

SUCCUS CICUTÆ SPISSATUS.

Inſpiſſated juice of hemlock.
Edinb.

The proceſs is ſimilar to that uſed with aconitum, except that this is ordered to be evaporated to the conſiſtence of a *thin* honey; and when cool, as much of the powder of the dried leaves is to be added as will form it into a maſs proper for pills; care being taken that the evaporation goes to that length only as to require ſuch a quantity of the powdered leaves as will make a fifth part of the whole maſs, when brought to a proper conſiſtence.

However it is agreed, the mode of making the extract as ordered by the London college, is eſteemed the moſt eligible; as it forms the moſt pure extract, and the powder may be occaſionally added.

However, great care is required in preparing this inſpiſſated juice. Beſides the precaution of gathering the plant at the particular ſeaſon, on the firſt appearance of the flowers, and preventing the mixture of any other vegetable, the evaporation ſhould take place as ſoon as poſſible after the expreſſion, and therefore the juice ſhould not be bought already expreſſed; for if the juice, which retains the ſmell of the plant, be ſuffered to ſettle until it becomes clear, it loſes nearly all the ſpecific flavour of the hemlock; the odorous principle ſeeming to ſeparate, and ſubſide with the herbaceous feculencies: and the evaporation ſhould be *ſlow;* to prevent the too great diſſipation of its volatile parts, upon which much of its virtues depend, by too haſty an evaporation.

That ſuch caution in the preparation is abſolutely neceſſary, ſeems to be confirmed by Dr. WITHERING's obſervations, who ſays, "that no medicinal plant, when collected, is more apt to heat and ferment than hemlock; whence the quantity of extract is much leſs, and its properties greatly impaired; and that if the feculencies are thrown away, the medicine is ſpoiled.

Of this inſpiſſated juice, ſmall doſes ſhould be begun with, from two to five grains in a day to adults, and gradually augmented. Sometimes ſeveral drams have been taken in that time without producing any giddineſs: but from five grains to ten or twenty grains are generally ſufficient; for few conſtitutions will bear more, if it is properly prepared, without experiencing diſagreeable effects. The plant itſelf may be kept dry, in ſtrong brown paper bags; or, if powdered, in glaſs bottles cloſe ſtopped, and ſo placed as to exclude the light.

Dr. Stœrck has recommended the cicuta in a variety of complaints, in which he says it has been successful: he affirms, that it *removes obstructions*, and *their consequences; relieves rheumatic pains*, though of long continuance; discusses *scirrhous tumours*, both internal and external; and *cures dropsies* and *consumptions* proceeding from scirrhosities; that it often *dissolves cataracts*, and *stops their progress*, and has sometimes removed *the gutta serena*;—that inveterate *cutaneous eruptions*, *scald-heads*, *malignant ulcers*, *cancers*, the *malignant fluor albus*, *gonorrhœæ of long standing*, *obstinate remains of the venereal disease*, and *caries of the bones*, generally yield to it — that for the most part it is necessary to continue this medicine for a considerable time before the cure be effected, or much benefit perceived from it.

Notwithstanding which account, the trials that have been made of it in this country have not been attended with any thing like this success. However, the inspissated juice is given in a variety of complaints, which appear very obstinate; but its great efficacy, when joined with a mercurial alterative, has been more particularly observed in *scrophulous* and *scirrhous disorders*, and in hectic complaints, arising from tubercles in their early stage. Cicuta has also been given in *chincough*, *rheumatism*, and *nervous headache*, with some success.

Externally the powdered herb has been used, with linseed meal, or common white bread, made into a poultice with milk and water, in the proportion of one-fourth, or one-sixth, part of the herb, when applied to indurated tumors in the breast and other parts; joined with mercury, and given internally, and applied externally, it has been successfully employed in removing obstructions of the membranous parts of the urethra, and enlargement of the prostrate gland. And in some cases it is given with advantage joined with the peruvian bark.

ELATERIUM.

Lond. Edinb.

Take ripe wild cucumbers, and having very lightly pressed out the juice, pass it through a fine hair sieve into a glass vessel. After standing for some hours, the thicker part will fall to the bottom; from which the thinner is to be poured off, and what liquid matter is still left, is to be separated by filtration. The remaining thick part is to be covered with a linen cloth, and dried by gentle heat.

What happens in part in the foregoing preparation, happens in this completely, the spontaneous separation of the medicinal matter of the juice on standing for a little time; and the case is the same with the juices of several other vegetables, as those of arum, iris, and bryony roots. Preparations of this kind have been commonly called Fœculæ. The filtration above directed for draining off such part of the watery fluid as cannot be separated by decantation, is not the common filtration through paper, for this does not succeed here: the grosser parts of the juice, falling to the bottom, form a viscid cake upon the paper, through which the liquid cannot pass. The separation is to be attempted in another manner, so as to drain the fluid from the top. This is effected by placing one end of some moistened strips of woollen cloth, skeins of cotton, or the like, in the juice, and laying the other end over the edge of the vessel, so as to hang down lower than the surface of the

liquor. By this management the ſeparation ſucceeds in perfection.

Elaterium is a ſtrong hydragogue cathartic, and previous to its operation excites great ſickneſs, and ſometimes ſevere vomiting. In ſome inſtances of ſtagnant aſcites it has produced a complete evacuation of water, where other medicines have failed. Two or three grains are in general a ſufficient doſe. Perhaps half a grain given for a doſe and repeated every hour till it begins to operate, is the beſt and ſafeſt mode of exhibiting it.

SECT. II.

Expressed Oils.

EXPRESSED oils are obtained chiefly from certain ſeeds and kernels of fruits, by thoroughly pounding them in a ſtone mortar, or, where the quantities are large, grinding them in mills, and then including them in a canvas bag, which is wrapt in a hair cloth, and ſtrongly preſſed betwixt iron plates. The canvas, if employed alone, would be ſqueezed ſo cloſe to the plates of the preſs as to prevent the oil from running down: by the interpoſition of the hair cloth, a free paſſage is allowed it.

Sundry machines have been contrived, both for grinding the ſubject, and preſſing out the oil, in the way of buſineſs. To facilitate the expreſſion, it is cuſtomary to warm either the plates of the preſs; or the ſubject itſelf after the grinding, by keeping it ſtirring, in a proper veſſel over the fire: the oil, liquefied by the heat, ſeparates more freely and more plentifully. *When the oil is deſigned for medicinal purpoſes, this practice is not to be allowed;* for heat, eſpecially if its degrees be ſufficient to be of any conſiderable advantage for promoting the ſeparation, renders the oil leſs ſoft and palatable, impreſſes a diſagreeable flavour, and increaſes its diſpoſition to grow rancid. Hence the colleges both of London and Edinburgh expreſsly require the operation to be performed without heat.

Nor *are the oils to be kept* in a *warm place after their expreſſion. Expoſed but for a few days to a heat no greater than that of the human body, they loſe their emollient quality, and become highly rancid and acrimonious.* Too much care cannot be taken for preventing any tendency to this acrid irritating ſtate, in medicines ſo often uſed for abating immoderate irritation.

So much are theſe oils diſpoſed to this injurious alteration, that they frequently contract an acrimony and rancidity while contained in the original ſubjects. *Hence great care is requiſite in the choice of the unctuous ſeeds and kernels,* which are often met with very rancid; almonds are particularly liable to inconveniencies of this kind.

Expreſſed oils are prepared for mechanic uſes from ſundry different ſubjects, as nuts, poppy-ſeed, hemp-ſeed, rape-ſeed, and others. Thoſe directed for medicinal purpoſes in the London and Edinburgh Pharmacopœias, are,

OLEUM AMYGDALÆ.

Oil of almonds.

Lond.

Bruiſe freſh almonds, either ſweet

or bitter, in a mortar, and then express the oil, in a press, without heat.

In the same manner may be expressed from the bruised seeds of *linseed-oil*, *oil of mustard* and *oil of castor*.—For the particulars belonging to the medical powers of which see LINI SEMEN, SINAPIS, and RICINUS, in the Materia Medica: and for the expressed oil of *bay-berries*, *mace*, *olives*, and *palm-oil*, as far as they are supposed to exert any peculiar qualities, they will be found under LAURUS, MACIS, OLIVÆ, and PALMÆ, in the same division of this work.

The oil of almonds prepared from the sweet and bitter almonds are indifferently, altogether the same. Nor are the differences of the other oils very considerable, the discriminating qualities of the subjects not residing in the oils that are thus obtained by expression: *the oil of mustard-seed is as soft, insipid, and void of pungency, as that of sweet almonds*, the pungency of the mustard remaining entire in the cake left after the expression. The several oils differ in some of their properties from one another; but in medicinal qualities they appear to be all nearly alike, and agree in one common emollient virtue. *They soften* and *relax the solids*, and obtund acrimonious humours: and thus become serviceable, internally, *in pains*, *inflammations*, *heat of urine*, *hoarseness*, *tickling coughs*, &c.—in *glysters*, for lubricating the intestines, and promoting the ejection of indurated feces; — and in *external applications*, for tension and rigidity of particular parts. Their common dose is half an ounce: in some cases, they are given to the quantity of three or four ounces. The most commodious forms for their exhibition we shall see hereafter, in the chapter of Emulsions.

THE OIL OF CACAO, or the *chocolate nut*, expressed from the nuts slightly toasted, and freed from their coverings, seems to have no other advantage over the chocolate as commonly made, but from being divested of the aromatics with which that is joined, and hence may be given as an article of nutrition, where the common chocolate is contraindicated.

THE OIL OF HYOSCYAMUS, acquired in the same manner as the oil of almonds, is supposed to be possessed of the narcotic virtues of the plant, and therefore has entered the composition of some anodyne ointments and plasters: but, when the sedative power of henbane is wanted, an impregnation of olive oil with the leaves of the plant has been supposed would much better answer the purpose.

OLEUM OVI.

Egg-oil.

Boil any quantity of fresh eggs till they are hard; then take out the yolks, break them in pieces, and roast them gently in a frying-pan, till, when pressed between the fingers, they give out a certain fatness; put them, whilst warm, into a hair bag, and express the oil.

Externally applied, a paregoric and styptic power has been attributed to it; and it has been frequently applied *for the relief of sore nipples*, with which women who suckle children are sometimes much tormented. Administered internally, it has been thought useful *in stomach complaints*, *dysenteries*, and *different affections of the alimentary canal*. That this oil does possess these powers, is extremely doubtful; and it has only acquired attention from being inserted in most of the foreign pharmacopœias.

Notwithstanding the great similarity of expressed oils in general, there can be no doubt but the oils

expreſſed from aromatic ſubſtances, retain, for the moſt part, an admixture of the aromatic matter of the ſubject. Thus *nutmegs* and *mace* yield, upon expreſſion, an oil impregnated with the flavour of the ſpices; and *an oil expreſſed from aniſeeds* has a great ſhare of the peculiar ſmell of the ſeeds. A purgative oil alſo is extracted in America from the purgative ſeeds of the *ricinus*. It does not appear that other qualities of vegetables are communicated to their expreſſed oils.

The rinds of the ſeveral varieties of oranges, lemons, and citrons, yield by a kind of expreſſion their eſſential oils almoſt pure, and nearly ſimilar to thoſe which are obtained from them by diſtillation. The eſſential oils, in which the fragrance and aromatic warmth of theſe fruits reſide, are contained in numerous little veſicles, which may be diſtinguiſhed by the naked eye, ſpread all over the ſurface of the peel. If the rind be cut in ſlices, and the ſlices ſeparately doubled or bent in different parts, and ſqueezed between the fingers, the veſicles burſt at the bending, and diſcharge the oil in a number of fine ſlender jets. A glaſs plate being ſet upright in a glaſs or porcelain veſſel, and the ſlices ſqueezed againſt the plate, the little jets unite into drops upon the plate, and trickle down into the veſſel beneath. But though this proceſs affords the true native oil, in the ſame ſtate wherein it exiſted in the ſubject, unaltered by fire or other agents, it is not practicable to advantage, unleſs where the fruit is very plentiful; as only a ſmall part of the oil it contains can thus be extracted or collected.

The oil is more perfectly ſeparated by rubbing the rind upon a lump of ſugar. The ſugar, by the inequality of its ſurface produces the effect of a raſp, in tearing open the oily veſicles: and in proportion as the veſicles are opened, the ſugar imbibes the oil. When the outward part of the lump is ſufficiently moiſtened, it is ſcraped off, and the operation continued on the freſh ſurface. The oil thus combined with the ſugar, is fit for moſt of the uſes to which it is applied in a fluid ſtate. Indeed the pure eſſential oils obtained by diſtillation, are often purpoſely mixed with ſugar, to render their uſe the more commodious.

The oily preparations acquired by infuſion and decoction ſhould have next ſucceeded; but nothing more, it has been preſumed, could be expected from them than from common oil itſelf, which has the advantage of being leſs offenſive. The mucilaginous ingredients, marſhmallow root and linſeed, in the *oil of mucilages* of the former diſpenſatories, make no addition to the virtue of the oil; *for mucilages*, as already obſerved, *are not ſoluble in oils*. Experience has not diſcovered any ſuch ſingular qualities in flowers of St. John's wort, that four ounces of them ſhould communicate any remarkable virtue to a quart of oil. Of the other herbs, the more valuable parts are diſſipated by the boiling heat: and although the remaining matter, if it were taken internally, either by itſelf, or diſſolved in watery or ſpirituous liquors, might not be deſtitute of activity; yet it can ſcarcely be ſuppoſed, when combined with a large quantity of oil, to have any material effect in external applications. The whole of theſe oils have therefore been judiciouſly omitted; as the effects likely to be produced by theſe oils, have been thought to be more certainly and ſucceſsfully anſwered by mixing with the expreſſed oil a ſuitable quantity either of the native reſins of vegetables, or of the eſſential oils and reſinous extracts artificially prepared from them.

CHAPTER III.

Infusions in different menstrua.

SECT. I.

Infusions and Decoctions in Water.

WATER, the direct menstruum of gums and salts, *extracts readily the gummy and saline parts of vegetables.* Its action, however, is not limited to these; *the resinous and oily principles being, in most vegetables, so intimately blended with the gummy and saline,* as to be in great part taken up along with them: some of *the resinous cathartics,* and *most of the aromatic herbs,* as well as *bitters and astringents,* yield to water greatest part of their smell, taste, and medicinal virtue. Even of the pure essential oils and odorous resins of vegetables, separated from the other principles, *water imbibes a part of the flavour;* and by the artificial admixture of gummy or saline matter, *the whole substance of the oil or resin* is made dissoluble in water.

Of pure salts water dissolves only certain determinate quantities (see page 42). By applying heat, it is generally enabled to take up more than it can do in the cold, and this in proportion to the degree of heat; but as the liquor cools, this additional quantity separates, and the water retains no more than it would have dissolved without heat. *With gummy substances,* on the other hand, it unites unlimitedly, dissolving more and more of them till it loses its fluidity: *heat expedites the action of the water,* but cannot enable it to take up more than it would do, by allowing it longer time, in the cold. The active parts extracted from most vegetables by water, and oils and resins made soluble in water by the artificial admixture of gum, partake of this property of pure gums, being dissoluble without saturation.

It has been imagined that vegetables in a fresh state, while their oily, resinous, and other active parts, are already blended with a watery fluid, would yield their virtues to water more freely and more plentifully, than when their native moisture has been dissipated by drying. Experience however shews, that *dry vegetables,* in general, *give out more than fresh ones,* water seeming to have little action upon them in their recent state. If, of two equal quantities of mint, one be infused fresh in water, and the other dried, and then infused in the like quantity of water for the same length of time; the infusion of the dry herb will be remarkably the stronger: and *the case appears to be the same in all the vegetables that have been tried.*

In all the preparations described in this chapter, it is to be understood that *the subjects must be moderately* and *newly dried;* unless when they are expressly ordered to be taken fresh; in which case it is to be judged that their virtues are destroyed or impaired by drying.

The *native colours* of many vegetables are communicated to water along with their medicinal matter: many impart *a colour different from their own:* and others, though of a

beautiful and deep colour themselves, *give scarcely any to the menstruum.* Of the first kind are the *yellow* and *red flowers;* of the second, the *leaves of most plants;* of the third, *some of the blue flowers*, as those of cyanus and larkspur. *Acid liquors change the infusions of most flowers*, the yellow ones excepted, *to a red;* and *alkalies*, both fixt and volatile, *to a green.*

From *animal substances* water extracts the gelatinous and nutritious parts, whence glues, jellies, broths, &c. and, along with these, it takes up principles of more activity, as *the acrid matter of cantharides.* It dissolves also *some portion of calcined calcareous earths*, both of the animal and of the mineral kingdom, but has no action on any other kind of earthy matter. — On DECOCTIONS, see Article III.

ARTICLE I. *Infusions in cold water.*

INFUSUM CARDUI.

Infusion of carduus.

Take an ounce of the dried leaves of carduus benedictus, and a pint of common water. Let them steep *for six hours*, without heat, and then filter the liquor through paper.

By this management, only the finer parts of the carduus are extracted, and the infusion proves an agreeable light bitter: *it sits easier on the stomach than any other medicine I know of the bitter kind;* whereas, by long continued maceration, or by the application of heat, the grosser and more ungrateful parts are taken up, and the liquor becomes nauseous, so as to provoke vomiting. I have often given the light infusion, with great benefit, in *weaknesses of the stomach*, where the common bitters did not agree. It may be flavoured at pleasure with aromatic materials; instead of pure water, a mixture thereof, with some grateful distilled spirituous water, as twelve ounces of common water and four of the spirituous water of orange peel, may be used for the menstruum. The little quantity of spirit contained in this compound will not considerably vary the dissolving power of the water.

Many other vegetables may be advantageously treated in the same manner. From those which are weak in virtue, rich infusions may be obtained, by returning the liquor upon fresh quantities of the subject; the water loading itself more and more with the active parts. These loaded infusions are doubtless applicable to valuable purposes in medicine, as they contain, in a small compass, the finer, more subtile, and active principles of vegetables, in a form readily miscible with the fluids of the human body.

INFUSUM MENTHÆ.

Infusion of mint.

Take half an ounce of the dry leaves of spearmint, and a pint of simple mint-water. Steep them in a close vessel, in a warm place, for four hours, and then strain out the tincture.

The distilled water of mint is impregnated with as much of the volatile parts of the herb, as water can be made to retain by distillation. By infusion, however, it still takes up more, being equally effectual as a menstruum with fresh water; hence the tincture proves very rich in the virtue of the mint. This is another useful method of obtaining strong infusions from vegetables, and it may be varied at

discretion: the distilled water of one plant may be employed as a menstruum for another.

INFUSUM CORTICIS PERUVIANI, VEL CINCHONÆ.

Infusion of Peruvian bark.

Take an ounce of Peruvian bark reduced into fine powder, and twelve ounces of water. Macerate without heat *for twenty-four hours*, occasionally shaking the vessel; then pour off the clear liquor, and pass it through a fine strainer.

The extraction of the virtues of Peruvian bark, with aqueous liquors, has hitherto been attempted by strong coction. But this drug, contrary to most other vegetables, has lately been observed *to give out more to cold than to boiling water*. In boiling, a resinous matter, containing the astringency of the bark, is hastily melted out by the heat, but not truly dissolved by the water, and hence, in cooling, it begins to separate, renders the liquor turbid, and at length settles to the bottom; whereas, *by maceration in cold water*, the *astringent* and *bitter parts are gradually extracted together*, and *the former as well as the latter are retained by the water in a state of perfect solution*. The infusion appears to be one of the best preparations of the bark *for weak stomachs*, and may be given in doses of two or three ounces, in intermitting fevers, and in other disorders where the corroborating virtues of bark are required.

AQUA PICEA.

Tar-water.

Take of

Tar, two pounds;

Water, one gallon.

Stir them strongly together with a wooden rod; and *after standing to settle for two days*, pour off the water for use.

Tar-water has been recommended to the world as a certain and safe medicine in almost all diseases; a slow yet effectual alterative *in cachexies, scurvies, chlorotic, hysterical, hypochondriacal*, and *other chronical complaints*; and a sudden remedy in acute distempers which demand immediate relief, as *pleurisies, peripneumonies*, the *small pox*, and *all kinds of fevers in general*. The medicine, though certainly far inferior to the character that has been given of it, is doubtless in many cases of considerable utility; it sensibly raises the pulse; and occasions some considerable evacuations, generally by perspiration or urine, though sometimes by stool or vomit: hence it is supposed to act by increasing the vis vitæ, and enabling nature to expel the morbific humours.

We shall here insert, from the first public recommender of this liquor (bishop Berkley) some observations on the manner of using it. "Tar-water, when right, is "not paler than French, nor deeper-coloured than Spanish white "wine, and full as clear; if there "be not a spirit very sensibly perceived in drinking, you may "conclude the tar-water is not "good. It may be drank either "cold or warm: *in colics* I take "it to be best warm. As to the "quantity, in common chronical "indispositions *a pint a day may* "*suffice, taken on an empty stomach*, "at *two or four times*, to wit, night "and morning, and about two "hours after dinner and breakfast: "more may be taken by strong "stomachs. But those who labour "under great and inveterate maladies, must drink a greater "quantity, at least a quart every "twenty-four hours: all of this "class must have much patience "and perseverance in the use of "this, as well as of all other medicines, which, though sure, must "yet in the nature of things be "slow in the cure of inveterate "chronical disorders. In acute

" cases, fevers of all kinds, it must
" be drank in bed, warm, and in
" great quantity (the fever still
" enabling the patient to drink)—
" perhaps a pint every hour, which
" I have known to work surprising
" cures. But it works so quick,
" and gives such spirits, that the
" patients often think themselves
" cured before the fever hath quite
" left them."

Infusion of tar, or *tar-water*, as it has been called, has lost much of its reputation—as it is pretty certain, that water can but take up the liquid of the tar, charged perhaps with a very small quantity of oily matter in the form of an acid soap; and as its virtues chiefly depend upon this acid, it would be better to separate this acid by distillation, and mix it occasionally with water.

AQUA CALCIS.

Simple lime-water.

Lond.

Take of quick-lime half a pound; boiling distilled water, twelve ounces. Mix, and set it aside in a covered vessel for an hour; then pour off the clear liquor, and keep it in a vessel closely stopped.

Edinb.

Take half a pound of fresh-burnt lime, put it into an earthen vessel, and gradually sprinkle upon it four ounces of water; keeping the vessel shut, while the lime grows hot, and falls into powder; when pour upon it twelve pounds of water, and mix them well together by stirring. As soon as the lime is settled, stir it again; always keeping the vessel shut during the ebullition, that the access of the air may be more effectually prevented: then let the water be filtered through paper, placed in a funnel close shut at its top; and keep it in very close vessels.

The reason of adding the water by degrees to the lime is, that when poured on at once, it reduces the external part to a kind of muddy substance or soft paste, which in some measure defends the internal part from being acted upon by the water. It does not appear that the different proportions of water, in the two above prescriptions, occasion any sensible difference in the strength of the product: the quick-lime is far from yielding all its soluble parts to either proportion; the remainder giving a strong impregnation to many fresh quantities of water, though not so strong as to the first. The caution of keeping the water in close-stopt vessels ought to be strictly attended to; for in open ones, the calcareous matter, dissolved in the liquor, soon begins to separate, and forms a white crust upon the surface. This crust is not of a saline nature, as some have imagined; but an insipid earth, no longer miscible with watery liquors.

The surface being the part to which the common air is applied, here the separation first takes place; and as long as the crust remains entire, the closeness of the texture so excludes the air, that the rest of the fluid remains impregnated with lime; but when by any means the pellicle is broken it soon sinks to the bottom, and exposes a new surface to the action of the air which occasions a new separation of the lime.

In this manner a succession of crusts and precipitations are formed, till the whole of the quick-lime, once soluble and caustic, is found at the bottom of the vessel in the state of mild insoluble earth, leaving the water perfectly insipid. These crusts and successive separations are owing to the absorption of fixed air, or aërial acid, from the atmosphere; and the

mild insoluble state of the precipitated matter to the same cause.

As the purity of common water can rarely be depended upon, the distilled water is much more eligible in making the lime-water.

For the medical properties of lime-water, see Materia Medica, article CALX VIVA.

The *aqua calcis magis*, and *minus composita*, are now thrown out from both the London and Edinburgh dispensatories, as being considered of no material utility.

ARTICLE II. *Infusions in boiling Water.*

INFUSUM AMARUM.

Bitter infusion.

Edinb.

Take of
- Gentian root, half an ounce;
- Seville orange peel, dried, one dram;
- Coriander seed, half a dram;
- Proof spirit, four ounces;
- Water, one pound.

Pour on the spirit first, and let it stand three hours, and then add the water; macerate without heat twelve hours, and strain it.

INFUSUM GENTIANÆ COMPOSITUM;

formerly

INFUSUM AMARUM SIMPLEX.

Compound infusion of Gentian.

Lond.

Take of
- Gentian sliced, one dram by weight.
- Dried outer rind of Seville orange, one dram and a half by weight.
- Outer rind of fresh lemon, half an ounce by weight.
- Boiling water, twelve ounces by measure.

Macerate for one hour, and strain.

Both these liquors are very elegant and useful bitters; the latter in particular is as agreeable as can well be contrived, the peels communicating a fine flavour, which is the only addition of which the gentian stands in need.

INFUSUM CATECHU;

vulgo

INFUSUM JAPONICUM.

Take of
- Extract of catechu, two drams and a half;
- Cinnamon, half a dram;
- Boiling water, seven ounces;
- Simple syrup, one ounce;

Digest the extract and cinnamon with the water for two hours in a close-covered vessel: afterwards strain it, and add the syrup.

The infusion is an elegant cordial restringent, and may be given in doses of from one to two ounces, in those complaints specified under the article of JAPONICA TERRA in the MATERIA MEDICA.

INFUSUM AMARUM PURGANS.

Purging bitter infusion.

Take of
- Senna,
- Yellow rind of lemon peel, fresh —each three drams;
- Gentian root,
- Yellow rind of Seville orange-peel, dry,
- Lesser cardamom seeds, freed from the husks—each half a dram;
- Boiling water, five ounces by measure.

Macerate them together; and when cold, strain off the liquor.

INFUSUM AMARUM cum SENA.

Bitter infusion with senna.

Take of
- Senna, one dram;
- Gentian root;

Sweet fennel ſeeds—each half a dram;
Boiling water, a quarter of a pint.

Infuſe them for four hours, and then ſtrain the liquor.

This infuſion may likewiſe be prepared with two, three, or more times the quantity of ſenna.

Both theſe are uſeful purging bitters. The quantities here preſcribed are intended for one doſe: the firſt is the larger, and the other the ſmaller doſe, that ſenna is uſually given in.

INFUSUM SENÆ SIMPLEX.

Simple infuſion of ſenna.

Take of
Senna, one ounce and a half by weight;
Ginger *powdered*, one dram by weight;
Boiling diſtilled water, one pint.

Macerate for one hour, in a covered veſſel; and when the liquor is cold, ſtrain.

INFUSUM SENÆ TATARISATUM;

formerly

INFUSUM SENÆ COMMUNE.

Tartarized infuſion of ſenna.

Lond.

Take of
Sena, an ounce and a half;
Cryſtals of tartar, two drams;
Coriander ſeeds, bruiſed, four drams;
Diſtilled water, one pint.

Boil the cryſtals of tartar in the water, until they are diſſolved; then pour the water, whilſt it continues boiling, upon the other ingredients.

Macerate for an hour in a covered veſſel; and when cold, ſtrain off the liquor for uſe.

In our former pharmacopœia, an alkaline ſalt was uſed in the infuſion of ſenna, inſtead of the acid one here directed. The firſt was ſuppoſed to promote the operation of the medicine, by ſuperadding a degree of purgative virtue of its own, and by enabling the water to extract ſomewhat more from the capital ingredient, than it would be capable of doing by itſelf; whilſt acids have rather a contrary effect. Experience, however, has ſufficiently ſhown that this infuſion, and the following one with lemon juice, do not fail in their intention: and in a medicine, very nauſeous to many, it is of principal conſequence to prepare it ſo, that the lighteſt and leaſt diſguſtful parts may be extracted. Alkaline ſalts increaſe the offenſiveneſs of the ſenna; whilſt cryſtals of tartar conſiderably improve the colour of the infuſion, and likewiſe render the taſte to ſome perſons leſs diſagreeable. Soluble tartar ſhould ſeem a good ingredient in theſe kinds of compoſitions, as it not only improves the taſte, but promotes the purgative virtue of the medicine; this addition alſo renders the infuſion leſs apt to gripe, or occaſion flatulencies.

Both theſe infuſions of ſenna are mildly purgative to adults in the doſe of one ounce, or one ounce and a half to two ounces. The nauſeous flavour of the ſenna is more covered in the latter;—and perhaps would be ſtill more ſo by the addition of *ſugar*.

INFUSUM SENÆ LIMONIATUM.

Infuſion of ſenna with lemon.

Take of
Senna, an ounce and a half;
Yellow rind of lemon peel, freſh, one ounce;
Lemon juice, one ounce by meaſure;
Boiling water, one pint.

Macerate them together; and when cold, ſtrain off the infuſion.

This is a very pleasant and sufficiently efficacious purge: and the most agreeable form for the exhibition of senna to such as are more than ordinarily offended with its flavour. The dose is from two ounces to four.

INFUSUM TAMARINDORUM CUM SENA.

Infusion of tamarinds with senna.

Edinb.

Take of
Tamarinds, six drams;
Crystals of tartar;
Senna—of each one dram;
Coriander seeds, half a dram;
Red candied sugar, half an ounce;
Boiling water, eight ounces.

Macerate in a close earthen vessel, which has not been vitrified with lead; stir the liquor now and then, and after it has stood four hours, strain it. It may be also with double, triple, or a greater proportion of senna.

This *infusion*, and *the tartarized infusion of senna*, are mild and useful purges, particularly the former, which is excellently suited to delicate stomachs, at the same time that it is very well calculated for febrile and other acute diseases. Sugar used along with acids, such as tamarinds, or crystals of tartar, where the acid predominates, is found very much to improve their taste; and the combination of their acid and sweet, is found to cover the taste of the senna very effectually. The aromatic also serves the same purpose.

INFUSUM RHÆI.

Infusion of rhubarb.

Edinb.

Take of
Rhubarb, sliced, half an ounce;
Boiling water, eight ounces;
Spirituous cinnamon-water, one ounce.

Macerate the rhubarb, in a glass vessel, with the boiling water for a night; then, having added the cinnamon water, strain the liquor.

This appears to be one of the best preparations of rhubarb when designed as a purgative; water extracting its virtue more effectually than either vinous or spirituous menstrua: in this respect rhubarb differs from most of the other vegetable cathartics.

INFUSUM ROSÆ;

formerly

TINCTURA ROSARUM.

Infusion of the rose.

Lond.

Take of
The dried red rose, half an ounce;
Vitriolic acid diluted, three drams;
Boiling water, two pints and a half;
Double refined sugar, one ounce and a half.

First pour the water upon the roses in a glass vessel; then add the acid, and macerate for half an hour; strain the liquor when cold, and add the sugar.

Edinb.

Take of
Red roses, dried, one ounce;
Vitriolic acid, one dram;
Boiling water, five pounds;
White sugar, two ounces.

Macerate the roses with the boiling water in an unglazed vessel, four hours; then, having poured on the acid, strain the liquor; add to it the sugar.

Some have directed the oil of vitriol to be dropt upon the roses before the water is put to them: but this method is certainly faulty, for such of the roses as this caustic liquor falls upon undiluted, will be burnt up by it, and have their texture destroyed. Others have made an infusion of the roses in water first, and then added the acid, from

an apprehenſion, that if this acid be added to the water, it would weaken its powers as a menſtruum; but, whatever the acid ſpirit will hinder the water from extracting, it muſt precipitate, if added afterwards; though in this preparation the vitriolic acid bears ſo ſmall a proportion to the water, that its effect, in this reſpect, will be very little. The infuſion ſhould be made in a glaſs or ſtone-ware veſſel, rather than a glazed earthen one; for the acid will be apt to corrode the glazing of the latter.

This tincture is of an elegant red colour, and makes a very grateful addition to juleps in *hæmorrhages*, and all caſes that require mild coolers and ſubaſtringents. It is ſometimes taken with boluſes or electuaries of the bark; and likewiſe makes a good gargle. The virtues of this infuſion are to be aſcribed chiefly, if not ſolely, to the vitriolic acid.

INFUSUM LINI.

Infuſion of linſeed.

Take of
Linſeed, whole, two ſpoonfuls;
Liquorice, ſliced, half an ounce;
Boiling water, four pints.

Let them ſtand in infuſion by the fire for ſome hours, and then ſtrain off the liquor.

An ounce of coltsfoot leaves is ſometimes added to theſe ingredients; which addition procures this medicine the title of INFUSUM PECTORALE, *pectoral infuſion*. Both infuſions are ſoft, emollient, mucilaginous liquors; and as ſuch they are directed in *defluxions of thin acrid rheums*, and *eroſions of the veſſels*. They are given to the quantity of a pint a day.

INFUSUM ANTISCORBUTICUM.

Antiſcorbutic infuſion.

Take of
Buckbean leaves, two ounces;
Curaſſao oranges, half an ounce;
Compound horſeradiſh - water, four ounces;
Common water, four pints.

Let the common water, boiling, be poured on the buckbean and orange, and ſuffered to ſtand in a cloſe veſſel for a night; then ſtrain out the liquor, and add to it the horſeradiſh-water.

This infuſion is a very uſeful, and not inelegant, *antiſcorbutic*: buckbean appears from experience to be a very efficacious herb in this intention; the aromatic material here joined to it alleviates its ill flavour, and at the ſame time promotes its virtue. A quarter of a pint of the liquor may be taken three or four times a day.

INFUSUM CEPHALICUM.

Cephalic infuſion.

Take of
Wild valerian root, two ounces;
Roſemary, or ſage, half an ounce;
Aromatic water, four ounces;
Common water, four pints.

Let the common water be poured, boiling, on the herb and root, and ſuffered to ſtand for a night in a cloſe veſſel; then ſtrain out the infuſion, and add to it the aromatic water.

This infuſion is calculated againſt *epileptic diſorders*, and *other like affections of the nervous ſyſtem*. The doſe is a quarter of a pint, to be taken twice a day.

INFUSUM ALCALINUM.

Alkaline infuſion.

Take of
Kali prepared, half an ounce;
Saffron, half a dram;
Liquorice-root, two ounces;
Boiling water, three pints.

Let them ſtand together in a warm place for eight or ten hours, and then ſtrain out the liquor for uſe.

This infuſion is of ſervice in a *lentor* or *viſcidity of the blood and*

juices, the consequence of an obstructed perspiration, and oftentimes the origin of inflammatory distempers. It *attenuates thick humours*, and *promotes the natural secretions*. It is to be taken warm, in little quantities at a time, but frequently repeated.

INFUSUM DIURETICUM.

Diuretic infusion.

Take of

Wormwood leaves, dried, half an ounce;

Kali prepared, two scruples;

Juniper water, two ounces;

Common water, twelve ounces.

Pour the common water, boiling, on the wormwood and kali; and, when grown cold, strain off the liquor, and mix with it the juniper water.

This infusion is much of the same nature with the foregoing. It is directed in *the obstructions of the viscera*, which frequently succeed a long continuance of bilious fevers, or frequent relapses into them; and which generally end in a dropsy, jaundice, or irregular intermittent. The quantity here prescribed is to be taken every day, at three doses, and a purgative occasionally interposed. If intermittent fevers return after the cure of the other disorders, they are then successfully treated by the bark.

Preparations of this kind are likewise of considerable use *in maniacal disorders*; in which, as Dr. Mead observes, evacuations by the kidneys are of greater consequence than is generally supposed; especially if the mania be of the furious kind, and accompanied with febrile heat. Alkaline salts, given in large doses, are here the most effectual diuretics.

INFUSUM PARALYTICUM.

Paralytic infusion.

Take of

Horseradish root, shaved,

Mustard seed, bruised—each four ounces;

Boiling water, four pints.

Let them steep together, in a close vessel, for twenty-four hours.

This infusion is strongly impregnated with the pungency of the mustard seed and horseradish, which by this simple process give out the whole of their virtues. Though the medicine is designed chiefly for a stimulant in *paralytic complaints*, there are several other disorders in which it may be employed to good advantage; in *scorbutic* cases, in particular, it promises to be a remedy of great utility: it generally *promotes the urinary discharge*; and, if the patient be kept warm, *perspiration*. It is taken sometimes to half a pint, twice a day.

INFUSUM CINNAMOMI.

Infusion of cinnamon.

Take two ounces of powdered cinnamon, and two pints of boiling water. Infuse them in a close vessel, in a moderate heat, for half an hour; and then filter the liquor.

This infusion is agreeably impregnated with the flavour and warmth of the spice, and may, on many occasions, supply the place of the simple cinnamon water.

ARTICLE III. *Decoctions, Fomentations, and Mucilages.*

The effect of boiling differs from that of infusion in some material particulars. One of the most obvious differences is, that as the essential oils of vegetables, in which their specific odours reside, are volatile in the heat of boiling water, they exhale in the boiling along with the watery steam, and thus are lost to the remaining decoction;

whereas both in cold and hot infusions they are preserved. Odorous substances, and those in general whose virtues depend on their volatile parts, are therefore unfit for this treatment. The soluble parts of these may, nevertheless, be united in this form with those bodies of a more fixed nature; by boiling the latter till their virtues are sufficiently extracted, and then infusing the former in this decoction.

The extraction of the virtue of the subject is usually promoted or accelerated by a boiling heat; but this rule is less general than it is commonly supposed to be. We have already observed, that Peruvian bark gives out its virtue more perfectly by cold infusion than by coction. In some cases, boiling occasions a manifest disunion of the principles of the subject. Thus, when almonds are triturated with cold water, their oil, blended with the mucilaginous or other soluble matter of the almond, unites with the water into a milky liquor called an emulsion: but on boiling them in water, the oil separates and rises to the surface; and if the most perfect emulsion be made to boil, a like separation happens.

This also appears to take place, though in a less evident manner, in boiling other sundry vegetables: thus *tobacco*, *asarum*, and *ipecacuanha*, lose their active powers by boiling; nor does it appear that this change is effected merely by the discharge of volatile parts, because it has been proved, that the distilled water of ipecacuanha was infinitely less emetic than the infusion from which it was distilled, and that the boiling liquor gradually assumes a black colour, indicating some kind of decomposition of parts. And this probably takes place in all vegetables whatever; though from their not producing such evident effects on the living body as asarum, ipecacuanha, and tobacco, they cannot be so easily discovered.

It is for the abovementioned reasons that we think many materials should be infused in cold water. This however is not always absolutely necessary, and in extemporaneous practice may often be inconvenient: we have however thought it proper to point out the advantages to be expected from this more tedious, but much more complete and elegant method.

DECOCTUM CORNU CERVI;
formerly
DECOCTUM ALBUM.
The decoction of hartshorn.
Lond.

Take of
- Calcined hartshorn, prepared, two ounces;
- Gum Arabic, six drams;
- Water, three pints.

Boil them till only two pints remain; and then strain off the liquor, constantly stirring.

This decoction, though a much weaker absorbent than the *mistura cretacea*, is much more agreeable to most people; and is used as common drink in acute diseases attended with a looseness, and where acrimonious humours abound in the primæ viæ. The gum is added in order to render the liquor slightly glutinous, and thus enable it to sustain more of the calx; which is the ingredient that the colour, but probably not the virtue, of the medicine depends upon. Calcined hartshorn has no quality from which it seems capable either of *constringing* and strengthening the vessels, giving a greater degree of consistency to *thin* fluids, or obtunding *acrimonious* humours. It *blunts* and *absorbs acid juices;* but acrimony and acidity are very different: there are few (perhaps none of the acute) disorders of adults attended with the latter; and few of in-

fants are unaccompanied therewith. Some have propoſed ſtarch as an ingredient in theſe kinds of decoctions; a ſmall quantity of this ſoft, gelatinous, farinaceous ſubſtance ſhould ſeem to be greatly preferable to the earthy calx. It may be obſerved that the water is not enabled by the boiling to diſſolve any part of the calx; and that in the decoction, the earth is only diffuſed in ſubſtance through the water, as it would be by agitation.

DECOCTUM ALTHÆÆ.

Decoction of marſhmallow root.

Edinb.

Take of

Marſhmallow root, dried, four ounces;

Raiſins of the ſun, ſtoned, two ounces;

Water, ſeven pounds.

Boil to five pounds; ſtrain the liquor; and when the feces have ſettled, pour it off.

This is intended chiefly as an emollient to be drunk of in nephritic paroxyſms; it ſoftens and relaxes the parts, frequently relieves the pain, and procures an eaſy paſſage to the ſabulous matters.

DECOCTUM JAPONICUM.

Japonic decoction.

Take of

The confectio japonica (deſcribed hereafter among the electuaries) one ounce;

Common water, a pint and a half;

Spirituous cinnamon water,

Syrup of meconium — each one ounce.

Boil the confection in the common water, till the liquor, after ſtraining, will amount to a pint; to which, while turbid, add the cinnamon water and the ſyrup.

This decoction is uſed, both in draughts and in glyſters, as an anodyne and reſtringent in fluxes. The quantity here preſcribed contains two grains and a half of opium, excluſive of the ſyrup.

DECOCTUM HORDEI COMPOSITUM;

formerly

DECOCTUM PECTORALE.

Compound decoction of barley.

Lond.

Take of decoction of

Barley, two pints;

Stoned raiſins,

Figs, ſliced — each two ounces;

Liquorice, cut and bruiſed, half an ounce;

Water, four pints.

Boil to two pints, and ſtrain.

Edinb.

Take of

Stoned raiſins of the ſun,

Barley — each one ounce;

Fat figs, in number four;

Florentine orris root,

Liquorice,

Coltsfoot flowers — each half an ounce;

Water, ſix pints.

Boil the water with the raiſins, barley, and figs, till only four pints remain; adding, towards the end, the other ingredients; then ſtrain out the liquor for uſe.

Both theſe decoctions are uſeful *ſoft pectorals;* and very agreeable to the palate, particularly the firſt. They are good auxiliaries in *ſharp defluxions on the breaſt and lungs*, and have ſometimes done ſervice by themſelves. They may be drunk at pleaſure, and employed for the ſame purpoſes as the *decoctum althææ.*

DECOCTUM HORDEI;

formerly

AQUA HORDEATA;

Decoction of barley.

Lond.

Take of

Pearl barley, two ounces;

Diſtilled water, four pints.

Firſt waſh the barley from the impurities with cold water; then

boil it a little with about half a pint of fresh water. Throw away this; then add the distilled water boiling; and boil it again till half the water is wasted; then strain. —— The only difference betwixt this and that of the Edinburgh college, is the addition of one pint more water, and not distilled.

This liquor is to be drunk freely, as a diluter, in fevers and other disorders. Hence it is of consequence that it should be prepared so as to be as elegant and agreeable as possible; for this reason, it was inserted in the Pharmacopœia, and the several circumstances which contribute to its elegance set down; if any one of them be omitted, the beverage will be less grateful. However trivial medicines of this class may appear to be, they are of greater importance, in the cure of acute diseases, than many more laborious preparations.

DECOCTUM LIGNORUM.

Decoction of the woods.

Edinb.

Take of

Guaiacum saw-dust, three ounces;
Raisins of the sun, stoned, two ounces;
Sassafras wood, shaved,
Liquorice, sliced — each an ounce;
Water, ten pounds.

Boil the guaiacum and raisins with the water over a gentle fire to the consumption of one half; adding, towards the end, the sassafras and liquorice. Strain out the liquor, and, having suffered it to rest for some time, pour off the clear from the feces.

This decoction is very well contrived, and, if its use be duly continued, will do great service in some *cutaneous diseases, foulness of the blood and juices*, and *some disorders of the breast;* particularly in cold phlegmatic habits. It may be taken by itself, in the quantity of a quarter of a pint, two or three times a day, or used as an assistant in a course of mercurial or antimonial alteratives; the patient in either case keeping warm, in order to promote the operation of the medicine.

DECOCTUM ANTIHECTICUM.

Antihectic decoction.

Take of

Comfry root,
Eryngo root, each half an ounce;
Conserve of roses, two ounces;
Dulcified spirit of vitriol, forty drops;
Water, three pints.

Boil the water with the roots and the conserve, till one pint is wasted; then strain off the remaining liquor, and add to it the dulcified spirit.

This decoction is usually given in *hectic cases*, where *thin acrimonious humours abound*, and *in beginning consumptions*. The dose is a quarter of a pint, to be taken two or three times a day.

DECOCTUM ANTIFEBRILE.

Antifebrile decoction.

Take of

Virginian snake-root, bruised,
Peruvian bark, in powder—each three drams;
Water, one pint.

Boil them to half a pint; and having strained off the liquor, mix with it, of

Spirituous cinnamon water, an ounce and a half;
Syrup of clove july-flowers, two drams.

In the putrid malignant fever, arising from foul air in crowded hospitals and jails, this medicine has been given with remarkable success. In the low state of this dangerous disease, when the pulse,

before quick, begins to ſink, the ſtupor to increaſe, and petechiæ to appear; it promiſes to be a very uſeful remedy for ſupporting the *vis vitæ*, promoting a critical diaphoreſis, and correcting the putrid humours. Four ſpoonfuls of the decoction are to be taken every four or ſix hours; and moderate quantities of wine or cordial boluſes, with volatile ſalts, interpoſed at proper intervals.

DECOCTUM FEBRIFUGUM.

A febrifuge decoction.

Take of
Camomile flowers, dried, two ounces;
Kali prepared, two drams;
Water, three pints.

Boil the water with the camomile flowers, till one pint of the liquor be waſted; then ſtrain out the remaining decoction, and diſſolve in it the alkaline ſalt.

In a *thick viſcid ſtate of the blood* and *juices*, and *obſtructions of the abdominal viſcera*, a quarter of a pint of the decoction, taken three or four times a day, has ſometimes removed intermittent fevers, after the Peruvian bark had been tried in vain. It is nearly ſimilar to the alkaline and diuretic infuſions deſcribed above.

APOZEMA APERIENS.

Aperient apozem.

Take of
Rhubarb,
Madder—each three drams;
Kali, two drams;
Water, three pints.

Boil them together for an hour, and having ſtrained out the decoction, add to it three ounces of ſyrup of ginger.

This promiſes *to be a very powerful aperient and attenuating medicine*, of great ſervice in *icterical* and *hydropic caſes*. The doſe is three ounces, which may be repeated thrice a day.

DECOCTUM ASTRINGENS.

Aſtringent decoction.

Take of
Tormentil root, one ounce;
Cinnamon, three drams;
Pomegranate peel,
Plantane leaves—each half an ounce;
Syrup of dry roſes, one ounce;
Water, three pints.

Boil the water with the tormentil, granate peel, and plantane, till one pint be waſted, adding the cinnamon towards the end: then ſtrain off the decoction, and mix with it the ſyrup.

The title of this preparation ſufficiently expreſſes its virtues. The doſe, in fluxes where the morbid matter has been evacuated, and aſtringency is the only indication, is from one to four ounces, three or four times a day.

DECOCTUM BARDANÆ.

Decoction of burdock.

Take of
Burdock roots, two ounces;
Vitriolated tartar, one dram;
Water, three pints.

Boil the water with the roots, ſo long, that the liquor, when ſtrained, may amount only to a quart; to which add the vitriolated tartar.

This decoction is drunk to the quantity of a pint a day, as a *mild aperient*, *diuretic*, and *ſweetener*, in *ſcorbutic* and *rheumatic* complaints.

DECOCTUM HÆMATOXYLI *ſeu* CAMPECHENSE.

Decoction of logwood.

Take of
Shavings of logwood, three ounces;
Cinnamon, two drams;
Water, four pints.

Boil the water with the logwood till half the liquor be waſted, adding the cinnamon towards the end of the boiling; then ſtrain out the decoction for uſe.

This is an agreeable *mild restringent*, in *diarrhœas* and *other fluxes*, where stronger astringents would be improper or unsafe. It is given in the hospitals in doses of a quarter of a pint, three or four times a day. It generally tinges the stools red, which has occasioned some to be alarmed, as if the colour proceeded from a discharge of blood. The patient therefore is to be cautioned against any surprize on that account.

DECOCTUM DIURETICUM.

Diuretic decoction.

Take of 1.
- Parsley or fennel roots, one ounce:
- Wild carrot seeds, three drams;
- Pellitory of the wall, half an ounce;
- Raisins, two ounces;
- Nitre, one dram;
- Water, three pints.

Boil the water with the roots, seeds, pellitory, and raisins, so long, that there may be only two pints of liquor after straining; in which dissolve the nitre.

Take of 2.
- Grass roots, two ounces;
- Sorrel or wood-sorrel leaves, one handful;
- Tamarinds, one ounce and a half;
- Nitre, two drams;
- Barley-water, three pints.

Boil the roots in the barley-water, till one pint of the liquor be wasted, adding towards the end the sorrel, tamarinds, and nitre: then strain out the apozem for use.

Take of 3.
- Marshmallow roots, fresh, one pound;
- Fennel roots, half a pound;
- Nitre, half an ounce;
- Water, one gallon.

Boil the water with the roots, till one-fourth of the liquor be wasted; then strain off the remaining decoction, and dissolve in it the nitre.

These cooling aperient liquors are used, like the nephritic decoction already described, as common drink for *promoting urine in nephritic diseases*. They may be taken with safety, and often with good effect, in inflammatory cases, where the hot stimulating diuretics would be manifestly prejudicial.

DECOCTUM CINCHONÆ.

Decoction of Peruvian bark.

Lond.

Take of
- Peruvian bark, in powder, one ounce;
- Water, one pint and three ounces.

Boil them together for ten minutes in a covered vessel, and strain the liquor whilst hot.

The propriety of boiling the bark in a close vessel, and for so short a time, to those who have observed the peculiar odour exhaled, added to what Beaumé has said of its decomposition and destruction by long boiling, will appear evident.

This decoction should be passed only through a coarse strainer, and drunk whilst turbid: if suffered to stand till clear, the more efficacious parts of the bark will subside. We have formerly observed, that the virtues of this drug consist chiefly in its resinous substance, which, though it may be totally melted out by the heat of boiling water, remains only partially suspended in that menstruum.

DECOCTUM GEOFFRÆÆ.

Decoction of the cabbage-bark-tree.

Edin.

DECOCTUM MEZEREI.

Decoction of spurge olive.

Edin.

See GEOFFREÆA and MEZEREUM, in the Materia Medica.

DECOCTUM HELLEBORI ALBI.

Decoction of white hellebore.

Lond.

Take of

White hellebore, powdered, one ounce;

Diſtilled water, two pints;

Rectified ſpirit of wine, two ounces by weight.

Boil the hellebore in the water to a pint; and when the liquor is cold and ſtrained, add the ſpirit.

In *deſœdations of the ſkin*, particularly the *tinea capitis*, it is conſidered an efficacious remedy; but where the incruſtations are entirely removed, leaving a tender ſkin, the ſolution ſhould be diluted.

DECOCTUM SARSAPARILLÆ.

Decoction of ſarſaparilla.

Lond.

Take of

Sarſaparilla, ſliced, ſix ounces;

Diſtilled water, eight pints.

Macerate the ſarſaparilla with a heat of about 195°; then take it out and bruiſe it, and again macerate in the liquor for two hours. Then boil the liquor to four pints, preſs it out, and ſtrain.

By this proceſs the medical powers of the ſarſaparilla are fully extracted: for which ſee Materia Medica, article SARSAPARILLA; and its diaphoretic effect is ſaid to be obtained more readily when it is exhibited in form of decoction, than under any other. When given in venereal complaints after mercury has failed, two pints, in divided doſes, has been given every twenty-four hours.

DECOCTUM SARSAPARILLÆ COMPOSITUM.

Compound decoction of ſarſaparilla.

Lond.

Take of

Sarſaparilla, cut and bruiſed, ſix ounces;

Bark of ſaſſafras root,

Shavings of guaiacum,

Liquorice, bruiſed — each one ounce;

Bark of the root of mezereon, three drams;

Diſtilled water, ten pints.

Macerate with a gentle heat for ſix hours, then boil down to five pints, and towards the end of the boiling add the bark of the root of mezereon; and ſtrain the liquor.

This decoction is given from four to eight ounces four times a day, in venereal nodes, &c. See Materia Medica, article MEZEREI RADICIS CORTEX.—A medicine which had a conſiderable ſale under the name of the *Liſbon Diet-Drink*, is ſaid to be a decoction of three ounces of ſarſaparilla, half an ounce of mezereon, and two ounces of crude antimony, with liquorice, &c. boiled in ten pints to five of water. The efficacy of this medicine chiefly, it is ſuppoſed, depends upon the mezereon; and it is thought every advantage may be obtained from a ſimple decoction of guaiacum, bardana, or althæa, impregnated in the manner above deſcribed with the mezereon.

DECOCTUM SENEKÆ.

Decoction of ſeneka.

Take of

Seneka, rattle-ſnake root, one ounce;

Water, two pounds.

Boil to one pound, and ſtrain.

The virtues of this decoction will be eaſily underſtood by thoſe of the root from which it is prepared. See Materia Medica, article SENEKA. The doſe, in *hydropic caſes*, and *rheumatic* or *arthritic complaints*, is two ounces, to be repeated three or four times a day, according to its effect.

DECOCTUM CATECHU TERRÆ JAPONICÆ.

Decoction of Japan earth.

Take of

Japan earth, two drams;

Spirituous cinnamon water,
Syrup of quinces — each two ounces;
Common water, one pint.

Boil the common water with the Japan earth, till about one-fourth of the liquor be wasted; then suffer the decoction to settle, and having poured off the clear part, add to it the spirituous water and the syrup.

This decoction is a very agreeable and useful medicine *in fluxes* that are *not critical* or *symptomatic*, and in *a weak lax state of the intestines*. A spoonful or two may be taken every hour, or oftener: thus managed, it produces much better effects than if larger doses be given at once.

DECOCTUM PRO FOMENTO,
formerly
FOTUS COMMUNIS.
Decoction for fomentations.
Lond.

Take of
Abrotanum leaves,
Sea wormwood tops,
Camomile flowers—each, dried, one ounce;
Bay leaves, dried, half an ounce;
Water, six pints.

Boil them a little, and strain.

It is left to the choice of the apothecary to take either the male or female *abrotanum*, that is southernwood, or lavender-cotton: which, though differing from one another in some respects, may be looked upon as similar with regard to the purposes for which this composition is intended: nor indeed can either of them give much assistance to camomile flowers and wormwood. The use of this decoction is expressed in its title. Spirit of wine, which is commonly added in fomentations, is left to be directed by the prescriber, in such quantity as particular cases may require.

DECOCTUM COMMUNE pro CLYSTERE.
The common decoction for glysters.
Lond.

Take of
Mallow leaves, dried, one ounce;
Camomile flowers, dried,
Sweet fennel seeds — each half an ounce;
Water, one pint.

Boil them together, and strain out the decoction for use.

The title of this decoction sufficiently expresses its use, as the basis of glysters. The ingredients should be very lightly boiled, at least *the camomile flowers* and *fennel seeds* not put in till towards the end, a part of the virtue of these being soon lost by boiling.

The *Decoctum pro enemate* of the present London Pharmacopœia omits the fennel seeds.

DECOCTUM CHAMŒMELI,
vulgo
DECOCTUM COMMUNE.
Decoction of camomile.
Edinb.

Take of
Camomile flowers, one ounce;
Coriander seed, half an ounce;
Water, two quarts.

Make them just boil, and then strain out the liquor. The virtues of the ingredients may be sufficiently extracted also, by infusing them for some hours in the boiling water.

This decoction is intended to answer the purposes of both the foregoing. It is less loaded with the ingredients than either, but not perhaps for that reason the less useful.

DECOCTUM ULMI.
Decoction of elm.
Lond.

Take of
Fresh elm, the inner bark, bruised, four ounces;
Distilled water, four pints.

Boil to two pints, and strain.

This is given, in cutaneous eruptions, in doses of from four to

eight ounces twice a day. For its medical virtues, in other complaints alſo, ſee Materia Medica, article ULMI CORTEX INTERIOR.

FOTUS ANODYNUS.

Anodyne fomentation.

Take of

Garden poppy heads, one ounce;
Elder flowers, half an ounce;
Water, three pints.

Boil them till one pint be waſted, and then ſtrain out the liquor for uſe.

This fomentation is preſcribed for *tumefied* and *inflamed parts*, to abate *the inflammation* and *pain*. Whether the opiate matter in the poppy heads contribute much to this intention, may be queſtioned; as the effects of the compoſition may be attributed perhaps more to the warm fluid ſoftening and relaxing the ſkin, than to the particular qualities of the matters with which it is impregnated.

FOTUS AROMATICUS.

Aromatic fomentation.

Take of

Cloves,
Mace — each one dram;
Red wine, one pint.

Boil them a little, and ſtrain off the liquor.

This preparation is intended not only as a mere topical application for external complaints, but likewiſe for *relieving the internal parts. The pains of the bowels which accompany dyſenteries* and *diarrhœas*, *flatulent colics*, *uneaſineſs at the ſtomach*, and *reachings to vomit*, are frequently abated by fomenting the abdomen and region of the ſtomach with the warm liquor.

FOTUS ROBORANS.

Strengthening fomentation.

Take of

Oak bark, one ounce;
Granate peel, half an ounce;
Alum, two drams;
Smith's forge water (that is, water in which red-hot iron has been ſeveral times quenched) three pints.

Boil the water, with the oak bark and granate peel, to the conſumption of one-third; then ſtrain the remaining decoction, and diſſolve in it the alum.

This is a ſtrong aſtringent liquor, in which intention it is directed both as a fomentation *for ſtrengthening relaxed parts*, and *as an injection in the fluor albus.*

JUS VIPERINUM.

Viper-broth.

Take the middle-ſized viper, freed from the head, ſkin, and inteſtines; and two pints of water. Boil them to a pint and a half; then remove the veſſel from the fire, and, when the liquor is grown cold, let the fat, which congeals upon the ſurface, if the viper was freſh, be taken off. Into this broth, whilſt warm, put a pullet of a moderate ſize, drawn and freed from the ſkin and all the fat, but with the fleſh entire. Set the veſſel on the fire again, that the liquor may boil; then remove it from the fire, take out the chicken, and immediately chop its fleſh into little pieces: put theſe into the liquor again, ſet it over the fire, and as ſoon as it boils up, pour out the broth, firſt carefully taking off the ſcum.

Here all the circumſtances ſubſervient to the perfection of the broth, are carefully ſet down: and *even plain chicken-broth, for the uſe of the ſick, ought to be made in a ſimilar manner.*

This ſeems to be one of the beſt preparations of the viper; all the benefit that can be expected from that animal being by this means there obtained. It is very *nutritious* and *reſtorative food:* continued for a length of time, it has ſometimes

done ſervice in *leprous* and *other obſtinate cutaneous diſeaſes*. The dried fleſh of the vipers, brought from abroad, is not at all ſuperior to the freſh vipers of our own country. The wines and tincture of the animal, probably, have little virtue. The volatile ſalt, however ſtrongly recommended by ſome, does not appear to differ from that producible from every animal ſubſtance.

MUCILAGO AMYLI.

Mucilage of Starch.

Lond. Edinb.

Take of
Starch, three drams;
Diſtilled water, one pint.
Rub the ſtarch, by degrees adding the diſtilled water, and then boil a little. The college of Edinburgh order four drams of ſtarch to a pint.

MUCILAGO GUMMI ARABICI.

Mucilage of gum arabic.

Lond.

Take of
Gum arabic, four ounces;
Boiling diſtilled water, eight ounces by meaſure.
Rub the gum with the water until it is diſſolved.

Edinb.

Take of
Gum arabic, in powder;
Boiling water —— each equal weights.
Digeſt, and frequently ſtir them, till the gum is diſſolved; then ſtrain it through linen to clear it from impurities.

This mucilage is very uſeful in many operations in pharmacy, particularly for uniting oleaginous and aqueous ſubſtances together. It is alſo a good demulcent, and may be given largely where ſuch remedies are wanted.

MUCILAGO GUMMI TRAGACANTHÆ.

Mucilage of gum tragacanth.

Lond.

Take of
Tragacanth, powdered, half an ounce;
Diſtilled water, ten ounces.
Macerate with a gentle heat until the tragacanth is diſſolved.

Edinb.

Take of
Gum tragacanth, powdered, one ounce.
Boiling water, eight ounces.
Macerate for twenty-four hours; then mix, diligently rubbing them that the gum may be diſſolved, and preſs the mucilage through a linen cloth.

The preference is given to this mucilage in the formation of troches, and ſuch like preparations, becauſe the gum is more adheſive than the baſes of the foregoing mucilages; and it is alſo preferable to them where much tenacity is required, as in the ſuſpenſion of mercury and other ponderous bodies.

MUCILAGO SEMINUM CYDONII MALI.

Mucilage of quince ſeeds.

Lond.

Take of
Quince ſeeds, one dram;
Water, eight ounces by meaſure.
Boil them over a ſlow fire for ten minutes; then ſtrain through linen.

This is a pleaſant ſoft mucilage, of a ſomewhat ſweetiſh taſte, and a light agreeable ſmell: in theſe reſpects, and in its eaſy ſolubility in water, it differs from the mucilage of gum tragacanth, to which ſome have ſuppoſed it ſimilar. It has another difference, to its diſadvantage, being apt to grow mouldy in keeping.

GELATINA CORNU CERVI.

Jelly of hartſhorn.

Take of
Hartſhorn ſhavings, half a pound;
Water, three quarts;
White ſugar, ſix ounces;

Mountain wine, a quarter of a pint;
Orange (or lemon) juice, one ounce.

Boil the hartshorn with the water by a gentle heat in a glazed earthen vessel, till two parts are wasted; strain out the remaining liquor, add to it the other ingredients, and boil the whole over a gentle fire to the consistence of a soft jelly.

SECT. II.

WHEYS.

SERUM SOLUTIVUM.
Laxative whey.

TAKE of
Damask rose buds, fresh, one ounce;
Whey, two pints.

Steep them together for a night, and then strain out the whey for use.

Whey, thus impregnated with the virtues of the damask rose, *operates very gently by stool*, and for this purpose is held by some in great esteem. Its action may be quickened, and its taste rendered more agreeable, by the addition of a suitable proportion of crystals of tartar.

SERUM SINAPEOS.
Mustard whey.

Take of
Mustard seed, bruised, three spoonfuls;
Cows milk, two pints.

Set the milk over the fire to boil, and add to it the mustard seed; that a curd may be formed, from which the whey is to be carefully separated.

This is not an inelegant form for the exhibition of mustard seed; its pungency, and medicinal virtues depending thereon, being in great measure communicated to the whey.

SERUM ALUMINOSUM.
Alum whey.
Lond.

Take of
Cows milk, one pint;
Alum, in powder, two drams.

Boil them till the milk be curdled, and then carefully separate the whey.

This medicine is a strong, though not very grateful, *astringent*. It is given in *immoderate uterine fluxes*, and sometimes in *the diabetes*, in which last intention it is recommended by Dr. Mead. The dose is a quarter of a pint three or four times a day. It has been recommended also in *intermittent fevers*, the quantity above prescribed to be taken before the approach of a fit, divided into different doses: but, in this disorder, great caution is requisite in the use of so strong an astringent.

SERUM SCORBUTICUM.
Scorbutic whey.
Lond.

Take of
Cows milk, one pint;
Scorbutic juices, a quarter of a pint.

Boil them till the milk is curdled, and then carefully separate the whey.

This whey may be uſed as common drink *in ſcorbutic caſes*: the quantity above directed, at leaſt, ought to be taken every day, if any conſiderable effect be expected from it.

SECT. III.

VINEGARS.

VINEGAR extracts the virtues of ſeveral medicinal ſubſtances in tolerable perfection; but at the ſame time its acidity makes a notable alteration in them, or ſuperadds virtue of a different kind; and hence it is more rarely employed in this intention, than purely aqueous or ſpirituous menſtrua. Some drugs, however, vinegar, for particular purpoſes, excellently aſſiſts, or coincides with, as ſquills, garlick, ammoniacum, and others: and, in many caſes where this acid is itſelf principally depended on, it may be advantageouſly impregnated with the flavour of certain vegetables; moſt of the odoriferous flowers impart to it their fragrance, together with a fine purpliſh or red colour; violets, for inſtance, if freſh parcels of them be infuſed in vinegar in the cold for a little time, communicate to the liquor a pleaſant flavour, and deep purpliſh red colour. Vinegar, like other acids, added to watery infuſions or decoctions, generally precipitates a part of what the water had diſſolved.

ACETUM COLCHICI.

Vinegar of colchicum, or meadow-ſaffron.

Take of
The recent root of colchicum, cut into ſlices, one ounce;
Vinegar, one pound.
Macerate with a gentle heat for two days; then, after ſlight expreſſion, ſtrain.

This is ſeldom kept in the ſhops, and only prepared in common for forming the ſyrup or oxymel which bear its name; though we ſhould ſuppoſe that in this form it might be employed with advantage.

ACETUM ROSACEUM.

Vinegar of Roſes.

Take of
Red roſes dried, one pound;
Strong vinegar, one gallon.
Expoſe them to the ſun in a cloſe veſſel, for forty days; and then ſtrain off the liquor.

This is ſcarce otherwiſe made uſe of than for embrocating the head and temples in ſome kinds of head-ach, &c. in which it has now and then been of ſervice.—It has alſo been uſed in certain caſes of ophthalmia; but, in general, it requires dilution before application to that delicate organ.

ACETUM SCILLÆ.

Vinegar of ſquills.
Lond.

Take of
Freſh-dried ſquills, one pound;
Vinegar, ſix pints;
Proof ſpirit of wine, half a pint.
Macerate the ſquills in the vinegar with a gentle heat, in a glaſs veſſel, for four and twenty hours; preſs out the liquor, and ſet it by till the feces have ſubſided; then pour it off, and add ſpirit.

It ſhould ſeem moſt convenient to add the ſpirit before the vinegar is decanted; for by theſe means, the purification is accelerated and rendered more perfect, and the liquor prevented from growing foul a ſecond time, which it is apt to do upon the affuſion of the ſpirit, however carefully it may have been depurated before.

Edinb.

Take of
- The root of dried ſquills, two ounces;
- Diſtilled vinegar, two pounds and a half;
- Rectified ſpirit of wine, three ounces.

Macerate the ſquills with the vinegar eight days, and expreſs the vinegar, to which add the ſpirit; and when the feces are ſubſided, pour off the liquor.

Vinegar of ſquills is a medicine of great antiquity. We find in a treatiſe attributed to Galen, an account of its preparation, and of many particular virtues then aſcribed to it. It is a *very powerful ſtimulant*, *aperient*, and *attenuant of tenacious juices:* and hence is frequently uſed, with ſucceſs, in *diſorders of the breaſt occaſioned by a load of thick viſcid phlegm*; for *promoting urine in hydropic caſes*, &c. The doſe of this medicine is from *a dram to half an ounce:* where *crudities abound in the firſt paſſages*, it may be given at firſt in a larger doſe, to evacuate them by vomit. It is moſt conveniently exhibited along with cinnamon or other agreeable aromatic waters, which prevent the nauſea it would otherwiſe, even in ſmall doſes, be apt to occaſion.

ACETUM PROPHYLACTICUM.

Prophylactic vinegar.

Paris.

Take of
- Freſh tops of common wormwood,
- Roman wormwood,
- Roſemary,
- Sage,
- Mint,
- Rue—each one ounce and a half;
- Lavender flowers, dried, two ounces;
- Garlick,
- Calamus aromaticus,
- Cinnamon,
- Cloves,
- Nutmegs—each two drams;
- Strong vinegar, eight pints.

Digeſt them, by the heat of the ſun or a ſand-bath, in a matraſs cloſely ſtopt, for twelve days; then ſtrongly preſs out and ſtrain the liquor; and having afterwards filtered it, add half an ounce of camphor diſſolved in ſpirit of wine.

This compoſition is deſigned, as its title expreſſes, for an antipeſtilential. It is ſaid that during the plague at Marſeilles four perſons, by the uſe of this preſervative, attended, unhurt, multitudes of thoſe who were infected; that under colour of thoſe ſervices they robbed both the ſick and the dead; and that one of them being afterwards apprehended, ſaved himſelf from the gallows by diſcovering the remedy. The preparation is hence called *Vinaigre des quatre voleurs*, the vinegar of the four thieves. It is not to be doubted, that vinegar impregnated with antiſeptic vegetables, will contribute greatly to prevent the effects of contagious air.

The following will anſwer all the purpoſes of this compoſition, and is much more elegant.

ACETUM AROMATICUM.

Aromatic vinegar.

Take the tops of roſemary,
- Leaves of ſage,—of each four ounces;
- Flowers of lavender, two ounces;
- Cloves, two drams;
- Vinegar, eight pounds.

Macerate for four hours, expreſs the liquor, and ſtrain it.

ACETUM THERIACALE.

Treacle-vinegar.

Edinb.

Take of

Edinburgh theriaca, deſcribed hereafter among the electuaries, one pound;

Strong vinegar, four pints.

Digeſt them together, in a very gentle heat for three days; and then ſtrain out the vinegar for uſe.

This medicine has been greatly celebrated in acute and contagious diſeaſes, as a ſudorific and alexipharmic. Some have choſen to employ the vinegar as a vehicle, rather than as a menſtruum, for the theriaca; in either caſe, it is indiſputably, for ſundry purpoſes, an uſeful addition. To half an ounce by meaſure of the compoſition here preſcribed, there goes ſomewhat more than half a grain of opium; though it does not appear that the medicine has all the effect which might be expected from that article.

ACETUM LITHARGYRITIS.

Vinegar of litharge.

Edinb.

Take of

Litharge, triturated, half a pound;

Strong vinegar, two pounds.

Digeſt them together, frequently ſtirring the mixture with a wooden rod, till the colour of blue be not changed by the vinegar; preſerve for uſe the clear liquor which is above the ſediment.

This liquor is of the ſame nature with ſolutions of *Ceruſſa acetata*, of which hereafter. It is only uſed externally, as a coſmetic, againſt cutaneous eruptions, redneſs, inflammations, &c. But even here it is thought to be not void of danger; and it has been alleged that there are examples of its continued uſe having occaſioned ſundry ill conſequences. Of this, however, there ſeems to be much doubt; as the London college have received a ſimilar compoſition, differing only in the proportions, into their Pharmacopœia.

SECT. IV.

Medicated Wines.

THE original intention of medicated wines was, that medicines, which were to be continued for a length of time, might be taken in the moſt familiar and agreeable form; by theſe means, a courſe of remedies was complied with, notwithſtanding the repugnance and averſion which the ſick often manifeſt to thoſe directly furniſhed from the ſhops: and hence the inferior ſort of people had their medicated ales. Nevertheleſs, as vinous liquors excellently extract the virtues of ſeveral ſimples, and are not ill fitted for keeping, they have been employed as officinal menſtrua alſo, and ſubſtances of the greateſt efficacy are truſted in this form. As compounds of water and inflammable ſpirit, they take up ſuch parts of vegetables and animals as are ſoluble in thoſe liquors; though moſt of them abound at the ſame time with a mucilaginous or viſcous

ſubſtance, which renders them leſs effectual menſtrua than purer mixtures of water and ſpirit. They contain likewiſe a ſubtile acid, which ſomewhat further obſtructs their action on certain vegetable and animal matters, but enables them, in proportion to its quantity, to diſſolve ſome bodies of the metallic kind, and thus impregnate themſelves with the corroborating virtues of ſteel, the alterative and emetic powers of antimony, and the noxious qualities of lead.

To all the medicated wines, after they have been ſtrained, you may add about one-twentieth of their quantity of proof ſpirit, to preſerve them from fermentation. They may be conveniently kept in the ſame kind of glaſs bottles that wines generally are for common uſes, which ſhould likewiſe be corked with the ſame care.

VINUM ALOES.

Wine of aloes.

Lond.

Take of
- Socotorine aloes, eight ounces;
- White canella, two ounces;
- Spaniſh white wine, ſix pints;
- Proof ſpirit of wine, two pints.

Powder the aloes and canella ſeparately; mix them, and pour on the wine; digeſt for fourteen days, now and then ſhaking them; and afterwards ſtrain. It will be proper to mix a little clean white ſand with the powder, to prevent the moiſtened aloes from ſticking together.

VINUM ALOETICUM;

vulgo

TINCTURA SACRA.

Aloëtic wine, or Sacred tincture.

Edin.

Take of
- Socotorine aloes, one ounce;
- Leſſer cardamom ſeeds,
- Ginger,—each one dram;
- Spaniſh white wine, two pounds.

Digeſt for ſeven days, ſtirring it now and then; afterwards ſtrain.

Both theſe have been long in uſe, not only as cathartics for cleanſing the *primæ viæ* in doſes, from ſix drams to an ounce and an half, or more, in languid phlegmatic habits; but for ſtimulating the ſolids, warming the habit, promoting the catamenia and hæmorrhoidal flux; and by giving them in ſmall doſes at proper intervals, they produce excellent effects as alterants; proving at length purgative, and relieving coſtiveneſs for a longer continuance than any other medicine.

VINUM AMARUM,

ſive

GENTIANÆ COMPOSITUM.

Bitter wine.

Edinb.

Take of
- Gentian root, half an ounce;
- Peruvian bark, one ounce;
- Seville orange-peel, dried, two drams;
- Canella alba, one dram;
- Proof ſpirit, four ounces;
- Spaniſh white wine, two pounds and a half.

Firſt pour on the ſpirit, and after twenty-four hours add the wine; then macerate for three days, and ſtrain.

This is a very uſeful and elegant ſtomachic medicine, as the wine is fully capable of extracting all the virtues of the different ingredients.

VINUM ANTIMONIALE.

Antimonial Wine.

Lond.

Take of
- Vitrified antimony, powdered, one ounce;
- Spaniſh white wine, a pint and a half.

Digeſt for twelve days, frequently ſtraining the wine through paper.

Edinb.

Take of
- Glaſs of antimony, powdered, one ounce;

Spanish white wine, fifteen ounces.

Macerate for three days, stirring them now and then; and afterwards strain the liquor through paper.

However carefully the settling and decantation be performed, the filtration of the wine through paper appears to be necessary, lest some of the finer parts of the glass should chance to remain suspended in substance. It is not here, as in most other wines and tinctures, where the matter left undissolved by the menstruum is of little consequence: the antimonial glass, after the action of the wine, continues as virulent as ever, and capable of impregnating fresh parcels of the liquor as strongly as the first, and this, in appearance, inexhaustibly; yet, after thirty repeated infusions, it has been found scarce sensibly diminished in weight.

The antimonial wine possesses the whole virtues of that mineral, and may be so dosed and managed, as to perform all that can be effected by any antimonial preparation: with this advantage, that, as the active part of the antimony is here already dissolved and rendered miscible with the animal fluids, its operation is more certain. Given *from ten to fifty or sixty drops*, it acts generally *as an alterative* and *diaphoretic;* in larger doses, *as a diuretic* and *cathartic:* whilst three or four drams prove for the most part *violently emetic*. It has been chiefly used in this last intention, in some *maniacal* and *apoplectic cases*: and hence gained the name of emetic wine.

VINUM ANTIMONII TARTARISATI.

Wine of tartarised antimony.

Lond.

Take of

Tartarised antimony, two scruples;

Boiling distilled water, two ounces by measure;

Spanish white wine, eight ounces.

Dissolve the tartarised antimony in boiling water, and then add the wine.

Here appears a very considerable difference in the proportion of the active ingredients in each of these last compositions. In that of the London college, each ounce of the menstruum contains four grains. Of the Edinburgh, the same quantity of the menstruum only two. Hence this should, in prescribing, be attended to; for one ounce of the Edinburgh wine may be employed for procuring full vomiting, whilst the same quantity of the London would be much too powerful, and might produce unpleasant effects.

The *vinum antimonii*, and the *vinum antimonii tartarisati*, are often substituted one for the other; but the latter will, in many very common cases of extemporaneous prescription, be decomposed, where the first would not be liable to any such objection.

* VINUM E TARTARO ANTIMONIALI.

Emetic tartar-wine.

Ed'nb.

This is made by dissolving twenty-four grains of emetic tartar in one pound of white wine.

VINUM FERRI.

Steel-wine.

Lond.

Take of

Iron filings, four ounces;

Spanish white wine, four pints.

Macerate without heat for a month, frequently shaking it; and strain:

or

Take of

Iron filings, three ounces;

Cochineal, half a dram;

Rhenish wine, two pints.

Digest them together for twenty days, frequently shaking the vessel; and then pass the wine through a filter.

Both these wines are sufficiently

elegant ones. Rhenish is an excellent menstruum for steel, and dissolves a considerable quantity of it; and the cochineal imparts a fine colour.

Steel wine is a very useful preparation of this metal, and frequently exhibited in *chlorotic* and other *indispositions* where chalybeates are proper. Boerhaave recommends it as one of the noblest medicines he was acquainted with, for promoting that power in the body by which blood is made, when weakened by a bare debility of the over-relaxed solids, and an indolent, cold, aqueous indisposition of the juices: for in this case, says he, no virtue of any vegetable or animal substance, no diet nor regimen can effect that which is effected by iron: but *it proves hurtful, where the vital powers are already too strong*, whether this proceed from the fluids or the solids. The dose is from a dram to half an ounce; which may be repeated two or three times a day.

Some direct solutions of iron, made in wine or other vegetable acids, to be evaporated to the consistence of an extract, under the title of EXTRACTUM MARTIS. These preparations have no advantage, in point of virtue, above the common chalybeates; though in some forms, that of pills in particular, they may be rather more commodiously exhibited, than most of the officinal chalybeates of equal efficacy. They may be made into pills by themselves, and are tenacious enough to reduce other substances into that form.

VINUM IPECACUANHÆ.

Wine of ipecacuanha.

Lond.

Take of

Ipecacuanha, bruised, two ounces;
Spanish white wine, two pints.

Macerate without heat, and strain.

TINCTURA IPECACUANHÆ.

Tincture of ipecacuanha.

Edinb.

Take of

Ipecacuanha in powder, one ounce;
Spanish white wine, fifteen ounces.

After three days' digestion, let the tincture be filtered for use.

Both these wines are very mild and safe emetics, and equally serviceable, in *dysenteries* also, with the ipecacuanha in substance; this root yielding nearly all its virtues both to the Spanish white wine here ordered, as it does a good share of them even to aqueous liquors. The *common dose is an ounce, more or less*, according to the age and strength of the patient. The college of Edinburgh added formerly a scruple of cochineal, which imparts a fine red colour to the liquor. This article is now omitted, on a complaint, that the red colour of the matters evacuated sometimes alarmed the patient, as if it proceeded from a discharge of blood.

VINUM VIPERINUM.

Viper wine.

Lond.

Take of

Dry vipers, two ounces;
Mountain, three pints.

Macerate with a gentle heat for a week, and then strain off the wine.

It has been disputed, whether live or dry vipers are preferable for making this medicine. Such as are moderately and newly dried, are perhaps the most eligible, since by exsiccation they seem to lose only their phlegmatic or aqueous parts. Whether they communicate to the wine, either when used fresh or dry, so much virtue as they are supposed to do, is greatly to be doubted. Some compositions under this name have been highly celebrated, as *restoratives in debilities and decays of constitution*; but what virtues of this kind they possessed,

were ſupplied chiefly from other ingredients.

VINUM MILLEPEDARUM.

Wine of millepedes.

Edinb.

Take of

Live millepedes, bruiſed, two ounces;

Rheniſh wine, one pound.

Infuſe them together for ſeven days, and afterwards preſs the liquor through a ſtrainer.

This wine has been commended as an *admirable cleanſer of all the viſcera, yielding to nothing in the jaundice*, and *obſtructions of the kidneys* or *urinary paſſages, of excellent ſervice in almoſt all chronical diſtempers*, even in ſcrophulous and ſtrumous ſwellings, and in defluxions of rheum upon the eyes. But thoſe who expected theſe extraordinary virtues from it, have often been deceived; and, at preſent, there are few who have any great dependence on it. It is directed to be given from half an ounce to two ounces.

VINUM CEPHALICUM.

Cephalic wine.

Take of

Wild valerian root, four ounces;

Virginian ſnake-root, one ounce;

Roſemary tops, half an ounce;

French white wine, ſix pints.

Digeſt them together for three days, and then filter the tincture.

This preparation promiſes to be a medicine of conſiderable utility as a cephalic, that is, in diſorders of *the nervous ſyſtem*, wherein the membranes of the brain are often principally affected, as in *vertiginous, epileptic*, and *paralytic complaints*.

Here it may be proper to obſerve, that, though ſome of the diſtilled waters, to be treated of hereafter, receive many ſupernumerary ingredients, without any conſiderable injury to the produce; yet in medicines prepared by infuſions it is far otherwiſe. For there, ingredients, which give nothing over, do little harm: but as all thoſe commonly employed in infuſions communicate ſomething to the menſtruum; ſo, if ſuperfluous ones be admitted, they load the liquor with an uſeleſs matter, and occupy in it the place that ought to be poſſeſſed by the more efficacious.

VINUM CEPHALICUM PURGANS.

Purging cephalic wine.

This is made by adding to the foregoing, of

Senna, two ounces;

Black hellebore roots, one ounce;

French white wine, two pints.

Purgatives are often very neceſſary additions to medicines of the foregoing claſs. Thoſe here made choice of are well adapted to the purpoſe, and in ſuch quantity as to make the wine gently laxative in doſes of two ounces.

VINUM RHABARBARI.

Wine of rhubarb.

Lond.

Take of

Rhubarb, ſliced, two ounces and a half;

Leſſer cardamom ſeeds, bruiſed, half an ounce;

Saffron, two drams;

Spaniſh white wine, two pints;

Proof ſpirit of wine, eight ounces.

Macerate without heat for ten days, and then ſtrain.

VINUM RHEI.

Wine of Rhubarb.

Edinb.

Take of

Rhubarb, two ounces;

Canella alba, one dram;

Proof ſpirit, two ounces;

Spaniſh white wine, fifteen ounces.

Macerate for ſeven days, and ſtrain.

Either of theſe is a warm, cordial, laxative medicine; uſed chiefly in *weakneſs of the ſtomach and bowels, and ſome kinds of looſeneſſes, for evacuating the offending matter*,

and strengthening the tone of the viscera. They may be given from half a spoonful to three or four spoonfuls, or more, according to the circumstances of the disorder, and the purposes they are intended to answer.

VINUM AD STOMACHICOS.

Stomachic wine.

Edinb.

Take of
Calamus aromaticus,
Gentian root—each one ounce and a half;
Peruvian bark, in powder, two ounces;
Curassao oranges, one ounce;
Iron filings (to be tied up in a bag) three ounces;
Spanish white wine, one gallon.
Digest for the space of three days, and then filter the tincture.
This tincture may likewise be made without the iron.

This wine is a very efficacious medicine in weakness of the stomach and chylopoietic organs, and in a lax flaccid state of the viscera in general.

VINUM NICOTIANÆ.

Tobacco-wine.

Take of
Dried leaves of the best Virginia tobacco, one ounce;
Spanish white wine, one pound.
Macerate for four days, and then strain.

The present formula seems to be the best mode for administering the tobacco internally; for it extracts more fully the active parts of the tobacco than either water, or spirit, separately. The dose is similar to that given when infused in either of the above menstrua. See Mat. Med. Art. NICOTIANA.

VINUM SCILLÆ.

Squill wine.

Take of
Dried squills sliced, one ounce;
Ginger, one dram;
French white wine, two pounds.
Macerate for three days, and then strain.

As the active properties of the squill are fully extracted by the wine, and a cordial virtue joined with it by the addition of the ginger, which is a good corrector, and, by preventing its immediate action on the primæ viæ, assist in determining it more freely to the kidneys, or other excretory organs, where it is more wanted to exert its power.

VINUM OPII;

formerly

TINCTURA THEBAICA.

Wine of opium.

Take of
Strained opium, two ounces;
Cinnamon,
Cloves,—each one dram;
Spanish white wine, one pint.
Macerate without heat for a week, and then filter the tincture through paper.

This is the LIQUID LAUDANUM of SYDENHAM, with the exchange of Canary wine for Mountain, and the omission of an ounce of saffron; and was the *tinctura thebaica*, or liquid laudanum, of the old London Pharmacopœia. The aromatics in the form above are in so small quantity, that the prescriber can scarce expect any considerable effect from them, the proportion of each that goes to a grain of opium, amounting to no more than the sixteenth part of a grain. Even these minute proportions, however, are in good measure sufficient to take off the ill odour of the opium, which seems to be all that is intended by them.

The principal advantages of exhibiting opium in this form are, that by being already dissolved it exerts itself the sooner in the body; and that by some persons, liquids are more commodiously taken, than a bolus or pill. The

common doſes of the tincture are from *ten drops to forty*, *fifty*, or *more*, according to the exigencies of the caſe. It were to be wiſhed that the doſe could be more exactly aſcertained, by weight or meaſure; as the drops may, according to different circumſtances, vary in quantity, though in number the ſame; and as an error therein may, in ſome caſes, be of miſchievous conſequence. *Twenty drops contain, at a medium, about one grain of opium*, or rather ſo much as that quantity of wine will extract from one grain; for the liquor does not diſſolve the whole ſubſtance of the opium, nor is the ſolution equivalent, in its effect, to the full quantity of opium employed in it.

A liquid opiate, free from the inconveniences here complained of, will be deſcribed under the head of *Spirituous Tinctures*.

VINUM AROMATICUM.

Aromatic wine.

Take of
Cloves,
Ginger,—each half an ounce;
Cinnamon,
Nutmegs,—each one ounce;
Spaniſh white wine, ſix pints.

Beat the ſpices into a coarſe powder, and ſteep them in the wine for ſome days; then paſs the liquor through a ſtrainer.

This wine is a very high cordial, and greatly commended for *warming the habit* and *ſtrengthening the nervous ſyſtem*. It is ſo hot of the ſpices as to require being diluted for uſe, and to be taken only in ſmall quantities at a time. Mixed with a little lemon juice, and a large proportion of milk, it *forms a pleaſant and uſeful whey in low fevers*.

VINUM ANTISCORBUTICUM.

Antiſcorbutic wine.

Take of
Leaves of Buckbean,
Water-creſſes,
Brooklime,
Dittander,
Scurvy-graſs,
Jack-by-the-hedge,
Roots of horſeradiſh,—each one ounce;
Florence orris, two drams;
Spaniſh white wine, half a gallon.

The herbs and roots, all freſh gathered and cut ſmall, are to be ſteeped in the wine, in a veſſel very cloſely ſtopt, for twenty-four hours; after which the wine is to be filtered for uſe.

This compoſition is not ill contrived for anſwering the purpoſe expreſſed by its title; though ſome of the ingredients are not unexceptionable. An ounce of the herbaceous brooklime is altogether inſignificant in half a gallon of an infuſion of ſuch powerful materials; and it may be doubted whether the freſh orris root communicate any of its virtues to the liquor. The roots of the Florentine as well as of the common orris, raiſed in our gardens, are, while freſh, ſtrong purgatives; but their purgative matter is ſo little diſpoſed to ſolution in watery menſtrua, that it ſeparates from the expreſſed juices and ſettles to the bottom. In drying they change their nature; and the Florentine ſpecies, in a dry ſtate, might be an uſeful addition for giving an agreeable flavour to the wine. The flavour which this root communicates to vinous liquors, greatly reſembles that of raſpberries.

VINUM SCORBUTICUM.

Scorbutic wine.

Take of
Garden ſcurvy-graſs, one handful;
Horſeradiſh root, ſcraped, half an ounce;
Winter's bark, two drams;
Spaniſh white wine, two pints.

Let them ſteep together in the cold for three days.

This wine is ſo far impregnated with the virtues of the ingredients, as to *do conſiderable ſervice in ſcorbutic habits.* It is uſed chiefly in the ſpring, in the quantity of a common wine-glaſs, two or three times a day. Though far more ſimple than the preceding, it is not perhaps leſs efficacious.

VINUM SCORBUTICUM MUNTINGII.

Muntingius's ſcorbutic wine.

Take of

The roots of the greater water-dock, ſix ounces;
Gentian root,
Liquorice,
Cinnamon,
Black pepper,
Mace,—each three ounces;
Saffron, two ounces;
Mountain wine, ſixteen pints;
Strong vinegar, four pints;
Yolks of three freſh eggs.

Reduce the roots and ſpices into a groſs powder, and pour on them the wine, vinegar, and yolks of eggs. Digeſt the whole in a cloſe veſſel, with a gentle warmth, for three days; and then ſtrain out the liquor for uſe.

The author of this compoſition recommends it as a medicine of infallible efficacy againſt *inveterate ſcurvies*, and *all kinds of ſcorbutic complaints*, particularly ſuch as are *not accompanied with a fever* or *inflammation*: even *palſies*, and the *venereal lues*, he ſays, have yielded to it. The doſe is from three to ſix ounces, to be taken in the morning on an empty ſtomach, and continued for fourteen or twenty days, or longer: ſome quantity of it is likewiſe to be mixed with the patient's common drink, which he directs to be either good Rheniſh wine, or ſound malt liquors not too new. If the patient complains of heat, dryneſs, a violent cough, or where there are any ſymptoms of a conſumption, the black pepper is ordered to be omitted, and the liquorice increaſed in its room to ſix ounces.

A compoſition differing from the above only in the omiſſion of vinegar, and employing ſpirit of wine for the menſtruum, is ſaid to have come into eſteem at Paris, *againſt the gout.*

VINUM FEBRIFUGUM.

Febrifuge wine.

Paris.

Take of

Peruvian bark, in powder, two ounces;
Rough red wine, two pints.

Digeſt them together in a circulatory veſſel, with a moderate heat, for forty-eight hours, occaſionally ſhaking the veſſel: then ſuffer the whole to cool, and paſs the wine through a ſtrainer.

This is the preparation of bark made uſe of by ſir Robert Tabor or Talbot (an Engliſh gentleman reſiding in France) who was one of the firſt that retrieved the character of the medicine itſelf, at the time that ſome ill conſequences following its imprudent uſe had brought it into diſeſteem. He kept this preparation a ſecret, till Lewis XIV. purchaſed it for a conſiderable ſum, and communicated it to the public. It was not however the preparation, but a proper method of managing the medicine, upon which the ſucceſs of his practice depended. It appears from experience, that this wine is leſs certain in the cure of agues, than the bark given in ſubſtance; nor is it equal, in this intention, for general uſe, to the watery infuſion; the wine preventing its being taken ſo freely as is in many caſes requiſite. It nevertheleſs has it uſes, in *thoſe intermittent fevers where a large quantity of the bark is not neceſſary*; and is particularly ſerviceable *in a laxity and debility of the ſtomach and inteſtines.*

VINUM GUAIACINUM.
Guaiacum wine.

Take of
Guaiacum wood,
Yellow ſaunders, — each two ounces;
Orange peel, dried,
Leſſer cardamom ſeeds, — each one ounce;
Spaniſh white wine, one gallon.
Let them ſteep together for a week, and then ſtrain out the wine for uſe.

This is a moderately warm and corroborating wine. It is uſed in *nervous weakneſſes*, in *decays of conſtitution from cold pituitous humours*, and proves an uſeful preſervative *againſt rheumatic and arthritic complaints*. Two ounces, or an ordinary wine glaſs, may be taken two or three times a day, and continued for a month or two.

VINUM GUAIACINUM CUM HELLEBORO.
Guaiacum wine with hellebore.

Take of
Guaiacum wood,
Black hellebore root,—each two ounces;
Leſſer cardamom ſeeds,
Orange peel, dried,—each one ounce;
Spaniſh white wine, four pints.
Let theſe ingredients ſteep together for a week or longer, and then ſtrain out the wine for uſe.

From the warm ſtimulating, deobſtruent qualities of this wine, it may be uſed, to good advantage, *in cold phlegmatic habits*, where the humours ſtagnate in the remote veſſels, and *where there is a diſpoſition to gouty, rheumatic*, or *hydropic diſorders*. It is to be taken chiefly over night, in ſuch ſmall doſes as not to run off by ſtool.

SECT. V.

MEDICATED ALES.

MEDICATED ales are intended as diet-drinks in chronical indiſpoſitions. There are two ways of impregnating malt-liquors with the virtues of medicinal ſubſtances; macerating the ſubject in the liquor after the fermentation is completely finiſhed; and fermenting it along with the liquor, or at leaſt adding it towards the end of the fermentation, that, by the reſolutive power of that proceſs, its texture may be opened, and its medicinal parts more fully extracted. Neumann obſerves, that the active powers of many vegetables are not only effectually extracted, but extended as it were, by fermentation: that ſo much pounded nutmeg as will lie on the point of a knife, gives a flavour to a large vat of fermenting ale: whereas, when the fermentation is finiſhed, the quantity of liquor to which it gives a like impregnation, is comparatively inconſiderable.

CEREVISIA AMARA.
Bitter ale.

Take of
Gentian root,
Lemon peel, freſh,—each four ounces;
Long pepper, one ounce;
Ale, one gallon.
Let them ſteep together, without heat.

This is an agreeable bitter ſtomachic ale, much ſuperior to the common purls, or any of the compoſitions of this kind in the extemporaneous recipe writers.

CEREVISIA APERIENS.

Aperient ale.

Take of
Muſtard ſeed, unbruiſed, ten ounces:
Long birthwort root, ſix ounces;
Leſſer centaury tops, two ounces;
Savin tops, one ounce;
New ſmall ale, ten gallons.

This is an uſeful aperient diet-drink in *cachectic* and *chlorotic indispositions*, and in all caſes where obſtructions begin to form in the viſcera. It is to be taken to the quantity of half a pint at a time, twice a day.

CEREVISIA BUTLERI.

Dr. Butler's ale.

Take of
Betony,
Sage,
Agrimony,
Garden ſcurvy-graſs,
Roman wormwood,—each three handfuls;
Elecampane roots,
Horſeradiſh roots,—each four ounces;
New ale, four gallons.

The herbs and roots are to be put in a bag, and hung in the ale while it works.

This liquor has ſo far obtained among the common people, as to have been frequently made and ſold in public houſes. It is uſed in the ſpring, for purifying the blood, and preventing ſcorbutic diſorders.

CEREVISIA CEPHALICA.

Cephalic ale.

Take of
Wild valerian root, ten ounces;
Muſtard-ſeed, whole, ſix ounces;
Virginian ſnakeroot, two ounces;
Roſemary, or ſage, three ounces;
New ſmall ale, ten gallons.

The ingredients of this compoſition are all of the warm and ſtimulating kind; and conſequently tend to *invigorate the nervous ſyſtem*, and *promote the circulation of the fluids*. In *palſies*, *epilepſies*, and *vertigoes*, ſome benefit may be expected from this liquor uſed as common drink.

CEREVISIA DIURETICA.

Diuretic ale.

Take of 1.
Muſtard-ſeed, whole,
Juniper berries,—each eight ounces;
Wild carrot ſeeds, three ounces;
Common wormwood, two ounces;
New ſmall ale, ten gallons.

Take of 2.
Broom-tops,
Muſtard-ſeed, — each ſixteen ounces;
Flower-de-luce roots,
Sharp-pointed dock roots,—each twelve ounces;
Winter's bark,
Elder bark,
Wild carrot ſeeds,
Juniper berries, — each two pounds;
New ale, twelve gallons.

In *hydropic caſes*, and *corpulent ſcorbutic habits*, theſe aperient and diuretic liquors are very uſeful diet-drinks. Half a pint of either may be taken two or three times a day.

CEREVISIA AD SCORBUTICOS.

Scorbutic ale.

Take of
Horſeradiſh root, freſh, one pound;
Sharp-pointed dock roots, half a pound:
Canella alba, two ounces;
Buckbean leaves, freſh, eight ounces: or dried, three ounces;
New ſmall ale, ten gallons.

In *ſcorbutic diſorders*, and *impurities of the blood and juices*, this liquor, uſed as common drink, generally does ſervice. All the ingredients are very effectual for the intention, and well ſuited to the form. If the ſharp-pointed dock roots were exchanged for thoſe of the great water dock, the compoſition would be ſtill more powerful,

SECT. VI.

Spirituous Tinctures.

RECTIFIED SPIRIT OF WINE *is the direct menſtruum of the reſins* and *eſſential oils of vegetables;* and totally extracts theſe active principles from ſundry vegetable matters, which yield them to water either not at all, or only in part. *It diſſolves likewiſe the ſweet ſaccharine matter of vegetables;* and, generally, *thoſe parts of animal bodies* in *which their peculiar ſmells and taſtes reſide.*

The virtues of many vegetables are extracted *almoſt equally by water* and *rectified ſpirit;* but in the watery and ſpirituous tinctures of them there is this difference, that the active parts, in the watery extractions, are blended with a large proportion of inert gummy matter, on which their ſolubility in this menſtruum in great meaſure depends, while rectified ſpirit extracts them almoſt pure from gum. Hence, when the ſpirituous tinctures are mixed with watery liquors, a part of what the ſpirit had taken up from the ſubject generally ſeparates and ſubſides, on account of its having been freed from that matter which, being blended with it in the original vegetable, made it ſoluble in water. This, however, is not univerſal; for the active parts of ſome vegetables, when extracted by rectified ſpirit, are not precipitated by water, being almoſt equally diſſoluble in both menſtrua.

Rectified ſpirit may be tinged by vegetables of all colours, *except blue.* The leaves of plants in general, which give out but little of their natural colour to watery liquors, communicate to ſpirit the whole of their green tincture, which for the moſt part proves elegant, though not very durable.

Fixt alkaline ſalts deepen the colour of ſpirituous tinctures; and hence have been ſuppoſed to promote the diſſolving power of the menſtruum, though this does not appear from experience: in the trials that have been made to determine this affair, no more was found to be taken up in the deep-coloured tinctures, than in the paler ones, and often not ſo much; if the alkali be added after the extraction of the tincture, it will heighten the colour as much as when mixed with the ingredients at firſt. Nor is the addition of theſe ſalts, in making tinctures, uſeleſs only, but likewiſe prejudicial, as they, in general, injure the flavour of aromatics, and ſuperadd a quality ſometimes contrary to the intention of the medicine. Volatile alkaline ſalts, in many caſes, promote the action of the ſpirit. Acids generally weaken it; unleſs when the acid has been previouſly combined with the vinous ſpirit into a compound of new qualities, called dulcified ſpirit.

TINCTURA ALOES.

Tincture of aloes.

Lond.

Take of

Socotorine aloes, powdered, half an ounce;
Extract of liquorice, one ounce and a half;
Diſtilled water,
Proof ſpirit, — of each eight ounces by meaſure.

Digeſt in a ſand-bath, occaſionally ſhaking the veſſel, until the extract is diſſolved; then ſtrain.

Where the aloes is wiſhed to be exhibited alone in a fluid ſtate, this formula is one of the beſt; as the

extract of liquorice does no more than promote the suspension of the aloe, and covers in some degree the disagreeable taste of the aloes.

TINCTURA ALOES COMPOSITA;
formerly
ELIXIR ALOES.
Compound tincture of aloes.
Lond.

Take of
Socotorine aloes,
Saffron,— of each three ounces;
Tincture of myrrh, two pints.
Digest for eight days, and strain.

TINCTURA GENTIANÆ COMPOSITA;
formerly
TINCTURA AMARA.
Compound tincture of gentian.
Lond. Edinb.

Take of
Gentian root, sliced and bruised, two ounces;
Exterior peel of Seville orange, dried, one ounce;
Lesser cardamom seeds, bruised, half an ounce;
Proof spirit of wine, two pints.
Digest for eight days, and strain.

This is a very elegant spirituous bitter. As the preparation is designed for keeping, lemon-peel, an excellent ingredient in the watery bitter infusions, has, on account of the perishableness of its flavour, no place in this. The cardamom seeds are here a very commodious ingredient, as in this spirituous menstruum they are free from the inconvenience with which they are attended in other liquors, of rendering them untransparent. The Edinburgh Pharmacopœia has a composition similar in intention to this, under the title of

ELIXIR STOMACHICUM.
Stomachic elixir.
Edinb.

Take of
Gentian root, two ounces;
Curassao oranges, one ounce;
Virginian snakeroot, half an ounce;
Cochineal, half a dram;
French brandy, two pints.
Let them steep for three days, and then filter the elixir.

This elixir differs from that of former editions, in the substitution of Curassao oranges to fresh orange peel, and in the addition of half an ounce of Virginian snakeroot. The first is a grateful aromatic bitter, and the latter superadds a degree of pungency coinciding with the intention. Both this and the preceding composition are *very useful stomachic bitters.*

TINCTURA CINNAMOMI COMPOSITA;
formerly
TINCTURA AROMATICA.
Compound tincture of cinnamon.
Lond.

Take of
Cinnamon, six drams;
Lesser cardamom seeds, three drams;
Long pepper,
Ginger,—each two drams;
Proof spirit of wine, two pints.
Digest, for eight days, and then strain off the tincture.

This is a very warm aromatic, too much so to be given without dilution. A tea-spoonful or two may be taken in wine, or any other convenient vehicle, *in languors, weakness of the stomach, flatulencies,* and *similar complaints.* The stomachic tincture described hereafter, is similar in intention to this, but contrived less hot of the spices, that it may be taken by itself.

TINCTURA AROMATICA.
Aromatic tincture.
Edinb.

Take of
Cinnamon, six drams;
Lesser cardamom seeds, one ounce;

Garden angelica root, three drams;
Long pepper, two drams;
Proof ſpirit, two pounds and a half.

Macerate ſeven days, and filter.

This preparation is a ſufficiently elegant warm aromatic; and may be taken with the ſame intention, and in ſimilar doſes, with the former.

TINCTURA AURANTII CORTICIS.

Tincture of orange-peel.
Lond.

Take of
The freſh exterior peel of Seville oranges, three ounces;
Proof ſpirit of wine, two pints.

Digeſt for three days, and ſtrain.

In this tincture both the bitt e part and eſſential oil of the peel are extracted, ſo fully as to be capable of anſwering any medicinal purpoſe for which the peel itſelf or other preparations may be employed; for which ſee Mat. Med., article AURANTIORUM HISPALENSIUM CORTEX, &c.

TINCTURA BALSAMI PERUVIANI.

Tincture of balſam of Peru.
Lond.

Take of
Balſam of Peru, four ounces by weight;
Rectified ſpirit of wine, one pint;

Digeſt until the balſam is diſſolved.

As the ſpirit diſſolves the whole of the balſam and frees it from its impurities, this may be therefore conſidered as a formula well adapted to exhibit internally, and ſupply to the habit the medicinal powers of the balſam in their full force; for which ſee Mat. Med. article BALSAMUM PERUVIANUM.

TINCTURA BALSAMICA.

Balſamic tincture.

Take of
Balſam of Copaiba, one ounce and a half;
Balſam of Peru, half an ounce;
Engliſh ſaffron, one dram;
Rectified ſpirit of wine, one pint.

Digeſt theſe ingredients together, in a ſand heat, for three days; and then paſs the tincture through a ſtrainer.

This tincture is an excellent balſamic, both for internal and external purpoſes. It is uſually given in doſes of ten, twenty, or thirty drops, in *the fluor albus, gleets, cachexies, ſome kinds of aſthmas*, and *nephritic complaints*, for *ſtrengthening the tone of the viſcera*, and *corroborating the nervous ſyſtem in general*. Some caution is requiſite in the uſe of theſe reſinous warm medicines: in cold, languid, phlegmatic habits, they have for the moſt part good effects; but in bilious and plethoric conſtitutions, where there is any tendency to inflammation or immoderate heat, they are manifeſtly prejudicial, and raiſe or continue febrile ſymptoms.

TINCTURA CANTHARIDIS.

Tincture of cantharis.
Lond.

Take of
Cantharis, bruiſed, two drams;
Cochineal, half a dram;
Proof ſpirit, a pint and a half.

Digeſt for eight days, and ſtrain.

Edinb.

Take of
Cantharides, one dram;
Proof ſpirit, one pound.

Digeſt four days, and filter.

Theſe tinctures poſſeſs the whole virtues of the fly, and are the only preparations of it deſigned for internal uſe; tinctures being by far the moſt commodious and ſafe form for the exhibition of this active drug. If any additional ſubſtances ſhould be thought requiſite for promoting the effect of the cantharides,

whether as a *diuretic*, as a *detergent* in *ulcerations of the urinary passages*, or as a *restringent* in *diabetes*, *seminal gleets*, and *the fluor albus*, they are more advantageously joined extemporaneously to the tincture, or interposed by themselves at proper intervals. For the medicinal powers of cantharides, see Mat. Med. article CANTHARIDES; where they are more fully detailed.

The usual dose of these tinctures is from ten to twenty drops, which may be taken in a glass of water, or any other more agreeable liquor, twice a day; and increased by two or three drops at a time, according to the effect; or till some slight degree of strangury is perceived.

TINCTURA CARDAMOMI.

Tincture of cardamoms.

Lond.

Take of

Lesser cardamom seeds, bruised, three ounces;

Proof spirit, two pints.

Digest for eight days, and strain.

In the Edinburgh Pharmacopœia, *six ounces of the seeds* are prescribed to *two pounds and a half of spirit*; which constitutes the difference betwixt the two.

Tincture of cardamoms has been in use for a considerable time. It is a pleasant, warm cordial, and may be taken, along with any proper vehicle, from a dram to a spoonful or two.

TINCTURA CASCARILLÆ.

Tincture of cascarilla.

Take of

The bark of cascarilla, four ounces;

Proof spirit of wine, two pints.

Digest with a gentle heat for eight days, and strain.

The proof spirit of wine so fully extracts the active powers of the cascarilla, that this tincture may be employed to answer most of the purposes for which the bark is recommended. But it requires to be exhibited in substance, when given in intermittents. Its virtues are enumerated under the article ELEUTHERIÆ CORTEX, in the Mat. Med.

TINCTURA CASTOREI.

Tincture of castor.

Lond.

Take of

Russia castor, powdered, two ounces;

Proof spirit of wine, two pints.

Digest for ten days, and strain.

Edinb.

Take of

Russia castor, one ounce and a half;

Rectified spirit of wine, one pound.

Digest them with a gentle heat for six days, and strain.

It has been disputed, whether a weak or rectified spirit, and cold or warm digestion, be preferable for making this tincture. To determine this point, the following experiment has been brought. "Some "fine Siberia castor having been "infused in good French brandy, "without heat, for twenty days, "the tincture proved very weak: "on the same individual castor "(the magma or residuum of the "former tincture) the same quan- "tity of rectified spirit was poured, "as before of brandy; and after a "few hours' warm digestion, a "tincture was extracted much "stronger than the other." But this experiment is not satisfactory; the effects of the two menstrua, and of heat, having been respectively compared in very different circumstances. From the trials which I have made, it appears, that castor, macerated without heat, gives out its finer and most grateful parts to either spirit, more perfectly to the rectified; that heat enables both menstrua to extract the greatest part of its grosser and more nauseous matter; and that proof spirit ex-

tracts this laſt more readily than rectified.

The tincture of caſtor is recommended in *moſt kinds of nervous complaints*, and *hyſteric diſorders*: in the latter it ſometimes does ſervice, though many have complained of its proving ineffectual. The doſe is from twenty drops to forty, fifty, or more. See CASTOREUM in Mat. Med.

TINCTURA CASTOREI COMPOSITA.

Compound tincture of caſtor.
Edinb.

Take of
Ruſſia caſtor, one ounce;
Aſafœtida, half an ounce;
Vinous ſpirit of ſal ammoniac, one pound.
Digeſt for ſix days in a cloſe-ſtopt phial, frequently ſhaking the veſſel; and then ſtrain the tincture.

This compoſition is a medicine of real efficacy, particularly in *hyſterical diſorders*, and the *ſeveral ſymptoms which accompany them*. The volatile oily ſpirit is an excellent menſtruum both for the caſtor and the aſafœtida, and greatly adds to their virtues.

TINCTURA CINNAMOMI.

Tincture of cinnamon.
Lond.

Take of
Cinnamon, bruiſed, one ounce and a half;
Proof ſpirit of wine, one pint.
Digeſt for ten days, and ſtrain.

The preſcription in the Edinburgh Pharmacopœia, is exactly the ſame.

The tincture of cinnamon poſſeſſes the reſtringent virtues of the cinnamon, as well as its aromatic cordial ones; and, in this reſpect, it differs from the diſtilled waters of the ſpice.

TINCTURA CINCHONÆ; *formerly* TINCTURA CORTICIS PERUVIANI SIMPLEX.

Tincture of Peruvian bark.
Lond.

Take of
Cinchona, powdered, ſix ounces;
Proof ſpirit, two pints.
Digeſt with a gentle heat, for eight days, and ſtrain.

A medicine of this kind has been for a long time pretty much in eſteem, and uſually kept in the ſhops, though but lately received into the diſpenſatory. Some have employed highly-rectified ſpirit of wine as a menſtruum; which they have taken care fully to ſaturate, by digeſtion on a large quantity of the bark. Others have thought to aſſiſt the action of the ſpirit, by the addition of a little fixt alkaline ſalt, which does, not, however, appear to be of any advantage; and others have given the preference to the vitriolic acid, which was ſuppoſed, by giving a greater conſiſtence to the ſpirit, to enable it to ſuſtain more than it would be capable of doing by itſelf; at the ſame time that the acid improves the medicine, by increaſing the roughneſs of the bark. This laſt tincture, and that made with rectified ſpirit, have their advantages; though for general uſe the above-directed is the moſt convenient of any, the proof ſpirit extracting nearly all the virtues of the bark. It may be given from a tea-ſpoonful to half an ounce, or an ounce, according to the different purpoſes it is intended to anſwer. See PERUVIANUS CORTEX.

TINCTURA CINCHONÆ AMMONIATA; *formerly* TINCTURA CORTICIS PERUVIANI VOLATILIS.

Ammoniated tincture of Peruvian bark.
Lond.

Take of
Cinchona, powdered, four ounces;
Compound ſpirit of ammonia, two pints.

Digeſt, in a veſſel cloſe ſtopt, for ten days, and ſtrain.

This tincture is but ſlightly impregnated with the virtues of the bark; and is ſo acrimonious, that the largeſt doſe, which can with ſafety be given of it, can contain only a very ſmall quantity of the ſubject. The medicine nevertheleſs has its uſes, and may be ſerviceable in ſome caſes where the ſtronger are improper, as *in difficulty of breathing, obſtructions*, and *oppreſſions of the breaſt*. Stronger tinctures of this kind may be obtained by means of dulcified ſpirit of ſal ammoniac, or the ſpirit prepared with quicklime. All the three may be employed where a large quantity of bark is not required, as *at the cloſe of the cure of intermittents*, in *weakneſs of digeſtion*, attended with a cold ſenſation at the ſtomach, and *ſome fluxes*, particularly thoſe from the uterus, where the circulation is languid, the fibres relaxed, and where there is a periodical return of ſlight feveriſh complaints. In theſe caſes, I have often experienced ſalutary effects from a tincture in dulcified ſpirit of ſal ammoniac, given to the quantity of a tea ſpoonful five or ſix times a day, in any appropriated vehicles.

TINCTURA CINCHONÆ COMPOSITA.

Compound tincture of Peruvian bark.
Lond.

Take of
- Cinchona powdered, two ounces;
- Exterior peel of Seville orange, dried, one ounce and a half;
- Virginian ſerpentary, bruiſed, three drams;
- Saffron, one dram;
- Cochineal, powdered, two ſcruples;
- Proof ſpirit of wine, twenty ounces *by meaſure*.

Digeſt for fourteen days, and ſtrain.

This medicine bore the name of Huxham as its inventor; and is given as a corroborant and ſtomachic, in doſes of a few drams, particularly to thoſe recovering after long fevers, and alſo in ſome caſes where patients cannot bear the bark in ſubſtance.

TINCTURA CORTICIS PERUVIANI COMP.

Compound tincture of Peruvian bark.
Edinb.

Tak of
- Peruvian bark, in powder, three ounces;
- Virginian ſnakeroot,
- Gentian,—each two drams;
- French brandy, two pints.

Let them ſteep together for three days, and afterwards filter the tincture.

The ſubſtances here joined to the bark, in many caſes, promote its efficacy in the cure of intermittents; and not unfrequently are abſolutely neceſſary. In ſome bad habits, particularly where the juices are ſluggiſh and tenacious, the viſcera and abdominal glands obſtructed, the bark, by itſelf, proves unſucceſsful, if not injurious; whilſt, given in conjunction with corroborant ſtomachics and deobſtruents, it rarely fails of the due effect. Gentian and Virginian ſnakeroot are among the beſt additions for the purpoſe; to which it is often neceſſary to join chalybeate medicines alſo.

TINCTURA COLUMBÆ.

Tincture of columba.
Lond.

Take of
- Columba, powdered, two ounces and an half;
- Proof ſpirit of wine, two pints.

Digeſt for eight days, and ſtrain.

The virtues of the columbæ are poſſeſſed in a great degree by this menſtruum, ſo as to render it a medicine of much effect; and it may be depended upon where the root

is uſeful: but the root itſelf in powder is more eligible, where no circumſtances occur to prohibit its exhibition. See Mat. Med. article COLUMBÆ RADIX.

TINCTURA CROCI.

Tincture of ſaffron.

Take of
English ſaffron, one ounce;
Proof ſpirit, fifteen ounces.
Digeſt for five days, and ſtrain through paper.

This medicine derives ſcarce any power from the ſaffron, which has itſelf fallen meritedly into diſrepute. (See CROCUS, in the Mat. Med.) The tincture therefore can be kept only for a colouring ingredient.

TINCTURA ASÆFŒTIDÆ.

Tincture of aſafœtida.
Lond.

Take of
Aſafœtida, four ounces;
Rectified ſpirit of wine, two pints.
Digeſt, with a gentle heat, for ſix days, and ſtrain.

This tincture poſſeſſes the virtues of the aſafœtida itſelf; and may be given from ten drops to fifty or ſixty, or more, for a doſe.

Inſtead of the *rectified ſpirit of wine*, the Edinburgh college orders *vinous ſpirit of ſal ammoniac*, and the digeſtion to be performed in a cloſe-ſhut veſſel. This tincture is conſidered more generally uſeful than the other; as the vinous ſpirit of ſal ammoniac is not only a more powerful menſtruum than the rectified ſpirit, but alſo coincides with the general virtues of the aſafœtida.

TINCTURA FULIGINIS.

Tincture of ſoot.
Edinb.

Take of
Shining wood-ſoot, one ounce;
Aſafœtida, half an ounce;
Rectified ſpirit of wine,
Proof ſpirit—of each half a pound.
Digeſt ſix days, and ſtrain.

Fuller, in his Pharmacopœia Domeſtica, has a medicine under the title of HYSTERIC TINCTURE, ſimilar to this, only with a little myrrh, which is no very material addition to aſafœtida and ſoot. This medicine is found ſerviceable, not only in hyſteric caſes, but likewiſe in other nervous diſorders; and may be given from a teaſpoonful to a common ſpoonful twice a day.

TINCTURA GUAIACI AMMONIATA;

formerly

TINCTURA GUAIACINA VOLATILIS.

Ammoniated tincture of guaiacum.
Lond.

Take of
The gum-reſin guaiacum, four ounces;
Compound ſpirit of ammoniac, a pint and a half.
Digeſt, in a veſſel cloſe-ſtopt, for three days, and ſtrain.

This is a very elegant and efficacious tincture; the volatile ſpirit excellently diſſolving the gum, and, at the ſame time, promoting its medicinal virtue. In *rheumatic caſes*, a tea-ſpoonful taken every morning and evening in any convenient vehicle, has proved of ſingular ſervice.

ELIXIR GUAIACINUM VOLATILE.

Edinb.

Take of
Gum guaiacum, four ounces;
Balſam of Peru, two drams;
Diſtilled oil of ſaſſafras, half a dram;
Vinous ſpirit of ſal ammoniac, a pound and a half.
Macerate in a cloſe veſſel for ſix days, and ſtrain.

The preference has been given to this over that of the London Pharmacopœia; as the vinous ſpirit of this is leſs acrimonious than the

menſtruum of the other, and the addition of the balſam of Peru and oil of ſaſſafras increaſes the permanence of its operation as a general ſtimulant, and makes it a more powerful diaphoretic.

TINCTURA GALBANI.

Tincture of galbanum.

Lond.

Take of

Galbanum, cut into ſmall pieces, two ounces;

Proof ſpirit of wine, two pints.

Digeſt with a gentle heat for eight days, and ſtrain.

Galbanum is one of the ſtrongeſt of the fœtid gums, and though leſs active, it is much leſs diſagreeable than the aſafœtida. Hence this tincture in cures of hyſteria, flatulencies, and the aſthmatic complaints of old people, may be ſucceſsfully employed, where a fœtid antiſpaſmodic is immediately required; and where patients cannot bear the aſafœtida, this may be a very proper ſuccedaneum.

TINCTURA JALAPII.

Tincture of jalap.

Lond.

Take of

Jalap root, powdered, eight ounces;

Proof ſpirit of wine, two pints.

Digeſt, with a gentle heat, for eight days, and ſtrain.

This tincture is an uſeful and mild purgative, the menſtruum here employed taking up ſo much of the gummy parts, as corrects the griping quality with which the reſin is attended. It may be taken by itſelf from a dram to half an ounce; or mixed in ſmaller quantity with cathartic infuſions, or the like.

TINCTURA JALAPPÆ.

Tincture of jalap.

Edinb.

Take of

Jalap root, in coarſe powder, three ounces;

Proof ſpirit, fifteen ounces.

Digeſt for eight days, and ſtrain.

Rectified ſpirit of wine was formerly ordered for the preparation of this tincture; but rectified ſpirit, diſſolving little more than the pure reſinous parts of the jalap, rendered the uſe of the medicine ſomewhat leſs commodious than that of the tincture prepared with proof ſpirit. Moſt of the tinctures made in rectified ſpirit, diluted with water ſo as to be fit for taking, form a turbid white mixture: many of them are ſafely taken in this form, without any further addition; but the cathartic ones are never to be ventured on without an admixture of ſyrup or mucilage to keep the reſin united with the liquor; for if it ſeparates, in its pure undivided ſtate, it never fails to produce violent gripes.

Some have preferred to the tincture of jalap a ſolution in ſpirit of wine of a known quantity of the reſin extracted from the root; and obſerve, that this ſolution is more certain in ſtrength than any tincture that can be drawn from the root directly. For, as the purgative virtue of jalap reſides in its reſin, and as all jalap appears, from experiment, not to be equally reſinous, ſome ſorts yielding five, and others not three, ounces of reſin from ſixteen, it follows, that, although the root be always taken in the ſame proportion as the menſtruum, and the menſtruum always of the ſame ſtrength, it may nevertheleſs, according to the degree of goodneſs of the jalap, be impregnated with different quantities of reſin, and conſequently prove different in degree of efficacy. Though this objection againſt the tincture does not reach ſo far as ſome ſeem to ſuppoſe, it certainly behoves the apothecary to be careful in the choice of the root. The inferior

ſorts may be employed for making the *reſina jalapii*, which they yield in as great perfection, though not in ſo large quantity, as the beſt. Neumann thinks even the worm-eaten jalap as good for that purpoſe as any other.

TINCTURA CATECHU;
formerly
TINCTURA JAPONICA.
Tincture of catechu.
Lond.

Take of
Japan earth, three ounces;
Cinnamon, two ounces;
Proof ſpirit of wine, two pints.
Digeſt for three days, and ſtrain.

To the ſame ingredients the Edinburgh college orders two pounds and a half of proof ſpirit.

The cinnamon here is a very uſeful addition to the Japan earth, not only as it warms the ſtomach, &c. but likewiſe as it improves the roughneſs and aſtringency of the other.

TINCTURA E KINO.
Tincture of gum kino.
Edinb.

Take of
Gum kino, two ounces;
Proof ſpirit, one pound and a half.
Digeſt eight days, and ſtrain.

Theſe tinctures are of ſervice in all kinds of *defluxions*, *catarrhs*, *looſeneſſes*, *uterine fluors*, and *ſimilar diſorders*, where mild aſtringent medicines are indicated. Two or three tea-ſpoonfuls may be taken every now and then, in red wine or any other proper vehicle. This ſeems to be one of the beſt forms in which the kino can be exhibited, in obſtinate diarrhœas, and in caſes of lienteria.

TINCTURA LACCÆ.
Tincture of gum lac.
Edinb.

Take of
Gum-lac, powdered, an ounce;
Myrrh, powdered, three drams;
Spirit of ſcurvy-graſs, a pint and a half.
Digeſt in a ſand-heat for ſix days: after which ſtrain off the tincture.

This tincture is principally employed for *ſtrengthening the gums*, and *in bleedings* and *ſcorbutic exulcerations of them*: it may be fitted for uſe in theſe intentions, by mixing it with honey of roſes, or the like. Some recommend it internally *againſt ſcorbutic complaints*, and as a *corroborant in gleets*, *female weakneſſes*, &c. Its warmth, pungency, and manifeſtly aſtringent bitteriſh taſte, point out its virtues in theſe caſes to be conſiderable, though common practice, among us, has not yet received it.

TINCTURA FERRI AMMONIACALIS.
Tincture of ammoniacal iron.

Take of
Ammoniacal iron, four ounces;
Proof ſpirit of wine, one pint.
Digeſt, and ſtrain.

TINCTURA FERRI MURIATI;
formerly
TINCTURA MARTIS IN SPIRITU SALIS.
Tincture of muriated iron.

Take of
The ruſt of iron, half a pound;
Muriatic acid, three pounds;
Rectified ſpirit of wine, three pints.
Pour the muriatic acid upon the ruſt of iron, in a glaſs veſſel, and ſhake the mixture occaſionally during three days; ſet it by, that the fœculencies may ſubſide; then pour off the liquor; evaporate to a pint; and when cold, add the ſpirit.

TINCTURA FERRI.
Tincture of iron.
Edin.

Take of
Purified ſcales of iron, powdered, three ounces;

Muriatic acid, a quantity sufficient to dissolve the powder. Digest with a mild heat, and add rectified spirit of wine as much as will make the whole two pounds and a half.

All the tinctures of iron are no other than real solutions of the metal made in acids, and combined with vinous spirits. The three tinctures, here directed, differ from one another only in strength, the acid being the same in all: the first is the weakest, and the second the strongest. In a former Pharmacopœia there was a tincture from the matter which remains after the sublimation of the martial flowers; which, though it appears to be a good one, is now expunged as superfluous. Some have recommended dulcified spirit of nitre as a menstruum; but though this readily dissolves the metal, it does not keep it suspended. The muriatic is the only acid that can be employed for this purpose.

All these tinctures are greatly preferable to the calces or croci of iron, as being not only more speedy, but likewise more certain in their operation: the second, in some cases, passes off through the intestinal tube with little effect; whilst the tinctures scarce ever fail. From ten to twenty drops of either of the tinctures may be taken two or three times a day, in any proper vehicle; though it is seldom advisable to extend the dose so far as the last of the quantities, especially in regard to the tincture in muriatic acid, which is exceedingly strong of the iron.

The tincture of the Edinburgh Pharmacopœia is by some considered as the best composition; for the scales are supposed to be fitter for giving a proper solution than the rust, and the strength of the muriatic acid is so variable, that the quantity is left to the judgment of the operator. A pretty accurate criterion may be formed of the saturation by the fluid: if the acid should be superabundant, the solution is of a *green colour*; if fully saturated with the iron, of a *reddish* or *yellow colour*: sometimes it may be of an inky colour, but that happens when the rectified spirit has been impregnated with the astringent matter of the oak cask.

TINCTURA HELLEBORI NIGRI;
formerly
TINCTURA MELAMPODII.
Tincture of black hellebore.
Lond. and Edinb.

Take of

Black hellebore, coarsely powdered, four ounces;

Cochineal, two scruples;

Proof spirit of wine, two pints.

Digest with a gentle heat for eight days, and strain.

The Edinburgh college uses only half a dram of *cochineal*, but orders two pounds and a half of proof spirit, and after digestion the tincture to be filtered.

This is perhaps the best preparation of hellebore, when designed for an alterative, the menstruum here employed extracting the whole of its virtues. It has been found, from experience, *particularly serviceable in uterine obstructions*: in *sanguine constitutions*, where chalybeates are hurtful, *it seldom fails of exciting the menstrual evacuations*, and *removing the ill consequences of their suppression*. So great is the power of this medicine, that wherever, from an ill conformation of the parts, or other causes, the expected discharge does not succeed upon the use of it, the blood, as Dr. Mead has observed, is so forcibly propelled, as to make its way through other passages. A teaspoonful of the tincture may be

taken twice in a day, in warm water, or any other convenient vehicle.

TINCTURA MOSCHI.

Tincture of musk.

Edinb.

Take of

Musk, two drams;

Rectified spirit of wine, one pound.

Digest for ten days, and strain.

See the article Moschus in the Materia Medica.

TINCTURA MYRRHÆ.

Tincture of myrrh.

Lond.

Take of

Myrrh, bruised, three ounces;

Proof spirit of wine, a pint and a half;

Rectified spirit of wine, half a pint.

After due digestion, strain off the tincture.

Edinb.

Take of

Myrrh, three ounces;

Rectified spirit of wine, two pounds and a half.

Digest ten days, and strain off the tincture.

The pharmaceutical writers in general have been of opinion, that no good tincture can be drawn from myrrh by spirit of wine alone, without the assistance of fixt alkaline salts. But it appears from proper experiments, that these salts only heighten the colour of the tincture, without enabling the menstruum to dissolve any more than it would by itself. Rectified spirit extracts, without any addition, all that part of the myrrh in which its peculiar smell and taste reside, viz. the resin: and proof spirit dissolves almost the whole drug, except its impurities.

Tincture of myrrh is recommended internally for *warming the habit, attenuating viscid juices, strengthening the solids, opening obstructions*, particularly *those of the uterine vessels*, and *resisting putrefaction*. Boerhaave greatly esteems it in all *languid cases*, proceeding from simple inactivity; in those female disorders which are occasioned by *an aqueous, mucous, sluggish indisposition of the humours*, and *a relaxation of the vessels*; in *the fluor albus, and all diseases arising from a like cause*. The dose is from fifteen drops to forty or more. The medicine may doubtless be given in these cases to advantage; though with us it is more commonly used externally, for *cleansing foul ulcers*, and *promoting the exfoliation of carious bones*.

TINCTURA MYRRHÆ ET ALOES.

Tincture of myrrh and aloes.

Lond.

Take of

Myrrh, in powder, one ounce and a half;

Hepatic aloes, in powder, one ounce;

Rectified spirit of wine, two pints;

Digest in a sand-heat for six days, and then let the tincture be strained off.

This tincture is employed only in chirurgical dressings, *for cleansing foul ulcers, restraining the progress of gangrenes*, &c. in which intention the aloes is an useful addition to the myrrh. The hepatic aloes is reckoned more effectual for these purposes than the finer Socotorine.

TINCTURA OPII.

Tincture of opium.

Lond.

Take of

Hard purified opium, powdered, ten drams;

Proof spirit of wine, one pint.

Digest for ten days, and strain.

This is an improvement upon the old Tinctura Thebaica, made with wine; twenty drops of which

contained about one grain of opium.

Of two ounces of ſtrained opium, a pint of white wine diſſolves not quite one ounce; but proof ſpirit diſſolves nearly the whole. Proof ſpirit muſt therefore be the proper menſtruum for ſtrained opium: for though the proportion of opium is two ounces to a pint of wine in the Tinctura Thebaica, or Vinum Opii, and only ten drams in the Tinctura Opii to the ſame quantity of proof ſpirit, the ſtrength of the Tinctura Opii is not leſs, but rather greater, than that of the Tinctura Thebaica.

The tincture is given in doſes from ten to twenty drops or more.

TINCTURA OPII;
vulgo
LAUDANUM LIQUIDUM.
Tincture of opium, commonly called liquid laudanum.
Edinb.

Take of
Opium, two ounces;
Spirituous cinnamon water, one pound and a half.
Digeſt four days, and filter.

This is a very elegant liquid opiate, the menſtruum diſſolving nearly the whole ſubſtance of the opium, and effectually covering its ill flavour. The proportion of menſtruum is ſomewhat larger than in the vinous tincture formerly deſcribed: one grain of opium goes to about twenty drops of that tincture, and twenty-five of this: nevertheleſs, as there appears to be more of the opium diſſolved here than in the other, this tincture may poſſibly be the ſtronger of the two. It were to be wiſhed that the ſhops were furniſhed with a liquid opiate, in which the proportion of menſtruum was ſtill much larger, ſo as to admit of the doſe being determined by weight or meaſure; the method by drops ſeeming too precarious for a medicine of ſo powerful a kind. The following preparation is contrived with this view.

Take of
Thebaic extract, half a dram;
Highly-rectified ſpirit of wine, called alcohol, ten ounces;
Simple cinnamon water, twenty ounces.
Digeſt them together until the opium is diſſolved, and then filter the ſolution through paper.

This preparation I apprehend to be free from all the inconveniencies attending the common opiate tinctures. The menſtruum diſſolves the whole of the opium except the impurities, and conſequently the tincture is not liable to any uncertainty in point of ſtrength. The doſe may be aſcertained to the greateſt exactneſs: one grain of opium is contained in one ounce by meaſure, which is equal nearly to ſeven drams by weight. Neither the tinctures in wine nor proof ſpirit are ſo well adapted for keeping, as could be wiſhed; in long ſtanding, a part of the opium is gradually thrown off from both, and conſequently the tinctures become gradually weaker: the part which thus ſeparates, amounts ſometimes, as I have been informed, to near one-fourth of the quantity of opium at firſt diſſolved; it floats on the ſurface of the vinous tincture, and in the ſpirituous ſinks to the bottom. In the preparation here recommended, it has not been obſerved that any ſeparation happens.

Inſtead of the cinnamon water, pure water may be employed in the mixture; and where aromatic additions are wanted, either in a medicinal intention, or for covering the ill ſmell of the opium, any proper tincture or diſtilled water may be extemporaneouſly joined.

TINCTURA OPII CAMPHORATA;
formerly
ELIXIR PAREGORICUM.
Camphorated tincture of opium.
Lond.

Take of
Flowers of benzoin,
Hard purified opium,—each one dram;
Camphor, two ſcruples;
Oil of aniſeeds, one dram;
Proof ſpirit of wine, two pints;
Digeſt for three days, and ſtrain.

This tincture was uſually made with rectified ſpirit of wine; but now with proof ſpirit; as it is found that the latter will ſuſpend a greater proportion, than is here ordered, of benzoin.

This tincture is alſo ſuppoſed to have more effect as an anodyne, than might be expected from the quantity of opium, compared with that in the Tinctura Thebaica, and not without reaſon; as not above half the opium directed in the laſt was taken up by the vinous menſtruum. It is a good palliative remedy, from one dram to two or three; but ſhould ſeldom be truſted without other remedies.

TINCTURA OPII AMMONIATA;
vulgo
ELIXIR PARAGORICUM.
Ammoniated tincture of opium.
Edinb.

Take of
Flowers of benzoin,
Engliſh ſaffron,—of each three drams;
Opium, two drams;
Eſſential oil of aniſeed, half a dram;
Vinous ſpirit of ſal ammoniac, ſixteen ounces.
Digeſt for four days in a cloſe veſſel, and ſtrain it.

Theſe elixirs are taken from Le Mort, and were originally preſcribed under the title of ELIXIR ASTHMATICUM, which they do not ill deſerve. They contribute to *allay the tickling which provokes frequent coughing;* and at the ſame time are ſuppoſed to *open the breaſt,* and *give greater liberty of breathing.* The opium procures (as it does by itſelf) a temporary relief from the ſymptoms; whilſt the other ingredients tend to remove the cauſe, and prevent their return. It is given to children, againſt the chincough, &c. from five drops to twenty; to adults, from twenty to a hundred. Half an ounce by meaſure contains about a grain of opium, in the London formula; but in that of Edinburgh the proportion is larger.

TINCTURA RHABARBARI.
Tincture of rhubarb.
Lond.

Take of
Rhubarb, ſliced, two ounces;
Leſſer cardamon ſeeds, bruiſed, half an ounce:
Saffron, two drams;
Proof ſpirit of wine, two pints.
Digeſt for eight days, and ſtrain.

The *College of Edinburgh* orders three ounces of rhubarb, and two pounds and a half of proof ſpirit.

TINCTURA RHABARBARI COMPOSITA.
Compound tincture of rhubarb.

Take of
Rhubarb, ſliced, two ounces;
Liquorice, bruiſed, half an ounce;
Ginger, powdered,
Saffron,—of each two drams;
Diſtilled water, one pint;
Proof ſpirit of wine, twelve ounces by meaſure.
Digeſt for eight days, and ſtrain.

TINCTURA RHEI AMARA.
Bitter tincture of rhubarb.
Edinb.

Take of
Rhubarb, two ounces;

Gentian root, half an ounce;
Virginian ſnakeroot, one dram;
Proof ſpirit, two pounds and a half.
Digeſt ſeven days, and ſtrain.

TINCTURA RHEI DULCIS.

Sweet tincture of rhubarb.

Edinb.

To two pound and a half of tincture of rhubarb, ſtrained, add four ounces of ſugar-candy, and digeſt until the ſugar is diſſolved.

All the foregoing tinctures of rhubarb are deſigned as *ſtomachics* and *corroborants*, as well as *purgatives*. Spirituous liquors excellently extract thoſe parts of the rhubarb in which the two firſt qualities reſide, and the additional ingredients conſiderably promote their efficacy. In *weakneſs of the ſtomach, indigeſtion, laxity of the inteſtines, diarrhœas, colicky* and *other like complaints*, theſe medicines are frequently of ſervice. The ſecond is alſo, in many caſes, an uſeful addition to the Peruvian bark, in *the cure of intermittents*, particularly in cachectic habits, where the viſcera are obſtructed. In theſe intentions, a ſpoonful or two may be taken for a doſe, and occaſionally repeated.

TINCTURA SATURNINA;

vulgo

TINCTURA ANTIPHTHISICA.

Antiphthiſical tincture.

Edinb.

Take of
Sugar of lead, an ounce and a half;
Vitriol of iron, one ounce;
Rectified ſpirit of wine, one pound.
Let a tincture be extracted without heat.

The reducing of the ſalts *ſeparately* into powder, and performing of the digeſtion *without heat*, are very neceſſary circumſtances: for if the ingredients be attempted to be pulverized together, they will grow ſoft and almoſt liquid: and if heat be made uſe of, ſcarce any tincture will be obtained.

This tincture is ſometimes given from twenty to thirty drops, for *reſtraining immoderate ſecretions*, particularly *the colliquative ſweats attending hectic fevers* and *phthiſical diſorders*, whence the name *antiphthiſical* tincture. It is undoubtedly a medicine of great efficacy in theſe caſes, but *too dangerous to be raſhly ventured on.* Some have ſuppoſed, that it does not contain any of the ſugar of lead; but experiments, made for that purpoſe, have ſhewn it does. The London college have thrown it out of the laſt edition of their Pharmacopœia.

TINCTURA SCILLÆ.

Tincture of ſquills.

Lond.

Take of
Squills, freſh dried, four ounces;
Proof ſpirit of wine, two pints.
Digeſt for eight days, and pour off the clear liquor.

By this menſtruum the virtues of the ſquills are fully extracted, and may ſupply the place of the vinegar or oxymel of ſquill, where thoſe compounds, on account of the acid menſtruum, may diſagree with the ſtomach; but certainly the ſquill in ſubſtance is by much the moſt efficacious remedy.

TINCTURA SENÆ.

Tincture of ſenna.

Lond.

Take of
Raiſins, ſtoned, ſixteen ounces;
Senna, one pound;
Caraway ſeeds, bruiſed, one ounce and a half;
Leſſer cardamoms, bruiſed, half an ounce;
Proof ſpirit of wine, one gallon.
Digeſt for fourteen days, and ſtrain.

TINCTURA SENÆ COMPOSITA;

vulgo

ELIXIR SALUTIS.

Compound tincture of ſenna, commonly called elixir of health.
Edinb.

Take of
Senna leaves, two ounces;
Jalap root, one ounce;
Coriander ſeeds, half an ounce;
Proof ſpirit, three pounds and a half.

Digeſt for ſeven days, and to the ſtrained liquor add four ounces of ſugar-candy.

Both theſe tinctures are uſeful *carminatives* and *cathartics*, eſpecially to thoſe who have accuſtomed themſelves to the uſe of ſpirituous liquors; they oftentimes *relieve flatulent* and *colicky complaints*, where the common cordials have little effect: the doſe is from one to two ounces. Several preparations of this kind have been offered to the public, under the name of Daffy's elixir. The two above are equal to any, and ſuperior to moſt of them. The laſt of theſe is a proper addition to caſtor-oil, to make it ſit eaſy on the ſtomach, and is much preferable to any of the ardent ſpirits with which it is often given to produce that effect.

TINCTURA SERPENTARIÆ.
Tincture of ſnakeroot.
Lond.

Take of
Virginian ſnakeroot, three ounces;
Proof ſpirit of wine, two pints.

Digeſt without heat, and ſtrain off the tincture.

Edinb.

Take of
Virginian ſnakeroot, two ounces;
Cochineal, one dram;
Proof ſpirit, two pounds and a half.

Digeſt four days, and ſtrain off.

In the tincture of ſnakeroot, it was propoſed to the college to employ rectified ſpirit; but as the heat of this ſpirit prevents the medicine from being taken in ſo large a doſe as it might otherwiſe be, a weaker ſpirit was made choice of. The tincture made in this menſtruum, which extracts the whole virtues of the root, may be taken to the quantity of a ſpoonful or more every five or ſix hours; which often operates as a uſeful diaphoretic.

TINCTURA CARDAMOMI COMPOSITA;
formerly
TINCTURA STOMACHICA.
Compound tincture of cardamoms.
Lond.

Take of
Raiſins, ſtoned, four ounces;
Cinnamon, bruiſed, half an ounce;
Caraway ſeeds,
Leſſer cardamoms, huſked,
Cochineal, powdered,—of each two drams;
Proof ſpirit of wine, two pints.

Digeſt for fourteen days and ſtrain off.

This is a moderately warm ſtomachic tincture, much more pleaſant than the USQUEBAUGH of our former Pharmacopœias. It may be taken, without any vehicle, to half an ounce or an ounce, though oftener uſed in mixtures.

TINCTURA SUCCINI.
Tincture of amber.

Take of
Yellow amber, pounded, one ounce;
Vitriolic æther, four ounces.

Digeſt for three days, in a veſſel accurately cloſed, ſhaking the veſſel frequently; and afterwards filter the tincture.

The amber was formerly diſſolved in ſpirits of wine; but the æther forms a more elegant and active tincture, more perfectly diſſolves the amber, and may be conſidered as one of the moſt valuable preparations of that con-

crete. It has been recommended in a variety of affections, particularly of the nervous kind, as hysterical and epileptic complaints. Its dose from a few drops to a teaspoonful in a glass of wine or any other similar vehicle.

TINCTURA SUDORIFICA.

Sudorific tincture.

Take of
Virginian snakeroot, six drams;
Cochineal,
English saffron,—each two drams;
Opium, one scruple;
Spirit of Mindererus, one pint.

Digest them together in a gentle heat for three days, and then pass the tincture through a strainer.

This composition is an *efficacious sudorific;* the ingredients being of the most powerful kind, and the menstruum not only extracting those parts of them in which their virtues consist, but co-operating strongly in the same intention. From cochineal nothing more is expected than to furnish an agreeable colour to the tincture. Half an ounce of the tincture, by measure, contains five eighths of a grain of opium.

TINCTURA ANTIMONII.

Tincture of antimony.
Edinb.

Take of
Antimony, in powder, four ounces;
Salt of tartar, six ounces;
Rectified spirit of wine, two pints.

Mix the antimony with the salt of tartar, and inject them by little and little into a crucible placed in a strong fire. The mixture melts thin, and is to be continued in this state for half an hour; after which, it is to be poured out into a hot and dry iron mortar. Powder the mass while hot, put it into a heated matrass, and pour thereon the spirit. Digest them together, for three days, in a gentle heat of sand; and then decant the tincture.

In these processes, the alkaline salt unites with the sulphur of the antimony into a hepar; which communicates to the spirit a tincture of a gold colour. This antimonial tincture is supposed to contain likewise some of the reguline parts of the mineral, and is said to have sometimes provoked a puke when taken on an empty stomach, even in a small dose. It stands recommended, in doses of from ten to sixty drops or more, as a *deobstruent, promoter of urine,* and *a purifier of the blood;* but probably the VINUM EX ANTIMONIA TARTARISATO will answer equally every purpose.

TINCTURA BALSAMI TOLUTANI.

Tincture of balsam of Tolu.
Lond. and Edinb.

Take of
Balsam of Tolu, an ounce and a half;
Rectified spirit of wine, a pint.

Digest in a sand heat, until the balsam is dissolved: and then strain the tincture.

This is the same in both the London and Edinburgh Pharmacopœias, except in the title. In the latter, the tincture is named *Tinctura Tolutana.*

This solution of balsam of Tolu possesses all the virtues of the balsam itself. It may be taken internally, in the several intentions for which this valuable balsam is proper, to the quantity of a tea-spoonful or two, in any convenient vehicle. Mixed with the plain syrup of sugar, it forms an elegant balsamic syrup. See BALSAMUM TOLUTANUM in the Materia Medica.

TINCTURA VALERIANÆ.

Tincture of valerian.

Lond.

Take of
Wild valerian root, in coarſe powder, four ounces;
Proof ſpirit of wine, two pints.
Digeſt with a gentle heat for eight days, and ſtrain.

The valerian root ought to be reduced into fine powder, otherwiſe the ſpirit will not ſufficiently extract its virtues. The tincture proves of a deep colour, and conſiderably ſtrong of the valerian; though it has not been found to anſwer ſo well in the cure of epileptic diſorders, as the root in ſubſtance exhibited in the form of powder or bolus. The doſe of the tincture is, from half a ſpoonful to a ſpoonful or more, two or three times a day.

TINCTURA VALERIANA AMMONIATA;
formerly
TINCTURA VALERIANÆ VOLATILIS.
Ammoniated tincture of valerian.
Lond.

Take of
Wild valerian root, coarſely powdered, four ounces;
Compound ſpirit of ammonia, two pints.
Digeſt for eight days in a veſſel cloſely ſtopt, and ſtrain.

TINCTURA VALERIANA VOLATILIS.
Volatile tincture of valerian.
Edinb.

Take of
Wild valerian root, two ounces;
Vinous ſpirit of ſal ammoniac, one pound.
Macerate for ſix days in a cloſe veſſel, and ſtrain.

The menſtrua uſed in both theſe tinctures are each of them conſidered as excellently well calculated to extract the qualities; and, at the ſame time, conſiderably promote the virtues of the valerian, which in ſome caſes wants an aſſiſtance of this kind. The doſe may be a tea-ſpoonful or two.

TINCTURA ZINZIBERIS.
Tincture of ginger.
Lond.

Take of
Ginger, powdered, two ounces;
Proof ſpirit of wine, two pints.
Digeſt with a gentle heat, for eight days, and ſtrain.

This is a warm ſtimulant tincture; and where the qualities of the ginger are wanted to be thrown into the habit in a liquid form, this will anſwer the deſired purpoſe.

TINCTURA VERATRI.
Tincture of veratrum, or white hellebore.
Lond.

Take of
White hellebore root, eight ounces;
Proof ſpirit, two pounds and a half.
Digeſt them together for ten days, and filter the tincture through paper.

This tincture is ſometimes uſed for *acuating cathartics*, &c. and as an *emetic in apoplectic* and *maniacal diſorders*. It may likewiſe be ſo managed as *to prove a powerful alterative and deobſtruent*, in caſes where milder remedies have little effect. *But a great deal of caution is requiſite in its uſe.* The doſe, at firſt, ought to be only a few drops; if conſiderable, its proves violently emetic or cathartic.

ELIXIR GUAIACINUM.
Elixir of guaiacum.
Edinb.

Take of
Gum guaiacum, one pound;
Balſam of Peru, three drams;
Rectified ſpirit of wine, two pounds and a half.
Digeſt for ten days, and ſtrain off.

This compoſition and the other tinctures of the ſame gum are medicines of great efficacy, and capa-

ble of anſwering many uſeful purpoſes. They *warm* and *ſtrengthen the habit*, and *promote inſenſible perſpiration*. Twenty or thirty drops may be taken two or three times a day, or oftener, in any proper vehicle, in *rheumatic complaints*, *cutaneous defœdations*, &c. particularly where the patient is of a cold phlegmatic temperament, and the ſolids weak and relaxed. In hot, bilious conſtitutions, and tenſity or rigidity of the veſſels, like other ſtimulating medicines, they are evidently improper.

TINCTURA BENZOIS COMPOSITA;
formerly
BALSAMUM TRAUMATICUM.
Compound tincture of benzoin.
Lond.

Take of
Benzoin, three ounces;
Storax, ſtrained, two ounces;
Balſam of Tolu, one ounce;
Socotorine aloes, half an ounce;
Rectified ſpirit of wine, two pints.
Digeſt with a gentle heat for three days, and ſtrain.

Edinb.

Take of
Benzoin, powdered, three ounces;
Balſam of Peru, two ounces;
Hepatic aloes, in powder, half an ounce;
Rectified ſpirit of wine, two pints.
Digeſt them in a ſand-heat, for the ſpace of three days; and then ſtrain the balſam.

Theſe two tinctures formerly ſtood highly recommended as internal and external applications. They were exhibited INTERNALLY *for warming and ſtrengthening the ſtomach* and *inteſtines*, *expelling flatulencies*, and *relieving colicky complaints*—a few drops given for a doſe, in wine, or any other convenient vehicle; — EXTERNALLY, for *cleanſing* and *healing ulcers* and *wounds*, *diſcuſſing cold tumors*, *allaying gouts*, and *rheumatic* and *other old pains* and *aches*, and were applied cold on the part with a feather. At preſent they are chiefly employed in caſes of recent wounds to ſtop hæmorrhages, and heal by the firſt intention, as it is termed in the language of ſurgery.

ELIXIR ALOES;
vulgo
ELIXIR PROPRIETATIS.
Edinb.

Take of
Myrrh, in powder, two ounces;
Rectified ſpirit of wine,
Proof ſpirit, — of each one pound.
Digeſt for four days, and add
Socotorine aloes, powdered, one ounce and a half;
Engliſh ſaffron, one ounce.
Digeſt for two days more, and, when it is ſettled, pour it off.

This is the *elixir proprietatis* of Paracelſus, improved with regard to the manner of preparation.

This medicine is greatly recommended, and not undeſervedly, as a *warm ſtimulant* and *aperient*. It *ſtrengthens the ſtomach* and *other viſcera*, *cleanſes the firſt paſſages* from tenacious phlegm, and *promotes the natural ſecretions in general*. Its continued uſe has frequently done ſervice in *cachectic* and *icteric caſes*, *uterine obſtructions*, and *ſimilar diſorders*; particularly in cold, pale, phlegmatic habits. Where *the patient is of a hot*, *bilious conſtitution*, and *florid complexion*, this warm ſtimulating medicine is leſs proper, and ſometimes prejudicial. The doſe may be from twenty drops to a tea-ſpoonful or more, two or three times a day, according to the purpoſes which it is intended to anſwer.

ELIXIR PROPRIETATIS VITRIOLICUM.

Edinb.

Take of
Myrrh,
Socotorine aloes,—of each an ounce and a half;
English saffron, one ounce;
Dulcified spirit of vitriol, one pound.

Digest the myrrh with the spirit, in a well-stopped vial, four days; then add the saffron and aloes.

Digest them again for four days more; and when the feces have subsided, pour off the elixir.

Here the dulcified spirit of vitriol is very judiciously substituted for the spirit of sulphur, ordered in other books of pharmacy to be added to the foregoing preparation: for that strong acid precipitates from the liquor great part of what it had before taken up from the other ingredients; whereas, when the acid is previously combined with the vinous spirit, and thereby dulcified, as it is called, it does not impede its dissolving power. This elixir possesses the general virtues of the preceding, and is, in virtue of the menstruum, perferred to it in in hot constitutions, and weaknesses of the stomach. See *Elixir vitrioli.*

ELIXIR VITRIOLI ACIDUM.

Acid elixir of vitriol.

Edinb.

Take of
Rectified spirit of wine, two pounds;
Drop into it, by degrees, six ounces of the vitriolic acid.

Digest the mixture in a very gentle heat, in a close vessel, for three days.

Then add of
Cinnamon, one ounce and a half;
Ginger, one ounce.

Digest again in a close vessel for six days; and then filter through paper in a glass funnel.

The intention in this process is, to obtain a tincture of aromatic vegetables, in spirit of wine, combined with a considerable proportion of vitriolic acid. When the tincture is first drawn with vinous spirits, and the acid added afterwards, the acid precipitates great part of what the spirit had before taken up: and, on the other hand, when the acid is mixed with the spirit immediately before the extraction, it prevents the dissolution of all that it would have precipitated by the former way of treatment. By previously uniting the acid and the vinous spirit together by digestion, as in this process, the inconvenience is somewhat lessened.

All these compositions are valuable medicines in *weakness* and *relaxations of the stomach*, and *decays of constitution*, particularly in those which proceed from irregularities, which are accompanied with slow febrile symptoms, or which follow the suppression of intermittents. They have frequently taken place after bitters and aromatics, by themselves, had availed nothing: and, indeed, great part of their virtue depends on the vitriolic acid; which, barely diluted with water, has, in these cases, where the stomach could bear the acidity, produced happy effects.

Fuller relates (in his Medicina Gymnastica) that he was recovered, by Mynsicht's elixir, from an extreme decay of constitution, and continual reachings to vomit. They may all be given from ten to thirty or forty drops, or more, according to the quantity of acid, twice or thrice a day, at such times as the stomach is most empty.

The London College have omitted this elixir in their Pharmacopœia; supposing every advantage may be gained equally by the administration of the ACIDUM VITRIOLI DILUTUM.

ELIXIR VITRIOLI DULCE.

Sweet elixir of vitriol.

Edinb.

Take of
Aromatic tincture, one pint;
Dulcified ſpirit of vitriol, eight ounces by weight.
Mix them together.

This is deſigned for perſons *whoſe ſtomach is too weak to bear the foregoing acid elixir.* To the taſte it is gratefully aromatic, without any perceptible acidity. The dulcified ſpirit of vitriol, here directed, occaſions little or no precipitation upon adding it to the tincture.

A medicine of this kind was formerly in great eſteem, under the title of VIGANI'S VOLATILE ELIXIR OF VITRIOL; the compoſition of which was firſt communicated to the public in the *Pharmacopœia reformata.* It is prepared by digeſting ſome volatile ſpirit of vitriol upon a ſmall quantity of mint-leaves curiouſly dried, till the liquor has acquired a fine green colour. If the ſpirit, as it frequently does, partakes too much of the acid, this colour will not ſucceed: in ſuch caſe it ſhould be rectified from a little fixt alkaline ſalt. The mint is moſt commodiouſly ſuſpended in the ſpirit in a fine linen cloth: this prevents the neceſſity of filtration, during which the more volatile parts would exhale.

TINCTURA SABINÆ COMPOSITA;
formerly
ELIXIR MYRRHÆ COMPOSITUM.
Compound tincture of ſavin.
Lond.

Take of
Extract of ſavin, one ounce;
Tincture of caſtor, one pint;
Tincture of myrrh, half a pint.
Digeſt, until the extract of ſavin is diſſolved; then ſtrain.

This preparation is a medicine of great importance in *uterine obſtructions,* and in *hypochondriacal* caſes; though, poſſibly, means might be contrived of ſuperadding more effectually the virtues of ſavin to a tincture of myrrh and caſtor. It may be given from five drops to twenty or thirty, or more, in pennyroyal water, or any other ſuitable vehicle.

TINCTURA RHEI CUM ALOE;
vulgo
ELIXIR SACRUM.
Tincture of rhubarb with aloes; commonly called *Sacred elixir.*
Edinb.

Take of
Rhubarb, ten drams;
Socotorine aloes, ſix drams;
Leſſer cardamom ſeeds, half a ounce;
Proof ſpirit, two pounds and a half.
Digeſt for ſeven days, and ſtrain off the elixir.

SPIRITUS VINOSUS CAMPHORATUS.
Camphorated ſpirit of wine.
Lond.

Take of
Camphor, four ounces;
Rectified ſpirit of wine, two pints.
Mix, that the camphor may be diſſolved.

This ſolution of camphor is employed chiefly for external uſes, againſt *rheumatic pains, paralytic numbneſſes, inflammations,* for *diſcuſſing tumors, preventing gangrenes,* or *reſtraining their progreſs.* It is too pungent to be exhibited internally, even when diluted, nor does the dilution ſucceed well; for on the admixture of aqueous liquors, the camphor gradually ſeparates and runs together in little maſſes.

HOFFMAN, ROTHEN, and others, mention a camphorated ſpirit not ſubject to this inconvenience. It is prepared by grinding the camphor with ſomewhat more than an equal weight of fixt alkaline ſalt, then adding a proper quantity of proof ſpirit, and drawing off one half of it by diſtillation. This ſpirit was propoſed to be received into

the Pharmacopœia, under the title of SPIRITUS CAMPHORÆ TARTARIZATUS. But upon trial it did not anſwer expectation; ſome of the camphor riſes with the ſpirit in diſtillation, though but a ſmall quantity; whence, mixed with a large portion of water, it does not ſenſibly render it turbid: but in a proper quantity it exhibits the ſame appearance as the more common camphorated ſpirit. It did not appear, that ſpirit diſtilled from camphor, with or without the alkaline ſalt, differed at all in this reſpect.

The moſt convenient method of uniting camphor with aqueous liquors, for internal uſe, ſeems to be by the mediation of almonds, or of mucilages. Triturated with theſe, it readily mingles with water into the form of an emulſion, at the ſame time that its pungency is conſiderably abated. It may alſo be commodiouſly exhibited in the form of an oily draught, expreſſed oils totally diſſolving it.

TINCTURA BENZOINI.

Tincture of benzoin.

Take of

Benzoin, four ounces;

Rectified ſpirit of wine, one pint.

Digeſt them together in a ſand-heat for three or four days, and then decant off the tincture.

This tincture ſtands recommended in *aſthmas*, and other *diſorders of the lungs*, in doſes of from twenty to ſixty or ſeventy drops. It has, however, been principally made uſe of externally, as a *coſmetic* for *cleanſing* and *ſmoothing the ſkin*. For theſe purpoſes it is mixed with a large portion of water, when it forms a white liquor called LAC VIRGINIS. If this be ſuffered to reſt for ſome time, the benzoin precipitates, in form of a white magiſtery (of a very pleaſant ſmell, and not diſagreeable taſte), which in the Brandenburgh Pharmacopœia is preferred to the flowers of benzoin, as being free from the empyreumatic flavour with which theſe are generally attended. It is, however, of a different nature from the flowers, being no other than the benzoin in its whole ſubſtance; whereas the flowers are a diſtinct part of it, not reſinous, like the reſt of the maſs, but rather, as we ſhall ſee hereafter, of the ſaline kind. The precipitation is directed to be made with roſe-water.

TINCTURA ſeu ESSENTIA AMBRÆ.

Tincture or *eſſence of ambergris.*

Pariſ.

Take of

Ambergris, one dram;

Tartarized ſpirit of wine,

Spirit of roſes, that is, highly rectified ſpirit of wine drawn off from dried damaſk roſes,

—each one ounce and a half.

Digeſt in the heat of a water-bath.

The ambergris, if pure, is here totally diſſolved into a reddiſh liquor, provided the heat be ſufficient to make the ſpirit boil or ſimmer. With a weaker heat, or if the ſpirit be not highly rectified, the ſolution does not ſucceed. This tincture is *a high cordial*: eight or ten drops may be taken on ſugar.

TINCTURA ſeu ESSENTIA REGIA.

The royal tincture or *eſſence.*

Pariſ.

Take of

Ambergris, two ſcruples;

Muſk, one ſcruple;

Civet, ten grains;

Oil of cinnamon, ſix drops;

Oil of rhodium, four drops;

Salt of tartar, half a dram;

Rectified ſpirit of wine,

Spirit of roſes,

Spirit of orange-flowers,—each one ounce and a half.

Grind the ſalt of tartar with the ambergris, muſk, civet, and eſſential oils, till they are thoroughly mixed; then add the ſpirits, and digeſt in a warm place for ſome days, frequently ſhak-

ing the veſſel; afterwards let the liquor ſettle, and pour off the clear from the dregs.

This tincture is a very high perfume; and by thoſe who can bear ſubſtances of that claſs, may be taken, like the preceding, as a cordial. A few drops give a fine flavour to a large quantity of other liquors. The ambergris diſſolves here with leſs heat than in the foregoing preparation; the eſſential oils promoting its ſolution.

ESSENTIA LIGNORUM.

Eſſence of the woods.

Argentoratenſ.

Take of

Saſſafras, two ounces;
Guaiacum, three ounces;
China root,
Sarſaparilla,
Red ſaunders,
Yellow ſaunders--each one ounce;
Spirit of wine, as much as will cover the above ingredients to the height of four inches.

Digeſt for eight days, and then filter the eſſence.

This eſſence, or tincture, is given in venereal and catarrhous diſorders, and impurities of the humours in general, from a ſcruple to a dram or more. By gently drawing off half of the ſpirit, the remainder becomes proportionably ſtronger, and is then called *Eſſentia lignorum concentrata.*

BALSAMUM VITÆ.

Balſam of life.

Brandenburgh.

Take of

Eſſential oils of Lavender,
Nutmegs,
Cloves,
Rhodium,
Serpyllum--each half a dram;
Cinnamon,
Lemon peel,
Bergamotte--each two ſcruples;
Balſam of Peru, one dram;
Highly rectified ſpirit of lavender, fifteen ounces.

Firſt diſſolve the balſam in the ſpirit, then add the oils, and digeſt till the whole is diſſolved.

This fragrant balſam is an improvement on one deſcribed by HOFFMANN, in his notes on Poterius, and is probably the ſame, or nearly the ſame, with the balſam ſo much celebrated afterwards in that author's practice, internally *in languors, faintings, debilities of the nervous ſyſtem, colics,* &c. from ten to twenty or thirty drops; and externally applied to the noſtrils, temples, &c. in *vertiginous, lethargic* and *other like complaints.* Thus much is certain from HOFFMANN's own writings, that his balſam was compoſed of fragrant oils diſſolved in rectified ſpirit of wine.

CHAPTER IV.

Conservation of recent vegetables and their infusions, &c. by sugar and honey.

SECT. I.

CONSERVES.

CONSERVES are compositions of recent vegetable matters and sugar, beaten together into an uniform mass.

This management is introduced for preserving certain simples, undried, in an agreeable form, with as little alteration as possible in their native virtues; and to some subjects it is very advantageously applied. Vegetables whose virtues are lost or destroyed in drying, may in this form be kept uninjured for a length of time: for by carefully securing the mouth of the containing vessel, the alteration, as well as dissipation, of their active principles is generally prevented; and the sugar preserves them from the corruption which juicy vegetables would otherwise undergo.

There are, however, sundry vegetables, whose virtues are impaired by this treatment. Mucilaginous substances, by long lying with sugar, become less glutinous; and astringents, sensibly softer upon the palate. Many of the fragrant flowers are of so tender and delicate a texture, as almost entirely to lose their peculiar qualities on being beaten or bruised.

In general, it is obvious, that in this form, on account of the large admixture of sugar, only substances of considerable activity can be taken to advantage as medicines. And indeed, conserves are at present considered chiefly as auxiliaries to medicines of greater efficacy; or as intermedia for joining them together. They are very convenient for reducing into boluses or pills the more ponderous powders as mercurius dulcis, the calces of iron, and other mineral preparations; which, with liquid or less consistent matters, as syrups, will not cohere.

The shops were formerly incumbered with many conserves, altogether insignificant; the few now retained have in general either an agreeable flavour to recommend them, or are capable of answering some useful purposes as medicines. Their common dose is the bulk of a nutmeg, or as much as can be taken up at once or twice upon the point of a knife. There is in general no great danger of exceeding in this particular.

General method of preparing conserves. Leaves are picked from the stalks, and flowers from their cups. They are then beaten in a marble mortar, with a wooden pestle, into a smooth mass; after which, thrice their weight of double-refined sugar is added by degrees, and the beating continued till they are uniformly mixed.

The sugar should be pulverized by itself, and passed through a sieve, before it is mixed with the vegetable mass; otherwise it can not easily be reduced to sufficient fineness, so as to be duly incorporated. Some vegetables are scarce reducible to the requisite fineness by beating in a mortar: such is

orange-peel. This is most conveniently rasped or grated off from the fruit, then well mixed with the sugar, and the compound set by in a close vessel for some weeks; after which, it may be beaten smooth with considerably less labour than at first. This *peel*, and *red rose-buds*, are commonly ground in a wooden mill made for that purpose.

The conserves of LUJULÆ—ABSINTHII MARITIMI—ROSÆ RUBRÆ—CORTICIS EXTERIORIS AURANTII HISPALENSIS—MENTHÆ SATIVÆ—RUTÆ—are to be made in the following manner:

Pluck the leaves from the foot-stalks; and the unblown petal from the calyx, cutting off the heels. Take off the outer rind of the orange-peel with a grater. When they are thus prepared, bruise them with a wooden pestle in a marble mortar, with three times their weight of double refined sugar, until they are mixed.

CONSERVA ARI.

Conserve of arum, or cuckow-pint.

Take of

The fresh root of arum, bruised, half a pound;

Double-refined sugar, one pound and a half.

Beat them together in a mortar.

The *pulvis ari compositus* used to be kept in the shops; but the activity of arum is almost wholly lost by drying; hence has it been rejected, and this conserve prescribed in its stead, which is the best form it can be preserved in.

It may be given to adults in doses of a dram. Arum in its recent state is a medicine of great activity, and was held in high estimation by SYDENHAM, who prescribed it much in rheumatic cases.

CONSERVA SCILLÆ.

Conserve of squills.
Lond. Edinb.

Take of

Fresh squills, one ounce;

Double-refined sugar, five ounces.

Beat them together in a mortar into a conserve.

The powder of the dried root, when given in form of a pill or bolus, is considered as a more certain and agreeable mode of exhibition.

The reason why the conserve is made in so small a quantity, is to guard against its variation in strength; for by long keeping it loses its power in no small degree.

It is given in doses of from half a dram to two scruples; chiefly as an *expectorant* and *diuretic*.—See SCILLA in Mat. Med.

CONSERVA MILLEPEDARUM.

Conserve of millepedes.

Take of

Millepedes, alive, one pound;

Double-refined sugar, two pounds and a half.

Beat them together into a conserve.

This is perhaps one of the best forms under which millepedes can be given, if they possess those virtues which some practitioners have attributed to them. See MILLEPEDÆ in Mat. Med.—And by children, to whom they are frequently prescribed, this conserve may be easily taken, when other forms cannot be introduced. This conserve is so readily made, that it may form an extemporaneous prescription, and need not be kept in the shops.

CONSERVA foliorum LUJULÆ.

Conserve of the leaves of wood-sorrel.
Lond. Edin.

This is a very elegant and grateful conserve; in taste it is slightly acidulous, with a peculiar flavour, which some resemble to that of green tea. It is taken occasionally, for *quenching thirst*, and *cooling the mouth and fauces*, in complaints where the heat of the body is much increased.

CONSERVA foliorum MENTHÆ vulgaris.

Conserve of the leaves of spearmint.

Lond.

The conserve of mint retains the taste and virtues of the herb. It is given in *weaknesses of the stomach* and *reachings to vomit;* and not unfrequently does service in some cases of this kind, where the warmer and more active preparations of mint would be less proper.

CONSERVA foliorum RUTÆ.

Conserve of the leaves of rue.

Lond.

This conserve is given from a dram to half an ounce, in *crudities of the primæ viæ*, for *promoting digestion*, and in *hysteric disorders*. It gently *stimulates the solids*, *attenuates viscid juices*, and *excites the natural secretions*. Some have had a great opinion of it, taken in a morning, as a preservative against the effects of contagious air or exhalations.

CONSERVA summitatum ABSINTHII maritimi.

Conserve of the tops of sea-wormwood.

Lond.

The conserve of wormwood has been celebrated in *dropsies*. Matthiolus relates, that several persons were cured by it of that distemper, without the assistance of any other medicine. Where the disorder indeed proceeds from a simple laxity or flaccidity of the solids, the continued use of this medicine may be of some service; as it appears to be *an elegant mild corroborant*. It is directed to be given in the dose of half an ounce, about three hours before meals.

CONSERVA ROSÆ RUBRÆ.

Conserve of red roses.

L. E.

This is a very agreeable and useful conserve. A dram or two, dissolved in warm milk, are frequently given as a light restringent, in *weakness of the stomach*, and likewise in *coughs* and *phthisical complaints*. In the German Ephemerides, examples are related of very dangerous phthises cured by the continued use of this medicine. In one of these cases, twenty pounds of the conserve were taken in the space of a month; and in another, upwards of thirty. Riverius mentions several other instances of this kind. In obstinate catarrhs, and some other affections, it may probably have its uses; but in the true pulmonary consumption little can be expected from it, more than rendering the milk pleasant to the taste, and becoming an agreeable placebo.

CONSERVA flavedinis CORTICIS AURANTII Hispalensis.

Conserve of the yellow rind of Seville orange peel.

L. E.

This conserve is a very elegant one, containing all the virtues of the peel, in a form sufficiently agreeable, both with regard to the dose and the convenience of taking it. It is a *pleasant warm stomachic*, and in this intention is frequently used.

CONSERVA FRUCTUS CYNOSBATI.

Conserve of hips.

L. E.

Hips require less sugar for reducing them into a conserve, than the substances above enumerated. Twelve ounces of the pulp of the ripe fruit are to be mixed with only twenty ounces of sugar.

The conserve of hips is of some esteem, as a *soft cooling restringent*. Three or four drams or more are given at a time, in *bilious fluxes*, *sharpness of urine*, and *hot indispositions of the stomach*. A good deal of care is requisite on the part of the apothecary in making this conserve: the pulp is apt to carry with it some of the prickly fibres with which the inside of the fruit is lined. If these be retained in the conserve, they will irritate the stomach, so as to occasion vomiting, and create a pruritus about the anus.

CONSERVA PRUNI SILVESTRIS.

Conſerve of the ſloe.

Lond.

Let the ſloes be put into water, and ſet over the fire till they grow ſoft, with care that they do not burſt. Then take the ſloes out of the water, preſs out their pulp, and with thrice its weight of double-refined ſugar make a conſerve.

This preparation is a *gentle aſtringent*, and may be given as ſuch in the doſe of two or three drams. The degree of its aſtringency will vary according to the maturity of the ſloes, and the length of time that the conſerve has been kept.

All conſerves are beſt kept in cloſe veſſels, particularly thoſe of ARUM and SQUILLS.

SECT. II.

SYRUPS.

SYRUPS are ſaturated ſolutions of ſugar, made in water, or watery or vinous infuſions, or in juices. They were formerly conſidered as medicines of much greater importance than they are thought to be at preſent. Syrups and diſtilled waters were for ſome ages made uſe of as the great alteratives; inſomuch that the evacuation of any peccant humour was never attempted, till by a due courſe of theſe it had firſt been regularly prepared for expulſion. Hence aroſe the exuberant collection of both, which we meet with in Pharmacopœias; and like errors have prevailed in each. As multitudes of diſtilled waters have been compounded from materials unfit to give any virtue over the helm; ſo numbers of ſyrups have been prepared from ingredients which in this form cannot be taken in ſufficient doſes to exert their virtues; for two-thirds of a ſyrup conſiſt of ſugar, and the greateſt part of the remaining third is an aqueous fluid.

Syrups are at preſent chiefly regarded as convenient vehicles for medicines of greater efficacy; and made uſe of for ſweetening draughts and julaps, for reducing the lighter powders into boluſes, pills, or electuaries, and ſimilar purpoſes. Some likewiſe may not improperly be conſidered as medicines themſelves; as ſyrup of *buckthorn-berries*, *garlick*, *ſquill*, *colchicum*, *white poppy*, &c.

General Rules for preparing Syrups.

I.

All the rules laid down for making decoctions, are likewiſe to be obſerved in the decoctions for ſyrups. Vegetables, both for decoctions and infuſions, ought to be dry, unleſs expreſsly ordered otherwiſe.

II.

In both the London and Edinburgh Pharmacopœias only the pureſt or double-refined ſugar is allowed.

In the ſyrups prepared by boiling, it has been cuſtomary to perform the clarification with whites

of eggs, after the ſugar had been diſſolved in the decoction of the vegetable. This method is apparently injurious to the preparation, ſince not only the impurities of the ſugar are thus diſcharged; but a conſiderable part likewiſe of the medicinal matter, which the water had before taken up from the ingredients, is ſeparated along with them. Nor indeed is the clarification and deſpumation of the ſugar, by itſelf, very adviſeable; for its purification by this proceſs is not ſo perfect as might be expected; after it has undergone this proceſs, the refiners ſtill ſeparate from it a quantity of oily matter, which is diſagreeable to weak ſtomachs. It appears therefore moſt eligible to employ fine ſugar for all the ſyrups; even the purgative ones (which have been uſually made with coarſe ſugar, as ſomewhat coinciding with their intention) not excepted; for, as purgative medicines are in general ungrateful to the ſtomach, it is certainly improper to employ an addition which increaſes their offenſiveneſs.

III.

Where the weight of the ſugar is not expreſſed, twenty-nine ounces thereof are to be taken to every pint of liquor. The ſugar is to be reduced into powder, and diſſolved in the liquor by the heat of the water-bath, unleſs ordered otherwiſe: then ſet the ſyrup aſide for twenty-four hours, and if there are any fæculencies, pour the ſyrup from them. When pure water only is uſed, it forms the *Syrupus ſimplex* of the London, and the *Syrupus ſacchari* of the Edinburgh, Pharmacopœia.

Although in the formulæ of ſeveral of the ſyrups a double weight of ſugar to that of the liquor is directed, yet leſs will generally be ſufficient. Firſt therefore diſſolve in the liquor an equal weight of ſugar, then gradually add ſome more in powder, till a little remains undiſſolved at the bottom, which is to be afterwards incorporated by ſetting the ſyrup in a water-bath.

The quantity of ſugar ſhould be ſo much, that the liquor may keep diſſolved in the cold: if there be more, a part of it will ſeparate, and concrete into cryſtals, or candy; if leſs, the ſyrup will be ſubject to ferment, eſpecially in warm weather, and change into a vinous or ſour liquor. If, in cryſtallizing, only the ſuperfluous ſugar ſeparated, it would be of no inconvenience; but, when part of the ſugar has candied, the remaining ſyrup is found to have an under proportion, and is as ſubject to fermentation as if it had wanted ſugar at firſt.

IV.

Copper veſſels, unleſs well tinned, ſhould not be employed in the making of acid ſyrups, or ſuch as are compoſed of the juices of fruits.

The confectioners, who are the moſt dextrous people at theſe kinds of preparations, to avoid the expence of frequently new-tinning their veſſels, rarely make uſe of any other than copper ones untinned, in the preparation even of the moſt acid ſyrups, as of oranges and lemons. Nevertheleſs, by taking due care that their coppers be well ſcoured and perfectly clean, and that the ſyrup remain no longer in them than is abſolutely neceſſary, they avoid giving it any ill taſte or quality from the metal. This practice however is by no means to be recommended to the apothecary.

V.

The ſyrup, when made, is to be

ſet by till next day; if any ſaccharine cruſt appear upon the ſurface, take it off.

SYRUPUS ACETI.

Syrup of vinegar.

Edinb.

Take of

Vinegar, two pounds and a half;
Refined ſugar, three pounds and a half.

Boil, till a ſyrup be formed.

This is often employed in mucilaginous mixtures, and farinaceous infuſions and decoctions, in common colds and coughs; and gives theſe liquids a very agreeable taſte, and is uſeful in being in ſome degree a diaphoretic. Where honey diſagrees, it may very well ſupply the place of the *Acetated honey*.

SYRUPUS ex ALLIO.

Syrup of garlick.

Take of

Garlick, ſliced, one pound;
Boiling water, two pounds.

Macerate them in a cloſe veſſel for one hour, then ſtrain off the liquor, and diſſolve in it a proper quantity of ſugar, ſo as to make a ſyrup.

This ſyrup is occaſionally made uſe of for *attenuating viſcid phlegm*, and *promoting expectoration in humoral aſthmas*, and *oppreſſions of the breaſt*. In theſe caſes, it proves a medicine of conſiderable efficacy, though a very unpleaſant one; it taſtes and ſmells ſtrongly of the garlic. It well ſupplies the place of the *Oxymel ex allio*, for the uſe of thoſe with whom honey diſagrees.

SYRUPUS ALTHÆÆ.

Syrup of marſhmallows.

Lond.

Take of

The freſh root of marſhmallows, bruiſed, one pound;
Double-refined ſugar, four pounds;
Diſtilled water, one gallon.

Boil the water with the roots to one half; when grown thoroughly cold, pour off and preſs out the decoction, and ſet it by for twenty-four hours for the fæculencies to ſettle; then pour off the clear liquor; add the ſugar, and boil the whole to the weight of ſix pounds.

Edinb.

Take of

Marſhmallow roots, ſomewhat dried, nine ounces;
Pureſt ſugar, four pounds;
Water, ten pounds.

Boil the water with the roots to the conſumption of one half; then ſtrain the liquor by ſtrongly expreſſing it: after it has ſtood long enough for the fæces to ſubſide, and it is free from dregs, pour off the clear liquor from the ſediment, and boil it with the ſugar ſo as to make a ſyrup.

The ſyrup of marſhmallows is uſed chiefly in *nephritic caſes* for *ſweetening emollient decoctions*, and in tickling coughs from irritating defluxions on the fauces; and is of ſervice from its inviſcating ſuch matter, and ſheathing the parts over which it paſſes. Of itſelf, it can do little ſervice, notwithſtanding the high opinion which ſome have entertained of it; for what can be expected from two or three ſpoonfuls of the ſyrup, when the decoction from which two or three pounds are made, may be taken at a draught or two?

SYRUPUS CINNAMOMI.

Syrup of cinnamon.

Take of

Cinnamon, bruiſed, five ounces;
Spirituous cinnamon-water, two pounds.

Digeſt them in a cloſe veſſel for twenty-four hours; then add to the ſtrained liquor three pounds of double-refined ſugar, and boil it to a ſyrup.

This ſyrup is ſtrongly impregnated with the cinnamon, and may be of uſe where we want to employ an aromatic ſweet to render any medicinal compoſition agreeable to

the palate, in ſuch caſes where mild ſtimulants are prohibited.

SYRUPUS e CORTICE AURANTII.

Syrup of orange-peel.

Lond.

Take of

The yellow rind of Seville-orange peel, freſh, eight ounces;

Boiling water, five pints.

Macerate them for a night in a cloſe veſſel, ſtrain out the liquor, and diſſolve in it the proper quantity of ſugar for making it into a ſyrup.

Edinb.

Take of

The yellow rind of orange-peel, freſh, ſix ounces;

Boiling water, three pounds.

Infuſe them for a night in a cloſe veſſel, then ſtrain the liquor, let it ſtand to ſettle, and, having poured it off clear from the ſediment, diſſolve therein twice its weight of white ſugar, ſo as to make it into a ſyrup, with a gentle heat.

In making this ſyrup, it is particularly neceſſary, that the ſugar be previouſly powdered and diſſolved in the infuſion with as gentle a heat as poſſible, to prevent the exhalation of the volatile parts of the peel. With theſe cautions, the ſyrup proves a very elegant and agreeable one, poſſeſſing great ſhare of the fine flavour of the orange-peel.

SYRUPUS TOLUTANUS;

formerly

SYRUPUS BALSAMICUS.

Syrup of Tolu.

Lond.

Take of

Balſam of Tolu, eight ounces;

Water, three pints.

Boil for two hours in a cloſe veſſel, ſtrain the liquor, and add a proper quantity of double-refined ſugar to make it into a ſyrup.

The coction may be conveniently performed in a retort, with a receiver adapted to it, the liquor which comes over being occaſionally poured back; or the water may be entirely drawn off, and the ſugar diſſolved in the diſtilled liquor.

SYRUPUS BALSAMICUS.

Edinb.

Take of the

Syrup of ſugar, juſt made, and warm from the fire, two pounds;

Tincture of balſam of Tolu, one ounce;

When the ſyrup has grown almoſt cold, ſtir into it the tincture, by little at a time, agitating them well together, till perfectly united.

This method of making the balſamic ſyrup was dropt in one of the preceding editions of the Edinburgh Pharmacopœia, on a complaint that the ſpirit ſpoiled the taſte of the ſyrup; which it did in a great degree when the tincture was drawn with malt ſpirits; the nauſeous oil, with which all the common malt ſpirits are accompanied, being left in the ſyrup after the evaporation of the pure ſpirituous part. Particular care therefore ſhould be taken, that the ſpirit employed for making the tincture be perfectly clean, and well rectified from all ill flavour.

The intention of the contrivers of the two foregoing proceſſes ſeems to have been ſomewhat different. In the firſt, the more ſubtile and fragrant parts of the balſam are extracted from the groſſer reſinous matter, and alone retained in the ſyrup: the other ſyrup contains the whole ſubſtance of the balſam, in larger quantity. They are both moderately impregnated with the agreeable flavour of the balſam.

In ſome Pharmacopœias, an ele-

gant ſyrup of this kind is prepared from a tincture of balſam of Peru, with roſe-water, and a proper quantity of ſugar.

SYRUPUS CARYOPHYLLI RUBRI.

Syrup of clove july-flower.

Lond.

Take of freſh

Clove july-flowers, two pounds;

Boiling water, ſix pints.

Macerate them for twelve hours in a glaſs veſſel; ſtrain the liquor without expreſſion, and diſſolve therein its due proportion of double-refined ſugar to make it into a ſyrup.

Edinb.

One pound of the flowers freſh gathered, and freed from their huſks, is to be infuſed in four pounds of water, and the ſyrup made with the addition of ſeven pounds and a quarter of the pureſt ſugar, diſſolved by a gentle heat.

This ſyrup is of an agreeable flavour, and a fine red colour; and for theſe it is chiefly valued.

SYRUPUS COLCHICI.

Syrup of colchicum.

Edinb.

Take of

The root of colchicum, freſh and ſucculent, and cut into ſmall pieces, one ounce;

Vinegar, ſixteen ounces.

Macerate the root in the vinegar two days, ſhaking the veſſel often; then ſtrain the liquor by gentle preſſure, and add the ſugar powdered; boil it gently to the conſiſtence of a ſyrup.

This appears to be the beſt preparation of this root, in the taking of which great care ſhould be obſerved with reſpect to the propereſt ſeaſon, as much depends upon that; to an error in this the uncertainty of its effects has been aſcribed. The bulbous root ſhould be taken up in autumn, as it is ſuppoſed then to be in its higheſt perfection.

The ſyrup is often employed as a ſucceſsful *diuretic*, and may be taken from one or two drams, to an ounce or more. See COLCHICUM, Materia Medica.

SYRUPUS CROCI.

Syrup of ſaffron.

Lond.

Take of

Saffron, one ounce;

Boiling diſtilled water, one pint.

Macerate the ſaffron in water for twelve hours, in a cloſe veſſel, and diſſolve the double-refined ſugar in the ſtrained liquor, that it may be made a ſyrup. This ſyrup has been conſidered a pleaſant cordial; but its chief uſe depends more upon its colour than any medicinal power it poſſeſſes.

SYRUPUS CYDONIORUM.

Syrup of quinces.

Take of

Quince-juice, depurated, three pints;

Cinnamon, one dram;

Cloves,

Ginger—each half a dram;

Red port wine, one pint;

Double-refined ſugar, nine pounds.

Digeſt the juice with the ſpices, in the heat of aſhes, for ſix hours; then, adding the wine, paſs the liquor through a ſtrainer; and afterwards diſſolve in it the ſugar, ſo as to make a ſyrup.

If the quinces be kept for ſome time in an airy place, before the juice is preſſed out, the ſyrup proves rather more elegant, and richer of the fruit, than when they are taken freſh from the tree. In either caſe, the preparation is a *very agreeable mild reſtringent*; and in

ſome *kinds of looſeneſſes* and *diſorders of the ſtomach* may be either taken by itſelf, in the quantity of a ſpoonful or two at a time, or employed for reconciling to the palate and ſtomach medicines of the more ungrateful kind.

SYRUPUS KERMESINUS.

Syrup of kermes.

Edinb.

This ſyrup is brought to us ready-made, from the ſouthern parts of France.

The ſyrup of kermes is of an agreeable taſte, and a fine red colour. It is accounted cordial and corroborant, and ſuppoſed to be particularly ſerviceable in weakneſſes and other diſorders of pregnant women.

SYRUPUS LIMONIS SUCCI.

Syrup of lemon-juice.

Lond.

Take of

Juice of lemons, ſuffered to ſtand till the fæces have ſubſided, two pints;

Double-refined ſugar, fifty ounces.

Diſſolve the ſugar that it may make a ſyrup.

Edinb.

Take of

Lemon-juice, depurated, two pounds and a half;

Double-refined ſugar, fifty ounces;

Diſſolve the ſugar in the juice ſo as to make a ſyrup.

After the ſame manner are prepared

SYRUPUS MORI.

Syrup of mulberries [*L.*]

SYRUPUS FRUCTUS RUBI IDÆI.

Syrup of raſpberries [*L.*]

SYRUPUS RIBIS NIGRI.

Syrup of black currants.

All theſe are very pleaſant *cooling ſyrups*, and in this intention are occaſionally made uſe of in draughts and julaps, for *quenching thirſt, abating heat*, &c. in bilious or inflammatory diſtempers. They are ſometimes likewiſe employed in gargariſms for inflammations of the mouth and tonſils.

SYRUPUS PAPAVERIS ALBI; *formerly*

SYRUPUS e MECONIO, ſive DIACODION.

Syrup of white poppy.

Lond.

Take of

White poppy heads, dried, three pounds and a half;

Water, eight gallons.

Double-refined ſugar, ſix pounds.

Cut the poppy, and bruiſe it; then add the water, and boil to three gallons in a water bath ſaturated with ſalt: preſs out the liquor, and reduce it by boiling to about four pints; and ſtrain while hot, firſt through a ſieve, and then through thin woollen cloth; ſet it aſide for twelve hours, that the fæculencies may ſubſide. Pour the liquor from the ſediment, boil it to three pints, and diſſolve the ſugar in it to make a ſyrup.

SYRUPUS PAPAVERIS ALBI, ſeu de MECONIO, vulgo DIACODION.

Syrup of white poppies, or of meconium, commonly called diacodium.

Edinb.

Take of

White poppy heads, dried, and freed from their ſeeds, two pounds;

Boiling water, thirty pounds;

Pureſt ſugar, four pounds.

Macerate the heads, cut into ſmall pieces, for a night; afterwards boil it till one-third part only of the liquor remains; ſtrain it, and ſtrongly preſs out the remainder. Boil the ſtrained liquor to one half, and ſtrain it again; then add the ſugar, and boil it to a ſyrup.

It may alſo be made by diſſolving, in two pounds and a half of ſimple ſyrup, one dram of the extract of white poppies.

Theſe ſyrups, impregnated with the opiate matter of the poppy heads, are given to children in doſes of two or three drams; to adults, from half an ounce to an ounce and upwards, for *obtunding* and *incraſſating acrimonious humours*, *easing pains*, *procuring reſt*, and anſwering the other intentions of mild opiates. Particular care is requiſite in their preparation, that they may be always made, as near as poſſible, of the ſame ſtrength; and accordingly both the colleges have been very minute in their deſcription of the proceſs.

SYRUPUS PAPAVERIS ERRATICI.

Syrup of wild poppy.

Lond.

Take of

Wild poppy flowers, freſh, four pounds;

Boiling diſtilled water, four pints and a half.

Put the white poppies by degrees into the water boiling in a water bath, and frequently ſtir them, until the flowers be thoroughly moiſtened; then take out the veſſel, and macerate for twelve hours; preſs out the liquor, and ſet it aſide for the fæculencies to ſubſide: afterwards add the proper quantity of double-refined ſugar to make it into a ſyrup.

The deſign of putting the flowers at firſt into boiling water, in a veſſel placed in a water-bath, before their maceration, is, that they may ſhrink enough to be all immerged in the water, and ſtay no longer over the fire than till this effect is produced; leſt the liquor become too thick, and the ſyrup ropy.

This ſyrup has been recommended in *diſorders of the breaſt*, *coughs*, *ſpitting of blood*, *pleuriſies*, and other diſeaſes, both as an *emollient*, and as an *opiate*. It is one of the lighteſt of the opiate medicines, and in this reſpect ſo weak, that ſome have doubted of its having any anodyne quality.

SYRUPUS PECTORALIS.

Pectoral ſyrup.

Take of

Engliſh maidenhair, dried, five ounces;

Liquorice, four ounces;

Boiling water, five pints.

Macerate them for ſome hours; then ſtrain out the liquor, and, with a proper quantity of double-refined ſugar, make it into a ſyrup.

The title of this compoſition expreſſes its medical intention. It has been ſuppoſed to ſoften *acrimonious humours*, *allay tickling coughs*, and *promote the expectoration of tough phlegm*.

SYRUPUS ROSÆ:

formerly

SYRUPUS ROSARUM SOLUTIVUS.

Roſe-ſyrup.

Lond.

Take of

The damaſk roſe, dried, ſeven ounces;

Boiling diſtilled water, four pints;

Double-refined ſugar, ſix pounds.

Macerate the roſes in the water for twelve hours, and ſtrain. Evaporate the ſtrained liquor to two pints and a half, and add the ſugar that it may be made a ſyrup.

SYRUPUS ROSARUM PALLIDARUM.

Syrup of pale roſes.

Edinb.

Take of

Pale roſes, freſh-gathered, one pound;

Boiling water, four pounds;

White ſugar, three pounds.

Macerate the roſes in the water for a night; then ſtrain the liquor; and adding to it the ſugar, boil them into a ſyrup.

This ſyrup may likewiſe be made from the liquor remaining after the diſtillation of roſe-water, depurated from its fæces.

The liquor remaining after the diſtillation of roſes (provided the ſtill has been perfectly clean) is as proper for making this ſyrup as a freſh infuſion: for the diſtillation only collects thoſe volatile parts which are diſſipated in the air, whilſt the infuſion is boiling to its conſiſtence. Theſe ſyrups are *agreeable* and *mild purgatives* for children, in the doſe of half a ſpoonful, or a ſpoonful. They likewiſe prove *gently laxative to adults*, and in this intention *may be of ſervice in coſtive habits*. Its principal uſe is in ſolutive glyſters.

SYRUPUS DE ROSIS SICCIS.

Syrup of dry roſes.

Edinb.

Take of

Red roſes, dried, ſeven ounces;

White ſugar, ſix pounds;

Boiling water, five pounds.

Infuſe the roſes in the water for a night, then boil them a little, ſtrain out the liquor, and, adding to it the ſugar, boil them to the conſiſtence of a ſyrup.

This ſyrup is ſuppoſed to be *mildly aſtringent*; but is principally valued on account of its red colour. The London college have omitted it, having retained others at leaſt equal to it in that reſpect.

SYRUPUS SCILLITICUS.

Syrup of ſquills.

Edinb.

Take of

Vinegar of ſquills, two pounds;

White ſugar, three pounds and a half.

Make them into a ſyrup, without boiling.

This ſyrup uſed to be made with the addition of cinnamon and ginger, one ounce each: but they often counteracted the intention of the medicine, and did not take off the offenſive taſte of the ſquills; they were therefore very judiciouſly omitted.

It is uſed chiefly in doſes of a ſpoonful or two, for *attenuating viſcid phlegm*, and *promoting expectoration*, which it does very powerfully.

SYRUPUS SPINÆ CERVINÆ.

Syrup of buckthorn.

Lond.

Take of the

Juice of ripe and freſh buckthorn berries, one gallon;

Pimento, powdered, an ounce and a half;

Ginger, one ounce;

Double-refined ſugar, ſeven pounds.

Set the juice by for three days, that the fæculencies may ſubſide, and ſtrain. Macerate the ſpices in a pint of the ſtrained juice for four hours, and ſtrain. Boil the reſt of the juice to three pints, adding towards the end that part in which the ſpices were macerated. Laſtly, put in the ſugar, and make the mixture into a ſyrup.

SYRUPUS E RHAMNO CATHARTICO, ſeu E SPINA CERVINA.

Syrup of buckthorn.

Edinb.

Take of

The juice of ripe buckthorn-berries, depurated, ſeven pounds and a half;

White ſugar, three pounds and a half.

Boil them to the conſiſtence of a ſyrup.

Both theſe preparations, in doſes

of three or four ſpoonfuls, *operate as briſk cathartics* The principal inconveniencies attending them are, their being very unpleaſant, and their occaſioning a thirſt and dryneſs of the mouth and fauces, and ſometimes violent gripes. Both theſe may be prevented, by drinking liberally of water-gruel, or other warm liquids, during the operation. The ungratefulneſs of the buckthorn is endeavoured to be remedied in the firſt of the above preſcriptions, by the addition of aromatics, which, however, are ſcarcely ſufficient for that purpoſe. The ſecond alſo had formerly an aromatic material for the ſame intention, a dram of the eſſential oil of cloves; which, being found ineffectual, is now rejected.

SYRUPUS VIOLÆ.

Violet ſyrup.

Lond.

Take of

Violets, freſh, two pounds;
Boiling water, five pints;
Pureſt ſugar, ſeven pounds and a half.

Macerate the violets for twenty-four hours; ſtrain the liquor through thin linen; afterwards adding the due proportion of double-refined ſugar, to make it into a ſyrup.

Edinb.

Take of

Freſh violets, one pound;
Boiling water, four pounds.

Macerate the violets for twenty-four hours in a glaſs or a glazed earthen veſſel, cloſe covered; then ſtrain without expreſſion, and diſſolve in it the ſugar, ſo as to make a ſyrup.

This ſyrup is of a very agreeable flavour, and in the quantity of a ſpoonful or two proves to children *gently laxative*. It is apt to loſe, in keeping, the elegant blue colour, for which it is chiefly valued; and hence ſome have been induced to counterfeit it with materials whoſe colour is more permanent. This abuſe may be readily diſcovered, by adding to a little of the ſuſpected ſyrup any acid or alkaline liquor. If the ſyrup be genuine, the acid will change its blue colour to a red, and the alkali will change it to a green; but if counterfeit, theſe changes will not happen. It is obvious, from this mutability of the colour of the violet, that the preſcriber would be deceived if he ſhould expect to give any blue tinge to acidulated or alkalized julaps or mixtures, by the addition of the blue ſyrup.

SYRUPUS ZINGIBERIS.

Syrup of ginger.

Lond.

Take of

Ginger, bruiſed, four ounces;
Boiling diſtilled water, three pints.

Macerate them for four hours, and ſtrain, and make it into a ſyrup with a proper quantity of double-refined ſugar.

Edinb.

Take of

Ginger, beat, three ounces;
Pureſt ſugar, ſeven pounds and a half;
Boiling water, four pounds.

Steep the ginger in the water, in a cloſe veſſel, for twenty-four hours; then ſtrain the liquor, freed from its fæces, add to it the ſugar, and make them into a ſyrup.

Theſe are agreeable and moderately aromatic ſyrups, lightly impregnated with the flavour and virtue of the ginger.

CONFECTIO ALKERMES.

Confection of kermes.

Take of

Juice of kermes grains, warmed and ſtrained, three pounds;

Damaſk roſe-water, ſix ounces by meaſure;
Oil of cinnamon, half a ſcruple;
Double-refined ſugar, one pound.

Diſſolve the ſugar in the roſe-water, by the heat of a water-bath, into a ſyrup; then mix in the juice of kermes, and, after it has grown cold, the oil of cinnamon.

Edinb.

Take of
Syrup of kermes, three pounds;
Yellow ſaunders,
Cinnamon—each ſix drams;
Cochineal, three drams;
Saffron, one dram and a half.

Evaporate the ſyrup, with a gentle heat, to the conſiſtence of honey; then mix with it the other ingredients reduced to a very fine powder.

Both theſe compoſitions are *elegant* and *agreeable cordials*; the doſe, when taken by themſelves, is from a ſcruple to a dram or more. The firſt has an advantage of mixing uniformly in julaps, without ſpoiling their tranſparency, which the powders in the ſecond always do. Particular care ought to be had in the choice of the eſſential oil, which for the moſt part is grievouſly adulterated; it would be convenient to grind the oil with a little of the ſugar, before it is added to the other ingredients; for by theſe means it will mix more perfectly, and not be apt to ſeparate in keeping.

SECT. III.

MELLITA:

MEDICATED HONEYS.

THE more fixt parts of vegetables, diſſolved in watery liquors, may be thence transferred into honey, by mixing the honey with the watery decoction or juice of the plant, and boiling them together till the aqueous part has exhaled, and the honey remains of its original conſiſtence.

Honey, though extolled by ſome writers for the medical powers it poſſeſſes, yet does not appear to have many advantages over ſugar, particularly in forming compoſitions for keeping any time; but rather the reverſe, becauſe it is too apt to run into a ſtate of fermentation, much more ſo than ſugar; and in ſome particular conſtitutions to produce very unpleaſant effects in the bowels, particularly ſevere gripings.

It is on theſe accounts that ſo few of the medicated honeys are retained in the diſpenſatories of the preſent day. The college of Edinburgh has totally rejected them, and that of London has given us but ſix in the laſt edition of their Pharmacopœia. But as they are ſtill preſcribed by phyſicians of eminence in many places, thoſe which appear the moſt active we have here enumerated.

MEL ACETATUM;
formerly
OXYMEL SIMPLEX.
Acetated honey.

Take
Clarified honey, two pounds;
Diſtilled vinegar, one pint.
Boil them in a glaſs veſſel, with a ſlow fire, to the conſiſtence of a ſyrup.

This is an agreeable mild, cooling medicine. It is often uſed in detergent gargariſms, and frequently as an expectorant. Joined with a moderate portion of the ſyrup of white poppy, it is an excellent medicine for a tickling cough.

MEL ROSÆ;
formerly
MEL ROSACEUM.
Roſe-honey.

Take of
Red roſes, dried, four ounces;
Diſtilled boiling water, three pints;
Clarified honey, five pounds.
Macerate the roſes in the water for ſix hours, and ſtrain; then mix the honey with the liquor, and boil them to the conſiſtence of a ſyrup.

This preparation is not unfrequently made uſe of as a *mild cooling detergent*, particularly in gargariſms for *ulcerations* and *inflammation of the mouth and tonſils.*

OXYMEL *ex* ALLIO.
Oxymel of garlick.

Take of
Garlick, cut in ſlices, an ounce and a half;
Caraway ſeeds,
Sweet fennel ſeeds — each two drams;
Vinegar, half a pint;
Clarified honey, ten ounces by weight.
Boil the vinegar, for a little time, with the ſeeds bruiſed, in a glazed earthen veſſel; then add the garlick, and cover the veſſel cloſe: when grown cold, preſs out the liquor, and diſſolve in it the honey by the heat of a water-bath.

This oxymel is recommended for *attenuating viſcid juices, promoting expectoration* and *the fluid ſecretions in general.* It is doubtleſs a medicine of conſiderable efficacy, though very unpleaſant; the flavour of the garlick prevailing, notwithſtanding the addition of the aromatic ſeeds.

OXYMEL COLCHICI.
Oxymel of meadow-ſaffron.
Lond.

Take of
Freſh meadow-ſaffron, cut into into thin ſlices, one ounce;
Diſtilled vinegar, one pint;
Clarified honey, two pounds.
Macerate the meadow-ſaffron in a glaſs veſſel, with a gentle heat, for forty-eight hours. Preſs out the liquor ſtrongly from the root; then ſtrain it, and add honey. Laſtly, boil the mixture, frequently ſtirring it with a wooden ſpoon, to the conſiſtence of a ſyrup.
Doſe—ʒſs to ʒj.

This is a very active medicine, nearly ſimilar to the *Syrupus colchici;* though, perhaps, not ſo agreeable to ſome conſtitutions, to which honey is offenſive; but in many it will anſwer ſimilar purpoſes, and prove to poſſeſs equal *diuretic* powers.

OXYMEL PECTORALE.
Pectoral oxymel.
Edinb.

Take of
Elecampane roots, one ounce;
Florence orris roots, half an ounce;
Gum ammoniacum, one ounce;
Vinegar, half a pint;
Clarified honey, one pound;
Water, three pints.
Let the roots, cut and bruiſed, be boiled in the water till one-third be waſted; then ſtrain off the liquor, let it ſtand to ſettle, and having poured it off clear from the fæces, add to it the honey,

and the ammoniacum, previouſly diſſolved in the vinegar. Mix them together, by boiling them a little.

The title of this compoſition expreſſes its medical virtues. It is deſigned for *thoſe diſorders of the breaſt that proceed from a load of viſcid phlegm*, and *obſtructions of the pulmonary veſſels*. Two or three ſpoonfuls may be taken every night and morning, and continued for ſome time.

OXYMEL SCILLITICUM.

Oxymel of ſquills.

Lond.

Take of

Clarified honey, three pounds;

Vinegar of ſquills, two pints.

Boil them in a glazed veſſel, with a ſlow fire, to the conſiſtence of a ſyrup.

The honey was formerly employed for this preparation unclarified; and the ſcum, which in ſuch caſes ariſes in the boiling, taken off. By theſe means, the impurities of the honey were diſcharged; but ſome of the medicinal parts of the ſquills, with which the vinegar was impregnated, were alſo ſeparated. For this reaſon the college both of London and Edinburgh has now judiciouſly ordered the honey, for all theſe kinds of preparations, to be previouſly clarified by itſelf.

Oxymel of ſquills is an *uſeful aperient*, *detergent*, and *expectorant*, and of great ſervice *in humoural aſthmas*, *coughs*, and other diſorders, where thick phlegm abounds. It is given in doſes of ʒſs to ʒj or more, along with ſome aromatic water, as that of cinnamon, to prevent the great nauſea which it would otherwiſe be apt to excite. In large doſes, it proves emetic.

MEL SCILLÆ.

Honey of ſquill.

Lond.

Take of

Clarified honey, three pounds;

Tincture of ſquills, two pints.

Digeſt them in a glaſs veſſel to the conſiſtence of a ſyrup.

This will poſſeſs all the powers of the ſquill, and may be uſed as an *expectorant*, and *diuretic*; in the ſame caſes as the ſquill itſelf.

OXYMEL ÆRUGINIS;

formerly

MEL ÆGYPTIACUM.

Oxymel of verdigris.

Take of

Prepared verdegris, one ounce;

Vinegar, ſeven ounces by meaſure;

Clarified honey, fourteen ounces by weight.

Diſſolve the verdigris in the vinegar, and ſtrain through linen; then add the honey, and boil down the mixture to a proper conſiſtence.

The complaint of the diverſity of the ſtrength of the different parts of the *Mel Ægyptiacum* is in this preparation perfectly removed. It is intended only as an external application for cleanſing foul ulcers, and keeping down fungous fleſh. It has been recommended in venereal ulcerations of the mouth and throat. But great care ſhould be taken that no portion of the verdigris gets into the ſtomach; for a very ſmall quantity will produce dangerous, and perhaps fatal effects, on that organ.

CHAPTER V.

Separation and collection of those parts of vegetable and animal substances, which are volatile in the heat of boiling water.

THERE are many vegetable, and some animal substances, whose virtues reside, wholly or in part, in a matter which is capable of totally exhaling in the heat of boiling water. In most of the processes hitherto described, it has been endeavoured, as much as possible, to preserve this votatile matter along with the more fixt parts; whether those fixt parts were themselves medicinal, or only subservient to the union of the volatile matter with the fluids employed. The aim, *in the present chapter, will be to completely separate this volatile subtile principle*, and *collect its pure from the grosser fixt parts*, either *in a concentrated state*, or *diluted with water or spirit of wine. In its concentrated state*, it appears commonly *an oil;* which, from its containing always the specific odour, and frequently the other medicinal powers, of the subject, is called *essential oil; in its more dilute state*, it will be found in simple distilled water, distilled spirits, and distilled spirituous waters.

SECT. I.

Directions for obtaining Essential Oils.

ESSENTIAL oils are acquired by distillation. A quantity of water is added to the subject, sufficient to prevent its burning; and, in this water, it is likewise macerated a little time before the distillation. The oil comes over along with the water; and either swims on its surface, or sinks to the bottom, according as it is lighter or heavier than that fluid.

The length of the maceration is to be varied according to the texture and compactness of the subject. The most tender subjects scarce require any. Those of a soft and loose texture are to be steeped for two or three days; and the more viscous ones, for a longer time. The further the maceration is intended to be protracted, the greater quantity of sea-salt must be added. *From viscous substances* the oil may be obtained in a shorter time, by submitting them to a slight, and not too long continued, fermentation. *Seeds* and *spices* are to be bruised, and *woods* to be rasped, previously to the maceration or fermentation.

Essential oils are obtained only from odoriferous substances; but not equally from all of this class, nor in quantity proportionable to their degree of odour; some which, if we were to reason from analogy,

ſhould ſeem very well fitted for this proceſs, yielding extremely little oil, and others none at all. *Roſes* and *camomile-flowers*, whoſe ſtrong and laſting ſmell promiſes abundance, are found, upon experiment, to contain but a ſmall quantity. *The violet* and *jeſſamine flower*, which perfume the air with their odour, loſe their ſmell upon the gentleſt coction, and do not afford the leaſt perceptible mark of oil upon being diſtilled, unleſs immenſe quantities be ſubmitted to the operation at once; whilſt *ſavin*, whoſe diſagreeable ſcent extends to no great diſtance, gives out the moſt oil of almoſt any vegetable known.

Nor are the ſame plants equally fit for this operation, when produced in different ſoils or ſeaſons; or at different times of their growth. Some yield more oil *if gathered when the flowers begin to fall off*, than at any other time; *lavender* and *rue* for inſtance. Others, as *ſage, afford the largeſt quantity when young, before they have ſent forth any flowers;* and others, as *thyme, when the flowers have juſt appeared. All fragrant herbs* yield a larger proportion of oil when produced in dry ſoils and warm ſummers, than in the oppoſite circumſtances. On the other hand, *ſome of the diſagreeable ſtrong-ſcented ones*, as *wormwood*, are ſaid to contain moſt in rainy ſeaſons and moiſt rich grounds.

Several of the chemiſts have been of opinion, that *herbs and flowers, moderately dried*, yield a greater quantity of eſſential oil, than if they were diſtilled when freſh. It is ſuppoſed, that the oil being already blended, in freſh plants, with a watery fluid, great part of it remains diffuſed through the water after the diſtillation, divided into particles too minute to unite and be collected; whereas, in drying, the oily parts, on the exhalation of the moiſture which kept them divided and diſperſed, run together into globules, which have little diſpoſition to mingle with watery fluids, and eaſily ſeparate from the water employed in the diſtillation.

This theory, however, does not appear to be altogether ſatisfactory; for though the oil be collected in the ſubject into diſtinct globules, it does not riſe in that form, but reſolved into vapour, and blended and coagitated by the heat with the vapour of the water; and if the oil in a dry plant were leſs diſpoſed to unite with aqueous fluids than in a freſh one, the dry ought to yield a weaker infuſion than the freſh; the contrary of which is generally found to obtain. As the oil of the dry plant is moſt perfectly extracted and kept diſſolved by the water before the diſtillation, I can ſee no reaſon why it ſhould have a greater tendency to ſeparate from the water afterwards.

The opinion of dry plants yielding moſt oil, ſeems to have ariſen from an obſervation of HOFFMANN, which has, I think, been miſunderſtood: "A pound," he ſays, "of "dry ſpike-flowers yields an ounce "of oil: but if they were diſtilled "freſh, they would ſcarcely yield "above half an ounce; and the "caſe is the ſame in balm, ſage, "&c. The reaſon is, that in dry-"ing the watery humidity ex-"hales; and as from two pounds "of a freſh plant we do not ob-"tain above one pound of dry, "and little of the ſubtile oil eva-"porates in the drying, it follows, "that more oil ought to be afford-"ed by the dry than by the freſh." The meaning of which I apprehend to be no more than this: that if two pounds of a freſh plant be, by drying, reduced to one, without any loſs of the oil, then the one pound dry ought to be equivalent to the two freſh. A later

writer quotes an experiment of NEUMANN, which appears to be misunderstood in the same manner; for NEUMANN, in the place referred to, says only, that dry wormwood is found to yield much more oil than an *equal weight* of the fresh plant. I do not recollect any instance, in which fresh and dry plants have been brought to a fair comparison, by dividing the quantity of the subject into two equal weights, and distilling one while fresh, and the other after it has been carefully and moderately dried.

But whatever may be the effect of moderate exsiccation, it is certain, that, if the drying be long continued, the produce of oil will be diminished, its colour altered, and its smell impaired.

With regard to the proportion of water, if whole plants, moderately dried, be used, or the shavings of woods, as much of either may be put into the vessel, as, lightly pressed, will occupy half its cavity; and as much water may be added, as will rise up to two thirds its height. The water and ingredients, altogether, should never take up more than three-fourths of the still; there should be liquor enough to prevent any danger of an empyreuma, but not so much as to be too apt to boil over into the receiver.

The maceration should be continued so long, as that the water may fully penetrate the parts of the subject. To promote this effect, *woods should be thinly shaved across the grain,—roots cut transversely into thin slices,—barks reduced into coarse powder,*—and *seeds slightly bruised.* Very compact and tenacious substances require the maceration to be continued a week or two, or longer; for those of a softer and looser texture, two or three days are sufficient; whilst some tender herbs and flowers not only stand not in need of any at all, but are even injured by it.

Whether the addition of sea-salt, as formerly recommended, be of any real service, is greatly to be doubted. The uses generally assigned to it are, to penetrate and unlock the texture of the subject more effectually than simple water could do; and to prevent the fermentation or putrefaction into which the matter is apt to run during the length of time that the maceration is often continued. But sea-salt seems rather to harden and condense, than to soften and resolve, both vegetable and animal subjects; and if it prevent putrefaction, it must, on that very account, be rather injurious than of service. The resolution here aimed at approaches near to a beginning putrefaction; and saline substances, by retarding this, prolong the maceration far beyond the time that would otherwise be necessary. It is in the power of the operator, when he perceives the process coming near this pitch, to put a stop to it at pleasure, by proceeding immediately to distillation. By these means, the whole affair will be finished in a very little time, with at least equal advantage in every other respect; provided the manual operations of pounding, rasping, and the like, which are equally necessary in either case, be scientifically complied with.

Bodies of a very viscous and compact texture are directed, in the Edinburgh Pharmacopœia, to be fermented for some days with a little yeast: half their quantity o water is sufficient for performing the fermentation; so much more as is necessary, is to be added afterwards, before the distillation. This process undoubtedly promotes the resolution of the subject, and the

extrication of the oil; *it rarely happens*, however, *that assistances of this kind are needful.* Particular care must be had not to continue the fermentation too long; or to give a bad flavour to the oil by an ill-chosen ferment, or using too large a quantity of any.

Some chemists pretend, that by the addition of salts and acid spirits they have been enabled to gain more oil from certain vegetable matters, than can possibly be got from them without such assistance. Experiments made on purpose to settle this point seem to prove the contrary. This at least is constantly found to be true; that, where there is any reason to think the yield to be greater than usual, the quality of the oil is proportionably injured. The quantity of true essential oil in vegetables can by no means be increased; and what is really contained in them may be easily separated without any addition of this kind. All that saline matters can do in this respect, is, to make the water susceptible of a greater degree of heat than it can sustain by itself, and thus enable it to carry up a gross unctuous matter, not volatile enough to arise with pure water. This gross matter, mingling with the pure oil, increases the quantity, but at the same time must necessarily debase its quality. And indeed, when water alone is made use of, the oil which comes over about the end of the operation is remarkably less fragrant, and of a thicker consistence, than that which arises at the beginning; distilled a second time, with a gentle heat, it leaves a large quantity of gross, almost insipid, resinous matter behind.

The choice of proper instruments is of great consequence to the performance of this process to advantage. There are some oils, which pass freely over the swan-neck of the head of the common still: others, less volatile, cannot easily be made to rise so high. For obtaining these last, we would recommend a large low head, having a rim or hollow canal round it. In this canal the oil is detained on its first ascent (and thence conveyed at once into the receiver); the advantages of which are sufficiently obvious.

With regard to the fire, the operator ought to be expeditious in raising it at first, and to keep it up, during the whole process, of such a degree, that the oil may freely distil; otherwise, the oil will be exposed to an unnecessary heat, a circumstance which ought as much as possible to be avoided. Fire communicates to all these oils a disagreeable impression, as is evident from their being much less grateful when newly distilled, than after they have stood for some time in a cool place; the longer the heat is continued, the more alteration it must produce in them.

The greater number of oils require for their distillation the heat of water strongly boiling; but there are many also which rise with a considerably less heat: such as those of *lemon-peel*, *citron-peel*, *oils of the flowers of lavender* and *rosemary*, and of *almost all the more odoriferous kinds of flowers.* We have already observed, that these flowers have their fragrance greatly injured, or even destroyed, by beating or bruising them. It is impaired also by the immersion in water, in the present process; and the more so in proportion to the continuance of the immersion and the heat. Hence these oils, distilled in the common manner, prove much less agreeable in smell than the subjects themselves. For the distillation of substances of this class, I have contrived another method. Instead of being immersed

in water, they are exposed only to its vapour. A proper quantity of water being put into the bottom of the still, the odoriferous herbs or flowers are laid lightly in a basket, of such a size that it may enter into the still and rest against its sides, just above the water. The head being then fitted on, and the water made to boil, the steam, percolating through the subject, imbibes the oil, without impairing its fragance, and carries it over into the receiver. Oils thus obtained possess the odour of the subject in an exquisite degree, and have nothing of the disagreeable scent perceivable in those distilled by boiling them in water in the common manner.

It may be proper to observe, that those oils which rise with a less heat than that of boiling water, are generally called, by the chemical and pharmaceutical writers, *light* oils; and those which require the heat of water strongly boiling, are called *ponderous*. I have avoided these expressions, as they might be thought to relate to the comparative *gravities* of the oils; with which the volatility or fixedness have no connection. Oil-olive is lighter than most of the essential oils; but the heat requisite to make it distil exceeds that in which the heaviest essential oil distils, considerably more than the heat of boiling water exceeds that of ice.

The water employed in the distillation of essential oils, always imbibes some portion of the oil; as is evident from the smell, taste, and colour which it acquires. It cannot however retain above a certain quantity; and therefore such as has been already used, and almost saturated itself, may be advantageously employed, instead of common water, in a second, third, or any future distillation of the same subject.

Some late chemical writers recommend, not the water which comes over, but that which remains in the still, to be used a second time. This can be of no service; as containing only such parts of the vegetable as are not capable of arising in distillation, and which serve only to impede the action of the water as a menstruum, and to endanger an empyreuma.

After the distillation of one oil, particular care should be had to duly cleanse the worm before it is employed in the distillation of a different plant. Some oils, those of *wormwood* and *aniseeds* for instance, adhere to it so tenaciously, as not to be melted out by heat, or washed off by water. The best way of cleansing the worm from these, is to run a little spirit of wine through it.

Essential oils, after they are distilled, should be suffered to stand for some days, in vessels loosely covered with paper, till they have lost their disagreeable fiery odour, and become limpid: then put them up in small bottles, which are to be kept quite full, closely stopt, in a cool place. With these cautions, they will retain their virtues in perfection for many years.

When carelessly kept, they in time gradually lose their flavour, and become gross and thick. Some endeavour to recover them again, after they have undergone this change, by grinding them with about thrice their weight of common salt, then adding a large proportion of water, and distilling them afresh. The purer part arises thin and limpid, possessing a great degree of the pristine smell and taste of the oil, though inferior in both respects to what the oil was at first. This *rectification*, as it is

called, *ſucceeds equally without the ſalt.* The oils, when thus altered, are nearly in the ſame ſtate with the turpentines, and other thickened oily juices, which readily yield their purer oil in diſtillation with water alone.

When eſſential oils have entirely loſt their ſmell, ſome recommend adding them in the diſtillation of a freſh quantity of the oil of the ſame plant; by which means they are ſaid to ſatiate themſelves anew with the odorous matter, and become entirely renovated. This practice, however, ought doubtleſs to be diſapproved, as being no other than a ſpecious ſophiſtication; for it can do no more than to divide, between the old oil and the new, the active matter which belongs to the new alone.

Eſſential oils, medicinally conſidered, *agree in the general qualities of pungency and heat: in particular virtues, they differ* as much as the ſubjects from which they are obtained; the oil being the direct principle in which the virtues, or part of the virtues, of the ſeveral ſubjects reſide. Thus the *carminative virtue* of the warm ſeeds,—the *emmenagogue* of ſavin,—the *nervine* of roſemary, the *ſtomachic* of mint,—the *antiſcorbutic* of ſcurvy-graſs,—the *cordial* of aromatics, &c. are concentrated in their oils.

There is another remarkable difference in eſſential oils, the foundation of which is leſs obvious; *that of the degree of their pungency* and *heat;* which are by no means in proportion, as might be expected, to thoſe of the ſubject they were drawn from. *The oil of cinnamon*, for inſtance, is exceſſively pungent and fiery; in its undiluted ſtate it is *almoſt cauſtic:* — whereas *cloves* a ſpice which in ſubſtance is far more pungent than the other, yields an oil which is far leſs ſo. This difference ſeems to depend *partly* upon the quantity of oil afforded, cinnamon yielding much leſs than cloves, and conſequently having its active matter concentrated into a ſmaller volume; *partly*, upon a difference in the nature of the active parts themſelves: for though eſſential oils contain always the ſpecific odour and flavour of their ſubjects, whether grateful or ungrateful, they do not always contain the whole pungency: this *reſides frequently in a more fixt reſinous matter*, and *does not riſe with the oil.* After the diſtillation of cloves, pepper, and ſome other ſpices, a part of their pungency is found to remain behind: a ſimple tincture of them in rectified ſpirit of wine is even more pungent than their pure eſſential oils.

The more grateful oils are frequently made uſe of for reconciling to the ſtomach medicines of themſelves diſguſtful. It has been cuſtomary to employ them as *correctors for the reſinous purgatives;* an uſe to which they do not ſeem to be well adapted. All the ſervice they can here be of, is to make the reſin ſit eaſier at firſt on the ſtomach: far from abating the irritating quality upon which the virulence of its operation depends, theſe pungent oils ſuperadd a freſh ſtimulus.

Eſſential oils are never given alone, on account of their extreme heat and pungency; which in ſome is ſo great, that a ſingle drop, let fall upon the tongue, produces a gangrenous eſchar. They are readily imbibed by pure dry ſugar, and in this form may be conveniently exhibited. *Ground with eight or ten times their weight of ſugar*, they become ſoluble in aqueous liquors, and thus may be diluted to any aſſigned degree. *Mucilages* alſo render them miſ-

cible with water into an uniform milky liquor. *They dissolve likewise in spirit of wine:* the more fragrant in an equal weight, and almost all of them in less than four times their own quantity. These solutions may be either taken on sugar, or mixed with syrups, or the like: on mixing them with water, the liquor grows milky, and the oil separates.

The more pungent oils are employed *externally against paralytic complaints, numbness, pains* and *aches, cold tumours*, and in other cases where particular parts require to be heated or stimulated. The *tooth-ache* is sometimes relieved by a drop of these almost caustic oils, received on cotton, and cautiously introduced into the hollow tooth.

In the last edition of the London Pharmacopœia, the following directions are given with regard to the mode of obtaining the ESSENTIAL OILS of

ANISE,
CARAWAY,
JUNIPER BERRY,
LAVENDER,
PEPPERMINT,
SPEAR-MINT,
ORIGANUM,
PENNYROYAL,
ROSEMARY,
SASSAFRAS ROOT.

Let these oils be drawn off by distillation from an alembic with a large refrigeratory; but to prevent an empyreuma, the substance must be macerated in water previous to distillation.

The water which comes over with the oil in distillation, is to be kept for use.

Essential oils are prepared from vegetables in the manner of their distilled waters; but with somewhat less proportion of water: those of the odoriferous kind chiefly from flowers, or plants in a flowering state. The time of maceration varies with the temperature of the season and texture of the substance, from two or three days to a week, or longer.

The oils are to be separated after distillation, by means of a funnel, the stem of which being stopped by the finger, and the liquor poured into it; the oil, if light, swims at the top; if ponderous, subsides: the undermost, whether oil or water, is by removing the finger first let out, and the uppermost retained by replacing the finger and again closing the stem.

The same directions are to be observed in distilling the essential oils inserted in the following pages, which are not specified in the catalogue of the London College above recited, such as the *Oleum Absinthii, Sabinæ, Chamæmeli, Cymini*, &c.

OLEUM ABSINTHII ESSENTIALE.

Essential oil of the leaves of wormwood.

Edinb.

This is one of the more ungrateful oils: it smells strongly of the wormwood, and contains its particular nauseous taste; but has little or nothing of its bitterness, this remaining entire in the decoction left after the distillation. Its colour, when drawn from the fresh herb, is a dark green; from the dry, a brownish yellow. This oil is recommended by Hoffmann as *a mild anodyne*, in *spasmodic contractions:* for this purpose he directs a dram of it to be dissolved in an ounce of rectified spirit of wine, and seven or eight drops of the mixture taken for a dose in any convenient vehicle. Boerhaave greatly commends, in *tertian fevers*, a medicated liquor composed of about seven grains of the oil, ground first with a dram of sugar, then with two drams of the salt of wormwood, and afterwards dissolved in six ounces of the distilled water of the same plant. Two

hours before the fit is expected, the patient is to bathe his feet and legs in warm water, and then to drink two ounces of the liquor every quarter of an hour till the two hours are expired. By these means, he says, all cases of this kind are generally cured with ease and safety, provided there is no schirrosity or suppuration. With us, the oil of wormwood is employed chiefly as a *vermifuge*, and for this purpose is both applied externally to the belly, and taken internally. It is most conveniently exhibited in the form of pills, which it may be reduced into by mixing it with crumb of bread.

OLEUM SEMINUM ANETHI ESSENTIALE.

Essential oil of dill seeds.

This is a very warm oil; of a flavour not very agreeable, less so than that of the seeds. It is sometimes given as *a carminative*, *in flatulencies*, *colicky pains*, *hiccups*, and the like, from one to three or four drops.

OLEUM SEMINUM ANISI ESSENTIALE.

Essential oil of aniseeds.

L. E.

This oil possesses the taste and smell of the aniseeds in perfection. It is one of the mildest of the distilled oils. Fifteen or twenty drops may be taken at a time without danger, though common practice rarely goes so far as half this number. Its smell is extremely durable and diffusive. Milk drawn from the breast, after taking it, is found impregnated with its odour; and possibly this may be, in part, the foundation of the pectoral virtues usually ascribed to it. In *flatulencies* and *colics*, it is said by some to be less effectual than the seeds themselves.

It is remarkable of this oil, that it congeals, even when the air is not sensibly cold, into a butyraceous consistence: and hence, in the distillation of it, the operator ought not to be over-solicitous in keeping the water in the refrigeratory too cool: it behoves him rather to let it grow somewhat hot, particularly towards the end of the process; otherwise the oil congealing may so stop up the worm, as to endanger blowing off the head of the still; at least a considerable quantity of oil will remain in it.

Dose—five to twelve drops.

OLEUM CARUI ESSENTIALE.

Essential oil of caraway seeds.

L. E.

The flavour of this exactly resembles that of the caraway. It is a *very hot* and *pungent oil.* It is not unfrequently made use of as a *carminative:* and supposed by some to be *peculiarly serviceable for promoting urine*, to which it communicates some degree of its smell.

Dose—one to five drops.

OLEUM CARYOPHYLLI AROMATICI ESSENTIALE.

Essential oil of cloves.

L. E.

This oil is so ponderous as to sink in water, and is not easily elevated in distillation: if the water which comes over be returned on the remaining cloves, and the distillation repeated, some more oil will generally be obtained, though much inferior in quality to the first. The oil of cloves is usually described as being "in taste excessively hot and fiery, and of a gold yellow colour." *(Boerh. Process.)* Such indeed is the composition which we receive under this name from Holland: but the genuine oil of cloves is one of the milder oils: it may be taken with great safety (duly diluted) to the quantity of ten or twelve drops or more. Nor is its colour at all yellow, unless it has been long and carelessly kept, or distilled by too violent a fire. When in perfec-

tion, it is *limpid* and *colourless*, of a *pleasant*, *moderately warm*, and *pungent taste*, and a *very agreeable smell*, much resembling that of the spice itself. The Dutch oil of cloves contains a large quantity of expressed oil, as evidently appears upon examining it by distillation. This however cannot be the addition to which it owes its acrimony. A small proportion of a resinous extract of cloves communicates to a large one of oil a deep-colour, and a great degree of acrimony.

Dose—three to six drops.

OLEUM FLORUM CHAMÆMELI ESSENTIALE.

Essential oil of camomile flowers.

Edin.

This is a very pungent oil, of a strong not ungrateful smell, resembling that of the flowers. Its colour is yellow, with a cast of greenish or brown. Is is sometimes given in the dose of a few drops, as *a carminative*, in *hysteric disorders*, and likewise as *a vermifuge*. It may be conveniently made into pills with crumb of bread.

OLEUM CINNAMOMI.

Oil of cinnamon.

L. E.

This valuable oil is extremely hot and pungent, of a most agreeable flavour, like that of the cinnamon itself. In *cold languid cases*, and *debilities of the nervous system*, *it is one of the most immediate cordials* and *restoratives*. The dose is one, two, or three drops; which must always be carefully diluted by the mediation of sugar, &c. for so great is the pungency of this oil, that a single drop let fall upon the tongue, undiluted, produces, as Boerhaave observes, a gangrenous eschar. In the distillation of this oil, a smart fire is required; and the low head, with a channel round it, before recommended for the distillation of the less volatile oils, is particularly necessary for this, which is one of the least volatile, and which is afforded by the spice in exceeding small quantity. The distilled water retains no small portion of the oil; but this oil being very ponderous, great part of it subsides, from the water, on standing for two or three weeks in a cool place.

Dose—one drop to three.

OLEUM SEMINUM CYMINI ESSENTIALE.

Essential oil of cummin seeds.

This is one of the warmer and less pleasant oils. It is employed chiefly *in cold*, *flatulent*, *hysteric complaints*. It gives its smell strong to the urine, and is supposed peculiarly serviceable for promoting its discharge.

Dose—one to three drops.

OLEUM SEMINUM FŒNICULI ESSENTIALE.

Essential oil of fennel seeds.

The oil obtained from sweet fennel seeds is much more elegant and agreeable than that of the common fennel. It is one of the mildest of these preparations. It is *nearly of the same degree of warmth with that of aniseeds;* to which it is likewise similar in flavour, though far more grateful. It is given as a *carminative*, in *cold indispositions of the stomach;* and in some *kinds of coughs*, for *promoting expectoration.*

Dose—two to twelve drops.

OLEUM JUNIPERI BACCÆ ESSENTIALE.

Essential oil of juniper berries.

L. E.

This oil is a very warm and pungent one, of a strong flavour, not unlike that of the berries. In the dose of a drop or two, it proves a serviceable *carminative* and *stomachic*. In one of six, eight, or more, a *stimulating detergent*, *diuretic*, and *emmenagogue*. It seems to have somewhat of the nature of the turpentines, or their distilled oil; like

which it communicates a violet ſmell to the urine.

The oil of theſe berries reſides partly in veſicles ſpread through the ſubſtance of the fruit, and partly in little cells contained in the ſeeds; when the berry is dry, and the oil hardened into a reſinous ſubſtance, it becomes viſible, upon breaking the ſeeds, in form of little tranſparent drops. In order therefore to obtain this oil to advantage, we ought, previouſly to the diſtillation, to bruiſe the berry thoroughly; ſo as to break the ſeeds, and entirely lay open the oily receptacles.

Doſe—two to ten drops.

OLEUM florum LAVENDULÆ ESSENTIALE.

Eſſential oil of lavender flowers.

L. E.

This oil, when in perfection, is very limpid, of a pleaſant yellowiſh colour, extremely fragrant, poſſeſſing in an eminent degree the peculiar ſmell generally admired in the flowers. It is a medicine of great uſe, both externally and internally, in *paralytic* and *lethargic complaints*, *rheumatic pains*, and *debilities of the nervous ſyſtem*.

Lavender flowers yield the moſt fragrant oil, and in conſiderably the largeſt quantity, when they are ready to fall off ſpontaneouſly, and the ſeeds begin to ſhew themſelves; the leaves give out extremely little. The flowers may be ſeparated from the reſt of the plant, by drying it a little, and then gently beating it: they ſhould be immediately committed to diſtillation, and the proceſs conducted with a well-regulated gentle heat: too great heat would not only change the colour of the oil, but likewiſe make a diſagreeable alteration in its ſmell.

Doſe—one to ſix drops.

OLEUM LIMONIS.

Eſſential oil of lemon-peel.

Lond.

This is a pleaſant oil, of a fine ſmell, very near as agreeable as that of the freſh peel; it is one of the lighteſt and moſt volatile eſſential oils we have, perfectly limpid, and almoſt colourleſs. It is taken in doſes of two or three drops, as a *cordial*, in *weakneſs of the ſtomach*, &c. though more frequently uſed as a perfume. It gives a fine flavour to the officinal *Spiritus ammoniæ compoſitus*, and occaſions the ſoap pills to ſit eaſy on the ſtomach.

Doſe—two to five drops.

OLEUM MACIS ESSENTIALE.

Eſſential oil of mace.

L. E.

The eſſential oil of mace is moderately pungent, very ſubtile and volatile, of a ſtrong aromatic ſmell, like that of the ſpice itſelf: it is thin and limpid, of a pale yellowiſh colour, with a portion of thicker and darker-coloured oil at the bottom. This oil is celebrated in *vomiting*, *hiccups*, *colicky pains*, &c. both given *internally* and applied *externally* to *the ſtomach* and *umbilical region*. It is however but rarely made uſe of, and not often met with in the ſhops.

Doſe—one to four drops.

See alſo MACIS and NUX MOSCHATA.

OLEUM MARJORANÆ ESSENTIALE.

Eſſential oil of marjoram leaves.

Edinb.

This oil is very hot and penetrating, in flavour not nearly ſo agreeable as the marjoram itſelf: when in perfection, it is of a pale yellow colour; by long keeping, it turns reddiſh: if diſtilled with too great a heat, it ariſes of this colour at firſt. It is ſuppoſed to be peculiarly *ſerviceable in relaxations*, *obſtructions* and *mucous diſcharges of the uterus*: the doſe is one or two drops.

OLEUM MENTHÆ SATIVÆ ESSENTIALE.

Essential oil of the leaves of common mint.

L. E.

This oil smells and tastes strongly of the mint, but is in both respects somewhat less agreeable than the herb itself. It is an *useful stomachic medicine;* and not unfrequently exhibited in *want of appetite, weakness of the stomach, reachings to vomit,* and similar disorders, *when not accompanied with heat or inflammation.* It is likewise employed externally for the same purposes; and is an excellent ingredient in the stomachic plaster of the shops.

Dose—one drop to five.

OLEUM MENTHÆ PIPERITIDIS ESSENTIALE.

Essential oil of the leaves of peppermint.

Lond.

This possesses the smell, taste, and virtues of the peppermint in perfection; the colour is a pale greenish yellow. It is a medicine of great pungency and subtility; and diffuses, almost as soon as taken, a glowing warmth through the whole system. *In colics accompanied with great coldness,* and *in some hysteric complaints,* it is of excellent service.

Dose—two or three drops.

OLEUM NUCIS MOSCHATÆ ESSENTIALE.

Essential oil of nutmegs.

Lond.

The essential oil of nutmegs possesses the flavour and aromatic virtues of the spice in an eminent degree. It is similar in quality to the oil of mace, but somewhat less grateful.

Dose—two to five drops.

OLEUM ORIGANI ESSENTIALE.

Essential oil of the leaves of origanum.

L. E.

This oil has a very pungent acrimonious taste, and a penetrating smell. It has been chiefly employed externally as *an errhine,* and for *easing pains of the teeth.*

OLEUM ESSENTIALE PIPERIS JAMAICENSIS.

Essential oil of Jamaica pepper.

Edinb.

This is a very elegant oil, and may be used as a succedaneum to the oils of some of the dearer spices. It is of a fine pale colour, in flavour more agreeable than the oil of cloves, and not far short of that of nutmegs. It sinks in water, like the oils of some of the eastern spices.

OLEUM PULEGII ESSENTIALE.

Essential oil of the leaves of penny-royal.

L. E.

This oil, in smell and taste, resembles the original plant: the virtues of which it likewise possesses. It is given in *hysteric cases,* &c.

Dose, from one to five drops.

OLEUM RORISMARINI ESSENTIALE.

Essential oil of rosemary.

L. E.

The oil of rosemary is drawn from the plant in flower. When in perfection, it is very light and thin, pale, and almost colourless: of great fragrancy, though not quite so agreeable as the rosemary itself. It is recommended in nervous and hysteric complaints. Boerhaave holds it in great esteem against *epilepsies* and *suppressions of the uterine purgations,* occasioned by weakness and inactivity.

Dose, from three to five drops.

OLEUM LIGNI RHODII ESSENTIALE.

Essential oil of rhodium.

Edinb.

This oil is extremely odoriferous, and principally employed as a perfume in ſcenting pomatums, and the like. Cuſtom has not as yet received any preparation of this elegant aromatic wood into internal uſe.

OLEUM RUTÆ ESSENTIALE.

Eſſential oil of rue leaves.

Edinb.

The oil of rue has a very acrid taſte, and a penetrating ſmell, reſembling that of the herb, but rather more unpleaſant. It is ſometimes made uſe of in *hyſteric diſorders*, and as *an anthelmintic;* as alſo in *epilepſies proceeding from a relaxed ſtate of the nerves.*

Rue yields its oil very ſparingly. The largeſt quantity is obtained from it *when the flowers are ready to fall off, and the ſeeds begin to ſhew themſelves.* Suitable maceration, previous to the diſtillation, is here extremely neceſſary.

OLEUM SABINÆ ESSENTIALE.

Eſſential oil of ſavin leaves.

Edinb.

Savin is one of the plants which yield, without much maceration, a very large quantity of oil; which is a celebrated *uterine* and *emmenagogue: in cold phlegmatic habits,* it is undoubtedly a medicine of much ſervice, though not capable of performing what it has been uſually repreſented to do.

Doſe—two or three drops, or more.

OLEUM SASSAFRAS RADICIS ESSENTIALE.

Eſſential oil of ſaſſafras.

L. E.

This is the moſt ponderous of all the known eſſential oils, but riſes in diſtillation with ſufficient eaſe; it appears limpid as water, has a moderately pungent taſte, a very fragrant ſmell, exactly reſembling that of the ſaſſafras. It ſtands greatly commended as a *ſudorific,* and for *purifying the blood and juices:* it is likewiſe ſuppoſed to be of ſervice in *humoural aſthmas* and *coughs.*

Doſe, from two to ten drops.

The decoction remaining after the diſtillation of the oil affords by inſpiſſation an uſeful extract. Hoffmann ſays, he has given it with great benefit, as a *corroborant* in *cachectic caſes,* in *the decline of intermitting fevers,* and *for abating hypochondriacal ſpaſms.*

Doſe ℈ i.

OLEUM TEREBINTHINÆ.

Oil of turpentine.

Lond.

Take of

Common turpentine, five pounds;
Water, four pounds.

Diſtil the turpentine from the water in a copper alembic.

After the oil has been diſtilled there remains the *reſina flava,* which is only uſed for external application, to give conſiſtence to plaſters, and ſimilar purpoſes.

This oil is a very hot ſtimulating medicine. It is ſometimes given as a *ſudorific* and *diuretic,* in the doſe of two or three drops: in large doſes, it is apt *greatly to heat the body,* occaſion pain of the head, and effuſion of the ſemen and liquor of the proſtrate glands. It has nevertheleſs been taken in conſiderable doſes (along with honey or other convenient vehicles) againſt *chronic rheumatiſm,* the *ſciatica,* and *lumbago;* and, as it is ſaid, with great ſucceſs. Some have recommended it againſt *venereal runnings:* but here it has produced miſchievous conſequences, inflaming the parts and aggravating the diſorder. Care ſhould be taken not to give very large doſes; as an inſtance has been mentioned of bloody urine ſucceeding the exhibition. EXTERNALLY it is not unfrequently employed *againſt rheumatic pains, aches, ſprains,*

for *discussing cold tumours*, and *restraining hæmorrhages.*

OLEUM TEREBINTHINÆ RECTIFICATUM.

Rectified oil of turpentine.

L. E.

Take of

Oil of turpentine, one pound;

Distilled water, four pints, or pounds.

Distil.

OLEUM VINI.

Oil of wine.

Lond.

Take of

Alcohol;

Vitriolic acid—each one pint.

Mix them by degrees, and distil; taking care that no black froth passes into the receiver. Separate the oily part of the distilled liquor from the volatile vitriolic acid. To the oily part add *water of pure kali*, sufficient to correct the sulphureous smell; submit it again to distillation, and draw over what little æther there may be, with a gentle heat. The *oleum vini* remains in the retort, swimming on the watery liquor, from which it is to be separated.

The vitriolic acid should be added to the alcohol by a little at a time, waiting till the first addition is incorporated before another quantity is put in; by which the ensuing heat is inconsiderable, and the combination is effected without inconvenience: otherwise, if they are put together too hastily, great heat and ebullition would be raised, dissipate a part of the mixture, hazard the breaking of the vessel, and endanger the operator.

The chief use which is at present made of the *oleum vini* is to form the *Spiritus ætheris vitriolici compositus.*

Most of the foregoing oils are drawn by our chemists, and easily procurable in a tolerable degree of perfection; those of *cinnamon*, *cloves*, *nutmegs*, and *mace*, excepted. These are usually imported: and are for the most part so much adulterated, that it is difficult to meet with such as are at all fit for use.

Nor are the adulterations of these kinds of preparations easily discoverable. The grosser abuses indeed may be readily detected: thus if the oil be mixed with *spirit of wine*, it will turn milky on the addition of water;—if *with expressed oils*, rectified spirit will dissolve the essential, and leave the other behind;—if *with oil of turpentine*, on dipping a piece of paper in the mixture, and drying it with a gentle heat, the turpentine will be betrayed by its smell. But the more subtle artists have contrived other methods of sophistication, which elude all trials of this kind.

Some have looked upon the specific gravity of oils as a certain criterion of their genuineness; and accordingly we have given a table of the gravity of several in page 40. This however is not to be absolutely depended on: for the genuine oils, obtained from the same subjects, oftentimes differ in gravity as much as those drawn from different ones. *Cinnamon* and *cloves*, whose oils usually sink in water, yield, if slowly and warily distilled, an oil of great fragrancy, which is nevertheless specifically lighter than the aqueous fluid employed in the distillation of it; whilst, on the other hand, the last runnings of some of the lighter oils prove sometimes so ponderous as to sink in water.

As all essential oils agree in the general properties of solubility in spirit of wine, indissolubility in water, miscibility with water by the intervention of certain intermedia, volatility in the heat of boiling water, &c. it is plain that they may be variously mixed with one another, or the dearer sophisticated with the cheaper, without any possibility of

discovering the abuse by any trials of this kind. And indeed it would not be of much advantage to the purchaser, if he had infallible criteria of the genuineſs of every individual oil. It is of as much importance, that they be *good*, as that they be *genuine*; for I have often ſeen genuine oils from incurious diſtillation, and long and careleſs keeping, weaker both in ſmell and taſte than the common ſophiſticated ones.

The *ſmell* and *taſte ſeem to be the only certain teſts that the nature of the thing will admit of*. If a bark ſhould have in every reſpect the appearance of good cinnamon, and ſhould be proved indiſputably to be the genuine bark of the cinnamon tree; yet, if it want the cinnamon flavour, or have it but in a low degree, we reject it; and the caſe is the ſame with the oil. It is only from uſe and habit, or compariſons with ſpecimens of known quality, that we can judge of the goodneſs either of the drugs themſelves, or of their oils.

Moſt of the eſſential oils, indeed, are too hot and pungent to be taſted with ſafety; and the ſmell of the ſubject is ſo much concentrated in them, that a ſmall variation in this reſpect is not eaſily diſtinguiſhed. But we can readily dilute them to any aſſignable degree. A drop of the oil may be diſſolved in ſpirit of wine; or received on a bit of ſugar, and diſſolved by that intermedium in water. The quantity of liquor which it thus impregnates with its flavour, or the degree of flavour which it communicates to a certain determinate quantity, will be the meaſure of the degree of goodneſs of the oil.

We ſhall here ſubjoin ſome experiments *of the quantity of eſſential oil obtained from different vegetables*, reduced into the form of a table. The *firſt* column contains the names of the reſpective vegetable ſubſtances—the *ſecond* the quantity of each which was ſubmitted to the diſtillation—and the *third* the quantity of oil obtained. In every other part of this book where *pound* weights are mentioned, the troy pound of twelve ounces is meant; but theſe experiments having been all made by a pound of ſixteen ounces, it was thought expedient to ſet down the matter of fact in the original weights; eſpecially as the ſeveral materials in the large quantity commonly required for the diſtillation of oils are purchaſed by weights of the ſame kind. But to remove any ambiguity which might ariſe hence, and enable the reader to judge more readily of the yield, a reduction of the weights is given in the next column; which ſhews the number of parts of each of the ſubjects, from which one part of oil was obtained. To each article is affixed the author's name from whom the experiment is taken. The different diſtillations of one ſubject, ſeveral of which are inſerted in the table, ſhew how variable the yield of oil is, and that the exotic ſpices, as well as our indigenous plants, do not always contain the ſame proportion of this active principle: though it muſt be obſerved, alſo, that part of the differences may probably ariſe from the operation itſelf having been more or leſs carefully performed.

Table of the quantity of Essential Oil obtained from different Vegetables.

Agallochum wood	10 lb.	4 dra.	yielded of essential oil	320	so that one part of oil was obtained from	*Hoff.*
Angelica root	1 lb.	1 dra.		128		*Carth.*
Anisseed	1 lb.	4 dra.		32		*Neum.*
Anisseed	3 lb.	1 oun.		48		*Lewis.*
Anisseed	4 lb.	1 oun.		64		*Lewis.*
Asafœdita	4 oun.	1 dra.		32		*Neum.*
Calamus aromaticus	50 lb.	2 oun.		185		*Hoff.*
Calamus aromaticus	1 lb.	2 scrup.		192		*Neum.*
Caraway seeds	4 lb.	2 oun.		32		*Lewis.*
Caraway seeds	2 lb.	9 dra.		$28\frac{1}{2}$		*Lewis.*
Caraway seeds	1 cwt.	83 oun.		$21\frac{1}{2}$		*Lewis.*
Carline thistle root	1 lb.	$2\frac{1}{2}$ scrup.		153		*Neum.*
Cardamom seeds	1 oun.	1 scrup.		24		*Neum.*
Carrot seeds	2 lb.	$1\frac{1}{2}$ dra.		171		*Lewis.*
Cascarilla	1 lb.	1 dra.		128		*Carth.*
Camomile flowers	1 lb.	30 gra.		256		*Carth.*
Common camomile flowers	6 lb.	5 dra.		153		*Lewis.*
Wild camomile flowers	1 lb.	20 gra.		384		*Carth.*
Wild camomile flowers	6 lb.	$2\frac{1}{2}$ dra.		307		*Lewis.*
Chervil leaves, fresh	9 lb.	30 gra.		2304		*Neum.*
Cedar wood	1 lb.	2 dra.		64		*Margg.*
Cinnamon	1 lb.	1 dra.		128		*Sala.*
Cinnamon	1 lb.	$2\frac{1}{2}$ scrup.		153		*Neum.*
Cinnamon	4 lb.	6 dr.		$85\frac{1}{3}$		*Lemery.*
Cinnamon	1 lb.	2 dra.		64		*Carth.*
Cinnamon	1 lb.	8 scrup.		$45\frac{1}{2}$		*Carth.*
Clary seeds	4 lb.	2 dra.		256		*Lewis.*
Clary in flower, fresh	130 lb.	$3\frac{1}{2}$ oun.		594		*Lewis.*
Cloves	1 lb.	$1\frac{1}{2}$ oun.		$10\frac{1}{3}$		*Teichm.*
Cloves	1 lb.	$2\frac{1}{2}$ oun.		$7\frac{1}{9}$		*Carth.*
Cloves	2 lb.	5 oun.		$6\frac{2}{3}$		*Hoff.*
Copaiba balsam	1 lb.	6 oun.		$2\frac{2}{3}$		*Hoff.*
Copaiba balsam	1 lb.	8 oun.		2		*Lewis.*
Cummin seed	1 bush.	21 oun.				
Dictamnus Creticus	1 lb.	30 gra.		256		*Lewis.*
Dill seed	4 lb.	2 oun.		32		*Lewis.*
Elecampane root	2 lb.	$3\frac{1}{2}$ scrup.		245		*Neum.*
Elemi	1 lb.	1 oun.		16		*Neum.*
Fennel seed, common	2 oun.	1 scrup.		48		*Neum.*
Fennel seed, sweet	1 bush.	18 oun.				
Galangal root,	1 lb.	1 dra.		128		*Carth.*
Garlick root, fresh	2 lb.	30 gra.		256		*Neum.*
Ginger	1 lb.	1 dra.		128		*Neum.*
Horseradish root, fresh	8 oun.	15 gra.		256		*Neum.*
Hyssop leaves	2 lb.	$1\frac{1}{2}$ dra.		237		*Neum.*
Hyssop leaves	1 lb.	$\frac{1}{2}$ dra.		85		*Carth.*
Hyssop leaves	1 lb.	2 dra.		64		*Carth.*

Hyſſop leaves, freſh -	2 cwt.	yielded of eſſential oil	6 oun.	ſo that one part of oil was obtained from	597 *Lewis.*
Hyſſop leaves, freſh - -	10 lb.		3 dra.		427 *Lewis.*
Hyſſop leaves, freſh - -	30 lb.		9 dra.		427 *Lewis.*
Juniper berries - -	8 lb.		3 oun.		42⅔ *Hoff.*
Juniper berries - -	1 lb.		3 dra.		42 *Carth.*
Lavender in flower, freſh -	48 lb.		12 oun.		64 *Lewis.*
Lavender in flower, freſh -	30 lb.		6¾ oun.		72 *Lewis.*
Lavender in flower, freſh -	13½ cw.		60 oun.		403 *Lewis.*
Lavender flowers, freſh -	2 lb.		4 dra.		64 *Hoff.*
Lavender flowers, dried -	4 lb.		2 oun.		32 *Lewis.*
Lavender flowers, dried -	2 lb.		1 oun.		32 *Hoff.*
Lavender flowers, dried -	4 lb.		3 oun.		21⅓ *Hoff.*
Broad-leaved Lavender flowers, dry -	4 lb.		1 oun.		64 *Hoff.*
	1 lb.		2 dra.		64 *Carth.*
Lovage root - - -	1 lb.		1 dra.		128 *Carth.*
Mace - - - -	1 lb.		5 dra.		25⅗ *Neum.*
Mace - - - -	1 lb.		6 dra.		21⅓ *Carth.*
Marjoram in flower, freſh	81 lb.		3¾ oun.		347 *Lewis.*
Marjoram in flower, freſh	13½ lb.		3½ dra.		493 *Lewis.*
Marjoram in flower, freſh	34 lb.		1½ oun.		362 *Lewis.*
Marjoram leaves, freſh -	18½ lb.		4 dra.		592 *Lewis.*
Marjoram leaves, dried -	4 lb.		1 oun.		64 *Hoff.*
Maſterwort root - -	1 lb.		30 gra.		256 *Neum.*
Milfoil flowers, dried -	14 lb.		4 dra.		448 *Lewis.*
Mint in flower, freſh -	6 lb.		4½ dra.		177 *Lewis.*
Mint leaves, dried - -	4 lb.		1½ oun.		42⅔ *Hoff.*
Peppermint, freſh - -	4 lb.		3 dra.		170⅔ *Lewis.*
Myrrh - - - -	1 lb.		2 dra.		64 *Hoff.*
Myrrh - - - -	1 lb.		3 dra.		42⅔ *Neum.*
Nutmegs - - -	1 lb.		1 oun.		16 *Hoff.*
Nutmegs - - -	1 lb.		1 oun.		16 *Geoff.*
Nutmegs - - -	1 lb.		4 dra.		32 *Neum.*
Nutmegs - - -	1 lb.		6 dra.		21⅓ *Sala.*
Nutmegs - - -	1 lb.		5 dra.		25⅔ *Carth.*
Parſley ſeeds - - -	2 lb.		1 dra.		256 *Lewis.*
Parſley leaves, freſh - -	238 lb.		2 oun.		1904 *Lewis.*
Parſnip ſeeds - - -	8 lb.		2 dra.		512 *Lewis.*
Pennyroyal in flower, freſh	13 lb.		6 dra.		277 *Lewis.*
Black pepper - - -	2 lb.		6 dra.		42⅔ *Lewis.*
Black pepper - -	1 lb.		2½ dra.		82 *Neum.*
Black pepper - -	1 lb.		4 ſcrup.		96 *Carth.*
Black pepper - -	1 lb.		1 dra.		128 *Heiſter.*
Black pepper - -	6 lb.		3 dra.		256 *Geoff.*
Pimento - - -	1 oun.		30 gra.		16 *Neum.*
Rhodium wood - -	1 lb.		3 dra.		42⅔ *Neum.*
Rhodium wood - -	1 lb.		2 dra.		64 *Sala.*
Rhodium wood - -	1 lb.		3 dra.		42⅔ *Sala.*
Rhodium wood - -	1 lb.		3 dra.		42⅔ *Carth.*
Rhodium wood - -	1 lb.		4 dra.		132 *Carth.*
Roſemary in flower - -	1 cwt.		8 oun.		224 *Lewis.*
Roſemary leaves - -	1 lb.		2 dra.		64 *Sala.*
Roſemary leaves - -	1 lb.		3 dra.		42⅔ *Sala.*

Rosemary leaves - -	3 lb.	$3\frac{1}{6}$ dra.	121	*Neum.*
Rosemary leaves - -	1 lb.	1 dra.	128	*Carth.*
Rosemary leaves - -	1 lb.	$1\frac{1}{2}$ dra.	82	*Carth.*
Rosemary leaves, fresh -	70 lb.	5 oun.	224	*Lewis.*
Roses - - - -	100 lb.	4 dra.	3200	*Tachen.*
Roses - - - -	100 lb.	1 oun.	1600	*Homb.*
Roses - - - -	12 lb.	30 gra.	768	*Hoff.*
Rue - - - -	10 lb.	2 gra.	640	*Hoff.*
Rue - - - -	10 lb.	4 dra.	320	*Hoff.*
Rue in flower - -	4 lb.	1 dra.	512	*Lewis.*
Rue in flower - -	60 lb.	$2\frac{1}{2}$ oun.	507	*Lewis.*
Rue with the seeds - -	72 lb.	3 oun.	384	*Lewis.*
Saffron - - -	1 lb.	$1\frac{1}{2}$ dra.	$85\frac{1}{3}$	*Vogel.*
Sage leaves - - -	1 lb.	5 scrup.	77	*Carth.*
Sage in flower, fresh - -	34 lb.	$1\frac{1}{2}$ oun.	544	*Lewis.*
Sage of virtue in flower -	27 lb.	6 dra.	576	*Lewis.*
Sage of virtue in flower -	8 lb.	$1\frac{1}{2}$ dra.	681	*Lewis.*
Sassafras - - -	6 lb.	$1\frac{3}{4}$ oun.	55	*Hoff.*
Sassafras - - -	6 lb.	2 oun.	48	*Neum.*
Savin - - -	2 lb.	5 oun.	$6\frac{2}{3}$	*Hoff.*
Saunders, yellow - -	1 lb.	2 dra.	64	*Carth.*
Smallage seeds - -	1 lb.	$2\frac{1}{2}$ scrup.	154	*Neum.*
Stechas in flower, fresh -	$5\frac{3}{4}$ lb.	2 dra.	368	*Lewis.*
Thyme in flower, fresh -	2 cwt.	$5\frac{1}{2}$ oun.	652	*Lewis.*
Thyme in flower, dry -	$3\frac{1}{2}$ lb.	$1\frac{1}{2}$ dra.	298	*Lewis.*
Lemon thyme in flower, fresh	51 lb.	$1\frac{3}{4}$ oun.	653	*Lewis.*
Lemon thyme in flower, fresh	98 lb.	$2\frac{1}{2}$ oun.	627	*Lewis.*
Lemon thyme, dried a little	104 lb.	3 oun.	555	*Lewis.*
Wormood leaves, dry -	4 lb.	1 oun.	64	*Lewis.*
Wormwood leaves, dry -	18 lb.	$1\frac{1}{2}$ oun.	192	*Lewis.*
Wormwood leaves, dry -	25 lb.	$3\frac{1}{2}$ oun.	114	*Lewis.*
Zedoary - - -	1 lb.	1 dra.	128	*Neum.*

yielded of essential oil — so that one part of oil was obtained from

SECT. II.

Directions for obtaining Simple distilled Waters.

THE effluvia which exhale in the air from many vegetables, particularly from those of the odorous kind, consist apparently of principles of great subtility and activity, capable of strongly and suddenly affecting the brain and nervous system, especially in those whose nerves are of great sensibility; and likewise of operating, in a flower manner, upon the system of grosser vessels. Thus Boerhaave observes that in *hysterical* and *hypochondriacal persons*, the fragrant odour of the Indian hyacinth excites strange spasms, which the strong scent of the rue relieves:—that *the effluvia of the walnut-tree* occasion head-achs, and make the body costive:—that *those of poppies* procure sleep:—and that the smell *of bean-blossoms*, long continued, disorders the senses. Lemery relates, from his own knowledge,

that ſeveral perſons were purged, by ſtaying long in a room where damaſk roſes were drying.

Some of the chemiſts have indulged themſelves in the pleaſing ſurvey of theſe preſiding ſpirits, as they are called, of vegetables; their peculiar nature in the different ſpecies of plants; their exhalation into the atmoſphere by the ſun's heat, and diſperſion by winds; their rendering the air of particular places medicinal, or otherwiſe, according to the nature of the plants that abound. They have contrived alſo different means for collecting theſe fugitive emanations, and concentrating and condenſing them into a liquid form; employing either the native moiſture of the ſubject, or an addition of water, as a vehicle or matrix for retaining them.

The proceſs which has been judged moſt analogous to that of nature is the following. The ſubject freſh gathered, at the ſeaſon of its greateſt vigour, with the morning dew upon it, is laid lightly and unbruiſed in a ſhallow veſſel, to which is adapted a low head with a recipient. Under the veſſel, a live coal is placed, and occaſionally renewed, ſo as to keep up an uniform heat, no greater than that which obtains in the atmoſphere in ſummer, viz. about 85 degrees of Fahrenheit's thermometer. In this degree of heat, there ariſes, very ſlowly, an inviſible vapour, which condenſes in the head into dewy drops and falls down into the receiver, and which has been ſuppoſed to be the very ſubſtance that the plant would have ſpontaneouſly emitted in the open air.

But on ſubmitting to this proceſs many kinds of odoriferous vegetables, I have always found the liquors obtained by it to be very different from the natural effluvia of the reſpective ſubjects: they had very little ſmell, and no remarkable taſte. It appeared that a heat, equal to that of the atmoſphere, is incapable of raiſing in cloſe veſſels thoſe parts of vegetables which they emit in the open air. It may therefore be preſumed, that, in this laſt caſe, ſome other cauſe concurs to the effect: that it is not the ſun's heat alone, which raiſes, and impregnates the air with the odorous principles of vegetables, but that the air itſelf, or the watery humidity with which it abounds, acting as a true diſſolvent, extracts and imbibes them; ſo that the natural effluvia of a plant may be looked upon as an infuſion of the plant made in air. The purgative virtue of the damaſk roſe, and the aſtringency of the walnut tree, which, as above obſerved, are in ſome meaſure communicated to the air, may be totally extracted by infuſion both in watery and ſpirituous menſtrua, but never riſe in diſtillation with any degree of heat; and the volatile odours of aromatic herbs, which are diffuſed through the atmoſphere in the loweſt warmth, cannot be made to diſtil without a heat much greater than is ever found to obtain in a ſhaded air.

But the reaſon of this has been attempted to be accounted for, by ſuppoſing that the effluvia ariſing from growing vegetables, are chiefly exhaled by the living energy of the plant; the odoriferous matter is a real ſecretion, which cannot be performed independent of active veſſels; and it is reaſonable to allow the ſame powers for the exhalation of the effluvia, as for the tranſpiration of their watery parts.

The above proceſs therefore, and the theory on which it is built, appear to be faulty in two points; (1.) in ſuppoſing that all thoſe principles, which naturally exhale from vegetables, may be collected by diſtillation; whereas there are

many which the air extracts in virtue of its diſſolving power, and which are artificially ſeparable alſo by diſſolvents only; (2.) in employing a degree of heat inſufficient for ſeparating even thoſe parts which are truly exhalable by heat.

The foregoing method of diſtillation is commonly called *diſtillation by the cold ſtill;* but thoſe who have practiſed it, have generally employed a conſiderable heat. A ſhallow leaden veſſel is filled with the freſh herbs, flowers, &c. which are heaped above it, ſo that when the head is fitted on, this alſo may be filled a conſiderable way. A little fire is made under the veſſel, ſufficient to make the bottom much hotter than the hand can bear, care being taken only not to heat it ſo far as to endanger ſcorching any part of the ſubject. If the bottom of the veſſel be not made ſo hot as to have this effect on the part contiguous to it, it is not to be feared that the heat communicated to the reſt of the included matter will be great enough to do it any injury. By this management, the volatile parts of ſeveral odorous plants, as mint, are effectually forced over; and if the proceſs has been ſkilfully managed, the diſtilled liquor proves richly impregnated with the native colour and flavour of the ſubject, without having received any kind of diſagreeable impreſſion from the heat made uſe of.

This proceſs has been chiefly practiſed in private families; the ſlowneſs of the diſtillation, and the attendance and care neceſſary for preventing the ſcorching of ſome part of the plant, ſo as to communicate an ungrateful burnt flavour to the liquor, rendering it inconſiſtent with the diſpatch requiſite in the larger way of buſineſs.

Another method has therefore been uſed, that by the common ſtill, called, in diſtinction from the foregoing, the hot ſtill. Here a quantity of water is added to the plant, to prevent its burning: and the liquor is kept nearly of a boiling heat, or made fully to boil, ſo that the vapour riſes plentifully into the head, and paſſing thence into a ſpiral pipe or worm placed in a veſſel of cold water, is there condenſed, and runs out in drops quickly ſucceeding one another, or in a continued ſtream. The additional water does not at all weaken the produce: for the moſt volatile parts of the ſubject riſe firſt, and impregnate the liquor that firſt diſtils: as ſoon as the plant has given over its virtue ſufficiently, which is known by examining from time to time the liquor that runs from the noſe of the worm, the diſtillation is to be ſtopt.

This is the method of diſtillation commonly practiſed for the officinal waters. It is accompanied with one imperfection, affecting chiefly thoſe waters whoſe principal value conſiſts in the delicacy of their flavour; this being not a little injured by the boiling heat uſually employed, and by the co-agitation of the odorous particles of the ſubject with the water. Sometimes alſo a part of the plant ſticks to the ſides of the ſtill, and is ſo far ſcorched as to give an ungrateful taint to the liquor.

There is another method of managing this operation, already recommended for the diſtillation of the more volatile eſſential oils, and which is equally applicable to that of the waters. In this method, the advantages of the foregoing ones are united, and their inconveniencies obviated. A quantity of water being poured into the ſtill, and the herbs or flowers placed in a baſket over it, there can be no poſſibility of burning; the water may be made to boil, but ſo as not to riſe up into the baſket, which

would defeat the intention of this contrivance. The hot vapour of the water paſſing lightly through all the interſtices of the ſubject, imbibes and carries over the volatile parts unaltered in their native flavour. By theſe means the diſtilled waters of all thoſe ſubſtances, whoſe oils are of the more volatile kind, are obtained in the utmoſt perfection, and with ſufficient diſpatch; for which laſt intention the ſtill may be filled quite up to the head.

In the diſtillation of eſſential oils, the water, as obſerved in the foregoing ſection, imbibes always a part of the oil. The diſtilled liquors, here treated of, are no other than water thus impregnated with the eſſential oil of the ſubject; whatever ſmell, taſte, or virtue, is here communicated to water, or obtained in the form of a watery liquor, being found in a concentrated ſtate in the oil. The eſſential oil, or ſome part of it, more attenuated and ſubtiliſed than the reſt, is the direct principle, on which the title of *ſpiritus rector*, or preſiding ſpirit, has been beſtowed.

All thoſe vegetables, therefore, which contain an eſſential oil, will give over ſome virtue to water by diſtillation: but the degree of the impregnation of the water, or the quantity of water which a plant is capable of ſatiating with its virtue, are by no means in proportion to the quantity of its oil. The oil ſatiates only the water that comes over at the ſame time with it. If there be more oil than is ſufficient for this ſatiation, the ſurplus ſeparates, and concretes in its proper form, not miſcible with the water that ariſes afterwards. Some odoriferous flowers, whoſe oil is in ſo little quantity, that ſcarcely any viſible mark of it appears, unleſs fifty or an hundred pounds or more are diſtilled at once, give nevertheleſs as ſtrong an impregnation to water, as thoſe plants which abound moſt with oil.

Many have been of opinion, that diſtilled waters may be more and more impregnated with the virtues of the ſubject, and their ſtrength increaſed to any aſſigned degree, by *cohobation*, that is, by re-diſtilling them a number of times from freſh parcels of the plant. Experience, however, ſhows the contrary; a water ſkilfully drawn in the firſt diſtillation, proves, on every repeated one, not ſtronger, but more diſagreeable. Aqueous liquors are not capable of imbibing above a certain quantity of the volatile oil of vegetables, and this they may be made to take up by one, as well as by any number of diſtillations. The oftener the proceſs is repeated, the ungrateful impreſſion, which they generally receive from the fire even at the firſt time, becomes greater and greater. Thoſe plants which do not yield at firſt waters ſufficiently ſtrong, are not proper ſubjects for this proceſs, ſince their virtue may be obtained much more advantageouſly by others.

General rules for the diſtillation of the officinal ſimple waters.

I.

Plants and their parts, where they are directed freſh, ſuch only muſt be employed; but ſome are allowed to be uſed dry, as being eaſily procurable in this ſtate at all times of the year, though rather more elegant waters might be obtained from them whilſt green.

II.

When freſh and juicy herbs are to be diſtilled, thrice their weight of water will be fully ſufficient: but dry ones require a much larger quantity. In general, there ſhould be ſo much water, that after all intended to be diſtilled has come over,

there may be liquor enough left to prevent the matter from burning to the ſtill.

III.

The diſtillation may be performed in an alembic with a refrigeratory, the junctures being luted.

IV.

Plants differ ſo much, according to the ſoil and ſeaſon of which they are the produce, and likewiſe according to their own age, that it is impoſſible to fix the quantity of water to be drawn from a certain weight of them, to any invariable ſtandard. The diſtillation may always be continued as long as the liquor runs well flavoured of the ſubject, and no longer.

If the herbs be of prime goodneſs, they muſt be taken in the weights preſcribed. But when freſh ones are ſubſtituted to dry, or when the plants themſelves are the produce of unfavourable ſeaſons, and weaker than ordinary, the quantities are to be varied according to the diſcretion of the artiſt.

After the odorous water, alone intended for uſe, has come over, an acidulous liquor ariſes, which has ſometimes extracted ſo much from the copper head of the ſtill, as to prove emetic. To this are owing the anthelmintic virtues attributed to certain diſtilled waters.

V.

In the preceding edition of the Edinburgh Pharmacopœia, ſome vegetables were ordered to be ſlightly fermented with the addition of yeaſt, previouſly to the diſtillation.

The principle, on which this management is founded, is certainly juſt; for the fermentation ſomewhat opens and unlocks their texture, ſo as to make them part with more in the ſubſequent diſtillation than could be drawn over from them without ſome aſſiſtance of this kind. Thoſe plants, however, which require this treatment, are not proper ſubjects for ſimple waters to be drawn from; their virtues being obtainable to better advantage by other proceſſes.

VI.

If any drops of oil ſwim on the ſurface of the water, they are to be carefully taken off.

VII.

That the waters may keep the better, about one-twentieth part of their weight of proof ſpirit may be added to each, after they are diſtilled.

A great number of diſtilled waters was formerly kept in the ſhops, and are ſtill retained in foreign Pharmacopœias. The faculty of Paris direct, in a late edition of their *Codex Medicamentarius*, no leſs than one hundred and twenty-five different waters, and one hundred and thirty different ingredients in one ſingle water. Near one half of theſe preparations have ſcarcely any virtue or flavour from the ſubject, and many of the others are inſignificant.

The colleges of London and Edinburgh have rejected theſe oſtentatious ſuperfluities; and given an elegant and compendious ſet of waters, ſufficient for anſwering ſuch purpoſes as theſe kinds of preparations are applied to in practice. Diſtilled waters are employed chiefly as *grateful diluents*, as *ſuitable vehicles for medicines of greater efficacy*, or for *rendering diſguſtful ones more acceptable to the palate and ſtomach*: few are depended on, in any intentions of conſequence, by themſelves.

AQUA SEMINUM ANETHI.

Dill-ſeed water.

Lond. and Edinb.

Take of

Dill-ſeeds, a pound;

Water, as much as is ſufficient to prevent an empyreuma.

Draw off one gallon, or ten pints.

This water, which turns out pretty ſtrong of the dill-ſeeds, is ſometimes employed as the baſis of carminative juleps. It is ſimilar in flavour to a water drawn from caraway ſeeds, but leſs agreeable.

Doſe, ℥2 to ℥4.

The London and Edinburgh Colleges order all the ſimple waters to be diſtilled in the ſame manner; the former drawing off *one gallon*, and the latter *ten pints*, from the quantity of the ingredients ſpecified below.

Cort. Cinnam. ℔j. L. E.
Cortic. Cass. Lign. ℔j. E.
Menthæ piperit. florentis, ℔3. E. ℔jſs. L.
——— Sativæ florentis, ℔3. E. ℔jſs. L.
Pulegii Florentis, ℔3. E. ℔jſs. L.
Fructus Pimentæ, vel Pimento, ℔ſs. L. E.
{Rosæ Damascenæ vel recentis, Petalorum Rosacum Pallidarum recentium.} ℔6.
Cort. Limon. recent. ℔2. E.
Cort. Aurant. Hiſp. recent. ℔2. E.
Fœniculi Seminum, ℔j. L.

The London college conſiders moſt of the waters to be diſtilled from the dry herbs, becauſe they cannot be procured freſh at all times; but whenever they are uſed, their weight muſt be increaſed in proportion. Whether the freſh or dry herbs are employed, the operator is left at liberty to vary the weight, according to the ſeaſon in which they have been produced and collected. And after diſtillation the college of Edinburgh orders half an ounce of proof ſpirit of wine to be put to every pound or pint of the diſtilled water.

Beſides what the two colleges have adopted, ſome other waters remain in this work, on account of their apparent utility; and ſome from the authority by which they are ſupported; as the

Aq. Caſtorei, ℥j.—draw off 2 pints.
Cerefolii rec. ℔j.—draw off ℔8.
Ceraſorum nigrorum.
Hyſſopi.
Meliſſæ.
Sabinæ.
Rutæ.

which are to be diſtilled in the ſame manner as before directed. In theſe five laſt the quantity of the ingredients is not ſpecified; therefore any indeterminate portion may be taken; and adding a ſufficient quantity of water to avoid an empyreuma, as much may be drawn off as preſerves any taſte of the ingredient employed. To theſe therefore, and thoſe above ſpecified, we ſhall merely ſpeak of the medicinal purpoſes they ſeem, in ſome degree, calculated to anſwer.

AQUA CASTOREI.

Caſtor water.

Lond.

Caſtor yields almoſt all its flavour in diſtillation to water; but treated in the ſame manner with ſpirit of wine, gives over nothing. The ſpirit of caſtor, formerly kept in the ſhops, had none of the ſmell or virtues of the drug; whilſt the

water here directed proves, when freſh drawn, very ſtrong of it.

It is remarkable, that the virtues of this animal ſubſtance reſide in a volatile oil, analogous to the eſſential oils of vegetables. Some are reported to have obtained, in diſtilling large quantities of the drug, a ſmall portion of oil, which ſmelt extremely ſtrong of the caſtor, and diffuſed its ungrateful ſcent to a great diſtance.

This water is made uſe of in *hyſteric caſes*, and *ſome nervous complaints*, though it has not been found to anſwer what many people expect from it. It loſes much of its flavour in keeping.

AQUA CERASORUM NIGRORUM.

Black cherry water.

This is a very grateful water, and has long maintained a place in the ſhops. It has frequently been employed by phyſicians as a vehicle in preference to the other diſtilled waters; and among nurſes, and others who have the care of young children, has been the firſt remedy againſt the convulſive diſorders to which children are ſo often ſubject.

This water has nevertheleſs of late been brought into diſrepute, and by ſome looked upon as poiſonous. They obſerve, that it receives its flavour principally from the cherry-ſtones; and that theſe kernels, like many others, bear a reſemblance in taſte to the leaves of the lauro-ceraſus, which have been diſcovered to yield, by infuſion or diſtillation, the moſt ſudden poiſon known. Some phyſicians of Worceſter have found, by trial purpoſely made, that a diſtilled water very ſtrongly impregnated with the flavour of the cherry kernels (no more than two pints being diſtilled from fourteen pounds of the cherry ſtones) proved in like manner poiſonous to brutes: the committee of the London college repeated the ſame experiment, and found the effects agreeable to thoſe gentlemen's report.

It by no means follows from theſe trials, nor after ſuch long experience can it be imagined, that black cherry water, when no ſtronger than the ſhops have been accuſtomed to prepare it, is unſafe. Theſe kernels, as the committee obſerve, plainly reſemble opium, and ſome other things, which poiſon only when taken in too great a quantity; the water from the very laurel leaves is harmleſs when duly diluted; and even ſpirit of wine proves a poiſon of a kind not greatly different, if drunk to a certain degree of exceſs. Nor can it be concluded, from the trials with the ſtrong black cherry water on dogs, &c. that even this will have the ſame effects in the human body; the kernels of many ſorts of fruits being in ſubſtance poiſonous to brutes, though innocent to man.

It is poſſible, however, that this water in any degree of ſtrength may not be altogether ſafe to the tender age of infants, where the principles of life are but juſt beginning as it were to move; it is poſſible, that it may there have had pernicious effects, without being ſuſpected; the ſymptoms it would produce, if it ſhould prove hurtful, being ſuch as children are often thrown into from the diſeaſe which it is imagined to relieve. On theſe conſiderations, both the London and Edinburgh colleges have choſen to lay it aſide; more eſpecially as it has been too often counterfeited with a water diſtilled from bitter almonds, which are known to communicate a poiſonous quality.

AQUA CINNAMOMI.

Cinnamon water.

This is a very grateful and uſeful water, poſſeſſing in an eminent degree the fragrance and aromatic cordial virtues of the ſpice. Great

care ſhould be had, in the choice of the cinnamon, to avoid the too common impoſition of ſubſtituting caſia it its room. This latter yields a water much leſs agreeable than that of cinnamon, and whoſe flavour is manifeſtly empyreumatic. The two drugs may be eaſily diſtinguiſhed from one another by the marks laid down under the reſpective articles in the ſecond part of this work.

The virtues of all theſe waters depend upon their containing a portion of the oil of the ſubject. The oil of cinnamon is very ponderous, and ariſes more difficultly than that of any of the other vegetable matters from which ſimple waters are ordered to be drawn. This obſervation directs us, in the diſtillation of this water, to make uſe of a quick fire and a low veſſel. For the ſame reaſon, the water does not keep ſo well as might be wiſhed; the ponderous oil parting from it in time, and falling to the bottom, when the liquor loſes its milky hue, its fragrant ſmell, and aromatic taſte. Some recommend a ſmall proportion of ſugar to be added, in order to keep the oil united with the water.

Doſe, ℥ß to ℥iv.

AQUA DISTILLATA.

Diſtilled water.

Lond.

Take of

Spring water, ten gallons;

Draw off by diſtillation four pints; which being thrown away, draw off four gallons.

This is the beſt proceſs for acquiring water, with a degree of purity neceſſary for anſwering many medicinal purpoſes; as it is a means of clearing it from many heterogeneous parts with which water in its native ſtate is unavoidably impregnated. Thus freed, then it is rendered fitter for a variety of pharmaceutical and chemical proceſſes, than when in a ſtate of leſs purity.

AQUA FŒNICULI.

Fennel water.

Lond.

This water is ſufficiently grateful, and is ſaid to poſſeſs *diuretic* and *carminative* powers. It is often given to children, and appears uſeful in thoſe flatulent complaints to which they are ſubject. Some have obſerved, that the upper leaves and tops, before the flower appears, make a more elegant water, and a remarkably finer eſſential oil, than the lower ones; but no part of the herb is equal in flavour to the ſeeds.

Doſe, ℥ß to ℥iv.

AQUA HYSSOPI.

Hyſſop water.

Edinb.

Hyſſop water has been held by ſome in conſiderable eſteem, as an *uterine* and a *pectoral medicine*. Few at preſent expect any ſingular virtues from it, nor is it often made uſe of, or met with in the ſhops; but by ſome it is frequently employed. If it has any efficacy, its powers would be better acquired by infuſion or decoction.

AQUA MELISSÆ.

Balm water.

Edin.

In former editions of the Edinburgh Pharmacopœia, this water was ordered to be cohobated, or rediſtilled from freſh quantities of the herb. This management ſeems to have been taken from Boerhaave, who has a very high opinion of the water thus prepared. He ſays, he has experienced, in himſelf, extraordinary effects from it, taken on an empty ſtomach; that it has ſcarce its equal in *hypochondriacal* and *hyſterical caſes*, the *chloroſis*, and *palpitation of the heart*, as often as theſe diſeaſes proceed from a diſorder of the ſpirits rather than from any collection of morbific matter.

For my own part, I have already given my opinion with regard to the cohobation of theſe li-

quors; and ſhall here only obſerve, that, whatever virtues are lodged in balm, they may be much more perfectly and advantageouſly extracted by cold infuſion in aqueous or ſpirituous menſtrua: in this proceſs, the liquor ſuffers no injury from being returned on freſh parcels of the herb; a few repetitions will load it with the virtues of the ſubject, and render it very rich. The impregnation here is almoſt unlimited; but in diſtilled waters it is far otherwiſe.

AQUA MENTHÆ SATIVÆ.

Simple ſpearmint water.

Lond.

This water ſmells and taſtes very ſtrong of the mint; and proves, in many caſes, a *uſeful ſtomachic.* Boerhaave commends it (cohobated) as a preſent and incomparable remedy, for *ſtrengthening a weak ſtomach*, and *curing vomiting proceeding from cold viſcous phlegm;* as *alſo in lienteries.*

Doſe, ℥2 to ℥4.

AQUA MENTHÆ PIPERITIDIS.

Simple pepper-mint water.

This is a very elegant and uſeful water. It has a warm, pungent taſte, exactly reſembling that of the pepper-mint itſelf. A ſpoonful or two, taken at a time, *warms the ſtomach*, and *gives great relief in cold, flatulent colics.* Some have ſubſtituted a plain infuſion of the dried leaves of the plant, which is not greatly different in virtue from the diſtilled water.

Doſe, ℥2 to ℥4.

AQUA CAMPHORÆ.

Camphor water.

Take of,

Camphor, one ounce and a half; let it be diſſolved in half an ounce of ſpirit of roſemary, then pour upon it two pounds of diſtilled water, and draw off by diſtillation one pound and a half.

This appears to be intended to exhibit camphor in a very diluted ſtate, and probably it may agree with many ſtomachs better in this form than any other; however it is a form by which we may be empowered to try in the eaſieſt manner whether camphor is likely to be offenſive or not.

AQUA CEREFOLII.

Chervil water.

The cerefolium is held amongſt foreigners in high eſteem as a *diuretic* and *aperient*, and has been recommended in *dropſies.* This water, therefore, may be uſeful in forming a proper menſtruum for the exhibition of other medicines more powerfully calculated to be uſeful in ſuch affections.

AQUA PIMENTO;

formerly

AQUA PIPERIS JAMAICENSIS.

Water of Jamaica pepper.

Lond.

This diſtilled water is a very elegant one, and has come pretty much into uſe. The hoſpitals employ it as a ſuccedaneum to the more coſtly ſpice waters. It is, however, inferior in gratefulneſs to the ſpirituous water of the ſame ſpice hereafter directed.

Doſe, ℥2 to ℥4.

AQUA PULEGII.

Simple penny-royal water.

Lond.

This water poſſeſſes, in a conſiderable degree, the ſmell, taſte, and virtues of the penny-royal. It is frequently taken in hyſteric caſes, and not without good effects.

Doſe, ℥3 to ℥4.

AQUA ROSARUM DAMASCENARUM.

Damaſk roſe water.

Lond.

This water is principally valued on account of its fine flavour, which approaches to that generally admired in the roſe itſelf. The

purgative virtue of the roſes remains entire in the liquor left in the ſtill, which has therefore been generally employed for making the ſolutive honey and ſyrup, inſtead of a decoction or infuſion of freſh roſes prepared on purpoſe: and this piece of frugality the college have now admitted. A diſtilled water of red roſes has been ſometimes called for in the ſhops: and ſupplied by that of damaſk roſes, diluted with common water. This is a very venial ſubſtitution; for the water drawn from the red roſe has no quality which that of the damaſk does not poſſeſs in a far ſuperior degree; neither the purgative virtue of the one, nor the aſtringency of the other, ariſing in diſtillation.

Doſe, ℥2 to ℥4.

AQUA RUTÆ.

Rue water.

Rue gives over in this proceſs the whole of its ſmell, and great part of its pungency. The diſtilled water ſtands recommended in *epileptic caſes*, the *hyſteric paſſion*, for promoting perſpiration, and other natural ſecretions.

AQUA SABINÆ.

Savin water.

This water is by ſome held in conſiderable eſteem for the ſame purpoſes as the diſtilled oil of ſavin. Boerhaave relates, that he has found it (when prepared by cohobation) to give an *almoſt incredible motion to the whole nervous ſyſtem*, and that, when properly uſed, it proves eminently ſerviceable for *promoting the menſes and the hæmorrhoidal flux.*

SECT. III.

SPIRITUOUS DISTILLED WATERS AND SPIRITS.

THE flavour and virtues of diſtilled waters are owing, as obſerved in the preceding ſection, to their being impregnated with a portion of the eſſential oil of the ſubject from which they are drawn. Spirit of wine, conſidered as a vehicle for theſe oils, has this advantage above water, that it is their proper menſtruum, and keeps all the oil, that riſes with it, perfectly diſſolved into an uniform limpid liquor.

Nevertheleſs, many ſubſtances, which, on being diſtilled with water, impart to it their virtues in great perfection, if treated in the ſame manner with ſpirit of wine, ſcarce give over to it any ſmell or taſte. This difference proceeds from ſpirit not being ſuſceptible of ſo great a degree of heat as water. Liquids in general, when made to boil, have received as great a heat as they are capable of ſuſtaining: now, if the extent of heat between freezing and boiling water, as meaſured by thermometers, be taken for a ſtandard, ſpirit of wine will be found to boil with leſs than four-fifths of that heat, or above one-fifth leſs than the heat of boiling water. It is obvious therefore, that ſubſtances may be volatile enough to riſe with the heat of boiling water, but not with that of boiling ſpirit.

Thus, if cinnamon, for inſtance, be committed to diſtillation with a mixture of ſpirit of wine and

water, or with a pure proof ſpirit, which is no other than a mixture of about equal parts of the two, the ſpirit will ariſe firſt, clear, colourleſs, and tranſparent, and almoſt without any taſte of the ſpice; but as ſoon as the more ponderous watery fluid begins to ariſe, the oil comes freely over with it, ſo as to render the liquor highly odorous, ſapid, and of a milky hue.

The proof ſpirits uſually met with in the ſhops are accompanied with a degree of ill flavour; which, though concealed by means of certain additions, plainly diſcovers itſelf in diſtillation. This nauſeous reliſh does not begin to ariſe, till after the purer ſpirituous part has come over; which is the very time that the virtues of the ingredients begin, alſo, moſt plentifully to diſtil: and hence the liquor receives an ungrateful taint. To this cauſe principally is owing the general complaint, that the cordials of the apothecary are leſs agreeable than thoſe of the ſame kind prepared by the diſtiller; the latter being extremely curious in rectifying or purifying the ſpirits (when deſigned for what he calls fine goods) from all ill flavour.

It was uſual to direct rectified ſpirit of wine to be drawn from French brandy, but that is rather too dear an article in this country for diſtillation; nor is the ſpirit obtained from it any ways preferable to one procurable from cheaper liquors. The coarſer inflammable ſpirits may be rendered perfectly pure, and fit for the niceſt purpoſes, by the following method.

If the ſpirit be exceedingly foul, mix it with about an equal quantity of water, and diſtil with a ſlow fire; diſcontinuing the operation as ſoon as the liquor begins to run milky, and diſcovers, by its nauſeous taſte, that the impure and phlegmatic part is ariſing. By this treatment, the ſpirit leaves a conſiderable portion of its foul oily matter behind it in the water, which now appears milky and turbid, and proves highly diſagreeable in taſte. If the ſpirit was not very foul at firſt, this ablution is not neceſſary; if extremely ſo, it will be needful to repeat it once, twice, or oftener.

As vinous ſpirits ariſe with a leſs degree of fire than watery liquors, we are hence directed to employ, in the diſtillation of them, a heat leſs than that in which water boils: and if due regard be had to this circumſtance, very weak ſpirits may, by one or two wary diſtillations, be tolerably well freed from their aqueous phlegm; eſpecially if the diſtilling veſſels be of ſuch a height, that the ſpirit, by the heat of a water-bath, may but juſt paſs over them. In ſuch caſe, the phlegmatic vapours which ariſe for a little way along with the ſpirit, will condenſe and fall back again before they can come to the head. Very pompous inſtruments have been contrived for this purpoſe, and carried in a ſpiral or ſerpentine form to an extraordinary height. The ſpirit, aſcending through theſe, was to leave all the watery parts it contained, in its paſſage, and come over perfectly pure and free from phlegm. But theſe inſtruments are built upon erroneous principles, their extravagant height defeating the end it was deſigned to anſwer. If the liquor be made to boil, a conſiderable quantity of mere phlegm will come over along with the ſpirit; and if the heat be not raiſed to this pitch, neither phlegm nor ſpirit will diſtil. The moſt convenient inſtrument is the com-

mon ſtill, betwixt the body of which, and its head, an adopter or copper tube may be fixed.

A more highly rectified ſpirit is made by the following proceſs, and called

ALCHOHOL.

Lond.

Take of

Rectified ſpirit of wine, one gallon;

Prepared kali, made hot, one pound and a half;

Pure kali, one ounce.

Mix the ſpirit of wine with the pure kali, and afterwards add one pound of hot prepared kali; ſhake, and digeſt them for twenty-four hours. Pour off the ſpirit, and to it add the reſt of the prepared kali, and diſtil in a water-bath. Keep it in a veſſel cloſely ſtopped.

The prepared kali muſt be heated to 300°.

The ſpecific gravity of alchohol is to that of diſtilled-water, as 815 to 1000.

By this proceſs a very pure alchohol is obtained, of which we ſhall be convinced by comparing the ſpecific gravity of ſpirit of wine with this, that of the former being 835 to 1000.

Upon digeſting the alkaline ſalts with the ſpirit for a little time, the alkali, from its known property of attracting water and oils, will imbibe the remaining phlegm, and ſuch part of the diſagreeable unctuous matter as may ſtill be left in the ſpirit, and ſink with them to the bottom of the veſſel. If the ſpirit be now again gently drawn over, it will ariſe entirely free from its phlegm and nauſeous flavour; but ſome particles of the alkaline ſalt are apt to be carried up with it, and give what the workmen call an urinous reliſh. This may be prevented by adding, previouſly to the laſt diſtillation, a ſmall proportion of calcined vitriol, alum, or ſal catharticus amarus; the acid of theſe ſalts will unite with, and neutraliſe the alkali, and effectually prevent it from ariſing; while no more of the acid of the ſalts is extricated than what the alkali abſorbs.

The ſpirit obtained by theſe means is extremely pure, limpid, perfectly flavourleſs, and fit for the fineſt purpoſes. It may be reduced to the ſtrength commonly underſtood by proof, by mixing twenty ounces of it (by weight) with ſeventeen ounces of water. The diſtilled cordials made with theſe ſpirits prove much more elegant and agreeable than when the common rectified or proof ſpirits of the ſhops are made uſe of.

If the rectified ſpirit be diſtilled afreſh from dry alkaline ſalt, with a quick fire, it brings over a conſiderable quantity of the ſalt, and in this ſtate is ſuppoſed to be a more powerful menſtruum, for certain ſubſtances, than the pure ſpirit. This alkaliſed ſpirit is called TARTARISED SPIRIT OF WINE.

The general virtues of vinous ſpirits have been already mentioned in the preceding part. The ſpirits impregnated with the volatile oils of vegetables, to be treated of in this chapter, have, joined to thoſe, the aromatic, cordial, or other virtues which reſide in the oils.

ARTICLE I. *Diſtilled ſpirits.*

AQUA CARMELITANA;
vel
AQUA MELISSÆ COMPOSITA.
Compound balm-water, commonly called Eau des Carmes.

Take of
- Balm in flower, freſh gathered, one pound and a half;
- Lemon-peel, freſh, as ſoon as pared from the fruit, four ounces;
- Coriander ſeeds,
- Nutmegs,—each two ounces;
- Cloves,
- Cinnamon,—each, bruiſed, one ounce;
- Balm water, three pounds;
- Spirit of wine, highly rectified, ſix pounds;

Digeſt the ſeveral ingredients in the ſpirit, three days; and then draw off, by diſtillation, ſix pounds.

In the *Elémens de Pharmacie* of M. Beaumé, ſome improvements are propoſed of this proceſs. After the ſpirit, added to the ingredients, has been drawn off in the heat of a water-bath, he orders the diſtilled liquor to be rectified by a ſecond diſtillation, drawing off ſomewhat leſs than nine tenths of it; and thus would he have all aromatic ſpirits prepared. When the common ſpirits of this kind are rubbed on the hands, &c. they leave, after the more volatile parts have exhaled, a diſagreeable empyreumatic ſmell; and when diluted with water, and taken medicinally, they leave in like manner a nauſeous flavour in the mouth. To remedy theſe imperfections, he made many experiments, which ſhowed, that in order to obtain theſe liquors of the deſirable qualities, the ſpirit muſt not only be perfectly pure at firſt, but that the liquor ought alſo to be rectified after it has been diſtilled from the ſubjects. In this rectification, only the more volatile, ſubtile, and aromatic parts of the ingredients ariſe. There remains behind a white liquor, acrid, bitter, loaded only with the groſſer oil, and deprived of all the ſpecific flavour of the ſubjects. Indeed the very imperfection complained of, naturally points out this ſecond diſtillation for the remedy; as it ſhows the ſpirit to contain a grateful and ungrateful matter, the former of which exhales, while the other is left behind. The author ſays, that when the *aqua meliſſæ* is prepared as above directed, it has ſomething in it more perfect than any of the odoriferous ſpirits whoſe excellence is cried up, and which have the reputation of being the beſt.

Aromatic ſpirituous waters have in general leſs ſmell when newly diſtilled, than after they have been kept about ſix months. M. Beaumé ſuſpects that the preparations of this kind, which have been moſt in vogue, were ſuch as had been thus improved by keeping; and found that the good effects of age might be produced in a ſhort time by means of cold. He plunges quart bottles of the liquor into a mixture of pounded ice and ſea ſalt. The ſpirit, after having ſuffered, for ſix or eight hours, the cold hence reſulting, proves as grateful as that which has been kept for ſeveral years. Simple waters alſo, after being frozen, prove far more agreeable than they were before, though they are always leſs ſo than thoſe which have been drawn with ſpirit, and expoſed to a like degree of cold. This melioration of diſtilled wa-

ters by froſt was taken notice of by Geoffroy, *Hiſt. Acad.* 1713.

SPIRITUS RORISMARINI.

Spirit of roſemary.

Lond.

Take of

Freſh tops of roſemary, a pound and a half;

Proof ſpirit of wine, one gallon.

Diſtil, in a water-bath, five pints.

SPIRITUS RORISMARINI, *vulgo*,

AQUA REGIÆ HUNGARIÆ.

Hungary-water [*E.*]

Take of

The flowering tops of roſemary, juſt gathered, two pounds;

Rectified ſpirit of wine, eight pounds.

Diſtil in a water-bath, and draw off ſeven pints.

It is generally brought to us from abroad.

This ſpirit is very fragrant, inſomuch as to be in common uſe as a perfume. That brought from abroad is ſuperior in fragrance to ſuch as is generally made among us. In order to prepare it in perfection, the *vinous ſpirit ſhould* be *extremely* pure; *the roſemary tops gathered when the flowers are full blown upon them*, and committed immediately to diſtillation, particular care being taken not to bruiſe or preſs them. The beſt method of managing the diſtillation, is that formerly recommended for the diſtillation of the more volatile eſſential oils and ſimple waters, viz. firſt to place the ſpirit in the ſtill, and then ſet in, above the liquor, either an iron hoop, with a hair cloth ſtretched over it, upon which the flowers are to be lightly ſpread, or rather a baſket, ſupported on three pins, reaching down to the bottom. A gentle heat being applied, juſt ſufficient to raiſe the ſpirit, its vapour, lightly percolating through the flowers, will imbibe their finer parts, without making that diſagreeable alteration, which liquors applied to ſuch tender ſubjects, in their groſſer form, generally do. Probably the ſuperiority of the French Hungary-water, to that prepared among us, is owing to ſome ſkilful management of this kind, or to that recommended for the foregoing preparation, and employing a perfectly pure ſpirit.

In the Wirtemberg Pharmacopœia, ſome ſage and ginger are added, in the proportion of half a pound of the former, and two ounces of the latter, to four pounds of the roſemary.

SPIRITUS LAVENDULÆ.

Spirit of lavender.

Lond.

Take of

Lavender flowers, freſh gathered, a pound and a half;

Proof ſpirit of wine, one gallon.

Draw off, by the heat of a water-bath, five pints.

The ſame cautions are to be obſerved here, as in the diſtillation of the foregoing ſpirit. Both of them, when made in perfection, are very grateful and fragrant: they are frequently rubbed on the temples, &c. under *the notion of refreſhing* and *comforting the nerves*: and likewiſe taken internally, to the quantity *of a tea-ſpoonful, as warm cordials.*

SPIRITUS LAVENDULÆ COMPOSITUS.

Compound ſpirit of lavender.

Lond.

Take of

Spirit of lavender, three pints;

Spirit of roſemary, one pint;

Cinnamon,

Nutmegs, bruiſed,—each half an ounce;

Red ſaunders, one ounce.

Digeſt for ten days, and ſtrain.

The red ſaunders is of no further uſe in this compoſition, than as a colouring ingredient. If a yellow ſpirit were liked, the yellow ſaunders would be an excellent article, as it not only communicates a fine colour, but likewiſe a conſiderable ſhare of medicinal virtue. A ſpirit diſtilled from the flowers of lavender and ſage in due proportion, and digeſted in the cold for a little time with ſome cinnamon, nutmegs, and yellow ſaunders, proves a very elegant and grateful one. Where eſſential oils are employed, particular care muſt be had in the choice of them; for on their goodneſs that of the medicine depends. The digeſtion of the ſpirit with the ſpices, &c. ſhould be performed without heat, otherwiſe the flavour of the medicine will be injured.

Theſe ſpirits are *grateful reviving cordials:* though conſiderably more ſimple, they are not leſs elegant and valuable, than the more elaborate preparations of the former Pharmacopœias. This medicine has long been held in great eſteem, under the name of PALSY DROPS, *in all kinds of languors, weakneſs of the nerves*, and *decays of age.* It may be conveniently taken upon ſugar, from ten to eighty or a hundred drops.

AQUA ODORIFERA.

An odoriferous ſpirit, called ſweet honey-water.

Take of

Coriander ſeeds, one pound;
Lemon-peel, freſh,
Nutmegs,—each four ounces;
Ambergris,
Muſk,—each five grains;
Clean melaſſes ſpirit, two gallons.

Bruiſe the nutmegs and coriander ſeeds, and put them, with the lemon-peel and the ſpirit, into a ſmall ſtill placed in balneo Mariæ: tie a thin cloth over the mouth, and ſprinkle thereon the ambergris and muſk, reduced into fine powder; lute on the head, let the whole ſtand in digeſtion for twelve hours, and then diſtil as much as a boiling heat of the bath can force over.

To this add, of

Roſe-water, one pint;
Orange-flower-water, half a pint.

This compoſition is deſigned rather as a perfume than a medicine; though, for ſuch as can bear its fragrance, it might be uſed to advantage. The muſk and ambergris do not communicate ſo much of their ſmell as might be expected; and ſerve chiefly to heighten the flavour of the other ingredients; which theſe perfumes excellently do, when employed in very ſmall proportion, to all the odoriferous ſimples, without imparting any thing perceptible of their own. The foregoing ſpirit is very agreeable; a few drops give a fine flavour to a large quantity of other liquor. Mr. Wilſon, from whom the firſt is taken (*Pract. Chem.* pag. 354), tells us, that he often made it for king James II. and that it gives one of the moſt pleaſant ſcents that can be ſmelt. The other is formed on the ſame plan, by omitting ſuch articles as appeared ſuperfluous.

SPIRITUS COCHLEARIÆ.

Spirit of ſcurvy-graſs.

Take of

Freſh ſcurvy-graſs, bruiſed, ten pounds;
Rectified ſpirit of wine, five pints.

With the heat of a water-bath, diſtil off five pints.

This ſpirit is very ſtrong of the ſcurvy-graſs, and may be given in thoſe caſes where the uſe of this herb is proper, from twenty to one hundred drops. The virtues of

ſcurvy-graſs reſide in a very ſubtile, volatile oil, which ariſes in diſtillation both with water and pure ſpirit; and if the liquors be expoſed to the air, ſoon exhales from both. The ſpirit, newly diſtilled, is extremely pungent, but if long kept, even in cloſe veſſels, becomes remarkably leſs ſo.

It has been much recommended as a diuretic *in dropſies*.

The makers of this ſpirit have frequently added to the ſcurvy-graſs a quantity of horſe-radiſh root, and ſometimes ſubſtituted for it one drawn entirely from the horſe-radiſh; the flavour of theſe two ſimples being ſo much alike, that their diſtilled ſpirits are ſcarce diſtinguiſhable from one another. Here it may be obſerved, that though *arum* and *dracunculus* are uſually ranked in the ſame claſs with the two foregoing vegetables, and looked upon as ſimilar to them, this proceſs diſcovers a remarkable difference: whilſt the former yield all their pungency in diſtillation both to water and ſpirit, the latter give over nothing to either, and yet their virtues are deſtroyed in the operation.

SPIRITUS COCHLEARIÆ AUREUS.

Golden or purging ſpirit of ſcurvy-graſs.

Take of
Spirit of ſcurvy-graſs, one pound;
Gamboge, one ounce.

Diſſolve the gamboge in the ſpirit, and if any ſediment fall to the bottom, carefully decant the tinged liquor from it.

This ſpirit is otherwiſe made with ſcammony, or reſin of jalap, inſtead of gamboge.

This has been in great eſteem among the common people, and ſtrongly recommended by the venders, in all kinds of ſcorbutic diſorders. It is nevertheleſs a very indifferent medicine, and little deſerves the pompous title given it. It may be taken *from twenty to ſixty drops*, either upon ſugar or mixed with ſyrup.

AQUA ANHALTINA.

Anhalt water.

Take of
Turpentine, ſix ounces;
Olibanum, one ounce;
Aloes wood, three ounces;
Cloves,
Cinnamon,
Cubebs,
Roſemary flowers,
Galangal,
Maſtich,
Nutmegs,—each ſix drams;
Saffron, two drams and a half;
Bay berries,
Fennel ſeeds, — each half an ounce;
Spirit of wine, five pints.

Pulveriſe thoſe ingredients which require ſuch treatment, and digeſt the whole with the ſpirit for ſix days; then diſtil, with an exceedingly gentle heat, in balneo Mariæ: the liquor which runs clear is to be ſeparated from the turbid, and kept by itſelf.

Where the addition of muſk is required, fifteen grains thereof are to be tied in a bag, and ſuſpended in the head of the ſtill.

We have inſerted this compoſition from the Brandenburgh Pharmacopœia, on account of its being held, in ſome places, in great eſteem. It is *rubbed on weak* or *paralytic limbs*, *againſt catarrhs*, *old pains* and *aches*, &c. and likewiſe given internally, in *doſes of half* an ounce, for *ſtrengthening the ſtomach*, *diſcuſſing flatulencies*, *relieving colicky pains*, and *promoting the uterine purgations*. It is very unpleaſant to the palate: the aromatics, though ſufficiently numerous, and in conſiderable quantity, not giving over near enough to cover the ſtrong flavour of the turpentine; there are not many of them, indeed, that

give over any thing conſiderable at all. A more elegant ſpirit of this kind might be prepared from turpentine, roſemary, lavender, and ſage flowers; or by diſtilling the ſpirit firſt from the turpentine alone, and then diſſolving in it a proper quantity of any ſuitable eſſential oils.

ARTICLE II. *Diſtilled Spirituous Waters.*

General rules for the diſtillation of ſpirituous waters; from the Edinburgh Pharmacopœia.

I.

The plants and their parts ought to be moderately and newly dried, except ſuch as are ordered to be freſh-gathered.

II.

After the ingredients have been ſteeped in the ſpirit for the time preſcribed, add as much water as will be ſufficient to prevent an empyreuma, or rather more.

III.

The liquor which comes over firſt in the diſtillation, is by ſome kept by itſelf, under the title of ſpirit; and the other runnings, which prove milky, fined down by art. But it is better to mix all the runnings together, without fining them, that the waters may poſſeſs the virtues of the plant entire; which is a circumſtance to be more regarded than their fineneſs or ſightlineſs.

If the diſtillation be ſkilfully managed, the heat equable, and all along gentle, and no more drawn off than the quantity directed, moſt of the waters will appear ſufficiently bright and fine: ſome of them, which look turbid juſt after they are drawn, will, on ſtanding for a few days, become clear and tranſparent. The practice of ſaving ſome of the firſt runnings apart is certainly very injurious to the compoſition; the water being not only robbed by it of ſome of the more volatile parts of the ingredients, but likewiſe rendered permanently milky, as wanting the ſpirit which, by diſſolving the oil of the ingredients that gives this appearance, would make the liquor tranſparent. Nor is the method of fining the turbid waters by alum, &c. leſs culpable; for theſe additions produce their effects only by ſeparating from the liquor what it had before gained from the ingredients.

IV.

In the diſtillation of theſe waters, the genuine brandy obtained from wine is directed. Where this is not to be had, take, inſtead of that proof ſpirit, half its quantity of a well-rectified ſpirit prepared from any other fermented liquors. In this ſteep the ingredients; and then add ſpring water enough, both to make up the quantity ordered to be drawn off, and to prevent burning.

By this method more elegant waters may be obtained, than when any of the common proof ſpirits, even that of wine itſelf, are made uſe of. All vinous ſpirits receive ſome flavour from the matter from which they are extracted; and of this flavour, which adheres chiefly to the phlegm or watery part, they cannot be diveſted without ſeparating the phlegm, and reducing them to a rectified ſtate.

SPIRITUS ANISI COMPOSITUS;

formerly

AQUA SEMINUM ANISI COMPOSITA.

Compound aniſeed water.

Lond.

Take
Aniſeeds,
Angelica ſeeds,—of each bruiſed, half a pound;
Proof ſpirit, one gallon;
Water, as much as is ſufficient to prevent burning.

Draw off one gallon.

This is a very elegant aniſeed ſpirit, the angelica ſeeds greatly improving the flavour of the aniſe. It is apt to turn out milky, if drawn ſo low as here ordered.

AQUA CORTICUM AURANTIORUM SPIRITUOSA.

Spirituous orange-peel water.

Take of
Outer rind of Seville orange-peel, dried, one pound;
Proof ſpirit, three pounds;
Water, as much as is ſufficient to prevent an empyreuma.

Diſtil off two pounds by the heat of a water-bath.

This is conſiderably ſtronger of the orange-peel than the ſimple water. It is uſed as a *cordial*, *ſtomachic*, and *carminative*.

SPIRITUS ANTICTERICUS.

Anticteric ſpirit.

Take of
Spirit of turpentine, rectified, one ounce and a half;
Rectified ſpirit of wine, half a pound.

Diſtil with a gentle heat. Let the oil ſwimming above in the receiver be ſeparated from the ſaturated ſpirit, which is to be preſerved for uſe.

This combination of oil of turpentine and ſpirit of wine has been recommended as a ſolvent for biliary calculi: but though out of the machine it may poſſeſs ſuch a ſolvent power over the calculi immerſed in it; ſtill it can ſcarce reach them, it is natural to conclude, when taken internally, ſo as to exerciſe any power efficaciouſly.

AQUA VALERIANÆ COMPOSITA.

Compound valerian water.

Take of
Wild valerian root, a pound and a half;
Lovage ſeed, half a pound;
Pennyroyal leaves, four ounces;
Savin tops, two ounces;
French brandy, two gallons.

Digeſt for two days, and then draw off by diſtillation two gallons.

AQUA SEMINUM CARDAMONI.

Cardamom ſeed water.

Take of
Leſſer cardamom ſeeds, freed from the huſks, four ounces;
Proof ſpirit, one gallon;
Water, as much as is ſufficient to prevent burning.

Diſtil off one gallon.

This ſpirit is a *grateful cordial* and *carminative*, the cardamon ſeeds giving over in this proceſs the whole of their flavour. It is not perhaps very neceſſary to be at the trouble of ſeparating the huſks, for theſe communicate nothing diſagreeable. The only difference is, that, if employed unhuſked, a proportionably larger quantity of them muſt be taken.

SPIRITUS CARUI; *formerly* AQUA SEMINUM CARUI.

Caraway water.

Lond.

Take of
Bruiſed caraway ſeeds, half a pound;
Proof ſpirit of wine, one gallon;
Water, as much as will prevent burning.

Draw off one gallon.

This is a *cordial* in common

uſe. It contains the flavour of the caraway ſeeds in perfection.

In the ſame manner, the College of London orders *one gallon* of ſpirit to be drawn; and that of Edinburgh *nine pounds*, from the proportions of the ingredients ſpecified below—

from Menthæ piperitidis ℔jſs.
Pulegii ℔jſs.
Menthæ ſativæ ℔jſs.
Myriſticæ ℥2.
Corticis cinnamomi ℔j.
Pimento } ℥2. London.
Fructus pimentæ } ℔ſs. Edinburgh.

The ſpirit of cinnamon is a very elegant, and agreeable *cordial aromatic* ſpirit; poſſeſſed of ſome *reſtringent*, *diuretic*, and *expectorant* power; particularly aſſiſtant to medicines of theſe claſſes, when united with them; and is often very uſeful in rendering medicines more agreeable to the palate, and making them ſit eaſily on the ſtomach.

SPIRITUS JUNIPERI COMPOSITUS;
formerly
AQUA JUNIPERI COMPOSITA.
Compound ſpirit of juniper.
Lond.

Take of
Juniper berries, one pound;
Sweet fennel ſeeds,
Caraway ſeeds, bruiſed,—each an ounce and a half;
Proof ſpirit of wine, one gallon;
Water, as much as is ſufficient to prevent empyreuma.
Diſtil off one gallon.

This ſpirit, mixed with about an equal quantity of the rob of juniper berries, proves an uſeful medicine in *catarrhs*, *debility of the ſtomach* and *inteſtines*, and *difficulty of urine*. The ſpirit by itſelf is a *good cordial* and *carminative*. The ſervice which this and other ſpirituous waters do in theſe intentions, is too commonly known; though the ill conſequences that follow their conſtant uſe, be too little regarded.

SPIRITUS MENTHÆ PIPERITIDIS;
formerly
AQUA MENTHÆ PIPERITIDIS SPIRITUOSA.
Spirit of peppermint.
L. E.

This water is made uſe of in *flatulent colics* and *ſimilar diſorders*, in which it oftentimes gives immediate relief. It ſmells and taſtes ſtrongly of the peppermint.

SPIRITUS MENTHÆ SATIVÆ;
formerly
AQUA MENTHÆ VULGARIS SPIRITUOSA.
Spirit of ſpearmint.
Lond.

This ſpirit turns out a very elegant one, and preferable, in *weakneſs of the ſtomach*, *reaching to vomit*, and the like, to many more elaborate preparations. Where the diſorder is not accompanied with heat or inflammation, half an ounce of this water may be given diluted with ſome agreeable aqueous liquor.

AQUA MIRABILIS.

Take of
Cinnamon, two ounces;
Lemon-peel, one ounce;
Angelica ſeeds,
Leſſer cardamom ſeeds,

Mace,—each half an ounce;
Cubebs, two drams;
Balm leaves, ſix ounces;
French brandy, one gallon.

Pour the brandy on the other ingredients bruiſed; and after digeſting them for four days, draw off by diſtillation one gallon.

The above compoſition of this celebrated ſpirit is that which was formerly followed. At a late reformation it has received a conſiderable improvement; the cardamoms, cubebs, and balm, are omitted, and an addition of peppermint introduced. The formula is as follows.

AQUA AROMATICA;
vulgo
MIRABILIS.
Aromatic water, commonly called Aqua mirabilis.

Take of
Cinnamon, two ounces;
Freſh yellow rind of lemons,
Angelica ſeeds, — each one ounce;
Mace, half an ounce;
Peppermint, three ounces;
French brandy, one gallon.

Digeſt for two days, and then diſtil off one gallon.

This ſpirit is very rich of the ſpices; and proves a pleaſant, warm *cordial* and *carminative*. In thoſe who have not, by frequent uſe, deprived themſelves of the benefit of theſe kinds of liquors, it often gives preſent relief in *languors*, *flatulencies*, *colicky pains*, and ſimilar complaints.

The ſpices in theſe two compoſitions being rather too dear for the purpoſes of a common cordial water, the wholeſale dealers, as I have been informed, generally ſubſtitute for them a cheaper ſpice from our own plantations, pimento. A very elegant water is prepared alſo from that ſpice by itſelf.

SPIRITUS PIMENTO.
(See *page* 387.)

This ſpirit is far more agreeable than a ſimple water drawn from the ſame ſpice; and has long had a place among the cordials both of the diſtiller and apothecary; and is now received into the public Pharmacopœias of London and Edinburgh.

SPIRITUS MYRISTICÆ;
formerly
AQUA NUCIS MOSCHATÆ.
Spirit of nutmeg.
Lond.

This ſpirit (with the addition only of ſome hawthorn flowers, an article of very little ſignificance) was formerly celebrated in nephritic diſorders, under the name of AQUA NEPHRITICA. At preſent, it is regarded only as an agreeable ſpirituous liquor, lightly impregnated with the nutmeg flavour.

SPIRITUS PULEGII;
formerly
AQUA PULEGII SPIRITUOSA.
Spirit of penny-royal.
Lond.

This ſpirit has a good ſhare of the flavour of the penny-royal, and is pretty much in uſe as a *carminative*, *antihyſteric*, and *emmenagogue*.

SPIRITUS RAPHANI COMPOSITUS;
formerly
AQUA RAPHANI COMPOSITA.
Compound ſpirit of horſeradiſh.
Lond.

Take of
Garden ſcurvygraſs leaves, freſh, four pounds;
Horſeradiſh root, freſh,
Orange-peel, freſh, — each two pounds;
Nutmegs, bruiſed, one ounce;
Proof ſpirit of wine, two gallons;

Water, a ſufficient quantity to prevent burning.

Draw off two gallons.

This ſpirit is a very elegant one, and as well adapted for the purpoſes of an antiſcorbutic, as any thing that can well be contrived in this form. The horſeradiſh and ſcurvygraſs join very well together, giving a ſimilar flavour, though not a little diſagreeable; the nutmeg ſuppreſſes this flavour very ſucceſsfully, without ſuperadding any of its own; and to this, orange-peel adds a flavour very agreeable. Arum root has generally had a place in this ſpirit, but is here deſervedly thrown out; for it gives nothing of its pungency over the helm, notwithſtanding what is aſſerted, by ſome diſpenſatory-writers, to the contrary. Muſtard-ſeed, though not hitherto employed in theſe kinds of compoſitions, ſeems to be an excellent ingredient. It gives over the whole of its pungency, and is likewiſe leſs periſhable than moſt of the other ſubſtances of this claſs. This ſeed wants no addition, unleſs ſome aromatic material to furniſh an agreeable flavour.

AQUA VULNERARIA, ſeu AQUA CATAPULTARIA.

Arquebuſade water.

Pharm. Argent.

Take of

Comfrey, leaves and roots,
Sage,
Mugwort,
Bugloſs,—each four handfuls;
Betony,
Sanicle,
Ox-eye daiſy,
Common daiſy,
Greater figwort,
Plantane,
Agrimony,
Vervain,
Wormwood,
Fennel,—each two handfuls;
St. John's wort,
Long birthwort,
Orpine,
Veronica,
Leſſer centaury,
Milfoil,
Tobacco,
Mouſe-ear,
Mint,
Hyſſop,—each one handful;
Wine, twenty-four pounds.

Having cut and bruiſed the herbs, pour on them the wine, and let them ſtand together in digeſtion, in horſedung, or any other equivalent heat, for three days. Afterwards diſtil in an alembic with a moderate fire.

This celebrated water has been for ſome time held in great eſteem, in *contuſions*, for *reſolving coagulated blood*, *diſcuſſing the tumours* that *ariſe on fractures and diſlocations*, for *preventing the progreſs of gangrenes*, and *cleanſing and healing ulcers and wounds*, particularly *gun-ſhot wounds*. Mr. Lemery has been at the pains of writing a whole treatiſe on it; in which he conſiders each of the ingredients ſingly, and ſuppoſes the water to poſſeſs their united virtues. In this, however, he miſtakes; for the virtues of moſt of the herbs, admitting them to be as great as he would have them, reſide in ſuch parts as are not capable of being elevated in this proceſs.

CHAPTER VI.

SECT. I.

Extracts with Water.

THESE extracts are prepared, by boiling the subject in water, and evaporating the strained decoction to a thick consistence.

This process affords us some of the more active parts of the plants, free from the useless, indissoluble, earthy matter, which makes the largest share of their bulk. There is a great difference in vegetable substances, with regard to their fitness for this operation; some yielding to it all their virtues, and others scarce any. Those parts in which the sweet, glutinous, emollient, cooling, bitter, austere, astringent virtues reside, are for the most part totally extracted by the boiling water, and remain almost entire upon evaporating it: whilst those which contain the peculiar odour, flavour, and aromatic quality, are either not extracted at all, or exhale along with the menstruum. Thus *gentian root*, which is almost simply bitter, yields an extract possessing, in a small volume, the *whole* taste and virtues of the root:—*wormwood*, which has a degree of warmth and strong flavour joined to the bitter, loses the two first in the evaporation, and gives an extract not *greatly* different from the foregoing: the aromatic quality of *cinnamon* is dissipated by this treatment, its astringency remaining; whilst an extract made from the *flowers of lavender* and *rosemary* discovers nothing either of the taste, smell, or virtues of the flowers.

General Rules for making Extracts with Water.

1. It is indifferent, in regard to the medicine, whether the subject be used fresh or dry: since nothing that can be preserved in this process, will be lost by drying. In regard to the facility of extraction, there is a very considerable difference; vegetables in general giving out their virtues more readily when moderately dried, than when fresh.

2. Very compact dry substances should be reduced into exceeding small parts, previous to the affusion of the menstruum.

3. The quantity of water ought to be no greater than is necessary for extracting the virtues of the subject. A difference herein will sometimes occasion a variation in the quality of the product; the larger the quantity of liquor, the longer fire will be requisite for evaporating it, and consequently more of the volatile parts of the subject will be dissipated. A long continued heat likewise makes a considerable alteration in the matter which is not volatile: *sweet substances*, by long boiling with water, become nauseous; and the *drastic purgatives* lose their virulence;

though without any remarkable ſeparation of their parts.

4. The decoctions are to be depurated by colature; and, afterwards, ſuffered to ſtand for a day or two, when a conſiderable quantity of ſediment is uſually found at the bottom. If the liquor, poured off clear, be boiled down a little, and afterwards ſuffered to cool again, it will depoſit a freſh ſediment, from which it may be decanted before you proceed to finiſh the evaporation. The decoctions of very reſinous ſubſtances do not require this treatment, and are rather injured by it; the reſin ſubſiding along with the inactive dregs.

5. The evaporation is moſt conveniently performed in broad ſhallow veſſels; the larger the ſurface of the liquor, the ſooner will the aqueous parts exhale. This effect may likewiſe be promoted by agitation.

6. When the matter begins to grow thick, great care is neceſſary to prevent its burning. This accident, almoſt unavoidable if the quantity be large, and the fire applied, as uſual, under the evaporating pan, may be effectually prevented, by carrying on the inſpiſſation, after the common manner, no further than to the conſiſtence of a ſyrup, when the matter is to be poured into ſhallow tin or earthen pans, and placed in an oven, with its door open, moderately heated; which acting uniformly on every part of the liquid, will ſoon reduce it to any degree of conſiſtence required. This may likewiſe be done, and more ſecurely, in balneo Mariæ, by ſetting the evaporating veſſel in boiling water; but the evaporation is here exceedingly ſlow and tedious.

7. Extracts are to be ſprinkled with a little ſpirit of wine, to prevent their growing mouldy. They ſhould be kept in bladders moiſtened with ſweet oil.

EXTRACTUM ANGUSTURÆ.

Extract of anguſtura.

Take four ounces of anguſtura bark, put it into a flannel bag of a conical ſhape, pour upon this boiling water, and repeat till the liquor has but little taſte and colour. Let this be evaporated by a gentle heat: there will remain thirteen drams and twenty grains of the extract, of the full flavour of the bark, containing two drams of the reſinous matter.

EXTRACTUM GENTIANÆ.

Extract of gentian.

L. E.

To any quantity of gentian root, ſliced and bruiſed, add eight times its weight of water, and boil it till it is reduced to half; then let it be ſtrained and ſet aſide, that the fæculencies may ſubſide; then boil it again in a water-bath, ſaturated with ſea-ſalt, to a conſiſtence proper for making pills.

The ſame kind of bath is to be uſed in the preparation of all extracts, that the evaporation may be properly performed.

In the Edinburgh Pharmacopœia it is ordered, after firſt boiling the ingredients, that the liquor is to be ſtrained by ſtrong preſſure, and then evaporated in veſſels heated by the vapour of boiling water, till it acquires the thickneſs of honey; and towards the concluſion of the operation, that the extract ſhould be conſtantly ſtirred, that the empyreuma may be avoided, and the extract itſelf be free from lumps. And theſe directions are to be obſerved in making all extracts.

In the ſame manner is prepared the

EXTRACTUM
GLYCYRRHIZÆ,
HELLEBORI NIGRI,
PULSATILLÆ NIGRICANTIS,
RUTÆ,

EXTRACTUM
SABINÆ,
CHAMÆMELI,
PAPAVERIS ALBI,
CACUMINIS GENISTÆ,
ENULÆ CAMPANÆ,
ABSINTHII.

For the medical virtues of which extracts, our readers are referred to the Materia Medica, where they will be found enumerated under the names of the vegetable ſubſtances from whence they are prepared. For theſe preparations are nothing more than the more active parts extracted from the earthy parts of which vegetables are formed; except in ſome few, where the nature of the operation diſſipates the more volatile parts, or eſſential oils, but on which the medical power required does not always depend.

It is convenient, in making the extract of liquorice, before boiling the root, to cut it tranſverſely into ſmall pieces, that it may more readily give out its virtues by light coction. If the boiling be long continued, the rich ſweet taſte, for which this preparation is valued, will be greatly injured. For the ſame reaſon, the quantity of water ought to be no larger than is abſolutely neceſſary to extract the virtues of the root: a quart, or at the moſt three pints, will be fully ſufficient for a pound of liquorice. It would be of conſiderable advantage to the preparation, and probably (when made in quantity) leſs expenſive to the preparer, to uſe, inſtead of the decoction, juice of liquorice, preſſed out betwixt iron rollers, after the manner practiſed abroad for obtaining the juice of the ſugar-cane.

Large quantities of extract of liquorice have been uſually brought to us from Spain, and other foreign countries; but it is very rarely met with in the ſhops in perfection; the makers of this commodity, both at home and abroad, being either very ſlovenly in its preparation, or deſignedly mixing it with ſand and other impurities. When made with care, it is exceedingly ſweet, not at all bitteriſh or nauſeous, more agreeable in taſte than the root itſelf, of a pleaſant ſmell, a reddiſh brown colour, and, when drawn out into ſtrings, of a bright golden colour; totally ſoluble in water without depoſiting any fæces.

This preparation would be very convenient for many purpoſes in the ſhops, if kept in a ſomewhat ſofter conſiſtence than that of an extract. The only inconvenience attending this ſoft form is, its being apt in a ſhort time to grow mouldy: this may be effectually prevented, by the addition of a ſmall portion of ſpirit of wine.

EXTRACTUM HÆMATOXYLI, vel LIGNI CAMPECHENSIS.

Extract of logwood.

L. E.

Take of logwood, reduced to powder, one pound. Boil it in a gallon of water till half the liquor be conſumed, repeating the coction with freſh water four times or oftener. The ſeveral decoctions are to be mixed together, paſſed through a ſtrainer, and evaporated to a due conſiſtence.

This wood very difficultly yields its virtues to watery menſtrua, and hence the reducing it into fine powder is extremely neceſſary.

The extract of logwood has an agreeable ſweet taſte, with ſome degree of aſtringency; and hence becomes ſerviceable in *diarrhœas*, for *blunting the acrimony of the juices*, and *moderately conſtringing the inteſtines* and *orifices of the ſmaller veſſels*; it may be given from a ſcruple to half a dram, and repeated five or ſix times a day, to advantage. During the uſe of this medicine, the ſtools are frequently tinged red by

it, which has occaſioned ſome to be alarmed, as if the colour proceeded from blood: the preſcriber thereof ought to caution the patient againſt any ſurpriſe of this kind.

EXTRACTUM SENNÆ.

Extract of ſenna.

Lond.

Take of

Senna, one pound;

Diſtilled water, one gallon;

Boil the ſenna in the diſtilled water, adding after its decoction a little rectified ſpirit of wine. Evaporate the ſtrained liquor to a proper conſiſtence.

The ſpirit may be added when the decoction is reduced to one half, or three pints; for Beaumé ſays, that the reſinous parts of ſenna are in ſo ſmall a proportion to the gummy, that they are readily boiled out together.

This extract is given as a gentle purgative, from ten grains to one ſcruple, or in leſs quantity, as an aſſiſtant to milder laxatives; it is ſaid, that though this extract is a weaker purge, yet it gripes more.

EXTRACTUM CINCHONÆ, ſeu CORTICIS PERUVIANI, molle et durum.

Extract of Peruvian bark, ſoft and hard.

Lond.

Boil a pound of powdered bark in five or ſix quarts of water, for an hour or two, and pour off the liquor, which, whilſt hot, will be red and tranſparent, but on growing cold becomes yellow and turbid. The remaining bark is to be boiled again in the ſame quantity of water as before, and this proceſs repeated till the liquor remains tranſparent when cold. All the decoctions, ſtrained and mixed together, are to be evaporated over a very gentle fire to a due conſiſtence, care being taken to prevent the matter from burning.

This extract is directed to be kept in the ſhops, both in a *ſoft* and *hard form*; the firſt of a proper conſiſtence, for making into pills; the other fit for being reduced into powder.

Peruvian bark is a reſinous drug: the reſin melts out by the heat, but is not perfectly diſſolved by the water; hence, in cooling, it ſeparates, renders the liquor turbid, and in part falls to the bottom, as appears manifeſtly upon examining the ſediment by ſpirit of wine. This extract might be made to better advantage by the aſſiſtance of ſpirit of wine, after the ſame manner as that of jalap; and this method the Edinburgh College have directed. But all the ſpirits which can be expected to be employed for this proceſs among us, are accompanied with ſome degree of a bad flavour. This adheres moſt ſtrongly to the phlegmatic part of the ſpirit, which evaporating laſt, muſt communicate this ill flavour to the extract; a circumſtance of very great conſequence; as this medicine is deſigned for ſtomachs too weak to bear a due quantity of bark in ſubſtance. Ten or twelve grains of the hard extract are reckoned equivalent to about half a dram of the bark itſelf.

GUMMI et RESINA ALOES.

Gum and reſin of aloes.

Lond.

Boil four ounces of Socotorine aloes in two pints of water, till as much as poſſible of the aloes be diſſolved. The ſolution ſuffered to reſt for a night, will depoſit the reſin to the bottom of the veſſel: after which, the remaining liquor, ſtrained, if needful, is to be evaporated, that the gum may be left.

The gum of aloes is ſomewhat leſs purgative, and conſiderably leſs diſagreeable than the crude juice. This alteration is not owing, as

might be ſuppoſed, to the ſeparation of the reſin: for the pure reſin of aloes is ſtill leſs diſagreeable, and leſs purgative, even than the gum; ſome have denied that it has any purgative virtue at all, and others aſcribe to it an aſtringent quality. I have exhibited this reſin, divided by trituration with the teſtaceous powders, in the doſe of a ſcruple, without obſerving any effect from it. The gum ſeems to be the only part here intended for medicinal uſe. If the reſin be required, it ought to be further purified by ſolution in ſpirit of wine; for as it is obtained by precipitation from an aqueous ſolution of impure aloes, all the impurities of the drug, that are not ſoluble in water, will precipitate along with it.

EXTRACTUM MYRRHÆ GUMMOSUM.

Gummous extract of myrrh.

Take of
Myrrh, four ounces;
Spring water, two pounds.

Let the myrrh be diſſolved by gentle digeſtion, and repeated agitation of the veſſel, for four or five days; let the water ſwimming above the myrrh be then poured off, ſtrained, and evaporated, to the conſiſtence of an extract.

By this proceſs the myrrh is much deprived of the heating qualities which it poſſeſſes in its crude ſtate; and as ſome conſider it an uſeful remedy in phthiſis pulmonalis, under this form it may probably be exhibited with advantage.

EXTRACTUM TARAXACI.

Extract of dandelion.

This is prepared in the ſame manner as the extract of gentian, from the roots, collected early in ſpring, or late in autumn. If the dandelion poſſeſſes reſolvent, aperient, and diuretic powers, theſe may be conveniently obtained in this form. But as this root is known to contain a milky juice, it has been thought that the activity of this medicine might be increaſed by employing ſpirit in the proceſs.

ROB BACCARUM JUNIPERI.

Rob of juniper berries.

Let juniper berries, thoroughly bruiſed, be boiled in a ſufficient quantity of water, the liquor ſtrained, and inſpiſſated to the conſiſtence of honey.

This preparation may be made alſo from the decoction that remains after the diſtillation of the eſſential oil of the berries. It has a ſweet balſamic taſte, accompanied with a greater or leſs bitterneſs, according as the ſeeds of the berry were more or leſs thoroughly bruiſed. This elegant preparation, though not received in our Pharmacopœias, ſeems not unworthy of a place in the ſhops. Hoffmann has a great opinion of it in *debilities of the ſtomach and inteſtines*, and *in the difficulties of urine*, familiar to perſons of an advanced age.

SECT. II.

EXTRACTS WITH RECTIFIED SPIRIT.

RECTIFIED ſpirit of wine diſſolves the eſſential oils and reſins of vegetables, and does not readily carry off the oil in its exhalation; the heat ſufficient to exhale pure ſpirit, being much leſs than

that in which water conſiderably evaporates, or moſt eſſential oils diſtil. Hence a reſinous or ſpirituous extract of wormwood, contrary to that made with water, contains the warmth and flavour, as well as bitterneſs, of the herb; one made from cinnamon poſſeſſes its aromatic virtue, as well as its aſtringency; and one from lavender and roſemary flowers retains great part of their flavour and virtues; the volatile parts, which are carried off by water in its evaporation, being left behind by ſpirit.

The ſpirit employed for this purpoſe ſhould be perfectly free from any ill flavour; which would be communicated, in part, to the preparation; and from any admixture of phlegm or water, which would not only vary its diſſolving power, but likewiſe, evaporating towards the end of the inſpiſſation, would promote the diſſipation of the volatile parts of the ſubject. Hence alſo the ſubject itſelf ought always to be dry. Thoſe ſubſtances, which loſe their virtue by drying, loſe it equally on being ſubmitted to this treatment with the pureſt ſpirit.

The inſpiſſation ſhould be performed, from the beginning, in the gentle heat of a water-bath. It is not needful to ſuffer the ſpirit to evaporate in the air. Greateſt part of it may be recovered by collecting the vapour in the common diſtilling veſſels. If the diſtilled ſpirit be found to have brought over any flavour from the ſubject, it may be advantageouſly reſerved for the ſame purpoſes again.

It is obſervable, that though rectified ſpirit be the proper menſtruum of the pure volatile oils, and of the groſſer reſinous matter of vegetables, and water of the mucilaginous and ſaline; yet theſe principles are, in almoſt all plants, ſo intimately combined together, that, whichever of theſe liquors be applied at firſt, it will take up a portion of what is directly ſoluble only in the other. Hence ſundry vegetables, extremely reſinous, and whoſe virtues conſiſt chiefly in their reſin, afford nevertheleſs very uſeful extracts with water, though not equal to thoſe which may be obtained by a prudent application of ſpirit. Hence, alſo, the extracts made from moſt vegetables by pure ſpirit are not mere reſins; a part of the gummy matter, if the ſubject contained any ſuch, being taken up along with the reſin, an admixture of great advantage to it in a medicinal view. The ſpirituous extracts of ſeveral vegetable ſubſtances, as mint-leaves, rhubarb, ſaffron, diſſolve in water as well as in ſpirit.

Pure reſins are prepared by mixing, with ſpirituous tincture of very reſinous vegetables, a quantity of water. The reſin, incapable of remaining diſſolved in the watery liquor, ſeparates and falls to the bottom; leaving in the menſtruum ſuch other principles of the plant as the ſpirit might have extracted at firſt along with it.

RESINA JALAPÆ.

Reſin of jalap.

Take any quantity of jalap-root very well bruiſed. Pour upon it ſo much rectified ſpirit of wine as will cover it to the height of four fingers; and digeſt them together in a ſand-heat, that the ſpirit may extract the virtue of the root. Filter the tincture through paper, put it into a glaſs cucurbit, and diſtil off one half of the ſpirit. Add to the remainder a proper quantity of water, and the reſin will precipitate to the bottom. Divide it into little cakes, and dry it with a very gentle heat.

This preparation is a pure reſin; ſuch gummy parts as the ſpirit might have taken up, remaining

ſuſpended in the liquor. *Its indiſſolubility in any aqueous fluid, and its tenacious quality, by which it adheres to the coats of the inteſtines, and occaſions great irritation and gripes, forbid its being ever given by itſelf.* It is fitted for uſe, by thoroughly triturating it with teſtaceous powders; —by grinding it with almonds or powdered gum, and making the compound into an emulſion with water;—or by diſſolving it in ſpirit of wine, and mixing the ſolution with a proper quantity of ſyrup, or of mucilage. Six or eight grains, managed in either of theſe ways, prove powerfully cathartic, and generally without griping or greatly diſordering the body.

It has been ſaid, that reſin of jalap is frequently adulterated with common reſin; and that this abuſe may be diſcovered by ſpirit of wine, which diſſolves the former, without touching the latter. This criterion, however, is not to be relied on; for there are many cheap reſins which are ſoluble in ſpirit of wine as well as that of jalap; and there is not any one which may not be artfully rendered ſo.

RESINA SCAMMONII.

Reſin of ſcammony.

This reſin is prepared in the ſame manner as the preceding; with which it agrees alſo in its general qualities; occaſioning vehement gripes if taken by itſelf, and operating generally with ſufficient ſafety when properly divided.—Scammony is doubtleſs a valuable purgative; but what advantage there is in thus ſeparating the purgative reſin from its natural corrector, the gummy part, is not ſo clear.

RESINA GUAIACI.

Reſin of guaiacum.

This reſin is prepared in the ſame manner as the two preceding, either from the wood of guaiacum, or from what is called gum guaiacum. It is obtained moſt commodiouſly from the latter.

The virtue of guaiacum conſiſts wholly in its reſin; and the reſin of the wood, and of the gum ſo called, is perfectly one and the ſame; the gum being the natural exudation from the tree. If this exudation could be had pure, there would be no occaſion for any artificial preparation of this kind; but it always contains a large proportion of earthy matter, ſo as to ſtand greatly in need of this method of purification. Sixteen ounces of the beſt gum guaiacum do not yield above twelve ounces of pure reſin. The ſame quantity of the wood yields about three ounces, more or leſs, according to its goodneſs. The bark is ſomewhat leſs reſinous than the wood.

RESINA CINCHONÆ, vel CORTICIS PERUVIANI.

Reſin of Peruvian bark.

This reſin is made in the ſame manner as the foregoing, and proves an elegant preparation of the bark, much ſtronger in taſte than the watery extract deſcribed in the preceding ſection. It is nearly equivalent to about ten times its quantity of the bark in ſubſtance. There does not, however, appear to be any advantage in ſeparating the pure reſin by the addition of water, either in this or in the other articles. In regard to the bark particularly, it is more adviſable to endeavour to unite into one compound all that can be extracted from it by watery and ſpirituous menſtrua; and accordingly the Edinburgh College has received a preparation of this kind, which is deſcribed in the following ſection.

EXTRACTUM CROCI.

Extract of ſaffron.

Pharm. Brandenburg.

Digeſt ſaffron in freſh quantities of pure ſpirit of wine, ſo long as the ſpirit extracts any colour

from it. Mix the ſeveral tinctures together, and diſtil off the ſpirit, in a tall glaſs veſſel, by the heat of a water-bath, till the reſiduum appear of the conſiſtence of oil or balſam.

This is a general proceſs for the preparation of extracts from aromatic and other odorous ſubſtances; which extracts have been commonly diſtinguiſhed by the name of *eſſential*, for the ſame reaſon that the volatile oils are ſo called, their retaining the ſpecific odour and flavour of the ſubjects. In making the extracts of this claſs, the inſpiſſation ſhould never be carried much lower than the conſiſtence above directed; for when the matter has become thick, the ſpirit exhales more difficultly than before, and is more apt to carry off with it ſome of the volatile parts. If the preparation be wanted in a ſolid or conſiſtent form, it is more adviſable to mix with it a ſuitable quantity of any appropriated powdery matters, than to hazard the loſs of its virtue by a further evaporation. If any addition be wanted for giving conſiſtence to the extract of ſaffron, ſaffron in ſubſtance appears to be the beſt.

The extract of ſaffron has been permitted to ſtand in this place, as the proceſs for obtaining it is to be obſerved in preparing extracts from aromatic and other odorous ſubſtances. As a medicine it appears to be inſignificant.—See CROCUS, in Materia Medica.

SECT. III.

EXTRACTS WITH SPIRIT AND WATER.

THERE are ſundry vegetables, particularly thoſe of a reſinous nature, which are treated, to better advantage, with a mixture of water and ſpirit, than with either of them ſingly. The virtues of reſinous woods, barks, and roots, may indeed be in great part extracted by long boiling in freſh portions of water; but at the ſame time they ſuffer a conſiderable injury from the continued heat neceſſary for the extraction, and for the ſubſequent evaporation of ſo large a quantity of the fluid. Rectified ſpirit of wine is not liable to this inconvenience. But the extracts obtained by it, from the ſubſtances here intended, being almoſt purely reſinous, are leſs adapted to general uſe than in thoſe in which the reſin is divided by an admixture of the gummy matter, of which water is the direct menſtruum.

There are two ways of obtaining theſe compound or gummy reſinous extracts: *one*, by uſing proof ſpirit, that is, a mixture of about equal parts of ſpirit and water, for the menſtruum; *the other*, by digeſting the ſubject firſt in pure ſpirit and then in water, and afterwards uniting into one maſs the parts which the two menſtrua have ſeparately extracted. In ſome caſes, where a ſufficiency of gummy matter is wanting in the ſubject, it may be artificially ſupplied, by inſpiſſating the ſpirituous tincture to the conſiſtence of a balſam, then

thoroughly mixing with it a thick ſolution of any ſimple gum, as mucilage of gum Arabic, and exſiccating the compound with a gentle heat. By this method are obtained elegant gummy reſins, extemporaneouſly miſcible with water into milky liquors.

EXTRACTUM JALAPII.

Extract of jalap.

Edinb.

Take of

Jalap root, one pound;

Rectified ſpirit of wine, four pounds.

Digeſt them together four days, and pour off the tincture; and put to the remaining magma ten pounds of water; boil it to two pounds, and paſs it through a ſtrainer, and evaporate to the conſiſtence of a thin honey. Diſtil off the ſpirit from the tincture, till the remainder be of the ſame conſiſtence. Then mix the two inſpiſſated liquors well together; and evaporate to the conſiſtence of an extract.

This extract is an uſeful *purgative, preferable to the crude root*, as being of more uniform ſtrength, and as the doſe, by the rejection of the woody parts, is rendered ſmaller. The mean doſe is twelve grains. If the ſpirituous tincture were inſpiſſated by itſelf, it would afford a reſinous maſs, which, unleſs thoroughly divided by proper admixtures, occaſions violent griping, and yet does not prove ſufficiently cathartic; the watery decoctions yield an extract, which operates exceeding weakly: both joined together, as in this preparation, compoſe an effectual and ſafe purge. This method of making extracts might be advantageouſly applied to ſundry other reſinous ſubſtances, as the dry woods, roots, barks, &c. A ſmall quantity of ſpirit takes up the reſin; and much leſs water than would otherwiſe be neceſſary, extracts all the other ſoluble parts.

In a former edition of the Edinburgh Pharmacopœia, a little fixt alkaline ſalt was ordered to be added to the water in which the jalap is boiled after the action of ſpirit; on a ſuppoſition, that this would enable the water to extract more from the root than it could by itſelf. But, ſo far as the quantity of the alkaline ſalt could go, it had the oppoſite effect; impeding the action of the water. The reſinous parts of the jalap are diſſolved by the ſpirit; and little other than the gummy matter remains for water to extract. Now, if pure gum Arabic be put into water along with any alkaline ſalt, the ſalt will render the water incapable of diſſolving the gum. If the gum be diſſolved firſt, the addition of any alkaline ſalt will precipitate it.

Extract of PERUVIAN BARK, LOGWOOD, and CASCARILLA, are to be prepared in the ſame manner as the Jalap.

The College of Edinburgh has directed the extract of bark to be made with water and ſpirit, in the ſame manner as the preceding. In the bark we may diſtinguiſh two kinds of taſtes, an aſtringent and a bitter one; the former of which ſeems to reſide in the reſinous matter, and the latter chiefly in the gummy. The watery extract is moderately ſtrong in point of bitterneſs, but of the aſtringency it has only a ſmall degree. The pure reſin, on the other hand, is ſtrong in aſtringency, and weak in bitterneſs. Both qualities are united in the preſent extract; which appears to be the beſt preparation of this kind that can be obtained from this valuable drug.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM;

formerly

EXTRACTUM CATHARTICUM.

Compound extract of coloquintida.
Lond.

Take of
Socotorine aloes, an ounce and a half;
Colocynth, cut ſmall, ſix drams;
Scammony, powdered, half an ounce;
Leſſer cardamoms, huſked and pounded, one dram;
Proof ſpirit of wine, one pint.

Digeſt the colocynth in the vinous ſpirit with a gentle heat for four days. Preſs out the tincture, and diſſolve therein the aloes and ſcammony; when theſe are diſſolved, diſtil the ſpirit, and evaporate the water, adding the ſeeds towards the end of the proceſs, that the remaining maſs may be of a proper conſiſtence for making pills.

This compoſition anſwers very effectually the intention expreſſed in its title, ſo as to be relied on in caſes where the patient's life depends on its taking place. The doſe is from fifteen grains to half a dram. The proof ſpirit is a very proper menſtruum for the purgative materials; diſſolving nearly the whole ſubſtance of the aloes and ſcammony, except the impurities; and extracting from the colocynth, not only the irritating reſin, but great part of the gummy matter. This extract, formerly called *Extractum Catharticum*, prepared as here directed, retains all the eſſential oil of the cardamoms, of which, in the former method of preparing, it was deprived.

CONFECTIO AROMATICA;
formerly
CONFECTIO CARDIACA.

Aromatic confection.
Lond.

Take of
Zedoary in coarſe powder,
Saffron,—of each half a pound;
Diſtilled water, three pints;

Macerate for twenty-four hours; then preſs out and ſtrain—evaporate the ſtrained liquor to one pound and a half—and add
Compound powder of crabs-claws, ſixteen ounces;
Cinnamon,
Nutmegs,—of each two ounces;
Cloves, one ounce;
Leſſer cardamom ſeeds, half an ounce;
Double-refined ſugar, two pounds.

Powder together the ſpices very finely and, adding the ſugar, make a confection.

ELECTARIUM AROMATICUM;
formerly
CONFECTIO CARDIACA.

Edinb.

Take of
Aromatic powder, three ounces;
Syrup of orange-peel, boiled to the thickneſs of honey, ſix ounces;

Mix, with great care, into a ſmooth uniform electuary.

Theſe are improvements of the *Confectio cardiaca* of former diſpenſatories.—The eſſential oil of cardamoms, made at Apothecaries Hall in London, appeared to be loſt in the evaporation of the tincture; the cardamom ſeeds are now therefore more properly added in powder.

The confection, as now reformed, is a *ſufficiently grateful*, and *moderately warm cordial*; and frequently given in that intention, from eight or ten grains to a ſcruple or upwards, in boluſes and draughts. The extract retains a conſiderable ſhare of the flavour and virtue of the ingredients, though not near ſo much as if a rectified ſpirit had been employed. The operator ſhould be particularly careful to extract as much from

the ingredients as the ſpirit will take up; otherwiſe the inſpiſſated matter turns out ſo thin, and of ſo little tenacity, that the powders are apt to ſeparate and ſubſide from it in keeping. The crabs-claw powder does not appear to be very neceſſary, and is inſerted rather in compliance with the original, than from its contributing any thing to the intention of the medicine.

SECT. IV.

Extracts by long Digestion.

IN the foregoing part of this chapter, it has been obſerved, that the virtues of vegetable decoctions are altered by long boiling. Decoctions or infuſions of draſtic vegetables, by long continued boiling or digeſtion, loſe more and more of their virulence; and at the ſame time depoſit more and more of a groſs ſediment, reſulting probably from the decompoſition of their active parts. On this foundation it has been attempted to obtain ſafe and mild preparations from ſundry virulent drugs; and ſome of the chemiſts have ſtrongly recommended the proceſs, though without ſpecifying, or giving any intimation of, the continuance of boiling requiſite for producing the due mildneſs in different ſubjects. M. Beaumé, in his *Elémens de Pharmacie*, lately publiſhed, has given a particular account of an extract of opium prepared on this principle; the ſubſtance of which is as follows:

Extract of opium prepared by long digeſtion.

Let five pounds of good opium, cut in pieces, be boiled about half an hour, in twelve or fifteen quarts of water. Strain the decoction, and boil the remainder once or twice in freſh water, that ſo much of the opium as is diſſoluble in water may be got out. Evaporate the ſtrained decoctions to about ſix quarts; which being put into a tin cucurbit, placed in a ſand-bath, keep up ſuch a fire as may make the liquor nearly boil, for three months together, if the fire be continued day and night, and for ſix months, if it be intermitted in the night: filling up the veſſel with water in proportion to the evaporation; and ſcraping the bottom with a wooden ſpatula from time to time, to get off the ſediment which begins to precipitate after ſome days' digeſtion. The ſediment needs not to be taken out till the boiling be finiſhed; at which time the liquor is to be ſtrained when cold, and evaporated to an extract of a due conſiſtence for being formed into pills.

The author obſerves, that by keeping the liquor ſtrongly boiling, the tedious proceſs may be conſiderably expedited, and the ſix months digeſtion reduced to four months: that in the beginning of the digeſtion, a thick, viſcous, oily matter riſes to the top, and

forms a tenacious ſkin as the liquor cools; this is ſuppoſed to be analogous to eſſential oils, though wanting their volatility; that the oil begins to diſappear about the end of the firſt month, but ſtill continues ſenſible till the end of the third, forming oily clouds as often as the liquor cools; that the reſin at the ſame time ſettles to the bottom in cooling, preſerving for a long while its reſinous form, but by degrees becoming powdery, and incapable of being any longer ſoftened, or made to cohere by the heat: that when the proceſs is finiſhed, part of it ſtill continues a perfect reſin, diſſoluble in ſpirit of wine, and part an indiſſoluble powder: that when the digeſted liquor is evaporated to about a quart, and ſet in the cold till next day, it yields a browniſh earthy-ſaline matter, called *the eſſential ſalt of opium*, in figure nearly like the ſedative ſalt obtained from borax, intermingled with ſmall needled cryſtals. He gives an account of his having made this preparation ſix or ſeven times. The veſſel he made uſe of was about two inches and a half diameter in the mouth: the quantity of water evaporated was about twenty-four ounces a day, and from a hundred and thirty to a hundred and forty quarts during the whole digeſtion. Out of ſixty-four ounces of opium, ſeventeen ounces remained undiſſolved in the water: the quantity of reſinous matter, precipitated during the digeſtion, was twelve ounces: from the liquor, evaporated to a quart, he obtained a dram of eſſential ſalt, and might, he ſays, have ſeparated more; the liquor being then further evaporated to a pilular conſiſtence, the weight of the extract was thirty-one ounces.

It is ſuppoſed, that the narcotic virtue of opium reſides in the oily and reſinous parts; and that the gummy extract, prepared by the above proceſs, is endowed with the calming, ſedative, or anodyne powers of the opium, diveſted of the narcotic quality as it is of the ſmell, and no longer productive of the diſorders which opium itſelf, and the other preparations of it, frequently occaſion. A caſe is mentioned, from which the innocence and mildneſs of the medicine are apparent; fifty grains having been taken in a day, and found to agree well, where the common opiate preparations could not be borne. But what ſhare it poſſeſſes of the proper virtues of opium, is not ſo clear; for the cure of convulſive motions of the ſtomach and vomitings, which at length happened after the extract had been continued daily in the above doſes for ſeveral years (*pluſieurs années*), cannot perhaps be aſcribed fairly to the medicine.

If the theory of the proceſs, and of the alteration produced by it in the opium, be juſt; a preparation equivalent to the above may be obtained in a much ſhorter time. If the intention be to ſeparate the reſinous and oily parts of opium, they may be ſeparated, by means of pure ſpirit of wine, in as many hours as the digeſtion requires months. The ſeparation will alſo be as complete, in regard to the remaining gum, though ſome part of the gum will in this method be loſt, a little of it being taken up by the ſpirit along with the other principles.

In what particular part of opium its peculiar virtues reſide, has not perhaps been inconteſtably aſcertained; but thus much ſeems clear from experiment, *that the pure gum, freed from all that ſpirit can diſſolve, has little, or rather nothing, of its ſoporific power.*

In the new Dispensatory of Edinburgh in the year 1789, it is said, "*that the pure gum, freed from all that spirit can dissolve, does not differ essentially in its soporific power from the resinous part.*"

There are grounds also to presume, that, by whatever means we destroy or diminish what is called the narcotic, soporific, virulent quality of opium, we shall destroy or diminish likewise its salutary operation. For the ill effects, which it produces in certain cases, seem to be only the necessary consequences of the same power, by which it proves so beneficial in others.

CHAPTER VII.

EMPYREUMATIC OILS.

VEGETABLE and animal ſubſtances, and mineral bitumens, on being urged with a red heat, have their original properties deſtroyed, and are reſolved or changed into products of a different nature from what pre-exiſted in the ſubject. By burning them in the open air, a *part is changed into aſhes*, a part *into ſoot*, and a part is *diſſolved by the air*. Expoſed to the fire in cloſe veſſels (as in thoſe called retorts, having receivers adapted to them for detaining the volatile parts), they are reſolved into fetid oils, and different kinds of ſaline ſubſtances, which riſe into the receiver; and a black coal, which remains behind, and which, though no further alterable in cloſe veſſels, on admitting air, burns into white aſhes. The oils, called, from their fetid burnt ſmell, *empyreumatic*, are the objects of the preſent chapter. Some of theſe however, being obtained in the ſame proceſs with certain ſaline bodies of more importance than themſelves, are referred to the head of Saline Preparations.

OLEUM SUCCINI — OL. SUCCINI RECTIFICATUM.

See ANOMALOUS SALT.

OLEUM GUAIACI.

Oil of guaiacum.

Put any quantity of chips of guaiacum into an earthen long-neck, or a glaſs retort, and diſtil either in a ſand-bath or an open fire, increaſing the heat by degrees. At firſt an acid liquor will come over, afterwards a light red oil, and at length, in the utmoſt degree of fire, a thick black oil which ſinks through the other liquors to the bottom of the receiver.

Oils may be obtained after the ſame manner from every kind of wood.

The retort may be filled almoſt up to the neck with chips or ſmall pieces of guaiacum, the refuſe of the turner. Lute on a glaſs receiver with a paſte made of linſeed meal and water: ſet the retort on the bottom of a deep iron pot, with a little ſand under it; and fill up the ſpace, betwixt it and the ſides of the pot, with more ſand. Apply at firſt a gentle fire, and gradually increaſe it to the utmoſt that the furnace is capable of giving. Particular care muſt be had not to raiſe the heat too faſt when the firſt reddiſh oil begins to come over; for at this time, a large quantity of elaſtic vapour is extricated from the wood, which, if the fire be urged, or if it be not allowed an exit, will burſt the veſſels. When the diſtillation is finiſhed, and the veſſels grown cool, unlute the receiver, and ſeparate the oil from the acid liquor. The method of performing this by the funnel is as follows: Pour the ſeveral liquors into a glaſs funnel, whoſe ſtem is ſtopt by the finger. The ponderous black oil ſinks lowermoſt; ſuffer this to run out; then cloſe the ſtem again, and af-

terwards ſeparate the acid liquor from the lighter oil, in the ſame manner. They are more perfectly ſeparated, by pouring them into a hollow cone of filtering paper, moiſtened with water, and placed in a funnel: the acid liquor paſſes through, and the oil remains on the paper.

The oils obtained by this treatment from different woods and plants, are *nearly of the ſame qualities:* they have all a very diſagreeable acrid taſte, and a burnt ſtinking ſmell; without any thing of the peculiar flavour, taſte, or virtues of the ſubject which afforded them. The preſent practice rarely employs thoſe oils any otherwiſe than for external purpoſes, as the *cleanſing of foul bones, for the toothach, againſt ſome kinds of cutaneous eruptions, old pains* and *aches*, and *the like;* and for theſe not very often.

OLEUM LATERITIUM.

Oil of bricks.

Heat bricks red hot, and quench them in oil olive, till they have ſoaked up all the oil: then break them into pieces ſmall enough to be conveniently put into a retort; and diſtil with a ſand-heat gradually increaſed. An oil will ariſe, together with a ſpirit, which is to be ſeparated from it as in the foregoing proceſs.

This preparation has had a place in moſt Diſpenſatories, under the pompous names of oleum *philoſophorum, ſanctum, divinum, benedictum*, and others, as improper as that under which it ſtands above. It is really oil of olives rendered ſtrongly empyreumatic by heat. The ſpirit, ſo called, is no more than phlegm, or water, tainted with the burnt flavour of the oil. It has been celebrated for ſundry external purpoſes, particularly *againſt gouty* and *rheumatic pains, deafneſs* and *tingling of the ears*, &c. and has ſometimes been given inwardly. But common practice ſeems to have now entirely rejected this loathſome remedy.

OLEUM PETROLEI;

formerly

OLEUM PETROLEI BARBADENSIS.

Oil of petroleum, or foſſile tar.

Lond.

Take of

Petroleum a ſufficient quantity, and diſtil in a ſand-bath.

This oil will be more or leſs thin, according to the continuance of the diſtillation; and the tar will at laſt be reduced to a black coal, and then the oil will be pretty deep in colour, though perfectly fluid; this oil has a property ſimilar to that of the tincture of nephritic wood in water, appearing blue when looked upon, but of an orange colour when held betwixt the eye and the light. By long keeping, I have obſerved it to loſe this property. It is ſomewhat leſs diſagreeable than the foregoing oils, though very acrid and ſtimulating.

OLEUM CERÆ.

Oil of wax.

Edinb.

Melt yellow bees'-wax with twice its quantity of ſand, and diſtil in a retort placed in a ſand furnace. At firſt an acid liquor ariſes, and afterwards a thick oil, which ſticks in the neck of the retort, unleſs it be heated by applying a live coal. This may be rectified into a thin oil, by diſtilling it ſeveral times, without addition, in a ſand-heat.

Boerhaave directs the wax, cut in pieces, to be put into the retort firſt, ſo as to fill one half of it; when as much ſand may be poured thereon as will fill the remaining half. This is a neater, and much leſs troubleſome way, than melting the wax, and mixing it with the

ſand, before they are put into the retort. Boerhaave greatly commends this oil for *roughneſs* and *chaps of the ſkin*, and ſimilar purpoſes: the college of Straſburg ſpeak alſo of its being given internally, and ſay it is a *powerful diuretic (ingens diureticum)* in doſes of from two to four and more drops; but its diſagreeable ſmell has prevented its coming into uſe among us.

OLEUM ANIMALE.

Animal oil.

Lond.

Take of

Oil of hartſhorn, one pound.

Diſtil three times.

Edinb.

Take of

Empyreumatic oil, recently diſtilled from the horns of animals, as much as you will.

Diſtil from a matraſs furniſhed with a head, as long as a thin colourleſs oil comes over, which is to be freed from alkaline ſalt, and ſpirit, by means of water. In order to preſerve this oil limpid and good, it ought to be put in ſmall phials completely filled and inverted, having previouſly put into each phial a few drops of water, that on inverting them, the water may interpoſe betwixt the oil and mouth of the phial.

The quantity of oil employed in this proceſs ſhould be conſiderable: for it leaves ſo much black matter behind in the ſeveral diſtillations, that it is reduced, at laſt, to a ſmall portion of its original quantity. The diſtillation muſt be repeated, at leaſt, twelve times; and frequently the requiſite ſubtilization will ſcarcely be obtained with leſs than twenty diſtillations. It is ſaid, that the effect may be expedited, by mixing the oil with quicklime into a ſoft paſte; the lime keeping down more of the groſs matter, than would remain without ſuch an addition.

Model, of Peterſburgh, took ſome pains to reduce the expenſe attending the repeated diſtillations of this oil, in order to render it pure. He directed the fœtid oil to be poured into a glaſs cucurbit, with an alembic head; ſo as not to foul the ſide of the veſſel, and diſtilled with a gentle heat, ſeparating, by change of the receiver, the limpid oil which firſt comes over, from the more yellow, which follows; and in like manner, the ſecond from the third. To rectify the firſt limpid portion, one diſtillation with a ſlow fire is ſufficient, but the other portions commonly require two; in which the limpid part muſt be ſeparated in the ſame manner from the more impure which follows, by changing the receiver; and the proceſs thus be continued until all the oil flows limpid and white.

Animal oils thus rectified are of a ſubtile, penetrating, not diſagreeable ſmell and taſte. They are ſtrongly recommended as *anodynes* and *antiſpaſmodics*, in doſes of from fifteen to thirty drops. Hoffman reports, that they *procure a calm* and *ſweet ſleep*, which continues often for twenty hours, without being followed by any languor or debility, but rather leaving the patient more alert and cheerful than before: that they procure *likewiſe a gentle ſweat, without increaſing the heat of the blood:* that given to twenty drops or more, on an empty ſtomach, *fix hours before the acceſſion of an intermittent fever, they frequently remove the diſorder:* and that they are likewiſe a very generous remedy in *inveterate* and *chronical epilepſies*, and in *convulſive motions*, eſpecially if given before the uſual time of the attack, and preceded by proper evacuations.

The empyreumatic oils of vegetables, rectified in the ſame manner by repeated diſtillations, ſuffer a like change with the animal; loſing their dark colour and offenſive ſmell, and becoming limpid, penetrating, and agreeable. In this ſtate they are ſuppoſed, like the animal oils, to be anodyne, antiſpaſmodic, and diaphoretic, or ſudorific. It is obſervable, that all the empyreumatic oils diſſolve in ſpirit of wine, and that the oftener they are rectified or rediſtilled, they diſſolve the more readily: a circumſtance in which they differ remarkably from eſſential oils, which, by repeated diſtillations, become more and more difficult of ſolution.

How far theſe preparations really poſſeſs the virtues that have been aſcribed to them, has not yet been ſufficiently determined by experience; the tedioufneſs and trouble of the rectification having prevented their coming into general uſe, or being often made. They are liable alſo to a more material inconvenience in regard to their medicinal uſe, precariouſneſs in their quality: for how perfectly ſoever they be rectified, they gradually loſe, in keeping, the qualities they had received from that proceſs, and return more and more towards their original fetidneſs.

CHAPTER VIII.

Salts and Saline Preparations.

SECT. I.

Fixed alkaline Salts.

THE aſhes of moſt vegetables, ſteeped or boiled in water, give out to it a ſaline ſubſtance, ſeparable in a ſolid form by evaporating the water. This kind of ſalt never pre-exiſts in the vegetable, but is always generated during the burning. It is called fixt alkaline ſalt.

The ſhops were formerly burthened with a great number of theſe ſalts, which are now almoſt totally rejected; one being found fully ſufficient to anſwer all the purpoſes that can be derived from theſe kinds of alkaline ſubſtances. All theſe preparations, from whatever vegetables they may be obtained, thoſe of certain marine plants excepted, are nearly one and the ſame thing, and not diſtinguiſhable from each other, at leaſt in their effects as medicines.

The Colleges of London and Edinburgh therefore confine themſelves to the two following.

KALI PRÆPARATUM.

Prepared kali.

Lond.

Take of

Pot-aſh, two pounds;

Boiling diſtilled water, three pints.

Diſſolve, and filter through paper: evaporate this ſolution, until a pellicle appears, upon the ſurface; then ſet aſide for twelve hours, that the neutral ſalts may cryſtalliſe; afterwards pour out the liquor, and boil away the whole of the water, conſtantly ſtirring, leſt the ſalt ſhould adhere to the pot.

In like manner is purified impure kali from the aſhes of any kind of vegetables.

LIXIVA E TARTARO;

vulgo

SAL TARTARI.

Salt of Tartar.

Edinb.

Take of tartar, what quantity you chuſe. Let it rolled up in moiſt bibulous paper, or put into a crucible, and ſurrounding it with live coals, burn it into a coal; then having powdered it, let it be calcined in an open crucible, with a moderate heat, taking care that it does not melt, until it becomes white, or at leaſt an aſh colour; afterwards diſſolve it in warm water, let the liquor be ſtrained through linen, and evaporated in a clean iron veſſel, conſtantly ſtirring with an iron ſpatula towards the end of the proceſs, that the matter may not adhere to the bottom of the veſſel. A very white ſalt will remain; which muſt be left a little time longer over the

fire, until the bottom of the veſſel appears almoſt red. Laſtly, when the ſalt grows cold, it muſt be put into glaſs veſſels cloſely ſtopped.

This ſalt has a pungent fiery taſte; and occaſions in the mouth a kind of urinous flavour, probably from a reſolution which it produces in the ſaliva. It readily diſſolves in water, and deliquiates in the air, but is not acted upon by pure vinous ſpirits. Inſtead of being diſſolved by vinous ſpirits, if a ſaturated ſolution of it in water be dropt into the pure ſpirit, it will not mix therewith, but fall diſtinct to the bottom; if water be mixed with the ſpirit, the addition of fixt alkaline ſalt will imbibe the water, and form with it, as in the other caſe, a diſtinct fluid at the bottom. This property affords a commodious method of dephlegmating vinous ſpirits, or ſeparating their watery part, as we have already ſeen.

Salt of tartar, or ſolutions of it in water, raiſe an effervescence on the admixture of acid liquors, and deſtroy their acidity, the alkali and acid uniting together into a compound of new qualities, called *neutral*.—Earthy ſubſtances, and moſt metallic bodies, previouſly diſſolved in the acid, are precipitated from it by the alkali.—The alkaline ſalt changes the colour of the blue flowers of plants, or their infuſions, to a green. It has the ſame effect on the bright red flowers, and on the colourleſs infuſions of white ones; but in many of the dark red, as thoſe of the wild poppy, and of the yellow ones, it produces no ſuch change.

Solutions of this ſalt liquefy all the animal juices, except milk: corrode the fleſhy parts into a kind of mucous matter; concrete with animal fats, and vegetable oils, into ſoap; and diſſolve ſulphur into a red liquor; eſpecially if aſſiſted by a boiling heat, and mingled with quicklime, which greatly promotes their activity. On pure earths and ſtones, theſe liquors have no ſenſible action; but if the earth or ſtones be mixed with four or five times the weight of the dry ſalt, and urged with a ſtrong fire, they melt along with it, and become afterwards perfectly ſoluble both in water and by the moiſture of the air. With a ſmaller proportion of the ſalt, as an equal weight, they run into an indiſſoluble glaſſy matter.

The medical virtues of this ſalt are, to *attenuate the juices*, *reſolve obſtructions*, and *promote the natural ſecretions*. A dilute ſolution of it, drunk warm in bed, generally *excites ſweat*. If that evacuation be not favoured, its ſenſible operation is *by urine*. It is an excellent remedy *in coſtive habits*, eſpecially if a few grains of aloes be occaſionally interpoſed; with this advantage above other purgatives and laxatives, *that when the complaint is once removed, it is not apt to return*. Where acidities abound in the firſt paſſages, this ſalt *abſorbs the acid*, and *unites with it into a mild aperient neutral ſalt*. As one of its principal operations is to render the animal fluids more thin, it is obvious, that where they are already colliquated, as in ſcurvies, and in all putrid diſorders in general, this medicine is improper. The common doſe of the ſalt is from two or three grains to a ſcruple; in ſome circumſtances it has been extended to a dram, in which caſe it muſt always be largely diluted with watery liquors.

AQUA KALI PRÆPARATI; *formerly* LIXIVIUM TARTARI.

Water of prepared kali.

Lond.

Take of

Prepared kali, one pound.

Set it in a moist place until it dissolves, and strain.

This contains about one part of alkaline salt to three of water.

AQUA KALI PURI;

formerly

LIXIVIUM SAPONARIUM.

Water of pure kali.

Lond.

Take of

Prepared kali, four pounds;

Quick-lime, six pounds;

Distilled water, four gallons.

Pour four pints of water to the lime, and let them stand together for an hour; after which add the kali to the rest of the water—then boil for a quarter of an hour, suffer the liquor to cool, and strain. A pint of this ought to weigh sixteen ounces.

If the liquor effervesces with any acid, add more lime. Then boil the liquor and the lime together for five minutes in a close vessel. Lastly, let it be again cooled and strained. The boiling should be performed either in glass or earthen ware; strain it through linen, and keep it in a close vessel.

Quicklime, by depriving the alkali of its aërial acid, renders it caustic; and hence this ley is much more acrimonious, and acts more powerfully as a menstruum on oils, fats, &c. than a solution of the potash alone. The lime should be used fresh from the kiln; by long keeping, even in close vessels, it loses much of its strength: such should be made choice of as is thoroughly burnt or calcined, which may be known by its comparative lightness.

All the instruments employed in this process should be either of wood, earthen ware, or glass. The common metallic ones would be corroded by the ley, so as either to discolour, or communicate disagreeable qualities to it. If it should be needful to filter or strain the liquor, care must be taken that the filter or strainer be of vegetable matter: woollen, silk, and that sort of filtering paper which is made of animal substances, are quickly corroded and dissolved by it.

The liquor is most conveniently weighed in a narrow-necked glass bottle, of such a size, that the measure of a wine pint may arise some height into its neck; the place to which it reaches being marked with a diamond. A pint of the common leys of our soft soap-makers weighs more than sixteen ounces. It has been found that their soap-leys will be reduced to the standard here proposed, by mixing it with something less than an equal measure of water.

KALI PURUM;

vulgo

ALKALI VEGETABILE CAUSTICUM.

Pure Kali.

Lond.

Take of water of pure kali, one gallon. Evaporate to dryness, then let the salt be melted upon the fire, and poured out. In the Edinburgh Dispensatory this is described more particularly under the succeeding article:—

CAUSTICUM COMMUNE ACERRIMUM.

The strongest common caustic.

Edinb.

Take of caustic ley what quantity you please. Evaporate it in a very clean iron vessel on a gentle fire, until, on the ebullition ceasing, the saline matter gently flows like oil; which happens before the vessel becomes red. Pour out the caustic, thus liquefied, upon a smooth iron plate;

let it be divided into ſmall pieces before it hardens, and theſe are to be put into phials cloſe ſtopped.

This is a ſudden and very powerful cauſtic. It has an inconvenience of being apt to liquefy too much upon the part to which it is applied, ſo that it is not eaſily confined within the limits in which it is intended to operate: and indeed the ſuddeneſs of its action depends on this diſpoſition to liquefy.

CALX E KALI PURO;

formerly

CAUSTICUM COMMUNE FORTIUS.

Stronger common cauſtic.

Take of

Quick lime, five pounds and four ounces;

Water of pure kali ſixteen pounds.

Boil away the water of kali to a fourth part, then ſprinkle in the lime, previouſly ſlaked. Keep it in a veſſel cloſe ſtopped.

CAUSTICUM COMMUNE MITIUS.

The milder common cauſtic.

Edinb.

Take of cauſtic ley what quantity you chuſe. Evaporate in an iron veſſel, till one third remains; then mix with it as much new ſlaked lime, as will bring it to the conſiſtence of a pretty ſolid pap, which is to be kept in a veſſel cloſely ſtopped.

Here the addition of lime in ſubſtance renders the preparations leſs apt to liquefy than the foregoing, and conſequently more eaſily confinable within the intended limits, but proportionably ſlower in their operation.

It is obſervable, that both theſe cauſtics, and the ſoap leys, that is, alkaline ſalts increaſed in their power by quicklime, do not effervesce or emit air-bubbles, at leaſt in any conſiderable degree, on the admixture of acids; though this effervescence has been commonly reckoned one of the principal diſtinguiſhing characters of alkaline ſalts. Expoſed long to the air, they gradually reſume their power of effervescence, and loſe proportionably the additional activity which the quicklime had produced in them.

CAUSTICUM COMMUNE MITIUS.

The milder common cauſtic.

Lond.

Take of

Freſh quicklime,

Soft ſoap, of each equal parts.

Mix them well together, at the time of uſing.

This cauſtic, notwithſtanding the lime be uſed freſh, proves much milder than the former; the acrimony of the ſalt being here covered by the oil and tallow, by which it is reduced into ſoap.

NITRUM FIXUM.

Fixt nitre.

Take of

Powdered nitre, four ounces;

Charcoal in powder, five drams.

Mix them thoroughly together, by rubbing them in a mortar, and inject the mixture, by a little at a time, into a red-hot crucible. A deflagration, or a bright flame with a hiſſing noiſe, happens on each injection. The whole quantity being thus deflagrated, continue the fire ſtrong for half an hour.

Nitre is compoſed of the common vegetable fixt alkaline ſalt, and a peculiar acid. In this proceſs, the acid is deſtroyed or changed to another nature; and the remaining ſalt proves merely alkaline, not different in quality from the *ſal tartari*, except that a very minute portion of the nitre generally remains unchanged; the ſalt is purified by ſolution in water, filtration, and evaporation. It may be obſerved, that the ſalt receives no

ſenſible addition from the vegetable coal employed for the deflagration; for the aſhes of charcoal have very little ſaline matter; and the quantity of charcoal above directed yields only a grain or two of aſhes.

LIXIVA PURIFICATA;
vulgo
SAL ALCALINUS FIXUS VEGETABILIS PURIFICATUS.
Purified Lixiva.
Edinb.

Let the alkaline ſalt, called in England pearl-aſhes, be put into a crucible, and brought to a reddiſh heat; that the oily impurities, if there be any, may be deſtroyed, then having beat and agitated it with an equal quantity of water, let them be well mixed. Pour the liquor, after the fæces have ſubſided, into a very clean iron pot, and boil to dryneſs, conſtantly ſtirring the ſalt towards the end of the proceſs, that it may not adhere to the veſſel.

This preparation is frequently employed in conjunction with other articles, particularly for the formation of ſaline neutral draughts and mixtures; and it is uſed alſo by itſelf, in doſes from three or four grains to fifteen or twenty, and frequently operates as a powerful *diuretic*, particularly when plenty of diluted liquids is taken with it.

AQUA LIXIVIA CAUSTICA;
vulgo
LIXIVIUM CAUSTICUM.
Cauſtic lixivial water.

Take of
Freſh burnt quicklime, eight ounces;
Purified fixed alcaline vegetable ſalt, ſix ounces.

Throw the quicklime with twenty ounces of warm water into an iron or earthen veſſel. When the extinction and ebullition of the lime is completely finiſhed, immediately add the ſalt; theſe being well mixed, let the veſſel be kept ſhut till it cools; ſhake up the cool matter, and pour out the whole into a glaſs funnel, whoſe throat muſt be ſtopped with clean rag. Let the upper part of the funnel be covered cloſe, whilſt the tube of it is inſerted into another glaſs veſſel, that the lixivium may gradually drop into the veſſel placed below. As ſoon as it ſhall ceaſe to drop, pour into the funnel ſome ounces of water, but cautiouſly, that the water may ſwim above the matter; the lixiviated water will again begin to drop, and thus muſt the affuſion of water be repeated, till three pounds have dropped, which will take up two or three days, then ſhake the ſuperior with the inferior portions of the liquor together, mix and keep it in a veſſel well ſtopped.

This lixivium properly prepared has neither ſmell nor colour, neither will it effervesce but perhaps very ſlightly with acids. Colour and ſmell indicate the ſalt has not been ſufficiently calcined; the effervescence, that the lime has not been good.

The reaſon of the great nicety required in the operation is very obviouſly to prevent abſorption of fixed air from the atmoſphere; for the mildneſs or the cauſticity of alkalies, whether fixed or volatile, depend upon fixed air; the *firſt* depends upon the union with, the *laſt* upon the deprivation of it; thus quicklime having a greater affinity with fixed air than alkali, the fixed air in this proceſs quits the alkaline ſalt and unites with the quicklime, rendering the ſalt cauſtic, and the lime mild and inſoluble in water. See alſo Dr. Black's method of preparing this cauſtic fluid, which is conſidered the moſt eligible. En-

CLYCOP. BRITAN. vol. 14. p. 339. under CAUSTIC LEY.

By ſome dyſpeptic patients this ley has been taken with advantage, particularly when acidities affect the ſtomach, attended with much flatulence and laxity, for it exerts a ſtimulating power, at the ſame time unites with the acids, without the ſeparation of any air, as is the caſe where mild alcalies are uſed. When joined with mucilaginous ſubſtances, it may be ſafely taken into the ſtomach, and uſed to be given in veal broth, as a ſolvent of the ſtone; it has had alſo many pompous titles as a *lithontriptic*; but its reputation in this point has greatly diminiſhed.

NATRON PRÆPARATUM.

Prepared Natron.

Lond.

Take of

Barilla powdered, two pounds;
Diſtilled water, one gallon.

Boil the barilla in four pints of water for half an hour, and ſtrain and boil the part which remains after ſtraining with the reſt of the water, and ſtrain. Mix the liquors, and evaporate to two pints; and ſet them by for eight days; ſtrain this liquor again, and after due boiling ſet it by to cryſtalliſe. Diſſolve the cryſtals in diſtilled water, ſtrain the ſolution, boil and ſet it aſide to cryſtalliſe.

The liquor upon ſtanding depoſits ſome feculencies, from which it is eaſily freed by ſtraining it; and the cryſtalliſations, when properly conducted, entirely purify the natron from neutral ſalt, or any other remaining admixture.

SODA PURIFICATA;

vulgo

SAL ALCALINUS FOSSILIS FIXUS PURIFICATUS.

Edinb.

Take of the aſhes of Spaniſh kali, ſoda, or barilla, any quantity you chuſe, bruiſe, and boil them in water till all the ſalt be diſſolved; afterwards let this be filtered through paper, and evaporated in an iron veſſel, that, after it is cooled, it may ſhoot into cryſtals.

By the above proceſſes the *foſſil alkali* is procured ſufficiently pure, being much more diſpoſed to cryſtalliſe than the vegetable alkali; the admixture of this laſt is hereby in a great meaſure prevented.

In the iſland of Teneriff this natron is found lying on the ground, and is by the inhabitants called SALITRON, which is alſo their name for ſaltpetre. It is alſo found in the ſame ſtate in ſome other countries.

This natural product ſeems to have been better known to the ancients than modern naturaliſts, and it is with good reaſon ſuppoſed to be the nitre mentioned in the Bible.

This ſoda not only forms the baſis of ſeveral neutral ſalts, but is given by itſelf, and in its purified ſtate ſuppoſed to be uſeful in ſcrophulous affections.

DOSE, 10 grains to 3 ſs.

SECT. II.

VOLATILE ALKALINE SALTS.

AS fixt alkalies are produced in the burning of vegetables, and remain behind in the aſhes; volatile ones are produced by a like degree of heat from animal ſubſtances, and riſe in diſtillation

along with the other volatile principles; the admiſſion of air, neceſſary for the production of the former, is not needful for the latter. Theſe ſalts are obtainable alſo from ſome vegetable matters, and from vegetable and animal ſoot. Though a ſtrong fire be requiſite for their production, yet, when once completely formed, they are diſſipated by the gentleſt warmth: in diſtillation, they riſe ſooner than the moſt highly rectified ſpirit of wine. They are produced in urine, by putrefaction, without fire; and without fire alſo they exhale from it.

LIQUOR
formerly
SPIRITUS, SAL, et OLEUM CORNU CERVI.

Liquor, ſalt, and oil of hartſhorn.
Lond.

Take of hartſhorn ten pounds, diſtilled by a fire gradually increaſed; a liquor, ſalt, and oil will aſcend. Separate the oil and the ſalt from the liquor, and diſtil three times.

To the ſalt add an equal weight of prepared chalk, and ſublime thrice, or until it becomes white.

The ſame volatile liquor, ſalt, and oil may be obtained from any parts, *except the fat*, of any kind of animals.

Calcined hartſhorn is generally made by burning the horns left after this diſtillation.

Edinb.

Having poured out of the recipient all the different matters which have come over in it, they may be ſeparated from one another in the following manner. The *oil* ſeparates from the phlegm and ſpirit in filtration; the two latter will paſs through, and the oil remain on the filter.—The *phlegm* may be ſeparated from the ſpirit by diſtillation in a tall veſſel, with a gentle heat:—*the ſpirit* will come over into the recipient, and the phlegm remain at the bottom of the diſtilling veſſel.

The *ſpirit may be divided* into a *volatile ſalt and phlegm*, by diſtilling it in a very tall and narrow cucurbit; the ſalt will ariſe, and adhere to the head in a dry form; the phlegm remaining behind.

The *ſalt may be freed from the oil*, by ſubliming it from twice its quantity of pot-aſh; for the oil is kept down by the pot-aſh, whilſt the ſalt riſes.

The *ſpirit alſo is rendered purer*, by adding, to every pint, two ounces of pot-aſh, and diſtilling in a glaſs retort.

The remaining pot-aſh may be again purified for uſe, by calcining it in an open fire, ſo as to burn out the oil it had abſorbed from the ſalt or ſpirit.

The wholeſale dealers have very large pots for the diſtillation of hartſhorn, with earthen heads almoſt like thoſe of the common ſtill. For receivers, they uſe a couple of oil jars, the mouths of which are luted together; the pipe that comes from the head enters the lowermoſt jar, through a hole made on purpoſe in its bottom. When a large quantity of the ſubject is to be diſtilled, it is cuſtomary to continue the operation for ſeveral days ſucceſſively; only unluting the head occaſionally, to put in freſh materials.

When only a ſmall quantity of ſpirit or ſalt is wanted, a common iron pot, ſuch as is uſually fixed in ſand furnaces, may be employed; an iron head being fitted to it. The receiver ought to be large, and a glaſs, or rather tin adopter, inſerted betwixt it and the pipe of the head.

The diſtilling veſſel being charged with pieces of the horn, a moderate fire is applied, which is ſlowly increaſed, and raiſed at length

almoſt to the utmoſt degree. At firſt, a phlegmatic liquor ariſes; the quantity of which will be leſs or greater, according as the horns were more or leſs dry: this is ſucceeded by the ſalt and oil. The ſalt at firſt diſſolves, as it comes over, in the phlegm, and thus forms what is called ſpirit. When the phlegm is ſaturated, the remainder of the ſalt concretes in a ſolid form to the ſides of the recipient. If it be required to have the whole of the ſalt ſolid and undiſſolved, the phlegm ſhould be removed as ſoon as the ſalt begins to ariſe, which may be known by the appearance of white fumes: and, that this may be done the more commodiouſly, the receiver ſhould be left unluted, till this firſt part of the proceſs be finiſhed. The white vapours which now ariſe, ſometimes come with ſuch vehemence, as to throw off or burſt the receiver. To prevent this accident, it is convenient to have a ſmall hole in the luting; which may be occaſionally ſtopt with a wooden peg, or opened, as the operator ſhall find proper. After the ſalt has all ariſen, a thick, dark-coloured oil comes over: the proceſs is now to be diſcontinued, and the veſſels, when grown cold, unluted.

All the liquid matters being poured out of the receiver, the ſalt which remains adhering to its ſides is to be waſhed out with a little water, and added to the reſt. It is convenient to let the whole ſtand for a few hours, that the oil may the better diſengage itſelf from the liquor, ſo as to be firſt ſeparated by a funnel, and afterwards more perfectly by filtration through wetted paper. The ſalt and ſpirits are then to be further purified, as before directed.

The liquor of hartſhorn met with in the ſhops is extremely precarious in point of ſtrength; the quantity of ſalt contained in it (on which its efficacy depends) varying according as the diſtillation, in rectifying it, is continued for a longer or ſhorter time. If, after the volatile ſalt has ariſen, ſo much of the phlegm or watery part be driven over after it, as is juſt ſufficient to diſſolve it, the ſpirit will be fully ſaturated, and as ſtrong as it can be made. If the proceſs be not at this inſtant ſtopt, the phlegm, continuing to ariſe, muſt render the ſpirit continually weaker and weaker. The diſtillation therefore ought to be diſcontinued at this period, or rather whilſt ſome of the ſalt ſtill remains undiſſolved. The ſpirit will thus prove always equal, and the buyer be furniſhed with a certain criterion of its ſtrength. Very few have taken any notice of the above-mentioned inconvenience of theſe kinds of ſpirits; and the remedy is firſt hinted in the Pharmacopœia Reformata. The purity of the ſpirit is eaſily judged of from its clearneſs and grateful odour.

The volatile alkali procured from hartſhorn, whether in a ſolid or a fluid ſtate, is preciſely the ſame with that obtained from ſal ammoniac; therefore it is moſt eligible to procure theſe volatile ſubſtances from this ſalt, as the proceſs is ſo much more eaſy, and leſs expenſive.

AMMONIA PRÆPARATA;

vulgo

SAL VOLATILIS SALIS AMMONIACI.

Lond. Edinb.

Ammonia prepared.

L. E.

Take of

Sal ammonia powdered, one pound;

Prepared chalk, two pounds.

Mix and ſublime, from a retort into a refrigerated receiver.

AQUA AMMONIÆ;

formerly

SPIRITUS VOLATILIS SALIS AMMONIACI.

Water of ammonia.

Lond.

Take a pound and a half of pot-aſh, a pound of ſal ammoniac, and four pints of water. Diſtil off, with a gentle heat, two pints.

Edinb.

Take of ſal ammoniac, purified lixiva, or vegetable alkali, of each ſixteen ounces. The ſalts being mixed and put into a glaſs retort, pour on the water, then diſtil with a ſand bath to dryneſs, gradually increaſing the heat.

From the reſiduum, which is the SAL DIGESTIVUM SYLVII, a combination of muriatic acid, and vegetable alkali, called *Kali muriatum*, diſtilled in the ordinary way with vitriolic acid; the ſaline maſs left in the retort is the kali vitriolatum.

Sal ammoniac is a neutral ſalt, compoſed of volatile alkali and marine acid. In theſe proceſſes, the acid is abſorbed by the fixt alkali or chalk; and the volatile alkali is of courſe ſet at liberty.

The fixt alkali begins to act upon the ſal ammoniac, and extricates a pungent urinous odour, as ſoon as they are mixed. Hence it is moſt convenient not to mix them till put into the diſtilling veſſel: the two ſalts may be diſſolved ſeparately in water, the ſolutions poured into a retort, and a receiver immediately fitted on. An equal weight of the fixt ſalt is fully, perhaps more than, ſufficient, to extricate all the volatile.

Chalk does not begin to act upon the ſal ammoniac, till a conſiderable heat be applied. Hence theſe may be without inconvenience, and indeed ought to be, thoroughly mixed together, before they are put into the retort. The ſurface of the mixture may be covered with a little more powdered chalk, to prevent ſuch particles of the ſal ammoniac, as may happen to lie uppermoſt, from ſubliming unchanged. Though the fire muſt here be much greater than when fixt alkaline ſalt is uſed, it muſt not be too ſtrong, nor too ſuddenly raiſed; for, if it be, a part of the chalk (though of itſelf not capable of being elevated by any degree of heat) will be carried up along with the volatile ſalt. M. du Hamel experienced the juſtneſs of this obſervation: he relates, in the Memoirs of the French academy of ſciences for the year 1735, that he frequently found his volatile ſalt, when a very ſtrong fire was made uſe of in the ſublimation, amount to more, ſometimes one half more, than the weight of the crude ſal ammoniac employed; and that, though it be certain that not three-fourths of this concrete are pure volatile ſalt, the fixt earthy matter, thus once volatiliſed by the alkali, aroſe along with it again upon the gentleſt reſublimation, diſſolved with it in water, and exhaled with it in the air.

When all the ſalt has ſublimed, and the receiver grown cool, it may be taken off, and luted to another retort charged with freſh materials. This proceſs may be repeated, till the recipient appear lined with volatile ſalt to a conſiderable thickneſs. The veſſel muſt then be broken in order to get out the ſalt.

The volatile ſalt and ſpirit of ſal ammoniac are the pureſt of all the medicines of this kind. They are ſomewhat more acrimonious than thoſe produced directly from animal ſubſtances, which always contain a portion of the oil of the ſubject, and receive thence ſome degree of a ſaponaceous quality. Theſe laſt may be reduced to the ſame degree of purity, by combin-

ing them with acids into ammoniacal ſalts; and afterwards recovering the volatile alkali from theſe compounds by the proceſſes before directed.

The matter which remains in the retort, after the diſtillation of the ſpirit, and ſublimation of the ſalt, of ſal ammoniac, is found to conſiſt of marine acid united with the fixt alkali or chalk employed. When fixt alkaline ſalt has been uſed as the intermedium, the reſiduum, or caput mortuum, as it is called, yields, on ſolution and cryſtalliſation, a ſalt exactly ſimilar to the *ſpiritus ſalis marini coagulatus* hereafter deſcribed; and hence we may judge of the extraordinary virtues formerly attributed to this ſalt, under the names of *ſal antihyſtericum*, *antihypochondriacum*, *febrifugum*, *digeſtivum Sylvii*, &c.

The caput mortuum of the volatile ſalt, where chalk is employed as an intermedium, expoſed to a moiſt air, runs into a pungent liquor, which proves nearly the ſame with a ſolution of chalk made directly in the marine acid. It is called by ſome, *oleum cretæ*, oil of chalk. If calcined ſhells or other animal limes be mingled with ſal ammoniac, a maſs will be obtained, which likewiſe runs in the air, and forms a liquor of the ſame kind. This liquor has been the ſecret of ſome pretenders to a diſſolvent of the calculus.

SPIRITUS, SAL, et OLEUM FULIGINIS.

Spirit, ſalt, and oil of wood ſoot. Lond.

Diſtil ſoot after the ſame manner as directed before for hartſhorn: but here more labour is required to render the ſpirit and ſalt pure.

The volatile ſalt and ſpirit of ſoot are, when ſufficiently purified, not different in quality from thoſe of animal ſubſtances; though ſome have preferred them in nervous complaints, particularly in epileptic caſes.

Volatile alkaline ſalts, and their ſolutions called ſpirits, agree, in many reſpects, with fixt alkalies and their ſolutions or eys; as in changing the colour of blue flowers to a green; effervescing with and neutraliſing acids; liquefying the animal juices, and corroding the fleſhy parts, ſo as, when applied to the ſkin, and prevented from exhaling by a proper covering, to act as cauſtics; and diſſolving oils, and ſulphur, though leſs readily than the fixed alkalies, on account, probably, of their not being able to bear any conſiderable heat, by which their activity might be promoted. Their principal difference from the other alkalies ſeems to conſiſt in their volatility. They exhale or emit pungent vapours, in the coldeſt ſtate of the atmoſphere; and by their ſtimulating ſmell they prove ſerviceable in languors and faintings. Taken internally, they diſcover a greater colliquating as well as ſtimulating power; the blood drawn from a vein, after their uſe has been continued for ſome time, being found to be remarkably more fluid than before. They are likewiſe more diſpoſed to operate by perſpiration, and to act on the nervous ſyſtem. They are particularly uſeful in lethargic caſes; in hyſterical and hypochondriacal diſorders, and in the languors, headachs, inflations of the ſtomach, flatulent colics, and other ſymptoms which attend them. They are generally found more ſerviceable to aged perſons, and in phlegmatic habits, than in the oppoſite circumſtances. In ſome fevers, particularly thoſe of the low kind, accompanied with a cough, hoarſeneſs, redundance of phlegm, and fizineſs of the blood, they are of

great utility; liquefying the viſcid juices, raiſing the vis vitæ, and exciting a ſalutary diaphoreſis; but in putrid fevers, ſcurvies, and wherever the maſs of blood be thin and acrimonious, they do harm. As they are more powerful than the fixt ſalts in liquefying ſizy blood and tenacious humours, ſo they prove more hurtful, where the fluids are already in a colliquated ſtate. In vernal intermittents, particularly thoſe of the ſlow kind, and where the blood is denſe or ſizy, they are often the moſt efficacious remedy. Mr. Biſſet obſerves, in his Eſſay on the Medical Conſtitution of Great Britain, that, though many caſes occur which will yield to no other medicine than the bark, he has met with many that were only ſuppreſſed from time to time by the bark, but were completely cured by alkaline ſpirits: that theſe ſpirits will often carry off vernal intermittents, without any previous evacuation; but that they are generally more effectual, if a purge be premiſed; and in plethoric or inflammatory caſes, or where the fever perſonates a remittent, veneſection.

Theſe ſalts are moſt commodiouſly taken in a liquid form, largely diluted; or in that of a bolus, which ſhould be made up only as it is wanted. The doſe is from a grain or two to ten or twelve. Ten drops of a well-made ſpirit, or ſaturated ſolution, are reckoned to contain about a grain of the ſalt. In intermittents, fifteen or twenty drops of the ſpirit are given in a tea cup full of cold ſpring water, and repeated five or ſix times in each intermiſſion.

The volatile ſalts and ſpirits prepared from different animal ſubſtances have been ſuppoſed capable of producing different effects upon the human body, and to receive ſpecific virtues from the ſubject. The ſalt of vipers has been eſteemed particularly ſerviceable in the diſorders occaſioned by the bite of that animal; and a ſalt drawn from the human ſcull, in diſeaſes of the head. But modern practice acknowledges no ſuch different effects from theſe preparations, and chemical experiments have ſhown their identity. There is, indeed, when not ſufficiently purified, a very perceptible difference in the ſmell, taſte, degree of pungency, and volatility of theſe ſalts; and in this ſtate their medicinal virtues vary conſiderably enough to deſerve notice: but this difference they have in common, according as they are more or leſs loaded with oil, not as they are produced from this or that animal ſubſtance. As firſt diſtilled, they may be looked upon as a kind of volatile ſoap, in which the oil is the prevailing principle: in this ſtate, they have much leſs of the proper alkaline acrimony and pungency, than when they have undergone repeated diſtillations, and ſuch other operations as diſengage the oil from the ſalt; for, by theſe means, they loſe their ſaponaceous quality, and acquiring greater degrees of acrimony, become medicines of a different claſs. Theſe preparations, therefore, do not differ near ſo much from one another, as they do from themſelves in different ſtates of purity. To which may be added, that, when we conſider them as loaded with oil, the virtues of a diſtilled animal oil itſelf are likewiſe to be brought into the account.

Theſe oils, as firſt diſtilled, are highly fetid and offenſive, of an extremely heating quality, and of ſuch activity, that, according to Hoffman's account, half a drop, diſſolved in a dram of ſpirit of wine, is ſufficient to raiſe a copious ſweat. By repeated rectifications they loſe their offenſiveneſs, and at the ſame time become mild in their medici.

nal operation. The rectified oils may be given to the quantity of twenty or thirty drops, and are ſaid to be anodyne and antiſpaſmodic, to procure a calm ſleep and gentle ſweat, without heating or exagitating the body. It is obvious, therefore, that the ſalts and ſpirits muſt differ, not only according to the quantity of oil they contain, but according to the quality of the oil itſelf in its different ſtates.

The volatile ſalts and ſpirits, as firſt diſtilled, are of a brown colour, and a very offenſive ſmell. By repeated rectification, as directed in the proceſſes above ſet down, they loſe great part of the oil on which theſe qualities depend, the ſalt becomes white, the ſpirit limpid as water, and of a grateful odour; and this is the mark of ſufficient rectification.

It has been objected to the repeated rectification of theſe preparations, that, by ſeparating the oil, it renders them ſimilar to the pure ſalt and ſpirit of ſal ammoniac, which are procurable at an eaſier rate. But this is by no means the caſe. The intention is not to purify them wholly from the oil, but to ſeparate the groſſer part, and to ſubtiliſe the reſt, ſo as to bring it towards the ſame ſtate as when the oil is rectified by itſelf. I have repeated the rectification of ſpirit of hartſhorn twenty times ſucceſſively, and found it ſtill to participate of oil, but of an oil very different from what it was in the firſt diſtillation.

The rectified oils, in long keeping, become again fetid. The ſalts and ſpirits alſo, however carefully rectified, ſuffer, in length of time, the ſame change, reſuming their original brown colour and ill ſmell; a proof that the rectification is far from having diveſted them of oil.

AQUA AMMONIÆ CAUSTICÆ;

vulgo

SPIRITUS SALIS AMMONIACI CUM CALCE VIVA.

Take of

Sal ammoniac, ſixteen ounces;
Quicklime, freſh burnt, two ounces;
Water, ſix pints.

Add, to one pound of water put into an iron or ſtone-ware veſſel, the quicklime beat, and cover the veſſel for twenty-four hours, till the lime falls into a fine powder, which put into a retort; to this add the ſal ammoniac diſſolved in five pints of water; the mouth of the retort being cloſed, ſhake them well together, ſo that they may be properly mixed. Laſtly, let the diſtillation be performed with a very gentle heat, ſo that the operator's hand can eaſily bear the heat of the retort when he touches it, and the ſpirit paſs into a refrigerated receiver, until twenty ounces ſhall have been diſtilled.

In this diſtillation the veſſels are to be ſo luted together, as to prevent the eſcape of the moſt ſubtile vapours; and before the retort has cooled, let the veſſels be ſeparated, and the liquor poured out.

AQUA AMMONIÆ PURÆ;

formerly

SPIRITUS SALIS AMMONIACI CUM CALCE.

Water of pure Ammonia.

Lond.

Take of

Sal ammoniac, one pound;
Quicklime, one pound and a half;
Water, one gallon.

Add to the lime two pints of the water, and let them ſtand together an hour, then add the ſal ammoniac and the ſix pints of water boiling hot, and immediately cover the veſſel. Pour out the liquor when cold, and diſtil with a ſlow fire one pint.

The effect of the quicklime o the ſal ammoniac is very differen

from that of the chalk and fixt alkali in the foregoing process. Immediately on mixture, a very penetrating vapour exhales; and, in distillation, the whole of the volatile salt arises in a liquid form; no part of it appearing in a concrete state, how gently soever the liquor be re-distilled. This spirit is far more pungent than the other, both in smell and taste; and, like fixt alkalies rendered caustic by the same intermedium, it raises no effervescence on the admixture of acids.

The reasoning on this process is exactly the same as that on the *aqua lixivia caustica*, with regard to the mode by which the alkali assumes its caustic form.

This spirit is held too acrimonious for internal use, and has therefore been *chiefly employed for smelling to in faintings*, &c. though, when properly diluted, it may be given inwardly with safety. It is an excellent menstruum for some vegetable substances, as Peruvian bark, from which the other spirit extracts little. It is also most convenient for rendering oils miscible in water, as in oily mixtures.

Some have mixed a quantity of this with the officinal spirits both of sal ammoniac and of hartshorn, which thus become more pungent, so as to bear an addition of a considerable quantity of water, without any danger of discovery from the taste or smell. This abuse would be prevented, if what has been formerly laid down as a mark of the strength of these spirits (some of the volatile salt remaining undissolved in them) were complied with. *It may be detected* by adding to a little of the suspected spirit about one-fourth its quantity or more of rectified spirit of wine; which, if the volatile spirit be genuine, will precipitate a part of its volatile salt, but occasions no visible separation or change in the caustic spirit, or in those which are sophisticated with it.

Others have substituted for the spirit of sal ammoniac, a solution of crude sal ammoniac and fixt alkaline salt mixed together. This mixture deposits a saline matter on the addition of spirit of wine, like the genuine spirit; from which however it may be distinguished, as the salt, thus separated, is not a volatile alkaline, but a fixt neutral salt. *The abuse may be more readily detected* by a drop or two of solution of silver made in aqua-fortis; which will produce no change in the appearance of the true spirit, but will render the counterfeit turbid and milky.

SECT. III.

Combination of Alkalies with Oils and inflammable Spirits.

SAPO AMYGDALINUS.

Almond soap.

TAKE any quantity of fresh-drawn oil of almonds, and thrice its quantity by measure of the *aqua lixivia caustica*. Digest them together in such a heat, that they may but just boil or simmer, and in a few hours they will unite; after which, the liquor in boiling will soon become ropy, and in good measure trans-

parent: a little of it ſuffered to cool will appear like jelly. When this happens, throw in by little and little ſome common ſalt, till the boiling liquor loſes its ropineſs; and continue the coction, till, on receiving ſome drops on a tile, the ſoap is found to coagulate, and the water freely ſeparates from it. The fire being then removed, the ſoap will gradually riſe to the ſurface of the liquor. Take it off before it grows cold, and put it into a wooden mould or frame, which has a cloth for its bottom: afterwards take out the ſoap, and ſet it by till ſufficiently dried.

After the ſame manner, a ſoap may likewiſe be made with oil of olives; but the pureſt oil muſt be uſed, that the ſoap may be as little ungrateful as poſſible either to the palate or ſtomach.

This proceſs is ſo fully deſcribed, as to render any further directions unneceſſary. The general virtues of ſoaps have been already delivered. (See SAPO, *Materia Medica.*) That prepared after this manner is not different in quality from the hard ſort before mentioned. The ſtrength of ſoaps varies conſiderably with their age, and the manner in which they have been kept. Freſh ſoap, though apparently of a good conſiſtence, loſes, upon being thoroughly dried, near one-third of its weight; the whole of which loſs is mere water; a circumſtance to be particularly attended to in the exhibition of this medicine.

Soap is decompounded by all acids; and hence it does not lather with waters that contain any acid unneutraliſed. In pure water, it diſſolves into a milky liquor, which, on dropping in ſome oil of vitriol, forms a kind of coagulum. On adding more of the acid, the liquor becomes clear, the oil of the ſoap riſes to the ſurface, its alkali uniting with the acid, and forming ſaline concretions at the bottom. The oil, carefully collected, proves remarkably purer than when it firſt entered the compoſition of the ſoap; and, like the eſſential oils of vegetables, diſſolves in ſpirit of wine: it may poſſibly be applicable to ſome uſeful purpoſes, as it ſeems to be freed from its groſſer matter, extremely pure, and is void of the pungency of eſſential oils.

It follows from the above experiments, that no kind of acid ought to be uſed along with ſoap; all acids abſorbing the alkaline ſalt of the ſoap from the oil. NEUTRAL SALTS have not this effect, their acid being already ſatiated with an alkali: but ſalts compoſed of an acid and an earthy or metallic body, as the purging bitter ſalt, vitriol, &c. decompound the ſoap equally with pure acids; acids quitting an earth or metal, to unite with an alkali brought in contact with them.

Soap diſſolves likewiſe, but in ſmall quantity, in pure ſpirit of wine: it is obſervable of this ſolution, that, if expoſed to a degree of cold a very little greater than that in which water begins to freeze, it congeals into a ſolid pellucid maſs.

The menſtruum which diſſolves ſoap moſt perfectly, and in greateſt quantity, is a pure proof ſpirit. The common proof ſpirits have a ſlight acidity, not indeed diſtinguiſhable by the taſte or by the uſual ways of trial, but ſufficient to give ſomewhat of a milky hue to ſolutions of ſoap made in them. This may be corrected by the addition of a little alkaline ſalt. Mr. Geoffroy obſerves, in the Memoirs of the French Academy, that twenty-eight parts of good proof ſpirit, with the addition of one part of ſalt of kali, will diſſolve ten parts of good hard ſoap into a perfectly limpid liquor. The common alkaline ſalts, as that of tartar, anſwer

equally in this respect with soda; but the latter, being much less acrimonious, seems preferable, where the solution is intended for medicinal use.

This facility of the decomposition of soap by acids, renders it an useful criterion of low degrees, of unneutralized acidity in waters, &c. The limpid solution of soap in proof spirit, dropt into any liquor that contains either a pure acid, or a salt composed of an acid, with an earth or metal, renders the liquor immediately milky, more or less, in proportion to the quantities with which it is impregnated.

SAPO PURIFICATUS.

Purified soap.

Slice one pound of dry, hard, Genoa, Alicant, or any other oil-soap, into a clean pewter vessel, and pour upon it two gallons of rectified spirit of wine. Place the vessel in a water-bath, and apply such a degree of heat as may make the spirit boil, when it will soon dissolve the soap. Let the vessel stand close covered, in a warm place, till the liquor grow perfectly clear; if any oily matter swim upon the surface, carefully take it off. Then decant the limpid liquor from the feces, and distil off from it all the spirit that will arise in the heat of a water-bath. Expose the remainder to a dry air for a few days, and it will become a white, opaque, and somewhat friable mass. *Pract. Chem.*

Soap thus purified has little or no smell, and proves, upon examination, not in any degree acrimonious, but quite mild and soft, and consequently well fitted for medicinal purposes.

SAPO TARTAREUS.

Soap of tartar.

Take any quantity of salt of tartar, very well calcined, and reduced into powder whilst hot. Immediately pour upon it, in a broad glass vessel, twice its quantity of oil of turpentine, and let them stand together in a cellar for some weeks, till the oil has penetrated the salt: then add more oil by degrees, till the salt has absorbed thrice its own quantity, and both appear united into a soap, which, if the matter be every day stirred, will happen in a month or two. The effect succeeds sooner, if the containing vessel be fixed to the sail of a windmill, or any other machine that turns round with great velocity.

This tedious process, which is taken from a former edition of the Edinburgh Pharmacopœia, might be finished in a very little time, by duly attending to a circumstance which our chemists, and the pharmaceutical writers, have in general overlooked; and which many have supposed to be a means even of preventing success. If the oil be poured upon the pulverized salt whilst very hot, they will immediately unite, with a hissing noise; and, by rubbing for a few minutes in a hot mortar, form a truly saponaceous mass, the medicine here intended. If the salt be suffered to grow cold before the addition of the oil, it is scarce possible to unite them, as the committee of the London college observes, without the addition of a little water, which in this case promotes the effect. The regular, uniform motion above recommended, does not answer so well as agitation, or rubbing in a mortar; the different degrees of centrifugal force which the oil and salt acquire, when moved circularly, tending to keep them apart. The salt does not retain so much of the oil as might be expected; far the greater part of this volatile fluid being dissipated in the process. Mr. Baumé relates, in his *Manuel*

de Chemie, that experiments have convinced him the ſoap conſiſts of only the reſinous part of the oil united with the alkali; that the more fluid and well rectified the oil is, the leſs ſoap is obtained; and that, by adding a little turpentine in ſubſtance to the mixture, the preparation is conſiderably accelerated.

This medicine has been greatly celebrated as a *diuretic*, in nephritic *complaints*, and as a *corrector of certain vegetable ſubſtances, particularly opium*; it was for ſome time a great ſecret in the hands of its firſt preparer, Starkey, under the names of philoſophic ſoap, the vegetable corrector, &c. Its virtues, however, have not been ſufficiently warranted by experience; nor does the preſent practice pay any regard to it. Accordingly both the London and Edinburgh colleges have rejected it at a late reformation of their pharmacopœias.

LOTIO SAPONACEA.

Saponaceous lotion.

Lond.

Take of
- Damaſk roſe water, three quarters of a pint;
- Oil olive, one quarter of a pint;
- Water of kali, half an ounce by meaſure.

Grind the water of kali and the oil together, until they unite; then gradually add the roſe water.

This is deſigned for external uſe, as a detergent waſh; and, like other ſoapy liquors, anſwers this purpoſe very effectually. Where it is required to be more deterſive, it may be occaſionally rendered ſo, by the addition of a ſmall quantity of a ſolution of any fixt alkaline ſalt.

LINIMENTUM SAPONIS COMPOSITUM;

formerly

LINIMENTUM SAPONACEUM.

Compound ſoap liniment.

Lond.

Take of
- Spirit of roſemary, one pint;
- Hard Spaniſh ſoap, three ounces;
- Camphor, one ounce.

Digeſt the ſoap in the ſpirit of roſemary, until it is diſſolved; then add the camphor.

LINIMENTUM SAPONACEUM;

formerly

BALSAMUM SAPONACEUM, *vulgo* OPPODELDOCH.

Soap Liniment.

Edinb.

Take of
- Spaniſh ſoap four ounces;
- Camphor, two ounces;
- Eſſential oil of Roſemary, half an ounce;
- Rectified ſpirit of wine, two pints.

Digeſt the ſoap in the ſpirit of wine, with a gentle heat, till it be diſſolved; then add the camphor and the oils, and ſhake the whole well together, that they may be perfectly mixed.

Theſe compoſitions alſo are employed chiefly, for external purpoſes, *againſt rheumatic pains, ſprains, bruiſes*, and other like complaints. Soap acts to much better advantage, when thus applied in a liquid form, than in the ſolid one of a plaſter.

LINIMENTUM OPIATUM;

formerly

BALSAMUM ANODYNUM, *vulgo* BATEANUM.

OPIATED LINIMENT.

Edinb.

Take of
- White ſoap, four ounces;
- Crude opium, an ounce;
- Camphor, two ounces;
- Eſſential oil of roſemary, half an ounce;
- Rectified ſpirit of wine, two pints.

Digeſt the ſpirit with the ſoap and opium, in a gentle ſand-heat, for three days; then ſtrain the

liquor, add to it the camphor and essential oil, and shake the whole well together.

This composition is greatly commended *for allaying pains*, and is said to have been sometimes used with benefit *even in the gout*; a cloth dipt in it being laid on the part. It is sometimes likewise directed to be taken inwardly, in the same disorder, as also *in nervous colics, jaundices*, &c. from twenty to fifty drops or more; though surely, in gouty cases, the use of opiate medicines requires great caution. One grain of opium is contained in about ninety drops of the balsam.

LINIMENTUM AMMONIÆ;
formerly
LINIMENTUM VOLATILE.
Liniment of AMMONIA.
Lond.

Take of
Olive oil, one ounce and a half;
Water of ammonia, half an ounce.
Cork the phial, and shake them together.

The stronger liniment of ammonia of the London Pharmacopœia is made by adding water of ammonia and olive oil, of each half an ounce, to the foregoing quantities.

OLEUM AMMONIATUM;
vulgo
LINIMENTUM VOLATILE.
Ammoniated oil.
Edin.

Take of
Olive oil, two ounces;
Water of caustic ammonia, two drams;
Mix them, so that they may perfectly unite.

EPITHEMA VOLATILE.
Volatile epithem.

Take of
Venice or common turpentine,
Water of ammonia,—each equal weights.
Stir the turpentine in a mortar, gradually dropping in the spirit, until they unite into a white mass.

The three foregoing are very acrid, stimulating compositions, and are principally applied *against rheumatic* and *ischiadic pains*. The epithem was formerly made of a stiffer consistence, and more adhesive, by an addition of tacamahaca, which is here judiciously omitted, since it prevented the application from being so expeditiously got off from the part, as its great irritating power made sometimes necessary.

SPIRITUS AMMONIÆ;
formerly
SPIRITUS SALIS AMMONIACI DULCIS.
Spirit of ammonia.
L. E.

Take six ounces of pot-ash, four ounces of sal ammoniac, and three pints of proof spirit of wine. Distil off, with a gentle heat, a pint and a half.

The Edinburgh College orders four pounds of proof spirit to the same quantity of the above ingredients, and draw off two pounds: this, by the late Pharmacopœia of that college, was named *Spiritus salis ammoniaci vinosus*.

This spirit has come much into esteem, both as a medicine and a menstruum. It is a solution of volatile salt in rectified spirit of wine; for though proof spirit be made use of, its phlegmatic part does not arise in the distillation, and serves only to facilitate the action of the pure spirit upon the ammoniacal salt. Rectified spirit of wine does not dissolve volatile alkaline salts by simple mixture: on the contrary, it precipitates them, as has been already observed, when they are previously dissolved in water: but by the present process a considerable proportion of the volatile alkali is

combined with the ſpirit. It might perhaps, for ſome purpoſes, be more adviſable, to uſe in this intention the volatile ſpirit made with quicklime: for this may be mixed at once with rectified ſpirit of wine, in any proportions, without the leaſt danger of any ſeparation of the volatile alkali.

SPIRITUS AMMONIÆ FŒTIDUS;

formerly

SPIRITUS VOLATILIS FŒTIDUS.

Fetid ſpirit of ammonia.

Lond.

Take of
Pot-aſh, a pound and a half;
Sal ammoniac, one pound;
Aſafœtida, four ounces;
Proof ſpirit of wine, ſix pints.
Draw off, with a gentle heat, five pints.

Edinb.

Take of
Spirit of ammoniæ, eight ounces;
Aſafœtida, half an ounce.
Digeſt in a cloſe veſſel for twelve hours, and, with a water bath, diſtil eight ounces.

Theſe are deſigned as *antihyſterics*, and are undoubtedly very elegant ones. Volatile ſpirits, impregnated for theſe purpoſes with different fetids, have been uſually kept in the ſhops. The ingredient here made choice of is the beſt calculated of any for general uſe, and equivalent in virtue to them all. The ſpirit is pale when newly diſtilled, but acquires a conſiderable tinge in keeping.

SPIRITUS AMMONIÆ COMPOSITUS. *L.*

formerly

SPITITUS VOLATILIS AROMATICUS.

COMPOUND SPIRIT OF AMMONIA.

Lond.

Take of
Eſſence of lemons,
Eſſential oil of cloves,—each two drams;
Spirit of ammonia, one quart.
Mix them.

SPIRITUS AMMONIÆ AROMATICUS;

vulgo

SPIRITUS VOLATILIS OLEOSUS, *vulgo* SALINUS AROMATICUS.

Volatile oily ſpirit, commonly called ſaline aromatic ſpirit.

Edinb.

Take of
Dulcified ſpirit of ſal ammoniac, eight ounces;
Eſſential oil of roſemary, one dram and a half;
Eſſence of lemon-peel one dram.
Mix, that the oils may be diſſolved.

Volatile ſalts, thus united with aromatics, are not only more agreeable in flavour, but likewiſe more acceptable to the ſtomach, and leſs acrimonious, than in their pure ſtate. Both the foregoing compoſitions turn out excellent ones, provided the oils be good. The doſe is from ſix drops to ſixty or more.

SPIRITUS VOLATILIS AROMATICUS EXTEMPORANEUS.

Extemporaneous volatile aromatic ſpirit.

Take of
Dulcified ſpirit of ſal ammoniac, one pint;
Eſſential oil of Jamaica pepper, two drams.
Mix them together, that the oil may be diſſolved.

Or,

Take of
Spirit of wine, highly rectified,
Spirit of ſal ammoniac,—each half a pint;
Eſſential oil of Jamaica pepper, two drams.
Diſſolve the oil in the ſpirit of wine, and mix this ſolution with the ſpirit of ſal ammoniac: a white

coagulum will be immediately formed, which, in a warm place, ſoon reſolves into a tranſparent liquor, depoſiting a quantity of a volatile oily ſalt.

By either of theſe methods, a volatile oily ſpirit may be made occaſionally, and adapted, at pleaſure, to particular purpoſes, by chuſing an eſſential oil proper for the intention. Thus *in hyſterical diſorders*, where *the uterine purgations are deficient*, a preparation of this kind made with the oils of rue, ſavin, penny-royal, or ſimilar plants, proves an uſeful remedy:—for *weakneſs of the ſtomach*, oil of mint may be taken;—where *a cephalic is required*, oil of marjoram, lavender, or roſemary;—in *coldneſs* and *faintings*, oil of cinnamon;—*in caſes of flatulencies*, the oils of aniſeeds and ſweet fennel ſeeds. Theſe laſt greatly cover the pungency of the volatile ſpirit, and render it ſupportable to the palate. The ſpirits thus made by ſimple mixture, are no wiſe inferior, in medicinal efficacy, to thoſe prepared by diſtillation, though the tinge, which they receive from the oil, may render them to ſome perſons leſs ſightly.

SPIRITUS VOLATILIS SUCCINATUS.

Succinated volatile ſpirit.

Take of

Rectified oil of amber, one ſcruple by weight;
Alcohol, one ounce;
Water of pure ammonia, four ounces;
Soap, ten grains.

Digeſt the ſoap and oil of amber in the alcohol, until they are diſſolved; then add the water of pure ammonia, and mix them by ſhaking.

This compoſition is extremely penetrating, and has come into eſteem, particularly for ſmelling to *in lowneſſes* and *faintings*, under the name of *Eau de luce*; and alſo given ſometimes internally as a powerful ſtimulant and diaphoretic, to adults, from fifteen drops to ſixty, on the ſudden ſubſiding of exanthemata, and receding of arthritic appearances from the extremities. It is not quite limpid, for the oil of amber diſſolves only imperfectly in the ſpirit. If the volatile ſpirit be not exceedingly ſtrong, ſcarcely any of the oil will be imbibed.

SECT. IV.

ACID SPIRITS.

ACIDUM VITRIOLICUM;

Vitriolic acid.

Called formerly

SPIRITUS ET OLEUM VITRIOLI.

THIS acid was formerly obtained by diſtillation from vitriol of iron; but is now produced by combuſtion of ſulphur. In this operation there are three conditions requiſite.

Vital air muſt be preſent to maintain the combuſtion; the veſſel muſt be cloſe to prevent the eſcape of the volatile matter which riſes; and water muſt be preſent to imbibe it.

For theſe purpoſes a mixture

with eight parts of ſulphur with one of nitre is placed in a proper veſſel, incloſed within a chamber of conſiderable ſize, lined on all ſides with lead, and covered at bottom with a ſhallow ſtratum of water. The mixture being ſet on fire, and ſhut up, will burn for a conſiderable time, by virtue of the ſupply of vital air which nitre gives out when heated; and the water, imbibing the ſulphureous vapours, becomes gradually more and more acid, after repeated combuſtions, and the acid is afterwards concentrated by diſtillation.

Pure vitriolic acid is colourleſs, and emits no fumes. Its ſpecific gravity to that of water is, as 1850 to 1000. It ſtrongly attracts water, which it imbibes from the atmoſphere very rapidly, and in large quantities, if ſuffered to remain in an open veſſel. If it be mixed with water it produces an inſtantaneous heat, nearly equal to that of ebullition. Its action upon all earths, except the ſilicious; upon alkaline ſalts; upon many metals; and almoſt every other combuſtible ſubſtance is very ſtrong; and in fine poſſeſſes the general properties of acids in an eminent degree.

Vitriolic acid is uſed EXTERNALLY, in *the itch*, and other *eruptions*, alſo as an irritant, and rubefacient *in local palſy*, and *rheumatiſm*, in form of an unguent, by adding to any mild ointment one eighth part of the acid. INTERNALLY it has been propoſed as a *ſolvent for the human calculus*, diluted with water; becauſe on that ſubſtance it ſhows conſiderable action out of the body. It is much uſed in *morbid acidity*, *relaxation*, and *weakneſs of the ſtomach*, not only an account of its checking fermentation; but as it poſſeſſes tonic and aſtringent powers. Its effects are propagated over the ſyſtem, hence it is recommended as very efficacious in *paſſive hæmorrhages*, *gleets*, and *fevers of the typhous kind*. It is likewiſe adminiſtered *internally* in the *itch*, *and other chronical eruptions*; and when given to nurſes, is ſaid to cure both themſelves and their children. With ardent ſpirits, alkaline ſalts, and different metallic ſubſtances, &c. it forms a variety of medicinal compoſitions, of which we ſhall have occaſion to treat in the ſucceeding part of this work.

ACIDUM VITRIOLICUM DILUTUM;

formerly

SPIRITUS VITRIOLI TENUIS.

Diluted vitriolic acid.

Lond.

Take of

Vitriolic acid, one ounce by weight;

Diſtilled water, eight ounces by weight.

Mix them by degrees.

In the Edinburgh Pharmacopœia, one part of the vitriolic acid is ordered to be mixed with ſeven of water.

This is inſerted by the London college as being ſuppoſed capable of anſwering every ſalutary advantage expected from the elixir vitrioli acidum, which is therefore rejected from their Diſpenſatory, though it is retained by the Edinburgh under the following title:

ACIDUM VITRIOLI AROMATICUM.

Aromatic acid of vitriol.

Edinb.

Take of

Rectified ſpirit of wine, two pounds;

Vitriolic acid, ſix ounces.

Drop the acid into the ſpirit gradually; digeſt the mixture with

a very gentle heat in a veſſel cloſe covered, for three days; then add

Cinnamon, one ounce and a half;

Ginger, one ounce.

Let theſe be again digeſted, in a cloſe veſſel, for ſix days; then filter through paper put within a glaſs funnel.

ACIDUM NITROSUM;

formerly

SPIRITUS NITRI GLAUBERI.

Nitrous acid.

Lond.

Take of

Purified nitre, ſixty ounces;

Vitriolic acid, by weight, twenty-nine ounces.

The ſpecific gravity of this is to the weight of water as 1550 to 1000.

Mix and diſtil them cautiouſly and gradually together, under a chimney; and then diſtil, at firſt with a gentle, and afterwards with a ſtronger heat.

Edinb.

Put two pounds of nitre into a glaſs retort; and add by degrees one pound of vitriolic acid. Diſtil in a ſand heat, gradually increaſed, till the iron ſand-pot becomes of a dull red colour. If the acid and nitre are mixed in this way, the mixture ſhould be made under a chimney, that the operator may avoid the red corroſive fumes which riſe very copiouſly, and are extremely pernicious. The vapours ſeparated during the mixing of the nitrous acid and water, are the permanently elaſtic fluid, called *nitrous acid air*, which is deleterious to animal life.

In this proceſs, the vitriolic acid expels that of the nitre, in red corroſive vapours. A pound of vitriolic acid is ſufficient to expel all the acid from about two pounds of nitrous nitre, not from more. Some direct equal parts of the two. The acid, in either caſe, is in quality the ſame; the difference in this reſpect affecting only the reſiduum. When two parts of nitre are taken to one of vitriolic acid, the remaining alkaline baſis of the nitre is completely ſaturated with the vitriolic acid, and the reſult is a neutral ſalt, the ſame with *vitriolated tartar*. If more nitre be uſed, a part of the nitre in ſubſtance will remain blended with this vitriolated ſalt: if leſs nitre, it cannot afford alkali enough to ſaturate the vitriolic acid, and the reſiduum will be not a neutral ſalt, but a very acid one. In this laſt caſe there is one convenience; the acid ſalt being readily diſſoluble in water, ſo as to be got out without breaking the retort, which the others are not.

The acid of nitre is next in ſtrength to the vitriolic, and diſlodges all but that from alkaline ſalts or earths. *It differs from all the other acids in deflagrating with inflammable matters.* If a ſolution of any inflammable ſubſtance, as hartſhorn, &c. in this acid be ſet to evaporate, as ſoon as the matter approaches to dryneſs, a violent detonation enſues. The chief uſe of this acid is as a menſtruum for certain minerals, and as the baſis of ſome particular preparations. It has been given likewiſe, diluted with any convenient vehicle, as a *diuretic*, from ten to fifty drops.

ACIDUM NITROSUM DILUTUM.

Dilute nitrous acid.

L. E.

Take of

Nitrous acid,

Water, or diſtilled water,—each equal weights.

Mix them, but be careful to avoid the fumes.

ACIDUM MURIATICUM;
formerly
SPIRITUS SALIS MARINI GLAUBERI.
Muriatic acid.
Lond.

Take of
Dried ſea ſalt, ten pounds;
Vitriolic acid, ſix pounds;
Water, five pounds.

Mix the vitriolic acid with the water, and add by degrees the mixture to the ſalt; then diſtil.

The ſpecific gravity of this is to that of diſtilled water as 1170 to 1000.

Edinb.

Take of
Sea ſalt, two pounds;
Vitriolic acid,
Water,—of each one pound.

Firſt let the ſea ſalt be put into a pot, and brought to a red heat by fire, that the oily ſolder may be deſtroyed; then place it in a retort. Mix the acid with the water, and after the mixture has become cold, pour it upon the ſea ſalt. Laſtly diſtil, from a ſand-bath, with a moderate fire, ſo long as any acid comes over.

The mixture ſhould be put to the ſalt under a chimney, as the muriatic acid, which immediately appears in the form of white fumes, ought to be avoided, becauſe they are injurious.

In this proceſs the marine acid is diſengaged from its ſaline baſis by the vitriolic acid; with which baſis the vitriolic acid itſelf unites, and forms the natron vitriolatum.

The muriatic acid ariſes, not in red fumes like the nitrous, but in white ones. The addition of water is more neceſſary here than in the foregoing proceſs; the muriatic vapours being ſo volatile, as ſcarce to condenſe without ſome adventitious humidity. The oil of vitriol is moſt conveniently mixed with the water in an earthern or ſtone-ware veſſel: for unleſs the mixture be made very ſlowly, it grows ſo hot as to endanger breaking a glaſs one.

The ſpirit of ſea ſalt is the weakeſt of the mineral acids, but ſtronger than any of the vegetable. It requires a greater fire to diſtil it than that of nitre, yet is more readily diſſipated by the action of the air. It is uſed chiefly as a menſtruum for the making of other preparations. Sometimes likewiſe it is given, properly diluted, as an *antiphlogiſtic*, *aperient*, and *diuretic*, from ten to ſixty or ſeventy drops.

In this place in the former Pharmacopœia ſucceeded the different kinds of aqua fortis, which were nothing more than modes for procuring an impure nitrous acid, unfit for medicinal purpoſes. It has therefore been thought proper, in imitation of the London and Edinburgh Pharmacopœia, to ſupply their places with the *acidum nitroſum* and *acidum nitroſum dilutum*, which are truly the aqua fortis duplex; and tenuis, in a much purer ſtate, and better adapted for any purpoſes to which their application might be neceſſary.

ACIDUM ACETOSUM.
Acetous acid.
Lond.

Take of
Verdigreaſe in coarſe powder, two pounds.

Dry it perfectly by means of a water-bath ſaturated with ſea ſalt; then diſtil it in a ſand-bath; and afterwards re-diſtil the liquor.

Its ſpecific gravity is to that of diſtilled water as 1050 to 1000.

Though by this proceſs, conducted with attention, it is allowed that the acid is acquired in its moſt concentrated ſtate, ſtill it is ſuppoſed by ſome that it retains

portion of verdigris; and hence its use has in a great degree been prevented. The quantity, however, of the verdigris, if any, is so very minute, that it cannot be at all injurious to animal life, and therefore it is said to be of little consequence, especially as in the preparation of other medicines, the copper may often be separated by superior chemical affinity. If though acetous acid be required perfectly pure, and without the least foreign admixture, it may be procured by distilling it from the *kali acetatum* instead of verdigris. Or concentrated vinegar may be acquired by freezing white wine vinegar in a wooden vessel in cold winter weather, and returning the fluid in the middle separated from the ice; which may be considered sufficiently strong if one dram of it be capable of saturating a scruple of prepared kali.

AQUA AERIS FIXI.

Aërated water.

Let spring water be saturated with fixed air, or aërial acid, arising from a solution of chalk in vitriolic acid, or in any similar acid. Water may also be impregnated by this air arising from fermenting liquor.

When this water is properly impregnated with the aërial acid, it has an agreeable quick acidulous taste; which impregnation is easily performed by a simple apparatus contrived by Dr. Nooth. It has of late been considered as a medicine of great utility in *all putrid cases*, taken internally, or administered by way of glysters; in *worm cases*; and in *gravelly complaints*; also *in complaints of the stomach* taken as common drink. In order to procure the action of fixed air upon the stomach, fifteen grains of the fixed vegetable or mineral acid is dissolved in water, and drank immediately; after which a sufficient quantity of vegetable acid, or dilute vitriolic acid, mixed with water, as will neutralise the alkali, is taken immediately afterwards; hence a fermentation takes place, the aërial acid is set at liberty to produce its effect. Indeed, the Pyrmont, Seltzer, and some of the waters are supposed to acquire their efficacy from the fixed air with which they are impregnated.

If iron wires are suspended in this water till the water is fully saturated with the metal, an artificial chalybeate water is produced; and, indeed, simple water, by the assistance of this aërial acid, becomes a menstruum for different metallic and earthy substances; but then the water loses its properties of aërated water, and participates of those which belong to the basis with which it is united, forming different metallic or earthy salts in a dilute state.

ACETUM DISTILLATUM.

Distilled vinegar.

Lond.

Take of

Vinegar, five pints;

Distil with a gentle heat in glass vessels as long as the drops fall free from an empyreuma.

If some part of the spirit which comes over first be thrown away, the rest will be the stronger.

Edinb.

Put eight pounds of the best vinegar into a glass vessel. Let the two pounds which first come over, be thrown away, as they contain too much water; the four pounds which next follow will be the distilled vinegar, to be kept for use; what remains is a stronger acid, but too much burnt with the fire.

This process may be performed either in a common still with its head, or in a retort. The better kinds of wine vinegar should be

made uſe of: thoſe prepared from malt liquors, however fine and clear they may ſeem to be, contain a large quantity of a viſcous ſubſtance, as appears from the ſlimineſs and ropineſs to which they are very much ſubject; this not only hinders the acid parts from ariſing freely, but likewiſe is apt to make the vinegar boil over into the recipient, and at the ſame time diſpoſes it to receive a diſagreeable impreſſion from the fire. And indeed, with the beſt kind of vinegar, if the diſtillation be carried on to any great length, it is extremely difficult to avoid an empyreuma. The beſt method of preventing this inconvenience is, if a retort be made uſe of, to place the ſand but a little way up its ſides, and when ſomewhat more than half the liquor is come over, to pour on the remainder a quantity of freſh vinegar, equal to that of the liquor drawn off. This may be repeated three or four times; the vinegar ſupplied at each time being previouſly made hot. The addition of cold liquor would not only prolong the operation, but alſo endanger breaking the retort. If the common ſtill be employed, it ſhould likewiſe be occaſionally ſupplied with freſh vinegar, in proportion as the ſpirit runs off; and this continued, until the proceſs can be conveniently carried no further. The diſtilled ſpirit muſt be rectified by a ſecond diſtillation in a retort, or glaſs alembic; for though the head and receiver be of glaſs or ſtoneware, the acid will contract a metallic taint from the pewter worm.

The reſiduum of this proceſs is commonly thrown away as uſeleſs, though, if ſkilfully managed, it might be made to turn to good account; the moſt acid parts of the vinegar ſtill remaining in it. Mixed with about three times its weight of fine dry ſand, and committed to diſtillation in a retort, with a well-regulated fire, it yields an exceeding ſtrong acid ſpirit; together with an empyreumatic oil, which taints the ſpirit with a diſagreeable odour. This acid is, nevertheleſs, without any rectification, better for ſome purpoſes (as a little of it will go a great way) than the pure ſpirit; particularly for making the kali acetatum of the London Diſpenſatory; for there the oily matter, on which its ill flavour depends, is burnt out by the calcination.

The ſpirit of vinegar is a purer and ſtronger acid than vinegar itſelf, with which it agrees in other reſpects. The medical virtues of theſe liquors may be ſeen in the MATERIA MEDICA under the article ACETUM. Their principal difference from the mineral acids conſiſts in their being *milder*, *leſs ſtimulating*, leſs *diſpoſed to affect the kidneys*, and *promote the urinary ſecretions*, or to *coagulate the animal juices*. The matter, left after the diſtillation in glaſs veſſels, though not uſed in medicine, would doubtleſs prove a ſerviceable *detergent*, *ſaponaceous acid*; and in this light it ſtands recommended by Boerhaave.

SECT. V.

Combination of Acid with Vinous Spirits.

ALL the mineral acids, on being mixed with ſpirit of wine, raiſe a great ebullition and heat. If the acid be in ſmall quantity, it unites intimately with the vinous ſpirit, ſo as to riſe with it in diſtillation. The taſte, and all the characters of acidity, are deſtroyed; and the mixture acquires a grateful flavour, which neither of the ingredients had before.

SPIRITUS ÆTHERIS VITRIOLICI;

formerly

SPIRITUS VITRIOLI DULCIS.

Spirit of vitriolic æther.

Lond.

Take rectified ſpirit of wine, vitriolic acid, of each one pound.

In the Edinburgh Pharmacopœia, one part of vitriolic æther is ordered to be mixed with two parts of ſpirit of wine, which forms the compoſition. In performing the proceſs of the London Pharmacopœia, the acid is ordered to be poured to the ſpirit by a little at a time, and mixed by ſhaking; then the ſpirit of vitriolic æther to be diſtilled by a ſlow fire, into a tubulated receiver, to which another recipient is fixed, until ſulphureous vapours begin to ariſe from the retort.

If another receiver be taken, and the diſtillation continued, a ſmall portion of the oil of wine will come over, which may be kept for uſe.

The diſtillation ſhould be performed with an equable and very gentle heat, and not continued ſo long as till a black froth begins to appear: for, before this time, a liquor will ariſe of a very different nature from the ſpirit here intended. The ſeveral products are moſt commodiouſly kept apart by uſing a tubulated receiver, ſo placed, that its pipe may convey the matter which ſhall come over, into a phial ſet underneath: the juncture of the retort and recipient is to be luted with a paſte made of linſeed meal, and further ſecured by a piece of wet bladder: the lower juncture may be cloſed only with ſome ſoft wax, that the phial may be occaſionally removed with eaſe.

The true dulcified ſpirit ariſes in thin ſubtile vapours, which condenſe upon the ſides of the recipient in ſtraight ſtriæ. It is colourleſs as water, very volatile, inflammable, of an extremely fragrant ſmell, in taſte ſomewhat aromatic.

After the fire has been kept up for ſome time, white fumes ariſe, which either form irregular ſtriæ, or are collected into large round drops like oil. On the firſt appearance of theſe, the phial (or the receiver, if a common one be made uſe of) muſt be taken away. If another be ſubſtituted, and the diſtillation continued, an acid liquor comes over, of an exceeding pungent ſmell, like the fumes of burning brimſtone. At length a black froth begins haſtily to ariſe, and prevents our carrying the proceſs further.

On the ſurface of the ſulphureous ſpirit is found ſwimming a ſmall quantity of oil, of a light yellow colour, a ſtrong, penetrating, and very agreeable ſmell. This oil ſeems to be nearly of the ſame nature with the eſſential oils of vegetables. It readily and to-

tally diſſolves in rectified ſpirit of wine, and communicates to a large quantity of that menſtruum the taſte and ſmell of the aromatic or dulcified ſpirit.

The matter remaining after the diſtillation is of a dark blackiſh colour, and ſtill highly acid. Treated with freſh ſpirit of wine, in the ſame manner as before, it yields the ſame productions; till at length, all the acid that remains unvolatiliſed being inſatiated with the inflammable oily matter of the ſpirit, the compound proves a bituminous, ſulphureous maſs; which, expoſed to the fire in open veſſels, readily burns, leaving a conſiderable quantity of fixt aſhes; in cloſe ones, explodes with violence; and with fixt alkaline ſalts, forms a compound, nearly ſimilar to one compoſed of alkalies and ſulphur.

Dulcified ſpirit of vitriol has been for ſome time greatly eſteemed both as a menſtruum and a medicine. It diſſolves ſome reſinous and bituminous ſubſtances more readily than ſpirit of wine alone, and extracts elegant tinctures from ſundry vegetables. As a medicine, it *promotes perſpiration* and the *urinary ſecretion*, *expels flatulencies*, and in many caſes *abates ſpaſmodic ſtrictures*, *eaſes pains*, *and procures ſleep*. The doſe is from ten to eighty or ninety drops in any convenient vehicle. It is not eſſentially different from the celebrated anodyne liquor of Hoffman; to which it is, by the author himſelf, not unfrequently directed as a ſuccedaneum.

ÆTHER VITRIOLICUS;
formerly
VITRIOLIC ÆTHER.
Lond.

Take of
Spirit of vitriolic æther, two pound;
Water of pure kali, one ounce.
Shake them together, and diſtil by a gentle heat.

Edin.

Take of
Rectified ſpirit of wine;
Vitriolic acid,—of each, thirty-two ounces.

LIQUOR ANODYNUS MINERALIS HOFFMANNI.
Hoffman's mineral anodyne liquor.

Into half a pound of concentrated oil of vitriol, placed in a large glaſs retort, pour by little and little, through a long-ſtemmed funnel, one pint and a half of highly rectified ſpirit of wine. Stop the mouth of the retort, digeſt for ſome days, and then diſtill with a very gentle heat. At firſt a fragrant ſpirit of wine will ariſe; and after it, a more fragrant volatile ſpirit, to be caught in a freſh receiver. The receiver being again changed, a ſulphureous, volatile, acid phelgm comes over; and at length a *ſweet oil of vitriol*, which ſhould be immediately ſeparated, leſt it be abſorbed by the phlegm. Mix the firſt and ſecond ſpirits together, and in two ounces of this mixture diſſolve twelve drops of the ſweet oil. If the liquor has any ſulphureous ſmell, re-diſtill it from a little ſalt of tartar. *Pariſ.*

Whether this be the exact preparation, ſo much recommended and ſo often preſcribed by Hoffman, as an anodyne and antiſpaſmodic, we cannot determine. We learn from his own writings, that his anodyne liquor was compoſed of the dulcified ſpirit of vitriol, and the aromatic oil which ariſes after it; but not in what proportions he mixed them together. The college of Wirtemberg ſeem to think that all the oil was mixed with all the ſpirit obtained in one operation, without regard to the preciſe quantities.

AQUA RABELLIANA.
Eau de Rabel.

Take four ounces of oil of vitriol,

and twelve ounces of rectified ſpirit of wine. Pour the vinous ſpirit gradually into the acid, and digeſt in a cloſe matraſs. *Parif.*

This liquor has been greatly celebrated in France as a reſtringent, and for the ſame purpoſes as the dulcified ſpirit; from which it differs in having a conſiderable acidity.

In making the vitriolic æther, the following directions ſhould be carefully obſerved:

Pour the ſpirit into a glaſs retort, that will bear the ſudden heat, and pour the acid, in an uniform ſtream, upon it. Mix them gradually and cautiouſly together, by gently and frequently ſhaking the retort; and immediately diſtil by a ſand-heat, prepared before-hand for that purpoſe, the recipient being placed in a veſſel of ſnow or water. The fire ſhould be ſo regulated that the liquor may boil as ſoon as poſſible, and continued to boil till ſixteen ounces are diſtilled, when the retort is to be removed from the ſand.

To the diſtilled liquor add two drams of the ſtronger common cauſtic; and diſtil again, from a very high retort, with a very gentle fire, the recipient being placed as before in a refrigeratory. Continue the diſtillation till ten ounces are drawn off.

To the acid in the retort, after the diſtillation, if you pour ſixteen ounces of rectified ſpirit of wine, and repeat the diſtillation, at laſt the æther will be obtained; and this proceſs may be repeated ſeveral times.

The preparation of this ſingular fluid was formerly confined to few hands; for though ſeveral proceſſes have been publiſhed for obtaining it, the ſucceſs of moſt of them is precarious, and ſome of them are accompanied with danger to the operator. It has been uſual to direct the heat to be kept up till a black froth begins to appear; but if it is managed as above directed, the quantity of æther which the liquor can afford will be formed and drawn off before this ſulphureous froth appears. The cauſtic alkali is to engage any uncombined vitriolic acid, which may be preſent in the firſt diſtilled liquor, without receiving a fermentation which the mild alkali would occaſion, and endanger the burſting of the veſſels. Indeed, without care, this danger attends the whole of the proceſs.

Æther or æthereal ſpirit is the lighteſt, moſt volatile, and inflammable, of all known liquids. It is lighter than the moſt highly rectified ſpirit of wine, in the proportion of about ſeven to eight. A drop, let fall on the hand, evaporates almoſt in an inſtant, ſcarcely rendering the part moiſt. It mixes only in a ſmall quantity, with water, ſpirit of wine, alkaline lixivia, volatile alkaline ſpririts, or acids; but is a *powerful diſſolvent, for oils, balſams, reſins*, and *other analogous ſubſtances*. It has a fragrant odour, which in conſequence of the volatility of the fluid, is diffuſed through a large ſpace. It has often been found to give eaſe in *violent head-achs*, by being applied externally to the part, and *to relieve the tooth-ach*, by being laid on the afflicted jaw. It has been given alſo internally, and conſidered a powerful tonic, and antiſpaſmodic in *dyſpepſy, whooping-coughs*, and *hyſterical caſes*, from two or three drops to half an ounce, in a glaſs of wine or water; which ſhould be ſwallowed as quick as poſſible, as the ether ſo ſpeedily exhales.

SPIRITUS ÆTHERIS NITROSI;
formerly
SPIRITUS NITRI DULCIS.
Dulcified ſpirit of nitre.

Lond.

Take a quart of rectified ſpirit of wine, and half a pound of nitrous acid. Mix them, by pouring the nitrous ſpirit into the other; and diſtil with a gentle heat, one pound ten ounces.

Edinb.

Take of

Rectified ſpirit of wine, three pounds;

Nitrous acid, one pound.

Pour the rectified ſpirit of wine into a large bolt-head, placed in a veſſel of cold water, and add by degrees the acid, carefully ſhaking the veſſel: ſet it in a cool place, lightly ſtopped, for ſeven days; afterwards diſtil the liquor in a water-bath, the receiver being placed in a veſſel filled either with water or ſnow, as long as any ſpirit ariſes.

Here the operator muſt take care not to invert the order of mixing the two liquors, by pouring the vinous ſpirit into the acid; for if he ſhould, a violent effervescence and heat would enſue, and the matter be diſperſed in highly noxious red fumes. The moſt convenient and ſafe method of performing the mixture ſeems to be, to put the inflammable ſpirit into a large glaſs body with a narrow mouth, placed under a chimney, and to pour upon it the acid, by means of a glaſs funnel, in very ſmall quantities at a time; ſhaking the veſſel as ſoon as the effervescence enſuing upon each addition ceaſes, before a freſh quantity is put in. By theſe means, the glaſs will heat equally, and be prevented from breaking. During the action of the two ſpirits upon one another, the veſſel ſhould be lightly covered; if cloſe ſtopt, it will burſt: and, if left entirely open, ſome of the more valuable parts will exhale. Lemery directs the mixture to be made in an open veſſel; by which unſcientifical procedure he uſually loſt, as he himſelf obſerves, half his liquor: and we may preſume that the remainder was not the medicine here intended.

The method uſed by Dr. Black is ſaid to be the beſt for mixing theſe liquors. On two ounces of the ſtrong acid he pours, ſlowly and gradually, about an equal quantity of water; which ley being made to trickle down the ſides of the phial, floats on the ſurface of the acid, without mixing with it. He then adds, in the ſame cautious manner, three ounces of highly rectified ſpirit of wine, which in its turn, floats on the ſurface of the water. By theſe means, the three fluids are kept ſeparate, on account of their ſpecific gravities; and a ſtratum of water is interpoſed between the acid and the ſpirit. The phial is now ſet in a cool place, the acid gradually aſcends, and the ſpirit deſcends through the water.

By this method a quantity of nitrous æther is formed, without the danger of producing elaſtic vapours or explosion.

The liquors mixed together, ſhould be ſuffered to reſt for at leaſt twelve hours, that the fumes may entirely ſubſide, and the union be in ſome meaſure completed. The diſtillation ſhould be performed with a very ſlow and well-regulated fire; otherwiſe the vapour will expand with ſo much force as to burſt the veſſels. Wilſon ſeems to have experienced the juſtneſs of this obſervation; and hence directs the juncture of the retort and receiver not to be luted, or but ſlightly. If a tubulated recipient, with its upright long pipe, be made uſe of, and the diſtillation performed with the heat of a water-bath, the veſſels may be luted without any danger. This method has likewiſe another advantage, as it aſcertains the time when the operation is fi-

niſhed: whilſt in a water-bath, we may ſafely draw over all that will ariſe, for this heat will elevate no more of the acid than what is dulcified by the vinous ſpirit.

Dulcified ſpirit of nitre has been long held, and not undeſervedly, in great eſteem. It *quenches thirſt, promotes the natural ſecretions, expels flatulencies*, and *moderately ſtrengthens the ſtomach.* It may be given from half a dram to two drams, in any convenient vehicle. Mixed with a ſmall quantity of ſpirit of hartſhorn, the ſpiritus volatilis aromaticus, or any other alkaline ſpirit, it proves a *mild*, yet *efficacious diaphoretic*, and often *notably diuretic*: eſpecially in ſome febrile caſes, where ſuch a ſalutary evacuation is wanted. A ſmall proportion of this ſpirit, added to malt ſpirits, gives them a flavour approaching to that of French brandy.

SPIRITUS SALIS DULCIS.

Dulcified ſpirit of ſalt.

This is made with ſpirit of ſalt, after the ſame manner as dulcified ſpirit of nitre.

The dulcification of the ſpirit of ſalt does not ſucceed ſo perfectly, as that of the two foregoing acids, only a minute portion of it uniting with the ſpirit of wine, and, unleſs the proceſs be ſkilfully managed, ſcarce any. Some have held this ſpirit in great eſteem againſt *weakneſs of the ſtomach, indigeſtion*, and the like, *following from hard drinking;* at preſent it is not often made uſe of or kept in the ſhops.

SECT. VI.

Neutral Salts.

When any acid and alkaline ſalts are mixed together, in ſuch proportion that neither of them may prevail, they form by their coalition a new compound, called Neutral. In all the combinations of this kind (except ſome of thoſe with vegetable acids) the alkali and acid are ſo ſtrongly retained by one another, that they are not to be diſunited by any degree of fire. How volatile ſoever the acid were by itſelf, if combined with a fixt alkali, it proves almoſt as fixt as the pure alkali. If the alkali be of the volatile kind, the compound proves alſo volatile, ſubliming in its whole ſubſtance, without any ſeparation of its parts. There are, however, means of procuring this diſunion, by the intervention of other bodies, as we have already ſeen in the ſeparation of the volatile alkali of ſal ammoniac, and of the acids of nitre and ſea ſalt. But, in all caſes of this kind, only one of the ingredients of the neutral ſalt can poſſibly be obtained by itſelf, the ſeparation of this happening ſolely in virtue of the ſuperadded body's uniting with the other.

There is another kind of compound ſalts, formed by the coalition of acids with earthy and metallic bodies. Theſe ſalts differ from the true neutral ones in ſeveral obvious properties; ſome of them change blue vegetable juices to a green like alkalies, and others to a red like acids, while neutral ſalts make no change in the colour: mixed with boiling milk, they coagulate it, while neutral ſalts rather

prevent its coagulation. From moſt of them the acid is diſunited by fire, without the intervention of any additional matter, of which we have ſeen an inſtance in the diſtillation of the acid of vitriol. But the moſt diſtinguiſhing and univerſal character of theſe ſalts is, that ſolutions of them, on the addition of any fixt alkali, grow turbid, and depoſit their earth or metal. It were to be wiſhed that cuſtom had appropriated ſome particular name to the ſalts of this claſs, to prevent their being confounded, which ſeveral of them have often been, with the perfect neutral ſalts.

	Vitriolic acid.	Nitrous acid.	Marine acid.	Acetous acid.
Common fixt alkali.	Vitriolated kali.	Common nitre.	Regenerated ſea ſalt.	Acetated kali.
Alkali of sea salt.	Vitriolated natron.	Cubical nitre.	Sea ſalt.	A ſalt ſimilar to acetat. kali.
Volatile alkali.	Philoſophic ſal ammon.	Volatile nitre.	Sal ammoniac.	aqua ammon. acetat.
Calcareous earth.	Selenites.	Calcareous nitre.	Calcareous muriatic ſalt	A ſubaſtringent ſalt.
Magnesia.	Vitriolated magneſia.	Purging ſalts, not diſtinguiſhed by any particular name.		
Soluble earth of clay.	Alum.	Aſtringent ſalts not diſtinguiſhed by any particular name.		

The preceding table exhibits, at one view, the ſeveral compound ſalts reſulting from the union of each of the pure acids with each of the common alkalies and ſoluble earths; the acids being placed on the top, the alkalies and earths on the left hand, and the compound ſalts in the reſpective interſections; and is thus to be underſtood. In the upright columns, under each of the acids, are ſeen the ſeveral compound ſalts reſulting from the union of that acid with the reſpective alkalies and earths on the left ſide. In the tranſverſe columns, oppoſite to each particular alkali and earth, are ſeen the compound ſalts reſulting from the union of that alkali or earth with the reſpective acids on the top; and converſely, of each of the compound ſalts expreſſed in the table, the component parts are found on the top of the upright column, and on the left ſide of the tranſverſe column, in whoſe interſection that particular ſalt is placed. Some of theſe ſalts have been already treated of in the Materia Medica; but it was thought proper to unite them here into one view, for the greater perſpicuity in regard to their compoſition, and the different properties which their component parts aſſume in different combinations.

Cryſtalliſation of ſalts.

This is a general operation on

neutral and moſt of the other compound ſalts. It depends upon theſe principles: that water, of a certain degree of heat, diſſolves, of any particular ſalt, only a certain determinate quantity: that, on increaſing the heat, it diſſolves more and more (except only in one inſtance, common ſalt) till it comes to boil, at which time both its heat and diſſolving power are at their height: that, in returning to its firſt temperature, it throws off again all that the additional heat had enabled it to diſſolve: that, independently of any increaſe or diminution of heat, a gradual evaporation of the fluid itſelf will occaſion a proportional ſeparation of the ſalt: and that the particles of the ſalt, in this ſeparation from the water, unleſs too haſtily forced together by ſudden cooling, or ſtrong evaporation, or diſturbed by external cauſes, generally concrete into tranſparent and regularly figured maſſes, called cryſtals. The ſeveral ſalts aſſume, in cryſtalliſation, figures peculiar to each. Thus the cryſtals of nitre are hexagonal priſms; thoſe of ſea ſalt, cubes; thoſe of alum, octohedral maſſes; while ſal ammoniac ſhoots into thin fibrous plates like feathers.

The uſe of preparing ſalts in a cryſtalline form is not merely in regard to their elegance, but as a mark of, and the means of ſecuring, their purity and perfection. From ſubſtances not diſſoluble in water, they are purified by the previous ſolution and filtration: by cryſtalliſation, one ſalt is purified from an admixture of ſuch other ſaline bodies as diſſolve either more eaſily or with more difficulty than itſelf. For, if two or more ſalts be diſſolved together in a certain quantity of hot water, the ſalt which requires the greateſt heat for its ſolution in that quantity of water, will firſt begin to ſeparate in cooling: and, if the water be kept evaporating, in an uniform heat, the ſalt which requires moſt water in that heat will be the firſt in cryſtalliſing. In all caſes of this kind, if the proceſs be duly managed, the firſt ſhootings are generally well figured and pure. The ſucceeding ones, ſooner or later, according to the quantity of the other ſalts in the liquor, retain an admixture of thoſe ſalts, which they betray by their ſmallneſs and figure.

In order to the cryſtalliſation of ſaline ſolutions, it is cuſtomary to boil down the liquor, till ſo much of the fluid have exhaled, as that the ſalt begins to concrete from it even while hot, forming a pellicle upon the ſurface expoſed to the air. When this mark appears, the whole is removed into a cold place. This method ſeldom affords perfect cryſtals: for, when water is thus ſaturated with the ſalt in a boiling heat, and then ſuddenly cooled; the particles of the ſalt run haſtily and irregularly together, and form only a confuſed ſemitranſparent maſs. It is by ſlow concretion that moſt ſalts aſſume their cryſtalline form in perfection. The evaporation ſhould be gentle, and continued no longer, than till ſome drops of the liquor, in a heat below boiling, being let fall upon a cold glaſs plate, diſcover cryſtaline filaments. The liquor is then immediately to be removed from the fire into a leſs warm, but not a cold place; and the veſſel covered with a cloth to prevent the acceſs of cold air, and the formation of a pellicle, which falling down through the fluid, would diſturb the regularity of the cryſtalliſation. This is the moſt effectual method for moſt ſalts; thought there are ſome, whoſe cryſtalliſation is to be effected, not by an abatement of the heat, but by a

continued equable evaporation of the fluid; such in particular is sea salt.

Salts retain in crystallisation a portion of the aqueous fluid, without betraying any marks of it to the eye; on this their crystalline form appears in great measure to depend. The quantity of phlegm or water varies in different salts; dry crystals of nitre were found, on several careful trials, to contain about one-twentieth of their weight; those of alum, one-sixth; sea salt, one-fourth; borax, green vitriol, and the purging salts, no less than one half. The same salt appears always to retain nearly the same quantity.

Some salts dissolve in spirit of wine; and here also, as in water, the solution is limited, though the salt is not easily recovered in a crystalline form. Such in particular, are combinations of the nitrous acid with volatile alkalies, and with calcareous earths; of the marine acid with all the soluble earths; of the acetous with fixt and volatile alkalies. Scarce any of the compound salts, whose acid is the vitriolic, are affected by vinous spirits.

Salts differ greatly in their disposition to assume and retain a crystalline form. Many even of the compound kind imbibe humidity like fixt alkalies, so as to crystallise with difficulty, and, when crystallised, or exsiccated by heat, to deliquiate again in the air. Such are the combinations of the nitrous and marine acid with all the soluble earths, and of the acetous both with earths and alkalies. The vitriolic acid, on the other hand, forms, with all the substances it dissolves, permanent crystals; as do likewise the other mineral acids with all alkalies.

The crystallisation of those salts, which are not dissoluble in spirit of wine, is generally promoted by a small addition of that spirit; which absorbing the water, or weakening its dissolving power on the salt, disposes the salt to part from it more freely. The operator must be careful however not to add too much of the spirit, especially where the salt is composed of an earthy or metallic body united with the acid; lest it absorb the acid as well as the water, and instead of a gradual and regular crystallisation, hastily precipitate the earth or metal in a powdery form.

Mr. Roulle, of the French academy of sciences, has examined with great attention the phenomena of the crystallisation of salts, and published the result of his observations in different volumes of the Memoirs of that academy. Among other curious particulars, he has given a general distribution of salts, in regard to their crystallisation, which will be of practical utility to the artist.

He divides evaporation into three degrees; *insensible evaporation*, or that effected by the natural warmth of the atmosphere, from freezing, up to the heat of the summer's sun; *mean evaporation*, commencing with the sun's heat, and extending to that in which the exhaling steam is visible to the eye, and the liquor too hot to be endured by the hand; and *strong evaporation*, reaching from this period to boiling. He divides salts into six classes; the distinctions of which are taken from the degree of evaporation in which they crystallise most perfectly, from the figure of their crystals, their disposition to remain single or unite in clusters, and their receiving an increase from a continuance of the crystallisation.

I. The first class consists of salts which crystallise into small plates or very thin scales. The crystals are single. They are, of all salts, those which crystallise most frequently on the surface of their solutions, which retain least water in their crystals, and require most to dissolve in. They crystallise most perfectly by insensible evaporation.

Sedative salt. Selenites.

II. Salts whose crystals are cubes, cubes with the angles truncated, or pyramids of four or six sides. They form single, and change their figure by new accretions. By insensible evaporation they crystallise at the bottom, by mean evaporation at the surface, and by both kinds they prove perfect and regular. By strong evaporation, the liquor contracts a pellicle, and in cooling yields few crystals, and those ill figured.

Tartar. Sea salt. Vitriolated kali.

III. Salts whose crystals are tetrahedral, pyramidal, parellelopipeds, rhomboidal, and rhomboidal parellelopipeds; with the angles variously truncated, according to different circumstances. They form single (except that some few unite by the bases) and change their figure by new accretions. They crystallise at the bottom, most perfectly by insensible evaporation: by mean and strong evaporation, the liquor contracts a pellicle, and in cooling the crystals adhere to the pellicle, and prove confused and ill formed. They retain a large quantity of water.

Blue vitriol. Green vitriol. Verdigris. Seignett's salt. White vitriol. Borax. Alum.

IV. Salts whose crystals are flattened parallelopipeds, with the extremities terminating in two surfaces inclined to one another, so as to form a point and acute angles with the large sides. They cluster together, uniting, by the bases, into tufts. The crystals are largest and most regular by insensible evaporation. By mean and hasty evaporation, a pellicle is formed, and in cooling the crystals prove very small. They retain a large quantity of water in crystallisation, and require little to dissolve in.

Tartarised kali. Tartar united with volatile alkali. Tartar united with absorbent earth.

V. Salts whose crystals are very long, in form of needles, prisms, or columns of different surfaces. They shoot at the bottom, and cluster together into tufts of regular figures. By insensible evaporation they scarce ever crystallise well. By mean and strong evaporation, they give a pellicle, and in slow cooling, if the evaporation was not carried too far, they yield perfectly well formed crystals, which at first swim, but soon fall to the bottom. If the evaporation was too long continued, the crystals prove confused and ill formed.

Sal ammoniac. Philosophic sal ammoniac. Nitre. Volatile nitre. Vitriolated natron. Salt of amber. Vinegar united with chalk. Volatile vitriolic acid united with fixt alkali.

VI. Salts whose crystals are in very small needles, or of other indeterminate figures. None of them crystallise by insensible evaporation, and few of them by the mean degree. They require to be reduced, by strong evaporation, to a thick consistence; they then contract a pellicle, and crystallise with confusion. If the crystals be wanted regular, spirit of wine must be used, or some other medium, if the salt be soluble in spirit. They readily dissolve in water, and liquefy in the air.

Kali acetatum. Marine acid united with absorbent earths. Nitrous acid united with absorbent earths.

NITRUM PURIFICATUM.

Putrified nitre.

Lond.

Take of

Nitre, two pounds;

Distilled water, four pints.

Boil the nitre in the water till it is dissolved; filter the solution, and set it by to crystallise.

The usual method of evaporating solutions of salts, in order to their crystallisation, until a pellicle appears upon the surface fails in nitre. Here, when the liquor becomes ready for forming crystals; if a little be taken up in a spoon as it cools, the salt will begin to shew itself in small threads.

Common nitre contains usually a considerable portion of sea salt, which in this process is separated, the sea salt remaining dissolved after greatest part of the nitre has crystallised. The crystals which shoot after the first evaporation, are large, regular, and pure: but when the remaining liquor is further evaporated, and this repeated a second or third time, the crystals prove at length small, imperfect, and tipt with little cubical glebes of sea salt.

When rough nitre, in the state wherein it is first extracted from the earths impregnated with it, is treated in this manner, there remains at last a liquor called motherley, which will no longer afford any crystals. This appears to participate of the nitrous and marine acids, and to contain an earthy matter dissolved by those acids. On adding alkaline lixivia, the earth is precipitated, and when thoroughly washed with water, proves insipid. If the liquor be evaporated to dryness, a bitterish saline matter is left, which being strongly calcined in a crucible, parts with the acids, and becomes, as in the other case, insipid.

This earth has been celebrated as an *excellent purgative*, in the dose of a dram or two; and, in smaller doses, as an *alterant in hypochondriacal* and *other disorders*. This medicine was for some time kept a great secret, under the names of *magnesia alba*, *nitrous panacea*, *count Palmer's powder*, *il polvere albo Romano*, *poudre de Sentinelli*, &c. till Lancisi made it public in his notes on the *Metallotheca Vaticana*. It has been supposed that this earth is no other than a portion of the lime commonly added to the elixation of nitre at the European nitre-works. But, though the specimens of magnesia examined by Neumann, and some of that which has been brought hither from abroad, gave plain marks of a calcerous nature; yet the true magnesia must be an earth of a different kind, calcareous earths being rather astringent than purgative. The earthy basis of the *sal catharticus amarus* is found to have the properties ascribed to the true magnesia of nitre, and appears to be the very same species of earth. From that salt therefore

this medicine is now prepared, as will be ſeen hereafter.

The magneſia alba differs from calcareous earths, in having a leſs powerful attraction for fixed air, and in not becoming cauſtic by calcination.

SAL AMMONIACUS PURIFICATUS.

Purified ſal ammoniac.

This ſalt is purified by ſolution in water, filtration, and cryſtalliſation, after the manner above directed for nitre.

The impurities of ſal ammoniac are commonly ſuch as will not diſſolve in water: and hence the purification is effected by the ſolution and filtration. The very laſt cryſtals ſeldom betray an admixture of any other ſalt.

ZINCUM VITRIOLATUM PURIFICATUM;

formerly

VITRIOLUM ALBUM PURIFICATUM.

Purified vitriolated zinc.

Lond.

Take of
White vitriol, one pound;
Vitriolic acid, one dram;
Boiling diſtilled water, three pints;
Water, as much as is ſufficient.

Boil them together till the vitriol is diſſolved; then filter the liquor, and after due evaporation ſet it by in a cold place to cryſtalliſe.

Here the intention is not to ſeparate the ochery matter of the vitriol, but to prevent its ſeparating and colouring the cryſtals. This is effectually anſwered by the addition of the acid, by which it is kept diſſolved.

White vitriol, or vitriolated zinc, contains ſometimes a ſlight impregnation of copper, and more of a ferruginous matter; it therefore wants ſome depuration, for which purpoſe the vitriolic acid is added; but this does not ſeem the beſt method for anſwering the intended purpoſe; for if the vitriolic acid be added the iron or copper will be more likely to be united to it, and ſo cryſtalliſe together with the vitriolated zinc; whereas a ſmall addition of zinc would precipitate the other metals, by depriving them of their acid, and the vitriolated zinc, would thus become perfectly pure. This is one of the quickeſt in operation of thoſe *emetics* which are eſteemed ſafe, in doſes, *to adults*, from fifteen grains to a ſcruple, or half a dram.—Internally given in ſmaller doſes, we may obtain all the *tonic* power of zinc, and indeed ſome think it preferable in every caſe to the Calx of Zinc.—See VITRIOLUM ALBUM, Materia Medica.

ALUMINIS PURIFICATIO.

PURIFICATION OF ALUM.

Lond.

Take of
Alum, one pound;
Chalk, one dram;
Diſtilled water, two pints.

Boil a little while, ſtrain, and ſet the liquor aſide to cryſtalliſe.

The alum which we have from the alum works in England is ſufficiently pure for any medicinal purpoſes; however in this proceſs the chalk perfectly abſtracts any ſuperabundant acid of the alum, and precipitates any metallic or other foreign matter, with which it may be combined. Thus purified, it ſeems to be more ſoluble in water than before.

ALUMEN USTUM.

Burnt alum.

Lond.

Let alum be calcined in an iron or earthen veſſel, ſo long as it bubbles and ſwells up.

The bubbling or bliſtering proceeds from the phlegm retained in the cryſtals; after that is expelled,

the ſalt cannot be made liquid by any degree of fire. Alum is compoſed of vitriolic acid and an earth: and it is remarkable, that combinations of that acid with all earths, with moſt metals, and even with vegetable fixt alkalies, are unfuſible.

The alum, thus deprived of its phlegm, proves conſiderably ſtronger, and more acrid, inſomuch as to be ſometimes employed for conſuming fungous fleſh. It is ſaid to have the inconvenience of leaving a hardneſs upon the part.

For the medical properties of theſe two, ſee ALUMEN, Materia Medica.

FERRUM VITRIOLATUM EXSICCATUM;

vulgo

VITRIOLUM CALCINATUM.

Vitrol of iron dried.

Edinb.

Take vitrol of iron, any quantity you chuſe.

Let it be calcined in an unglazed earthen veſſel with a moderate fire till it becomes white and very dry. But the matter muſt be kept continually ſtirring, to prevent its ſticking to the veſſel, and acquiring a ſtony hardneſs. If this be urged with a more vehement fire, it paſſes into a deep red ſubſtance, called colcothar of vitriol.

This method is ſufficiently troubleſome: for, unleſs the heat be very gentle, and the matter ſpread very thin over the bottom of a broad ſhallow veſſel, it is almoſt impoſſible to avoid melting it, which makes it adhere to the ſides of the pan, and renders the previous pulveriſation an uſeleſs labour.

The method uſually practiſed by the chemiſts is, to place a deep earthen pan, with ſome vitriol in it, upon a gentle fire; the vitriol ſoon liquefies, boils up, and by degrees incruſtates to the ſides of the veſſel. Some more vitriol is then thrown in and ſuffered to incruſtate in the ſame manner, and this procedure repeated till the pan is nearly full of the concreted matter, which proves of a whitiſh colour, except on the outſide next the pan (which muſt be broken, to take it out) where it appears yellowiſh or reddiſh, according to the continuance and degree of fire. If the vitriol be deſired ſtill further dephlegmated, this may be commodiouſly effected, by reducing the maſs into a groſs powder (which will now no longer melt) and then calcining it over a ſtrong fire, in a ſhallow iron pan, till it has gained the degree of dryneſs required, which may be known from its colour. The principal uſe of calcined vitriol is for the diſtillation of the ſpirit of vitriol. If employed for this purpoſe uncalcined, it would melt in the diſtilling veſſel, and, running into a lump, ſcarce give out any ſpirit; and the little obtained would be very weak.

KALI VITRIOLATUM;

formerly

TARTARUM VITRIOLATUM.

Vitriolated kali.

Lond.

Take of the

Salt which remains after the diſtillation of the nitrous acid, two pounds;

Diſtilled water, two gallons.

Expel the ſuperfluous acid, by expoſing the ſalt to a ſtrong fire, in an open veſſel; then boil it a little while in the water; ſtrain and ſet the liquor aſide to cryſtalliſe.

LIXIVA VITRIOLATA;

vulgo

TARTARUM VITRIOLATUM.

Vitriolated lixiva.

Edinb.

Take of vitriolic acid diluted with

ſix times its quantity of water, as much as you chuſe.

Put it into a capacious glaſs veſſel, and drop into it gradually of purified fixed vegetable alkali, diſſolved with ſix times its quantity of water, as much as is ſufficient to render the acid perfectly neutral—The effervescence having ceaſed, filter the liquor, and after proper evaporation, ſet it aſide to cryſtalliſe, not in a cold but moderately warm place.

During the effervescence the operator ought to take care that the vapour then ſeparating does not ſtrike his noſtrils; for fixed air, when applied to the olfactory nerves is highly deleterious to life.

The mode of its being prepared by the Edinburgh diſpenſatory, is an elegant, and one of the leaſt troubleſome ways of preparing this ſalt. The Edinburgh college, in former editions, ordered the acid liquor to be dropt into the alkaline. By the converſe procedure, now received, it is obviouſly more eaſy to ſecure againſt a redundance of acidity: for the greater certainty in this point, it may be expedient, as in the foregoing proceſs, to drop in a little more of the alkaline ley than the ceſſation of the effervescence ſeems to require.

Vitriolated tartar, in ſmall doſes, as a ſcruple or half a dram, is an uſeful aperient; in larger ones, as four or five drams, a mild cathartic, which does not paſs off ſo haſtily as the *natron vitriolatum* or *magneſia vitriolata*.

The vitriolated tatar is one of thoſe neutral ſalts moſt difficult of ſolution, very little of it being taken up in cold water, notwithſtanding both the acid, and alkali of which it is compoſed ſo readily unite with that menſtruum, and ſo ſtrongly attract moiſture, even from the air. From the difficulty of its ſolubility, it is eſteemed one of the moſt perfect neutral ſalts, which performs it moſt completely, and extends its action beyond the primæ viæ.

The wholeſale dealers in medicines have commonly ſubſtituted for it an article otherwiſe almoſt uſeleſs in their ſhops, the reſiduum of Glauber's ſpirit of nitre. This may be looked upon as a venial fraud, if the ſpirit has been prepared as formerly directed, and the reſiduum diſſolved and cryſtalliſed; but it is a very dangerous one, if the vitriolic acid has been uſed in an over proportion, and the caput mortuum employed without cryſtalliſation; the ſalt in this caſe, inſtead of a mild neutral one of a moderately bitter taſte, proving highly acid. The purchaſer ought therefore to inſiſt upon the ſalt's being in a cryſtalline form. The cryſtals, when perfect, are oblong, with ſix flat ſides, and terminated at each end by a ſix-ſided pyramid. Some appear compoſed of two pyramids joined together by the baſes, and many, in the moſt perfect cryſtalliſations I have ſeen, are very irregular. They decrepitate in the fire, ſomewhat like thoſe of ſea ſalt, for which they have ſometimes been miſtaken.

LIXIVA VITRIOLATA SULPHUREA;

vulgo

SAL POLYCHRESTUS.

Vitriolated ſulphurous lixiva.

Take of

Nitre, reduced to powder;

Flowers of ſulphur, equal weights.

Let them be well mixed and thrown gradually into a red-hot crucible. As ſoon as the deflagration has ceaſed, let the ſalt cool, and be kept in a glaſs veſſel well ſtopped.

This ſalt may be made more pure

if it is diſſolved in warm water, filtered, and reduced into cryſtals.

Both theſe preparations are formed by the union of the prepared kali with the vitriolic acid. The firſt is the moſt ſimple proceſs, becauſe it is formed by the power of ſimple elective attraction, but in the laſt double elective attraction takes place, for here both the nitre and ſulphur are decompounded, the acid of the nitre, and the inflammable principle of the ſulphur detonate together: while the acid of the ſulphur combines with the alkaline baſis of the ſulphur. The two neutral ſalts are therefore exactly the ſame.

NATRON VITRIOLATUM;
Lond.
SODA VITRIOLATA;
Edinb.
VITRIOLATED NATRON, or SODA;
formerly
SAL CATHARTICUS GLAUBERI.

Diſſolve in warm water the maſs which remains after the diſtillation of ſpirit of ſea ſalt: filter the ſolution, and cryſtalliſe the ſalt. Expel the ſuperfluous acid, by expoſing the ſalt to a ſtrong fire, in an open veſſel, then boil it a little in the water, ſtrain the ſolution, and ſet it aſide to cryſtalliſe.
Lond.

There is no great danger of the cryſtals proving too ſharp, even when the ſpirit of ſalt is made with the largeſt proportion of oil of vitriol directed under that proceſs. The liquor which remains after the cryſtalliſation is indeed very acid; and with regard to this preparation, it is convenient it ſhould be ſo; for otherwiſe, the cryſtals will be very ſmall, and likewiſe in a little quantity. Where a ſufficient proportion of oil of vitriol has not been employed in the diſtillation of the ſpirit, it is neceſſary to add ſome to the liquor, in order to promote the cryſtalliſation of the ſalt.

The title formerly given to this ſalt expreſſes its medical virtues. Taken from half an ounce to an ounce, or more, it proves *a mild and uſeful purgative*; and in ſmaller doſes, largely diluted, *a ſerviceable aperient and diuretic.* The ſhops frequently ſubſtitute for it the *ſal catharticus amarus*, which is nearly of the ſame quality, but ſomewhat more unpleaſant, and, as is ſaid, leſs mild in operation. They are very eaſily diſtinguiſhable from each other, by the effect of alkaline ſalts upon ſolutions of them. The ſolution of Glauber's ſalt ſuffers no viſible change from this addition, its own baſis being a true fixt alkali: but the ſolution of the *ſal catharticus amarus* grows inſtantly white and turbid, its baſis, which is an earth, being extricated copiouſly by the alkaline ſalt; as in the making *magneſia alba.*

SODA PHOSPHORATA.
Phoſphorated ſoda, or mineral fixed alkali.
Edinb.

Take of
Bones burnt to whiteneſs, and powdered, ten pounds;
Vitriolic acid, ſix pounds;
Water, nine pounds.

Mix the powder in an earthen veſſel very well with the vitriolic acid; afterwards add the water, and mix them thoroughly together; then keep the veſſel in the vapour of boiling water for three days; after which time, diſtil the matter with another additional nine pounds of boiling water, and ſtrain it forcibly through linen, pouring upon it gradually hot water, till all the acid ſhall be waſhed off; ſet by the ſtrained liquor, that the fæces may ſubſide; from which pour it off, then reduce it by evaporation to

nine pounds, which ſet by, that the fæces may again ſubſide. Evaporate the liquor, poured a ſecond time from the fæces, to ſeven pounds, which being a third time cleared from the fæces, ſtrain. Thus at laſt a ſufficiently pure phoſphoric acid will be procured, to which being heated in an earthen veſſel, add purified ſoda diſſolved in warm water until the effervescence ſhall ceaſe. Then ſtrain the mixture, and ſet it aſide, that cryſtals may be formed, theſe being removed to the liquor if it ſhould be neceſſary, add a little ſoda that the acid may be perfectly neutraliſed, and by evaporation, diſſolve it to form cryſtals again ſo long as any can be produced.

Theſe cryſtals are to be kept in a veſſel well cloſed.

MAGNESIA ALBA.

White magneſia.
Lond.

Take
Vitriolated magneſia;
Prepared kali, of each two pounds;
Diſtilled water boiling, twenty pints.

Let theſe ſaline ſubſtances be diſſolved ſeparately, each in ten pints of water, and filter through paper, then mix them. Boil the liquor a little while and ſtrain it while hot through linen, upon which will remain the WHITE MAGNESIA; then pour upon it diſtilled water ſufficient to diſſolve and waſh out the vitriolated kali.

The ablutions ſhould be made with pure ſoft water, better if it is diſtilled: hard water is altogether inadmiſſible, as the hardneſs is generally owing to an imperfect nitrous ſelenite, whoſe baſe is capable of being diſengaged by magneſia united with fixed air.

This powder appears to be the ſame ſpecies of earth with that obtained from the mother-ley of nitre which was for ſeveral years a celebrated ſecret in the hands of ſome particular perſons abroad. HOFFMAN, who deſcribes the preparation of the nitrous magneſia, gives it the character of an uſeful *anti acid*, a *ſafe* and *inoffenſive laxative* in doſes of a dram or two, and a *diaphoretic* and *diuretic* when given in ſmaller doſes of fifteen or twenty grains. It is particularly ſerviceable in *heart-burns*, and *for preventing or removing the many diſorders which children are ſo frequently thrown into from a redundance of acid humours in the firſt paſſages.* It is preferred, on account of its laxative quality, to the common abſorbents, which (unleſs gentle purgatives are given occaſionally to carry them off) are apt to lodge in the body, and occaſion a coſtiveneſs very detrimental to infants.

Magneſia alba, when prepared in perfection, is a white and very ſubtile earth, perfectly void of ſmell or taſte, of the claſs of thoſe which diſſolve in acids. It diſſolves freely, even in the vitriolic acid; which in the common way of making ſolutions, takes up only an inconſiderable portion of other earths. Combined with this acid, it forms a bitter ſalt, very eaſily ſoluble in water, while the common abſorbents form with the ſame acid almoſt inſipid concretes, very difficult of ſolution. Solutions of magneſia in all acids are *bitter* and *purgative*; while thoſe of *the other earths* are more or leſs *auſtere* and *aſtringent*. A large doſe of the magneſia, if the ſtomach contains no acid to diſſolve it, does not purge or produce any ſenſible effect. A moderate one, *if an acid be lodged there*, or *if acid liquors be taken after it, procures ſeveral ſtools*; whereas the common abſorbents, in the ſame circumſtances, inſtead

of loosening, bind the belly. It is obvious, therefore, that magnesia is specifically different from the other earths, and that it is applicable to useful purposes in medicine.

MAGNESIA USTA.

Calcined Magnesia.

Lond.

Take of white magnesia, four ounces; expose it to a strong heat for two hours, and when cold put it into a glass vessel closely stopped. The formula of the Edinburgh dispensatory is the same, except the quantity of magnesia, which is not specified.

By this process the magnesia is deprived of its fixed air, which constitutes more than half its weight, according to Dr. Black $\frac{7}{12}$, and remains eqally mild with the aërated magnesia. When at the end of the operation it exhibits a luminous or phosphorescent property, it is a pretty certain criterion that it is deprived of air. If sufficiently burnt it does not effervesce with acids, and consequently is more eligible to complaints in the primæ viæ where there is a redundant acidity attended with flatulency, because it contains more of the real earth of magnesia in a given quantity, and neutralizes the acid without that extrication of air which is often a troublesome consequence in employing in these complaints aërated magnesia. It purges briskly in doses of from one dram to two. It is said, that, similar to the mild calcareous earths, it promotes and encreases putrefaction, the same as has been observed with respect to the Epsom and some other salts, which have magnesia for their bases.

KALI ACETATUM.

Lond.

LIXIVA ACETATA.

Edinb.

formerly

SAL DIURETICUS.

Lond.

TARTARUM REGENERATUM.

Edinb.

Acetated kali, or lixiva.

Lond. and Edinb.

Take of

Prepared kali, one pound.

Boil it, with a very gentle heat, in four or five times its weight of distilled vinegar. When the fermentation ceases, add, at different times, more distilled vinegar; one portion being almost evaporated, fresh vinegar will no longer raise any fermentation; which generally happens by the time that twenty pounds of distilled vinegar have been used. Then slowly exhale to dryness.

Melt the remaining impure salt for a little time, over a gentle fire; then dissolve it in water, and filter the solution through paper. If the melting has been duly performed, the filtered liquor will be limpid and colourless; if otherwise, it will be of a brown colour.

Evaporate the limpid solution, with a gentle heat, in a shallow glass vessel, occasionally stirring the salt as it dries, that its moisture may be the sooner exhaled. Afterwards keep it for use in a vessel very closely stopt; for it will liquefy by the air. This salt ought to be of perfect whiteness; and should totally dissolve both in water and spirit of wine, without leaving any fæces. If the salt, though ever so white, deposits any fæces in spirit of wine; the whole of it must be dissolved in that spirit, the solution filtered, and exsiccated again.

If the common alkalies be made use of for this process, they should be previously purified, by solution and crystallisation, from the neu-

tral ſalt which they generally contain. The diſtilled vinegar muſt be perfectly free from any empyreumatic taint. It is not neceſſary to dephlegmate it, or throw away the firſt runnings in the diſtillation, ſince theſe contain a portion of the acid (the part here wanted) as well as the phlegm.

It is difficult to hit the point of ſaturation betwixt the acetous acid and the alkaline ſalt. After about fourteen parts of ſtrong diſtilled vinegar have been gradually poured upon one of the fixed ſalt, the addition of a little more of the acid will not occaſion any further effervescence in the cold: but, if the mixture be now ſtrongly ſtirred and well heated, the effervescence will appear afreſh; upon which ſome more vinegar is to be added, till it again ceaſes. The ſaturation is not as yet complete; for, upon exhaling the aqueous parts, the remaining ſalt ſtill effervesces with freſh vinegar. When ſo much of the acid has now been added, that no marks of fermentation any longer appear, a little more of the vinegar may be poured in before you proceed to the laſt evaporation. By theſe means, the ſaturation of the alkali will be ſecured, whilſt, if the acid prevail, the ſuperfluous quantity of it will exhale.

The ſalt thus prepared is of a dark brown colour, a peculiar, not ungrateful odour, a penetrating, ſaponaceous, ſaline taſte, in no wiſe alkaline or acid. Its brown colour, and ſaponaceous quality, proceed from the oily parts of the vinegar; the depuration of the ſalt from this oil, is not in the foregoing proceſs inſiſted on. In the London Pharmacopœia, the ſalt is ordered to be purified to perfect whiteneſs.

The purification of this ſalt is not a little troubleſome. The operator muſt be particularly careful, in melting it, not to uſe too great a heat, or to keep it liquefied too long; a little ſhould be occaſionally taken out, and put into water: and as ſoon as it begins to part freely with its black colour, the whole is to be removed from the fire. In the laſt drying, the heat muſt not be ſo great as to melt it; otherwiſe it will not prove totally ſoluble. If the ſolution in ſpirit of wine be exſiccated, and the remaining ſalt liquefied with a very ſoft fire, it gains the leafy appearance which procured it the name *terra foliata*.

In the fourth volume of the Memoirs of the Correſpondents of the French Academy, Mr. Cadet has given a method of making the ſalt white at the firſt evaporation, without the trouble of any further purification. He obſerves, that the brown colour depends upon the oily matter of the vinegar being burnt by the heat commonly employed in the evaporation; and his improvement conſiſts in diminiſhing the heat at the time that this burning is liable to happen. The proceſs he recommends is as follows.

Diſſolve a pound of ſalt of tartar in a ſufficient quantity of cold water, filter the ſolution, and add by degrees as much diſtilled vinegar as will ſaturate it, or a little more. Set the liquor to evaporate in a ſtone-ware veſſel, in a gentle heat not ſo ſtrong as to make it boil: when a pellicle appears on the ſurface, the reſt of the proceſs muſt be finiſhed in a water-bath. The liquor acquires by degrees an oily conſiſtence, and a pretty deep brown colour, but the pellicle or ſcum on the top looks whitiſh, and when taken off and cooled, appears a congeries of little brilliant ſilver-like plates. The matter is to be kept continually ſtirring, till it is wholly changed

into this white flaky matter, the complete drying of which is moſt conveniently effected in a warm oven.

We ſhall not take upon us to determine whether the pure or impure ſalt be preferable as medicines; obſerving only, that the latter is more of a ſaponaceous nature, the former more acrid, though ſomewhat more agreeable to the ſtomach. Mr. Cadet reckons the ſalt prepared in his method ſuperior both to the brown and white ſorts made in the common way, as poſſeſſing both the oily quality of the one, and the agreeableneſs of the other, and as being always uniform, or of the ſame power; whereas the others are liable to vary conſiderably, according to the degree of heat employed in the evaporation. They are all medicines of great efficacy, and may be ſo doſed and managed as to prove either *mildly cathartic*, or *powerfully diuretic*: few of the ſaline deobſtruents come up to them in virtue. The doſe is from half a ſcruple to a dram or two. A bare mixture of alkaline ſalt and vinegar without exſiccation, is not perhaps much inferior as a medicine to the more elaborate ſalt. I have known two drams of the alkali, ſaturated with vinegar, occaſion ten or twelve ſtools, *in hydropic caſes*, and *a plentiful diſcharge of urine*, without any inconvenience.

AQUA AMMONIÆ ACETATÆ;

formerly

SPIRITUS MINDERERI.

Water of acetated ammonia.

Lond.

Take of

Ammonia prepared, two ounces.
Diſtilled vinegar, four pints, or as much as will perfectly ſaturate the ammonia.

Edinb.

Take any quantity of prepared ſal ammonia, and gradually pour upon it as much diſtilled vinegar, as will perfectly ſaturate the ammonia.

This is an excellent aperient ſaline liquor. Taken warm in bed, it proves *commonly a powerful diaphoretic*, or *ſudorific*; and, as it operates without heat, it has place in febrile and inflammatory diſorders, where medicines of the warm kind, if they fail of procuring ſweat, aggravate the diſtemper. Its action may likewiſe be determined to the kidneys, by walking about in a cool air. The common doſe is half an ounce, either by itſelf, or along with other medicines adapted to the intention. Its ſtrength is not a little precarious, depending in great meaſure on that of the vinegar; an inconvenience which cannot eaſily be obviated, for the ſaline matter is not reducible to the form of a concrete ſalt.

SECT. VII.

ANOMALOUS SALTS.

CRYSTALLI TARTARI.

Cryſtals of tartar.

LET powdered white tartar be boiled in twenty times its quantity of water, till perfectly diſſolved; and the ſolution, whilſt it continues hot, paſſed through filtering paper or a woollen cloth, and received in a wooden veſſel; then expoſe it

for a night or longer to the cold air, that cryſtals may form themſelves, and ſhoot to the ſides of the veſſel; the water being now poured off, the cryſtals are to be collected and dried for uſe.

The filtration of the ſolution of tartar through paper ſucceeds very ſlowly, and, unleſs managed with a good deal of addreſs, not at all: for, as ſoon as the boiling liquor begins to grow ſenſibly leſs hot, it depoſits much of the tartar all over the ſurface of the paper, which hinders the remainder from paſſing through. Zwelffer, in his animadverſions on this proceſs in the Auguſtan Pharmacopœia, directs the ſolution to be clarified with whites of eggs, and ſtrained only through a linen cloth; he likewiſe judiciouſly orders the veſſel to be cloſe covered, and the cryſtalliſation performed in a warm place: for, if the ſolution be ſuffered to cool very faſt, it is vain to expect any appearance of cryſtals; the tartar will inevitably be precipitated to the bottom of the veſſel in the form of ſand. And indeed, the buſineſs of refining and cryſtalliſing tartar is ſo very troubleſome, and requires ſo large an apparatus, that ſcarce any of the apothecaries, or even of the trading chemiſts, are at the trouble of it; but either import it ready refined from Holland, or purchaſe it from ſome people here who make it their ſole buſineſs.

Cryſtals of tartar, or what is called Cream of Tartar, in the ſucceeding proceſs, both of them poſſeſs ſimilar medical effects, for which ſee Tartarum, in the Materia Medica.

CREMOR TARTARI.

Cream of tartar.

Take any quantity of ſolution of tartar, made as in the foregoing proceſs, and paſſed through a filter. Boil it over the fire, till a thick cuticle appear on the ſurface, which is to be taken off with a wooden ſkimmer bored full of holes. Continue the boiling till a freſh cuticle ariſe, which is to be taken off as the foregoing, and the operation repeated till the whole quantity of liquor be thus conſumed. Afterwards dry all the cuticles together in the ſun.

This proceſs ſeems inſerted only to retain a name long familiar to the ſhops; for the preparation itſelf in no reſpect differs from cryſtals of tartar reduced to powder. Indeed the purchaſer ought always to prefer the cryſtals; for the powder is often ſophiſticated with ſaline ſubſtances of another kind.

Both the cryſtals and cream are brought to us from abroad; they are not different in quality from one another: and that good white tartar, unrefined, is not inferior to either of them.

KALI TARTARISATUM;

formerly

Tartarum Solubile.

Tartariſed kali.

Lond.

Take of

Prepared kali, one pound;
Cryſtals of tartar, three pounds;
Boiling diſtilled water, three gallons.

To the kali, diſſolved in water, add gradually the cryſtals of tartar powdered; filter the liquor, when cold; and after due evaporation ſet it by to cryſtalliſe.

LIXIVA TARTARISATA;

vulgo

Tartarum Solubile.

Tartariſed lixiva.

Edinb.

Take of

Purified fixt vegetable alkali, one pound;
Water, fifteen pounds.

The alkaline ſalt being diſſolved in the boiling water, add gradually the cryſtals of tartar powdered,

ſo long as any effervescence is raiſed, which will commonly ceaſe before a third part of the cryſtals of tartar ſhall be conſumed; then ſtrain the liquor, when cold, through paper, and, after proper evaporation, ſet it by to cryſtalliſe.

Common white tartar is perhaps preferable for this operation to the cryſtals uſually met with. Its impurities can here be no objection; ſince it will be ſufficiently depurated by the ſubſequent filtration.

The preparation of this medicine by either of the above methods is very eaſy; though ſome chemiſts have rendered it ſufficiently troubleſome, by a nicety that is not at all wanted. They inſiſt upon hitting the very exact point of ſaturation betwixt the alkaline ſalt and the acid of the tartar; and caution the operator to be extremely careful, when he comes near this mark, leſt, by imprudently adding too large a portion of either, he render the ſalt too acid, or too alkaline. If the liquor be ſuffered to cool a little before it is committed to the filter, and then properly exhaled and cryſtalliſed, no error of this kind can happen, though the ſaturation ſhould not be very exactly hit: for, ſince cryſtals of tartar are very difficultly ſoluble even in boiling water, and when diſſolved therein, concrete again upon the liquor's growing cold; if any more of them has been employed than is taken up by the alkali, this ſuperfluous quantity will be left upon the filter: and, on the other hand, if too much of the alkali has been made uſe of, it will remain uncryſtalliſed. The cryſtalliſation of this ſalt indeed cannot be effected without a good deal of trouble: it is therefore moſt convenient to let the acid ſalt prevail at firſt, to ſeparate the ſuperfluous quantity, by ſuffering the liquor to cool a little before filtration, and then *proceed to the total evaporation of the aqueous fluid*, which will leave behind it the neutral ſalt required. The moſt proper veſſel for this purpoſe is a ſtone-ware one; iron diſcolours the ſalt.

Soluble tartar, in doſes of a ſcruple, half a dram, or a dram, is *a mild cooling aperient:* two or three drams *commonly looſen the belly;* and an ounce proves *pretty ſtrongly purgative.* Malouin ſays it is equal in purgative virtue to the cathartic ſalt of Glauber. It is an uſeful addition to the purgatives of the reſinous kind, as it promotes their operation, and at the ſame time tends to correct their griping quality. But it muſt *never be given in conjunction with any acid*, ſuch as tamarinds, &c. for all acids decompound it; abſorbing its alkaline ſalt, and precipitating the tartar.

NATRON TARTARISATUM;
formerly
TARTARISED NATRON.
Lond.

Take of
- Natron, twenty ounces;
- Cryſtals of tartar powdered, two pounds;
- Diſtilled water boiling, ten pints.

Proceed as in making the kali tartariſatum.

The Edinburgh Diſpenſatory orders this compoſition to be formed of ſoda and cream of tartar, in the ſame manner as the Lixiva Tartariſata.

This is a ſpecies of ſoluble tartar, made with the mineral alkali or baſis of ſea-ſalt, called *natron*, or *ſoda*. It cryſtalliſes far more eaſily than the preceding preparation, and does not, like it, grow moiſt in the air. It is alſo conſi-

derably *less purgative*, but is equally decompounded by acids. It is given from one ounce to one ounce and an half as *a mild purgative*.

The London Pharmacopœia directs rather more NATRON to be employed than is necessary; for if the crystals of tartar have not the superabundant acid completely abstracted so as to be brought into a state of tartarised kali, a triple salt will be produced. Upon evaporating the remaining liquor, the superfluous natron may be recovered; and if we proceed in the evaporation afterwards, we may procure the tartarised natron.

SAL ESSENTIALE ACETOSÆ.

Essential salt of sorrel.

Take any quantity of the expressed juice of the leaves of wood sorrel, let it boil gently that the fæculent matter may be separated; then strain it till it be clear; and after this boil it on a moderate fire to the consistence of a syrup. Put it into long-necked glass vessels, and place it in a cold situation, that it may crystallise. Let these crystals be dissolved in water; and again formed into purer ones.

After the same manner, essential salts are obtained from all *acid*, *austere*, *astringent*, and *bitterish plants* that contain but a small quantity of oil.

Herbs of a dry nature are to be moistened, in the bruising, with a little water, that the juice may be the more easily pressed out.

In order to make the subject yield its juice readily, it should be chopt to pieces, and well bruised in a marble mortar, before it is committed to the press. The magma which remains in the bag, still containing no inconsiderable quantity of saline matter, may be advantageously boiled in water, and the decoction added to the expressed juice. The whole may be afterwards depurated together, either by the method before directed, or by running the liquor several times through a linen cloth. In some cases, the addition of a considerable portion of water is necessary; that the juice, thus diluted, may part the more freely from its fæculencies; on the separation of which, the success of the process in great measure depends.

The evaporation should be performed either in shallow glass basins, or in such earthen ones as are of a compact close texture; such are those usually called stoneware. The common earthen vessels are subject to have their glazing corroded, and are so extremely porous, as readily to imbibe and retain a good quantity of the liquor. Metallic vessels are particularly apt to be corroded by these acid kinds of juices.

These juices are so viscid, and abound so much with heterogene matter, of a quite different nature from any thing saline, that a pellicle, or pure saline incrustation upon the surface, is in vain expected. Boerhaave, therefore, and the more expert writers in pharmaceutical chemistry, with great judgment, direct the evaporation of the superfluous moisture to be continued until the matter has acquired the consistence of cream. If it be now suffered to stand for an hour or two in a warm place, it will, notwithstanding the former depurations, deposit a fresh sediment, from which it should be warily decanted, before it is put into the vessel in which it is designed to be crystallised.

Some recommend an unglazed earthen vessel, as preferable for this purpose to a glass one; the smoothness of the latter being sup-

posed to hinder the salt from sticking thereto; whilst the juice, easily insinuating itself into the pores of the former, has a great advantage of shooting its saline spicula to the sides. Others slightly incrustate the sides and bottom of whatever vessel they employ, with a certain mineral salt, which greatly disposes the juice to crystallise, to which of itself it is very averse: but this addition is, with regard to its medical virtue, quite different from the salt here intended.

The liquor which remains after the crystallisation, may be depurated by a gentle colature, and after due inspissation set to shoot again; when a further yield of crystals will be obtained.

The process for obtaining this salt is very tedious, insomuch as scarce to be completed in less than seven or eight months; and the quantity of salt which the juices afford, is extremely small. Hence it is hardly ever made or expected in the shops. It may be somewhat sooner separated from the mucilaginous and other fæculencies by clarification with whites of eggs, and by adding pure white clay.

The virtues of the essential salts have not been sufficiently determined from experience. Thus much, however, is certain, that they do not, as has been supposed, possess the virtues of the subjects entire, excepting only the acids and sweets. The others seem to be, almost all of them, nearly similar, from whatever plant they were obtained. In watery extracts of *wormwood*, *carduus*, *chamomile*, and *many other vegetables*, kept for some time in a soft state, I have often observed fine saline efflorescences on the surface, which had all nearly the same taste, somewhat of the nitrous kind. They are supposed by some to be at bottom no more than an impure species of volatile nitre (that is, a salt composed of the nitrous acid and ammonia). Those which were examined by the chemists of the French academy, deflagrated in the fire, and, being triturated with fixt alkalies, exhaled an urinous odour; plain marks of their containing those two ingredients.

SACCHARUM LACTIS.

Sugar of milk.

Take whey of milk, prepared by rennet. Let it be boiled over a moderate fire to the consistence of a syrup, then put it in a cold place that the crystals may be formed. Let the fluid which remains be again managed in the same manner, and let the crystals formed be washed with cold water.

This preparation has been greatly celebrated in *disorders of the breast*, but is far from answering what has been expected from it. It has little sweetness, and is difficult of solution in water. A saline substance, much better deserving the name of sugar, may be obtained by evaporating new milk, particularly that of the ass, to dryness, digesting the dry matter in water till the water has extracted its soluble parts, and then inspissating the filtered liquor. This preparation is of great sweetness, though neither white nor crystalline: nor is it perhaps in the pure crystallisable parts of milk that its medicinal virtues lie; and little dependence is put upon it as a medicine.

FLORES BENZOES.

Lond.

ACIDUM BENZOICUM;

Edinb.

formerly

FLORES BENZOINI.

Flowers of benzoine.

Lond.

Put one pound of powdered ben-

zoine into an earthen pot placed in ſand; and, with a ſlow fire, ſublime the flowers into a conical paper cap fitted to the pot.

If the flowers have any yellow tinge, mix them with white clay, and ſublime again.

Put any quantity of powdered benzoine into an earthern pot; under which, after adapting a large paper cap of a conical figure to the brim, place a ſlow fire that the flowers may ſublime. If the flowers be impregnated with the oil, let them be purified by ſolution in warm water, and cryſtalliſation.

Benzoine, expoſed in a retort to a gentle fire, melts, and ſends up into the neck white, ſhining, cryſtalline flowers, which are followed by an oily ſubſtance. On raiſing the heat a little (a recipient being applied to the neck of the retort) a thin yellowiſh oil comes over, intermingled with an acid liquor, and afterwards a thick butyraceous ſubſtance; this laſt, liquefied in boiling water, gives out to it a conſiderable quantity of ſaline matter (ſeparable by filtration and proper exhalation) which appears in all reſpects ſimilar to the flowers.

It appears therefore, that the whole quantity of flowers which benzoine is capable of yielding, cannot be obtained by the above proceſſes, ſince a conſiderable portion ariſes after the time of their being diſcontinued: that greateſt part of the flowers ariſes with a leſs degree of heat than what is neceſſary to elevate the oil: but that, if the operation be haſtily conducted, or if the fire be not exceeding gentle, the oil will ariſe along with the flowers, and render them foul. Hence, in the way of trade, it is extremely difficult to prepare them of the requiſite whiteneſs and purity; the heat which becomes neceſſary, when large quantities of the benzoine are employed, being ſo great as to force over ſome of the oil along with them.

In order therefore to obtain theſe flowers in perfection, only a ſmall quantity of benzoine ſhould be put into the veſſel at a time; and, that this may not be any impediment of the requiſite diſpatch, a number of ſhallow, flat-bottomed, earthen diſhes may be employed, each fitted with another veſſel inverted over it, or a paper cone. With theſe you may fill a ſand-furnace; having freſh diſhes charged in readineſs to replace thoſe in the furnace, as ſoon as the proceſs ſhall appear finiſhed in them: the reſiduum of the benzoine ſhould be ſcraped out of each of the veſſels, before a freſh parcel is put in.

The paper cone has been long diſuſed by the chemiſts. MAUD of London, and ſeveral others, employed glaſs retorts, for the firſt ſublimation, with the narrow parts of the tubes cut off, to which they joined receivers, not luted, ſcraping out the flowers frequently from the necks of the retorts, and uſing a degree of heat ſufficient to keep the benzoine melted. For the rectification they employed ſtoneware bodies, with large glaſs blind-heads fitted to them without luting. The impure flowers, after being wrapped up in bibulous paper, and moderately preſſed, were reſublimed into the blind-heads, of a pearly whiteneſs. Theſe flowers by ſome are conſidered as a peculiar acid, hence called *acidum benzoicum*.

Theſe flowers, when made in perfection, have an agreeable taſte and fragrant ſmell. They totally diſſolve in ſpirit of wine; and likewiſe, by the aſſiſtance of heat, in water; but ſeparate again from the

latter upon the liquor's growing cold, ſhooting into ſaline ſpicula, which unite together into irregular maſſes. By the mediation of ſugar they remain ſuſpended in cold water, and thus form an elegant balſamic ſyrup. Some have held them in great eſteem, as *pectoral* and *ſudorific*, in the doſe of half a ſcruple or more. But the preſent practice rarely makes uſe of them, on account of the offenſive oil, with which, as uſually prepared, they are tainted, and from which a freſh ſublimation from tobacco-pipe clay does not free them ſo effectually as might be wiſhed. The obſervations before related point out a method of depurating them more perfectly, viz. by ſolution, filtration, and cryſtalliſation.

SAL SEDATIVUS.

Salt of borax, called ſedative ſalt.

Put eight ounces of powdered borax into a wide-necked retort; pour thereon three ounces of water; and then add three ounces of vitriolic acid. Place the retort in a proper furnace, adapt to it a receiver, and increaſe the fire till the veſſel becomes red hot. The ſedative ſalt will ariſe into the neck, in form of thin ſhining plates, which are to be ſwept out with a feather: and a little liquor will paſs into the receiver. When the matter in the retort is grown cool, pour back upon it the diſtilled liquor, and ſublime again. Repeat this proceſs ſo long as the borax continues to yield any conſiderable quantity of ſaline flowers.

Or,

Diſſolve the borax in a ſufficient quantity of warm water, and add thereto the vitriolic acid. Evaporate this mixture, till thin plates begin to appear upon the ſurface; then ſuffer the fire to decay, and let the veſſel ſtand unmoved, till plenty of cryſtals are formed; which are to be well rinſed with cold water, and then dried for uſe.

In the preparation of this ſalt by ſublimation, the fire muſt be expeditiouſly raiſed when the matter begins to grow dry, for it is only at this period that the ſalt ſublimes. The ſublimed ſalt itſelf, in a perfectly dry ſtate, proves fixt in the fire. If moiſtened with water, and then expoſed to a ſmart heat, part of it continues to riſe, till the moiſture is wholly exhaled; after which, nothing more can be forced up by heat, till the ſalt is again moiſtened. Hence the uſe of returning the diſtilled liquor, and repeating the ſublimations. Lemery ſays, he found flowers continue to riſe till the thirty-ſixth ſublimation; and that the quantity obtained by all theſe ſublimations amounted to half an ounce and thirty-five grains, from two ounces of borax.

The part of the borax which does not ſublime, appears to be the ſame (when the common refined borax of the ſhops is made uſe of) with the alkaline ſalt of the ſea ſalt. The ſedative ſalt, united with that alkali, recompoſes borax again. The extrication of the ſedative ſalt from the borax happens on the ſame principle as that of the marine acid from ſea ſalt, viz. the vitriolic acid uniting with the alkali; and the reſiduum is in both caſes the ſame, viz. *vitriolated natron* or *ſoda*. The ſedative ſalt my be extricated alſo from borax by other acids, but moſt commodiouſly and effectually by the vitriolic.

The proceſs by cryſtalliſation is leſs troubleſome than that by ſublimation; but the ſalt proves generally leſs white, and is apt like-

wiſe to retain a part of the vitriolated natron, eſpecially if the evaporation be too long protracted.

The ſedative ſalt appears to the taſte a neutral ſalt; but, examined with alkalies, has the properties of an acid, effervescing, uniting, and cryſtalliſing with them, and deſtroying their alkaline quality. It diſſolves both in water and in ſpirit of wine: though not very readily in either. As to its virtues, it is ſuppoſed to be a *mild anodyne*, (whence its name), to *calm the heat of the blood in burning fevers*, to *prevent* or *remove delirious ſymptoms*, and *allay ſpaſmodic affections*, whether hypochondriacal or hyſterical, at leaſt for a time. The doſe is from two to eighteen grains, in any proper liquor.

SAL, ET OLEUM SUCCINI.

Salt, and oil of amber.

Lond.

Take of amber, two pounds.

Diſtil in a ſand-bath with a fire gradually increaſed. There will come over an acid liquor, an oil, and a ſalt impregnated with the oil.

The oil, diſtilled again by itſelf, is divided into a thinner oil which ariſes; and a thicker part that remains behind, called balſam of amber.

The ſalt is to be boiled in the diſtilled ſpirit, or in common water, and ſet to cryſtalliſe; by theſe means it is freed from its adhering oil. The oftener this is repeated, the purer it will be.

Edinb.

Mix powdered white amber with an equal weight of clean ſand, and put them into a glaſs retort, of which the mixture may fill one half: then adapt a large receiver, and diſtil in a ſand-furnace, with a fire gradually increaſed. At firſt a watery liquor will come over, with ſome yellow oil; then more yellow oil, along with ſalt; and afterwards, with a reddiſh or black coloured oil.

When the diſtillation is finiſhed, empty the liquor out of the receiver; and ſeparate the oil from the water: having collected together the ſalt which adheres to the ſides and neck of the retort, dry it by gentle preſſure between the folds of ſome ſpongy paper.

The oil may be ſeparated from the ſpirit by filtration; that it may be freed from the adhering oil; afterwards it may be purified by ſolution in warm water, and cryſtalliſation.

SAL SUCCINI PURIFICATUM.

Purified ſalt of amber.

Lond.

Take of

Salt of amber, half a pound;
Diſtilled water, one pint.

Boil the ſalt in the diſtilled water, and ſet the ſolution aſide to cryſtalliſe.

OLEUM SUCCINI RECTIFICATUM.

Rectified oil of amber.

Lond.

Take oil of amber.

Diſtil three times.

Edinb.

Let oil of amber, to which ſix times the quantity of water is added, be diſtilled from a glaſs retort, until two thirds of the water ſhall have paſſed over into the receiver. Then let the rectified oil be ſeparated from the water, and kept in veſſels cloſely ſtopped.

The acid liquor formerly called ſpirit, is a mere ſolution of a ſmall portion of the ſalt, and inert impurities of the bitumen in phlegm.

In the diſtillation of amber, the fire muſt for ſome time be continued gentle, ſcarce exceeding the degree at which water boils, till the

aqueous phlegm and thin oil have arifen; after which it is to be flowly increafed. If the fire were urged haftily, the amber would fwell up, and rife in its whole fubftance into the receiver, without undergoing the required decompofition or feparation of its parts. When fand or fimilar intermedia are mixed with it, it is lefs fubject to this rarefaction, and the fire may be raifed fomewhat more expeditiouffly; though this little advantage is perhaps more than counterbalanced by the room which the fand takes up in the retort.

Our chemifts generally leave the receiver unluted, that it may be occafionally removed as the falt rifes and concretes in the neck of the retort, whence it is every now and then fcraped out to prevent the oil from carrying it down into the receiver. When a grofs thick oil begins to arife, and no more falt appears, the diftillation is ftopt, though it might, perhaps, be continued longer to advantage.

Mr. Pott informs us (in a curious differtation on the falt of amber, publifhed in the ninth volume of the Memoirs of the Academy of Sciences of Berlin) that the Pruffian workmen, who prepare large quantities of the falt for exportation, from cuttings and fmall pieces of amber, perform the diftillation without any intermedium, and in an open fire: that fweeping out the falt from the neck of the retort being found too troublefome, they fuffer the oil to carry it down into the receiver, and afterwards feparate it by means of bibulous paper, which imbibes the oil, and leaves the falt dry; which paper is afterwards fqueezed and diftilled: that they continue the diftillation till all that can be forced over has arifen; with care only to catch the laft thick oil in a feparate receiver; and that from this they extract a confiderable quantity of falt, by fhaking it in a ftrong veffel with three or four frefh portions of hot water, and evaporating and cryftallifing the filtered waters.

The falt, freed from as much of the oil as fpongy paper will imbibe, retains fo much as to appear of a dark brown colour. Mr. Pott fays, the method he has found to fucceed beft, and with leaft lofs, is, to diffolve the falt in hot water, and put into the paper, through which the folution is to be filtered, a little cotton flightly moiftened with oil of amber: this, he fays, detains a good deal of the oil of the falt, and the folution paffes through the more pure. The liquor being evaporated with a very gentle fire, as that of a water-bath, and fet to fhoot, the firft cryftals prove tranfparent, with a flight yellowifh tinge; but thofe which follow are brown, oily, and bitter, and are therefore to be further depurated in the fame manner. The whole quantity of cryftals amounts to about one-thirtieth of the weight of the crude amber employed. By fublimation from fea falt, the falt is more perfectly and more expeditiouffly purified. Mr. Pott objects to fublimation, that a part of the falt is decompofed by it, a coaly matter being left behind, even though the falt was previouffly purified by cryftallifation. It may be prefumed, however, that this coal proceeds rather from the burning of fome remains of the oily matter, than from the decompofition of any part of the true falt.

Pure salt of amber has a penetrating, fubaftringent, acid tafte. It diffolves, both in water and in rectified fpirit; though not readily in either, and fcarcely at all in the latter without the affiftance of heat. Of cold water in fummer, it requires for its folution about twen-

ty times its own weight; of boiling water only about twice its weight. Exposed in a glass vessel, to a heat a little greater than that of boiling water, it first melts, then rises in a white fume, and concretes again in the upper part of the glass, into fine white flakes, leaving, unless it was perfectly pure, a little coaly matter behind. It effervesces with alkalies both fixt and volatile, and forms with them neutral compounds, greatly resembling those composed of the same alkalies and vegetable acids. Mixed with acid liquors, it makes no sensible commotion. Ground with fixt alkaline salts, it does not exhale any urinous odour. By these characters, it is conceived, that salt may be readily distinguished from all the other matters that have been mixed with or vended for it. With regard to its virtue, it is accounted *aperient*, *diuretic*, and, on account of its retaining some portion of the oil, *antihysteric*. Boerhaave gives it the character of *diureticorum et antihystericorum princeps*. Its great price, however, has prevented its coming much into use; and perhaps its real virtues are not equal to the opinion generally entertained of them.

The RECTIFIED OIL has a strong bituminous smell, and a pungent, acrid taste. Given in a dose of ten or twelve drops, it *heats*, *stimulates*, and *promotes the fluid secretions*. It is chiefly celebrated in *hysterical disorders*, and in *deficiencies of the uterine purgations*. Sometimes it is used externally, in liniments for *weak* or *paralytic limbs*, and *rheumatic pains*. This oil differs from all those of the vegetable kingdom, and agrees with the mineral petrolea, in not being soluble, either in its rectified or unrectified state, by spirit of wine, fixt alkaline lixivia, or volatile alkaline spirits; the oil, after long digestion or agitation, separating as freely as common oil does from water.

CHAPTER IX.

Preparations of Sulphur.

FLORES SULPHURIS.

Flowers of sulphur.

SUBLIME sulphur in proper vessels; and reduce the flowers, that concrete, into powder, either in a wooden mill, or in a marble mortar with a wooden pestle;

or

Put any quantity of yellow sulphur, grossly powdered, into an earthen cucurbit placed in a sand-furnace; and, having fitted on a glass blind-head, or inverted upon it another earthen cucurbit, begin the sublimation with a gentle heat, which may be afterwards increased. The flowers will rise into the uppermost part of the vessels, whence they are to be swept out, and carefully washed with very hot water.

This process is rarely attempted by the apothecaries, a large apparatus being necessary for performing it to advantage. Those who prepare the flowers of brimstone in quantity, use for the subliming vessel, a large iron pot, capable of holding two or three hundred weight. This communicates with an arched chamber, lined with glazed tiles, which serves for the recipient.

This preparation of sulphur makes no change in its qualities; only separating its impurities, and at the same time reducing it into a finer powder than it can easily be brought to by other means. At the bottom of the subliming vessel there remains a ponderous grey-coloured mass, composed of sand, earth, stony, and sometimes metallic matters, with a small portion of sulphur that has escaped the subliming heat. This is usually broken in pieces, and vended in the shops under the name of SULPHUR VIVUM.

FLORES SULPHURIS LOTI.

Washed flowers of sulphur.
Lond. and Edinb.

Take of

Flowers of sulphur, one pound;
Distilled water, four pints.

Boil them for some time. Then, pouring off this water, let some cold water be added, and thoroughly wash the flowers; after which they are to be dried for use.

As the flowers of sulphur are generally sublimed into very capacious rooms, which contain a large quantity of air, or in vessels not perfectly close; some of those that arise at first, are apt to take fire, and thus are changed into a volatile acid vapour, which, mingling with the flowers that sublime afterwards, communicates to them a notable degree of acidity. In such case the ablution here directed is for the general use of the medicine absolutely necessary: for the flowers, thus tainted with acid, sometimes occasion gripes, and may, in other respects, be productive of effects different from those of pure sulphur. Besides, it is said, that CRUDE SULPHUR is generally combined with a portion of arsenic, from which it is not always totally freed by sublimation; as the arsenic, in a low degree of heat, will often be sublimed along with it.

The procefs, therefore, of boiling the flowers of fulphur in water, not only wafhes off the adherent vitriolic acid, but deprives them alfo of any arfenic which might be poffibly mixed with them in fublimation. There are, however, fome particular combinations, to which they are fuppofed to be better adapted when unwafhed, as their union with mercury into æthiops mineral; and accordingly for that preparation the unwafhed flowers are directed by the London college.

OLEUM SULPHURATUM.

formerly

BALSAMUM SULPHURIS SIMPLEX.

Sulphurated oil.

Lond.

Boil flowers of fulphur, four ounces; fixteen ounces of oil olive, in a pot lightly covered, until they are united.

PETROLEUM SULPHURATUM;

formerly

BALSAMUM SULPHURIS BARBADENSE,

Is made in the fame manner.

OLEUM SULPHURATUM.

vulgo

BALSAMUM SULPHURIS CRASSUM.

Sulphurated oil.

Edinb.

Take of

Oil of olives, eight ounces;
Flowers of fulphur, one ounce.

Boil them together, in a fufficiently large iron veffel, over a gentle fire, keeping them continually ftirring, till they are united.

Linfeed oil more readily diffolves fulphur than oil olive, and the preparation made with it is reckoned fomewhat lefs difagreeable. The veffel they are boiled in ought to be capable of holding at leaft three times the quantity of the ingredients. As foon as the oil begins to act upon the fulphur, which happens nearly at the point of ebullition, the mixture rarefies very much, fo as, if not prudently removed from the fire, to run over into the furnace; and, as the matter is very fufceptible of flame, dangerous confequences may enfue, efpecially if the quantity be large. The operator ought therefore to be upon his guard in the management of this procefs.

Thefe preparations are more conveniently and fafely made in a tall glafs body, with the mouth at leaft an inch in diameter, than in the circulatory or clofe veffels in which they have commonly been directed to be prepared. For, when the fulphur and oil begin to act vehemently upon each other, they not only rarefy into a large volume, but likewife throw out impetuoufly great quantities of an elaftic vapour, which, if the veffels be clofed, or the orifices not fufficient to allow it a free exit, infallibly burft them. Hoffman relates a very remarkable hiftory of the effects of an accident of this kind. In the veffel before recommended, the procefs may be completed without danger, in four or five hours, by duly managing the fire; which fhould be very gentle for fome time, and afterwards increafed fo as to make the oil juft bubble or boil, in which ftate it fhould be kept till all the fulphur appears to be taken up.

Effential oils employed as menftrua for fulphur, undergo a great alteration from the degree of heat neceffary for enabling them to diffolve the fulphur; and hence the balfams have not near fo much of their flavour as might be expected. It fhould therefore feem more eligible to add a proper quantity of the effential oil to the fimple balfam; thefe readily incorporate by a gentle warmth, if the veffel be now and then fhaken. Sixteen parts of effential oil, and fix of

the oleum ſulphuratum, compoſe a balſam more elegant than thoſe formerly preſcribed, as the *terebinthinate—aniſated balſam of ſulphur*, &c.; which are now rejected; for theſe retain ſo much of the flavour of the oil, as is in ſome meaſure ſufficient to cover the taſte of the ſulphur, and render it ſupportable.

The balſams of ſulphur have been ſtrongly recommended in *coughs*, *conſumptions*, and *other diſorders of the breaſt and lungs*. But the reputation which they have had, in theſe caſes, does not appear to have been built upon any fair trial, or experience of their virtues. They are manifeſtly *hot*, *acrimonious*, and *irritating*; and therefore ſhould be uſed with the utmoſt caution. They have frequently been found to *injure the appetite*, *offend the ſtomach* and *viſcera*, *parch the body*, and occaſion *thirſt* and *febrile heats*. The doſe of the ſimple balſam is from ten to forty drops: thoſe with eſſential oils are not given in above half theſe quantities. EXTERNALLY, they are employed for *cleanſing and healing foul running ulcers*. Boerhaave conjectures, that their uſe in theſe caſes gives occaſion to the virtues aſcribed to them when taken internally.

KALI SULPHURATUM;
formerly
HEPAR SULPHURIS.
Sulphurated Kali.
Lond.

Take of
Flowers of ſulphur, one ounce;
Prepared kali, five ounces.

Melt the ſulphur with a ſlow fire, and then mix the ſalt, conſtantly ſtirring, until they unite into a red maſs.

It is much more convenient to melt the ſulphur firſt by itſelf, and add the ſalt of tartar by degrees, as here directed; than to grind them together, and afterwards endeavour to melt them as ordered in former editions: for in this laſt caſe, the mixture will not flow ſufficiently thin to be properly united by ſtirring; and the ſulphur either takes fire, or ſublimes in flowers, which probably has been the reaſon why ſo large a portion of it has been commonly directed. Even in the preſent method a conſiderable part of the ſulphur will be diſſipated; and if it were not, the hepar would not be of its due quality: for one part of ſulphur requires two of the alkaline ſalt, to render it perfectly ſoluble in water, which this preparation ought to be.

The kali ſulphuratum has a fetid ſmell, and a nauſeous taſte. Solutions of it in water, made with ſugar into a ſyrup, have been recommended in the ſame intentions as the ſulphurated oils above-mentioned: our Pharmacopœias nevertheleſs have deſervedly rejected this ſyrup, as common practice has almoſt done the balſams. The ſulphurated kali, digeſted in rectified ſpirit of wine, imparts a rich gold colour, a warm, and ſomewhat aromatic taſte, and a peculiar, not ungrateful ſmell. A tincture of this kind is kept in the ſhops, under the name of another mineral.

The *ſulphurated kali* has been by ſome ſtrongly recommended to prevent the effects of mineral poiſons; ſolutions of thin water have been preſcribed in herpetic, and other cutaneous eruptions; it has been employed in large quantities, in baths, by ſome phyſicians in the pſora, and uſed by way of lotion in tinea capitis.

SULPHUR PRÆCIPITATUM;
formerly
LAC SULPHURIS.
Precipitated ſulphur.
Lond.

Take of
Sulphurated kali, ſix ounces;
Diſtilled water, one pound and an half;

Diluted vitriolic acid, as much as is ſufficient.

Boil the ſulphurated kali in diſtilled water till it is diſſolved. Filter the liquor through paper, and then add the diluted vitriolic acid. Waſh the precipitated powder with freſh portions of water, until it becomes inſipid.

The method of preparing this lac, as it is called, with ſulphurated kali, is the moſt expeditious, and leaſt troubleſome, provided the kali ſulphuratum be well made.

This preparation is not ſo white as that of the laſt Diſpenſatory, which was made by boiling the ſulphur with quick lime, and precipitating with vitriolic acid, but it is thought by ſome to be more purgative. It is chiefly given as a mild purgative, and poſſeſſes the powers attributed to pure ſulphur. See SULPHUR. Materia Medica.

Pure lac ſulphuris is not different in quality from pure ſulphur itſelf; to which it is preferred, in unguents, &c. only on account of its colour. The whiteneſs does not proceed from the ſulphur's having loſt any of its parts in the operation, or from any new matter ſuperadded: for, if common ſulphur be ground with alkaline ſalts, and ſet to ſublime, it ariſes of a like white colour, the whole quantity of alkali remaining unchanged; and, if the lac be melted with a gentle fire, it returns into yellow ſulphur again.

It may be obſerved, that the name *lac ſulphuris*, or milk of ſulphur, applied among us to the precipitate, is by the French writers confined to the white liquor before the precipitate has fallen from it.

TINCTURA SULPHURIS VOLATILIS.

Volatile tincture of ſulphur.

Take of

Flowers of ſulphur, ſix ounces;
Sal ammoniac, one pound;
Quicklime, a pound and a half.

Sprinkle ſome water on the lime, and when ſlaked and fallen into powder, grind it firſt with the ſulphur, and afterwards with the ſal ammoniac, in ſmall quantities at a time: then diſtil the mixture in a retort, with a fire gradually increaſed. The diſtilled liquor is to be kept, in a bottle cloſe ſtopt, for uſe.

This liquor has a ſtrong offenſive ſmell, ſomewhat ſimilar to that which ariſes in the precipitation of *lac ſulphuris*. The vapour in both caſes ſpreads to a conſiderable diſtance, changes ſilver or copper utenſils to a brown or blackiſh colour, and produces diſagreeable alterations in many medicinal preparations. To this circumſtance therefore due regard ought to be had in the performance of that proceſs, and in the keeping of this tincture. If a piece of paper, written upon with a ſaturated ſolution of lead in vegetable acids, and gently dried, be placed in the middle of a quire of paper, or of a pretty thick book, and brought near the unſtopt orifice of the bottle containing the tincture, the vapour will quickly reach it, and change the colourleſs writing to a legible black.

Hoffman has a great opinion of the virtues of this preparation. He ſays, a mixture of one part of the tincture with three parts of ſpirit of wine, in a doſe of thirty or forty drops, *proves a moſt powerful diaphoretic*; and that a liquor compoſed of this and camphor, *takes off the pain of the gout*, by bathing the feet with it. This tincture may be a powerful medicine, but it is certainly a very unpleaſant one.

CHAPTER X.

Metallic Preparations.

IN former Pharmacopœias, there have been introduced various preparations of gold, which have been extolled as cordials, diaphoretics, and powerful purgatives; but with the beſt intent, they could not be adminiſtered, with ſafety, producing in ſome febrile caſes, according to the account of Konig and Ludovici, almoſt mortal diarrhœas.

But the experience of later times has ſufficiently ſhown, that this metal does not poſſeſs any valuable medical virtues; for in its metallic form, however finely comminuted, it proves *inactive*;—when ſatiated with acid, *corroſive*; and in the intermediate ſtates, either *inſignificant* or *unſafe*; preparations of this metal are therefore very judiciouſly thrown out of moſt modern Diſpenſatories.

SECT. I.

Preparations of Silver.

SILVER is the moſt permanent in the fire of all the metals, after gold. It diſſolves in the pure nitrous acid, into a colourleſs, tranſparent liquor, intenſely bitter and corroſive. This ſolution exſiccated furniſhes the ſhops with an uſeful cauſtic; which has likewiſe been taken internally in ſmall doſes, and mixed with other ſubſtances, as *an hydragogue*. It ſtains the ſkin black.

ARGENTUM NITRATUM;
formerly
CAUSTICUM LUNARE.
Nitrated ſilver.
Lond.

Take of
Silver, one ounce;
Diluted nitrous acid, four ounces, by meaſure.

Let the ſilver be diſſolved in a glaſs veſſel, upon warm ſand: then gently increaſe the heat, until a dry maſs be left. Melt this in a crucible, carefully avoiding too much heat, and pour it into moulds of a convenient form.

Edinb.

Take of
Pureſt ſilver, flatted into plates, and cut in pieces, four ounces;
Dilute nitrous acid, eight ounces;
Diſtilled water, four ounces.

Let the ſilver be diſſolved in a phial, by a gentle heat, and the ſolution evaporated to dryneſs. Put the maſs into a large crucible, and place it in the fire; which muſt at firſt be gentle; augment it by degrees, until the maſs flow like oil: then pour it into iron pipes made for this

purpoſe, previouſly heated and greaſed: and kept for uſe in a glaſs veſſel cloſe ſtopped.

Strong ſpirit of nitre will diſſolve ſomewhat more than half its weight of pure ſilver; and the weaker of the aquæ fortes commonly diſtilled from calcined vitriol and nitre, proportionably leſs, according to their quantity of pure nitrous acid. Sometimes this ſpirit contains a portion of the vitriolic or marine acids; which, however minute, renders it unfit for diſſolving this metal, and ſhould therefore be carefully ſeparated before the ſolution is attempted. The method which the refiners employ, for examining the purity of their aquafortis, and purifying it if neceſſary, is, to let fall into it a few drops of a perfect ſolution of ſilver already made. If the liquor remain clear, and grow not in the leaſt turbid or whitiſh, it is fit for their uſe; otherwiſe, they add a ſmall quantity more of the ſolution, which immediately turns the whole of a milk-white colour: the mixture being then ſuffered to reſt for ſome time, depoſits a white ſediment; from which it is warily decanted, examined afreſh, and, if need be, further purified, by a freſh addition of the ſolution.

The ſilver, flatted into thin plates, as directed in the ſecond of the above proceſſes, needs not be cut in pieces: the ſolution will go on the more ſpeedily, if they be only turned round into ſpiral circumvolutions, ſo as to be conveniently got into the glaſs, with care that the ſeveral ſurfaces do not touch one another. By this management, a greater extent of the face is expoſed to the action of the menſtruum, than when the plates are cut in pieces and laid above one another. Good dilute nitrous acid will diſſolve about half its weight of ſilver, and it is not adviſable to uſe a greater quantity of the menſtruum than is ſufficient for effecting the ſolution; for all the ſurplus muſt be evaporated in the ſubſequent fuſion.

The crucible ought to be large enough to hold five or ſix times the quantity of the dry matter; for it bubbles and ſwells up greatly, ſo as otherwiſe to be apt to run over. During this time, alſo, little drops are now and then ſpirted up, whoſe cauſticity is increaſed by their heat, and againſt which the operator ought therefore to be on his guard. The fire muſt be kept moderate till this ebullition ceaſes, and till the matter becomes conſiſtent in the heat that made it boil before: then quickly increaſe the fire till the matter flows thin at the bottom, like oil; on which it is to be immediately poured into the mould, without waiting till the fumes ceaſe to appear; for when this happens, the preparation proves not only too thick to run freely into the mould, but likewiſe leſs corroſive than it is expected to be.

In want of a proper iron mould, one may be formed of tempered tobacco-pipe clay, not too moiſt, by making in a lump of it, with a ſmooth ſtick firſt greaſed, as many holes as there is occaſion for: pour the liquid matter into theſe cavities, and, when congealed, take it out by breaking the mould. Each piece is to be wiped clean from the greaſe; and wrapt up in dry ſoft paper, not only to keep the air from acting upon them, but likewiſe to prevent their corroding or diſcolouring the fingers in handling.

This preparation is a ſtrong cauſtic, and frequently employed as ſuch, for *conſuming warts*, and *other fleſhy excreſcences*, *keeping down fungous fleſh in wounds* or *ulcers*, and ſimilar uſes. The free uſe of the argentum nitratum is recommended

highly in the cure of venereal chancres, particularly in their incipient ſtate; and effectually cures, by deſtroying the diſeaſed parts, which ſoon become clean, and heal quickly as ſores proceeding from any other cauſe, and the ſame magnitude, uſually do. It is rarely applied where a deep eſchar is required, as in the laying open of impoſtumations and tumours; for the quantity neceſſary for theſe purpoſes, liquefying by the moiſture of the ſkin, ſpreads beyond the limits in which it is intended to operate.

PILULÆ LUNARES.

The lunar pills.

Diſſolve pure ſilver in dilute nitrous acid, as in the foregoing proceſs, and, after due evaporation, ſet the liquor to cryſtalliſe. Let the cryſtals be again diſſolved in common water, and mingled with a ſolution of equal their weight of nitre. Evaporate this mixture to dryneſs, and continue the exſiccation with a gentle heat, keeping the matter conſtantly ſtirring, till no more fumes ariſe.

Here it is neceſſary to continue the fire till the fumes entirely ceaſe, as more of the acid is required to be diſſipated, than in the preceding proceſs. The preparation is, nevertheleſs, in taſte very ſharp, intenſely bitter and nauſeous; *applied to ulcers*, it *acts as a cauſtic*, but much milder than the foregoing. BOOERHAAVE, BOYLE, and others, greatly commend it *in hydropic caſes*. The former aſſures us, that two grains of it made into a pill, with crumb of bread and a little ſugar, and taken on an empty ſtomach (ſome warm water, ſweetened with honey, being drunk immediately after), *purge gently without griping*, and *bring away a large quantity of water, almoſt without the patient's perceiving it*: that it *kills worms*, and *cures many inveterate ulcerous diſorders*. He nevertheleſs cautious againſt uſing it too freely, or in too large a doſe; and obſerves, that it always proves corroſive and weakening, eſpecially to the ſtomach.

SECT. III.

PREPARATIONS OF IRON.

IRON calcines by fire the moſt eaſily, and melts the moſt difficultly of all the metals. Sulphur promotes its fuſion, and changes it into a ſubſtance not greatly diſſimilar to a combination of the metal with vitriolic acid. All acids diſſolve this metal; even the air corrodes it into a ruſt or calx.

Iron, in its metallic form, or lightly calcined, or combined with vegetable or with mineral acids, acts in the human body in the ſame manner (but with different degrees of power) by conſtringing the fibres. In all theſe ſtates, it *promotes* or *reſtrains ſecretions*, where the deficiency or exceſs proceeds from a laxity and debility of the veſſels; and, in general, raiſes *the pulſe*, and *quickens the circulation*. The calces ſeem to be the leaſt

active preparations; the crude metal, duly comminuted, is more easily soluble in the animal fluids, and, if acescent juices be lodged in the primæ viæ, soon manifests its operation by nidorous eructations, and the black colour of the alvine fæces; if previously combined with saline bodies, it scarce ever fails of taking effect.

As the calces of iron are scarcely dissoluble in acids, it has been concluded that they are not soluble in the human body, and that therefore they are to be looked upon no otherwise than as a mere inactive earth. But, admitting the absolute indissolubility of iron while it continues a calx, it must be observed, that the calces of this metal are remarkably easy of revival into their metallic state. M. BAUME' relates, that calx of iron, digested for an hour or two in oil olive, resumes its perfect metallic nature, so as to be attracted by the magnet, and totally soluble in acids; whence he infers, that a like revival of the metal happens in the human body. It is matter of common observation, that calces of iron tinge the excrements black, a sure mark of their taking effect: though their effect appears to be neither so speedy nor so great as that of iron in some other forms.

CHALYBIS RUBIGO PRÆPARATA.

Rust of steel prepared.

Lond.

Expose filings of steel to the air, frequently moistening them with water, until they are corroded; then grind them in a mortar, and, pouring on distilled water, wash over the more subtile powder. The remainder is to be exposed afresh to the air, and moistened as at first, then triturated and washed again: then let the powder thus washed over subside, and evaporate it to dryness.

MARTIS LIMATURA PRÆPARATA.

Filings of iron prepared.

Edinb.

Let filings of iron, first cleansed by the magnet, be moistened often with water, that they may turn to rust, which is to be ground into an impalpable powder.

FERRI SQUAMÆ PURIFICATÆ.

Iron scales purified.

Edinb.

Let the scales of iron, found at the anvils of smiths, be purified by the application of a magnet;—for the magnet will only attract the smaller pure scales, leaving the larger ones which are less pure.

The cleansing of iron filings by means of a magnet is very tedious, and does not answer so well as might be expected; for if they be rusty, they will not be attracted by it, or not sufficiently: nor will they, by these means, be entirely freed from brass, copper, or other metallic substances which may adhere to them. It appears from the experiments of HENCKEL (Pyritolog. cap. *vom eisem im kiess*) that if iron be mixed by fusion with even its own weight of any of the other metals, regulus of antimony alone excepted, the compound will be vigorously attracted by the loadstone. The rust of iron is to be procured at a moderate rate from the dealers in iron, free from any impurities, except such as may be washed off by water.

The rust of iron is preferable as a medicine to the calces or croci made by a strong fire. HOFFMAN relates, that he has frequently given it with remarkable success, *in obstinate chlorotic cases, accompanied*

with excessive headachs, and *other violent symptoms*: and that he usually joined with it *pimpinella*, *arum root*, and *salt of tartar*, with a *little cinnamon* and *sugar*. The dose is from four or five grains to twenty or thirty: some have gone as far as a dram; but all the preparations of this metal answer best in small doses, which should rather be often repeated than enlarged.

MARS SACCHARATUS.

Candied steel.

Edinb.

A solution of two parts of sugar in water, boiled to the consistence of a candy, is gradually added to one part of purified iron filings, in a vessel hung over a very gentle fire, constantly shaken, that the filings may be crusted over with the sugar. Starch is previously added, in the proportion of one dram to a pound, to prevent their running into lumps.

This is a very agreeable preparation of steel; but has hitherto been made only by the confectioners. It is a convenient medicine for children, as from its sweetness they take it very readily; and, it may be given to the quantity of half a dram, in cases in which chalybeate medicines are proper.

ÆTHIOPS MARTIALIS.

Martial æthiops.

Take of

Rust of iron, any quantity;

Oil of olives, a sufficient quantity to make it into a paste;

Let this be distilled in a retort, by a strong fire, to dryness: keep the residuum, reduced to a fine powder, in a close vessel.

This process is much less tedious than that given in the former Pharmacopœia, and less troublesome also—besides, it is supposed to give nearly the same result. It has been recommended on the supposition that the iron is here obtained in a very subtile state, but not in general supposed to have any advantage superior to the common chalybeates.

MARS SULPHURATUS.

Sulphurated iron.

Mix filings of iron with twice their weight of powdered sulphur, and as much water as is sufficient to make them into a paste; which, on standing at rest for six hours, will swell up. The matter is then to be pulverised, put by degrees into a hot crucible to deflagrate, and kept continually stirring with an iron spatula till it falls into a deep black powder.

If the quantity of this mixture be considerable, and strongly pressed down, it will not only swell on standing for some hours, but will heave up very weighty obstacles, and burst out into flame.

CROCUS MARTIS APERIENS.

Opening crocus of iron.

This is made by keeping the foregoing preparation longer over the fire, till it assumes a red colour.

CROCUS MARTIS ASTRINGENS.

Astringent crocus of iron.

Edinb.

This is made from the opening crocus of iron, by reverberating it for a long time in the most extreme degree of heat.

These preparations may differ somewhat from one another in virtue; though the difference is not of such a kind as the titles they have been usually distinguished by import. All the preparations of steel act by an astringent quality; that above, denominated *astringent*, seems to have the least effect, in that way. They may be given in form of bolus, electary, or pill, from six grains to a scruple.

Formerly, they were not unfrequently in use; at present they are so seldom called for, that they have been rejected both by the London and Edinburgh colleges.

FERRUM TARTARISATUM.

Tartarised iron.

Lond.

Take of
Filings of iron, one pound;
Powdered crystals of tartar, two pounds;
Mix them with distilled water, into a thick paste, and expose them to the air, in a wide glass vessel, for eight days: dry it in a sand bath, and then rub it into a very fine powder.

In the former Dispensatory, there were two preparations—MARS SOLUBILIS, and MARS SOLUBILIS TARTARISATUS;—but that offered here has all the use of them, and is more easily prepared; indeed, it is considered a very elegant and useful preparation of steel, and will in many cases take effect after many other of the chalybeates have failed; the salt here joined rendering the metal sufficiently soluble in the animal fluids. It may be given either in a liquid form, or in that of a bolus,&c. in doses of four or five grains, or half a scruple.

FERRUM VITRIOLATUM USTUM.

vulgo

COLCOTHAR VITRIOLI.

Vitriolated iron calcined.

Edinb.

Let exsiccated vitriol of iron be exposed to a very strong heat, until it has a very red appearance.

FERRUM AMMONIACALE.

Lond.

AMMONIATUM.

Edinb.

formerly

FLORES MARTIALES, and ENS VENERIS.

Ammoniacal iron.

Lond.

Take of
Iron filings, one pound;
Sal ammoniac, two pounds;
Mix, and sublime—rub together what remains at the bottom of the vessel with the sublimed matter, and again sublime.

Edinb.

Take of
Vitriolated iron, burnt, washed, and again exsiccated,
Sal ammoniac,—of each equal weights;
Let them be well mixed and sublimed.

The results of these processes, though different in their mode of preparation, are ultimately the same.

The success of this process depends principally upon the fire's being hastily raised; that the sal ammoniac may not sublime before the heat is become strong enough to enable it to carry up a sufficient quantity of the iron. Hence glass vessels are not so proper as earthen or iron ones; for when the former are made use of, the fire cannot be raised quick enough, without endangering the breaking of them. The most convenient vessel is an iron pot: to which may be luted an inverted earthen jar, having a small hole in its bottom, to suffer the elastic vapours, which arise during the operation, to escape. It is of advantage to thoroughly mix the ingredients together, moisten them with a little water, and then gently dry them; and to repeat the pulverisation, humectation, and exsiccation, two or three times, or oftener. If this method be followed, the sal ammoniac may be increased to three times the quantity of the iron, or further; and a single sublimation will often be suffi-

cient to raiſe flowers of a very deep orange colour.

This preparation is ſuppoſed to be highly *aperient* and *attenuating*; though no otherwiſe ſo than the reſt of the chalybeates, or at moſt, only by virtue of the ſaline matter joined to the iron. It has been found of ſervice in *hyſterical* and *hypochondriacal caſes*, and *in diſtempers proceeding from a laxity and weakneſs of the ſolids*, as the *rickets*. It may be conveniently taken in the form of a bolus, from two or three grains to ten. It is nauſeous in a liquid form (unleſs in ſpirituous tincture), and occaſions pills to ſwell and crumble, except ſuch as are made of the gums.

LIXIVIUM MARTIS.

Ley of iron.

Lond.

Let the matter, which remains after the ſublimation of the ammoniated iron, be ſet by in a moiſt place. It will run into a liquor, which is to be kept for uſe.

This liquor ſeems greatly to reſemble a ſaturated ſolution of iron made in ſpirit of ſalt. Its taſte is highly *aſtringent*, and ſomewhat ſweetiſh. It may be given in doſes of a drop or two in any convenient vehicle, for the ſame intentions as the other chalybeates.

FERRUM VITRIOLATUM.

L. E.

formerly

SAL MARTIS,

Lond.

SAL CHALYBIS,

Edinb.

Vitriolated iron.

Take of

Iron filings,

Vitriolic acid, each, by weight, eight ounces;

Diſtilled water, three pints;

Mix them in a glaſs veſſel; and, after the ebullition ceaſes, let the mixture ſtand for ſome time upon hot ſand: then pour off and filter the liquor through paper; and, after proper exhalation, ſet it by to cryſtalliſe.

Edinb.

Take of

Filings of iron, ſix ounces;

Vitriolic acid, eight ounces;

Water, two pounds and an half;

The proceſs is the ſame as the former.

During the diſſolution of the iron, a ſtrong ſulphureous vapour ariſes, which, on the approach of flame, catches fire, and explodes, ſo as ſometimes to burſt the veſſel. To this particular, therefore, the operator ought to have due regard. This vapour is alſo noxious to animal life: it is the inflammable air of Dr. PRIESTLEY.

The chemiſts are ſeldom at the trouble of preparing this ſalt according to the directions juſt given: but in its ſtead ſubſtitute common green vitriol, purified by ſolution in water, filtration, and cryſtalliſation. The only difference betwixt the two is, that the common vitriol contains ſomewhat more metal in proportion to the acid; and hence in keeping, its green colour is much ſooner debaſed by a ruſty browniſh caſt. The ſuperfluous quantity of metal may be eaſily ſeparated, by ſuffering the ſolution of the vitriol to ſtand for ſome time in a cold place, when a browniſh yellow ochry ſediment will fall to the bottom; or it may be perfectly diſſolved, and kept ſuſpended, by a ſuitable addition of vitriolic acid. If the vitriol be ſuſpected to contain any cupreous matter (which it does not appear that the common Engliſh vitriol ever does, though almoſt all the foreign vitriols do), the addition of ſome bright iron wire to the ſolution will both diſcover and

effectually ſeparate that metal: for the acid quits the copper to diſſolve a proportionable quantity of the iron; and the copper, in its ſeparation from the acid, adheres to the undiſſolved iron, and forms a ſkin of a true copper colour upon its ſurface. Even a vitriol of pure copper may, on this principle, be converted into a pure vitriol of iron.

But though the vitriolic acid appears, in this operation, to have ſo much ſtronger a diſpoſition to unite with iron than with copper, that it totally rejects the latter upon preſenting the former for it to act upon; the operator may, nevertheleſs, give a dangerous impregnation of copper to the pureſt and moſt ſaturated ſolution of iron in the vitriolic acid, by the uſe of copper veſſels. If the martial ſolution be boiled in a copper veſſel, it never fails to diſſolve a part of the copper, diſtinguiſhable by its giving a cupreous ſtain to a piece of bright iron immerſed in it. By the addition of the iron, the copper is ſeparated; by boiling it again without iron, more of the copper is diſſolved. And this may in like manner be ſeparated by adding more iron.

The ſalt of ſteel is one of the moſt efficacious preparations of this metal; and not unfrequently made uſe of, in *cachectic* and *chlorotic caſes*, for *exciting the uterine purgations*, *ſtrengthening the tone of the viſcera*, and *deſtroying worms*. It may be conveniently taken in a liquid form, largely diluted with aqueous fluids. BOERHAAVE directs it to be diſſolved in an hundred times its quantity of water, and the ſolution to be taken in the doſe of twelve ounces, on an empty ſtomach, walking gently after it. Thus managed, he ſays, it *opens the body*, *purges*, *proves diuretic*, *kills* and *expels worms*, *tinges* the *excrements black*, or *forms them into a matter like clay*, *ſtrengthens the fibres*, and *thus cures many different diſtempers*. The quantity of vitriol in the above doſe of the ſolution is fifty-ſeven grains and a half: but in common practice, ſuch large doſes of this chalybeate are never ventured on. Four or five grains, and in many caſes half a grain, are ſufficient, for the intentions in which chalybeate medicines are given. Very dilute ſolutions, as that of a grain of the ſalt in a pint of water, may be uſed as ſuccedanea to the natural chalybeate waters, and will in many caſes produce ſimilar effects.

SECT. IV.

PREPARATIONS OF COPPER.

COPPER is leſs eaſy of ſolution than iron; and, in its metallic ſtate, does not appear to be acted on by the animal fluids, or to have any conſiderable effect in the body. Diſſolved, it proves externally an *eſcharotic*; internally, a violent *purgative* and *emetic*. Acids of every kind diſſolve it, and likewiſe volatile alkalies. With the

vegetable and *marine acids*, it forms a green ſolution,—*with the vitriolic acid*, and *volatile alkalies*, a blue.

CUPRUM AMMONIACUM.

Ammoniacal copper.

Edinb.

Take of the
Pureſt vitriolated copper, two parts;
Prepared ammonia, three parts.
Rub them well together in a glaſs mortar, until, all effervefcence being over, they unite into a violet-coloured maſs, which, rolled up in bibulous paper, muſt firſt be laid on a chalk ſtone, after dried with a moderate heat, and kept in a veſſel well ſtopped.

AQUA CUPRI AMMONIATI.

Lond.

AQUA ÆRUGINIS AMMONIATÆ.

Edinb.

Water of ammoniated copper.

Lond.

——————— *verdigris.*

Edinb.

Take of
Sal ammoniac, one dram;
Lime water, one pint.
Let them ſtand together in a copper veſſel until the ammoniac is ſaturated with the copper.

Edinb.

Take of
Freſh-made lime water, eight ounces;
Sal ammoniac, two ſcruples;
Verdigris powdered, four grains.
Mix and ſtrain after twenty-four hours. For the medical virtues of theſe, ſee CUPRUM, Materia Medica.

TINCTURA VENERIS VOLATILIS.

Volatile tincture of copper.

Take of
Copper filings, one dram;
Spirit of ſal ammoniac, twelve drams.
Let them ſtand together in a cloſe veſſel, frequently ſhaking it, until the liquor is tinged of a beautiful violet colour.

This tincture or ſolution of copper has been given internally, in the doſe of a few drops, as a diuretic. Boerhave directs at firſt three drops to be taken in a morning faſting, with a glaſs of mead, and this doſe to be daily doubled till it comes to twenty-four drops; which laſt quantity is to be continued for ſome days. He ſays, that by theſe means, he cured an hydropic perſon labouring under a confirmed aſcites; and that the medicine procured ſurpriſing diſcharges of urine; that nevertheleſs, on trying it in another caſe of the ſame kind, it did not anſwer. See the article CUPRUM.

AQUA CUPRI VITRIOLATI COMPOSITA;

vulgo

AQUA STYPTICA.

Compound water of vitriolated copper.

Edinb.

Take
Vitriolated copper,
Alum,—of each three ounces;
Water, two pounds;
Vitriolic acid, one ounce and an half.
Boil the ſalts in the water that they may be diſſolved, afterwards add the acid to the liquor filtered through paper.

This is formed upon the ſtyptic recommended by SYDENHAM, for ſtopping bleeding at the noſe, and other external hæmorrhages; for this purpoſe cloths or doſſils are to be dipt in the liquor, and applied to the part.

SECT. V.

PREPARATIONS OF LEAD.

LEAD readily melts in the fire, and calcines into a dusky powder: which, if the flame be reverberated on it, becomes at first yellow, then red, and at length melts into a vitreous mass. This metal dissolves easily in the nitrous acid, difficultly in the vitriolic, and in small quantity in the vegetable acids; it is also soluble in expressed oil, especially when calcined.

Lead, and its calces, whilst undissolved, have no considerable effects as medicines. Dissolved in oils, they are supposed to be (when externally applied) anti-inflammatory and deficcative. Combined with vegetable acids, they are notably so; and, taken internally, prove a powerful but dangerous styptic.

PLUMBUM USTUM.

Burnt lead.

Melt lead with a gentle fire, and keep it continually stirring, with an iron spatula, till it change into powder.

MINIUM.

Red lead.

Let any quantity of lead be melted in an unglazed earthen vessel, and kept stirring with an iron spatula, till it fall into a powder, at first blackish, afterwards yellow, and at length of a deep red colour, in which last state it is called MINIUM; taking care not to raise the fire so high as to run the calx into a vitreous mass.

The preparation of red lead is so troublesome and tedious, as scarce ever to be attempted by the apothecary or chemist; nor indeed is this commodity expected to be made by them, the preparation of it being a distinct branch of business. The makers melt large quantities of lead at once, upon the bottom of a reverberatory furnace built for this purpose, and so contrived, that the flame acts upon a large surface of the metal, which is continually changed by the means of iron rakes drawn backwards and forwards, till the fluidity of the lead be destroyed; after which, the calx is only now and then turned. By barely stirring the calx, as before directed, in a vessel over the fire, it acquires no redness; the reverberation of flame upon the surface being absolutely necessary for this effect. It is said, that twenty pounds of lead gain, in this process, five pounds; and that the calx, being reduced into lead again, is found one pound less than the original weight of the metal.

These calces are employed in external applications, for *abating inflammations*, *cleansing* and *healing ulcers*, and the like. Their effects, however, are not very considerable; nor are they perhaps of much further real use, than as they give consistence to the plaster, unguent, &c.

CERUSSA.

Ceruse, or white lead.

Put some vinegar into the bottom of an earthen vessel, and suspend over the vinegar very thin plates of lead, in such a manner that the vapour which arises from the acid, may circulate about the plates. Set the containing vessel in the heat of horse-dung, for three weeks. If, at the end of this time, the plates be not totally calcined, scrape off the white powder, and expose them again

to the ſteam of vinegar, till all the lead be thus corroded into powder.

The making of white lead alſo is become a trade by itſelf, and confined to a few perſons, who have large conveniencies for this purpoſe. The general method which they follow, is nearly the ſame with that before deſcribed. See the Philoſophical Tranſactions, No. 137.

In this preparation, the lead is ſo far opened by the acid, as to diſcover, when taken internally, the malignant quality of the metal; and to prove externally, when ſprinkled on running ſores or ulcers, moderately *cooling*, *drying*, and *aſtrictive*.

AQUA LITHARGYRI ACETATA.

Water of acetated litharge.

Lond.

Take of

Litharge, two pounds and four ounces;

Diſtilled vinegar, one gallon.

Mix and boil to ſix pints, conſtantly ſtirring the liquor. Set it aſide until the fæculencies have ſubſided, and then ſtrain.

AQUA LITHARGYRI ACETATA COMPOSITA.

Compound water of acetated litharge.

Lond.

Take of

Water of acetated litharge, two drams by weight;

Diſtilled water, two pints;

Proof ſpirit of wine, two drams by meaſure.

Mix the ſpirit of wine with the water of acetated litharge, and then add the diſtilled water.

CERUSSA ACETATA.

Lond. and Edinb.

formerly

SACCHARUM SATURNI.

Acetated ceruſe.

Take of

Ceruſe, one pound;

Diſtilled vinegar, one gallon and an half.

Boil the ceruſe with diſtilled vinegar, until the vinegar become ſufficiently ſaturated, then filter the vinegar through paper, and, after due evaporation, ſet it to cryſtalliſe.

Edinb.

Put any quantity of ceruſe into a cucurbit, and pour thereon ten times the quantity of diſtilled vinegar. Digeſt them together for ſome days in a ſand-heat, till the vinegar has acquired a ſweetiſh taſte, when it is to be ſuffered to ſettle, and then poured off. Add freſh vinegar to the remainder, and repeat this proceſs till the menſtruum no longer extracts any ſweet taſte. Let all the impregnated liquors reſt for ſome time: and, after they have been poured from the fæces, evaporate them in a glaſs veſſel, to the conſiſtence of thin honey; ſo that, upon being ſet in a cool place, the ſugar may ſhoot into cryſtals, which are afterwards to be dried in the ſhade. Exhale the remaining liquor to a pellicle, ſet it again in the cold, and more cryſtals will ſhoot. Repeat this operation till no cryſtals can be any longer obtained.

Ceruſe (eſpecially that ſort called *flake lead*, which is not, like the others, ſubject to adulteration) is much preferable either to minium or litharge, for making the ſugar of lead; becauſe the corroſion, which it has already undergone from the ſteam of vinegar, diſpoſes it to diſſolve more readily. It ſhould be finely powdered before the vinegar is put to it, and during the digeſtion, or boiling, every now and then ſtirred up with a wooden ſpatula, to promote its diſſolution, and prevent its concreting into a hard maſs at the bottom. The ſtrong

acid obtained from the caput mortuum of vinegar may be employed for this proceſs to better advantage than the weaker, though purer acid, before directed. If a ſmall quantity of rectified ſpirit of wine be prudently added to the ſolution as ſoon as it is duly exhaled, and the mixture ſuffered to grow cold by ſlow degrees, the ſugar will concrete into very large and tranſparent cryſtals, which are ſcarcely to be obtained by any other method.

The cryſtals are ordered to be dried in the ſhade, becauſe, if they are expoſed to the ſun-ſhine, they acquire a blackiſh colour; ſoon loſe their ſaline condition, and the lead gradually aſſumes its metalline form: and this is ſuppoſed to happen from the abſorption of light, and its converſion into phlogiſton.

Lead communicates a ſweetneſs and aſtringency very ſimilar to the product of vinous fermentation, a practice too prevalent among fraudulent dealers, of correcting the too great ſharpneſs of acid wines or cider, by adulterating them with this metal. But there are two different ways for detecting this impoſition: a piece of paper may be written upon, or moiſtened with this liquor, and then expoſed to the vapour of ſulphurated kali; the paper where written upon, or moiſtened, will be of a livid colour; hence a ſolution of acetated ceruſe makes a good ſympathetic ink, as upon the ſame expoſure the ſame circumſtance will occur; or, if a ſolution of ſulphurated kali be dropped into the ſuſpected liquor, ſhould there be any lead preſent, this addition will inſtantly occaſion a precipitation of a livid or dark-coloured cloud.

The acetated ceruſe is much more efficacious than the foregoing preparations, in the ſeveral intentions to which they are applied. Some have ventured upon it *internally*, in doſes of a few grains, as a *ſtyptic*, in *hæmorrhages*, *profuſe colliquative ſweats*, *ſeminal fluxes*, the *fluor albus*, &c. nor has it failed their expectations. It *very powerfully reſtrains the diſcharge;* but almoſt as certainly as it does this, it occaſions ſymptoms of another kind, often more dangerous than thoſe removed by it, and ſometimes fatal. *Violent pains in the bowels*, or *through the whole body*, and *obſtinate conſtipations*, ſometimes immediately follow, eſpecially if the doſe has been conſiderable. *Cramps*, *tremors*, and *weakneſs of the nerves*, generally, ſooner or later, enſue.

Boerhaave is of opinion that this preparation proves malignant only ſo far as its acid happens to be *abſorbed* in the body; for in ſuch caſe, he ſays, "it returns again into ceruſe, which is violently poiſonous." On this principle it would follow, that in habits where acidities abound, the ſugar of lead would be innocent. But this is far from being the caſe. Lead and its preparations act in the body only ſo far as they are *combined* with acid. Ceruſe poſſeſſes the qualities of the compound only in a low degree; and either of them, freed from the acid, has little, if any effect at all. See a fuller account of its medical effects under PLUMBUM, Materia Medica.

SECT. VI.

Preparations of Tin.

TIN eaſily melts in the fire, and calcines into a duſky powder, which, by a further continuance of the heat, becomes white. A maſs of tin, heated till it is juſt ready to melt, proves extremely brittle, ſo as to fall in pieces from a blow, and, by dextrous agitation, into powder. Its proper menſtruum is aqua regia; though the other mineral acids alſo may be made to diſſolve it, and the vegetable ones in ſmall quantity. It cryſtalliſes with the vegetable and vitriolic acids; but with the others, deliquiates.

The virtues of this metal are little known. It has been recommended as an *antihyſteric*, *antihectic*, &c. At preſent it is chiefly uſed as an anthelmintic.

STANNI PULVIS;
formerly
STANNUM PULVERATUM.
Powder of tin.
Lond.

Take of tin, four ounces. Melt it and take off the ſcum; then pour it into a clean iron veſſel, ſhake it, or rub it to powder, and preſs the fineſt part of it through a hair ſieve.

This preparation has been uſed for ſome time as a remedy *againſt worms*, particularly *the flat kinds*, which too often elude the force of other medicines. The general doſe for *children* is from ten grains to twenty; for *adults*, one dram to two or more; ſome confine it to a few grains. But Dr. Alſton aſſures us, in the Edinburgh Eſſays, that its ſucceſs chiefly depends upon its being given in much larger quantities. He gives an ounce of the powder on an empty ſtomach, mixed with four ounces of melaſſes; next day, half an ounce; and the day following, half an ounce more: after which a cathartic is adminiſtered. He ſays the worms are uſually voided during the operation of the purge, but that pains in the ſtomach occaſioned by them are removed almoſt immediately upon taking the firſt doſe of the tin.

In the expulſion of the tænia this method is ſometimes ſucceſsful; but by no means ſo frequently as Dr. Alſton would lead us to hope, as has been proved by repeated experiments, where it has totally failed. See STANNUM, Materia Medica.

In the former edition of this work there were three preparations more of this metal, *Calx Jovis*, *Sal Stanni*, and *Aurum Muſivum*: but as the two laſt have not been found to poſſeſs any medical virtues that could be depended upon, they are very properly thrown out of practice; and as the *Calx Jovis* is ſo very nearly ſimilar to the *Pulvis Stanni* in its medical properties, it was thought uſeleſs to burthen the Pharmacopœia with ſo unneceſſary a proceſs. The preſent Pharmacopœia of Edinburgh has no preparation of *tin*.

SECT. VII.

PREPARATIONS OF ZINC.

THIS metal melts in a red heat; and, if the air be admitted, flames, and ſublimes into light, white, downy flowers; if the air be excluded, it ariſes, by a ſtrong fire, in its metallic form. Sulphur, which unites with or ſcorifies all the other metals except gold, does not act on zinc. Acids of every kind diſſolve it.

Zinc, its flowers or calces, and ſolutions, taken internally, prove ſtrong and quick emetics; in ſmall doſes, they are ſaid to be diaphoretic. Externally, they are cooling, aſtringent, and deſiccative.

PURIFICATIO ZINCI.

Purification of zinc.

Melt zinc with a heat no greater than is juſt ſufficient to keep it fluid. Stir it ſtrongly with an iron rod, and throw in alternately pieces of ſulphur and of tallow, the firſt in largeſt quantity. If any conſiſtent matter, or ſcoria, form on the top, take it off, and continue the proceſs, until the ſulphur be found to burn freely and totally away on the ſurface of the fluid zinc.

Zinc uſually contains a portion of lead, which this proceſs effectually ſeparates. Sulphur united with lead forms a maſs, which does not melt in any degree of fire that zinc is capable of ſuſtaining.

ZINCUM CALCINATUM.

Calcined zinc.

Lond.

Take zinc broken into ſmall pieces, eight ounces.

Caſt the zinc at different times into a large, deep, and inclined crucible, heated to a white heat, putting upon it another crucible in ſuch a manner that the air may have free acceſs to the burning zinc.

Take out the calx as ſoon as it is formed, and ſeparate its white and ſlighter part by paſſing it through a ſieve.

ZINCUM USTUM;

vulgo

FLORES ZINCI.

Calcined zinc.

Edinb.

Let a large crucible be ſo placed in a furnace with burning coals, that the mouth may incline a little towards you; and when the bottom is of a moderately white heat, let a piece of zinc about a dram weight be thrown in; in a ſhort time the zinc will be in a flame, and at the ſame time be converted into white flocculent appearances, which are to be taken from the ſurface of the metal now and then, with an iron ſpatula, that the calcination may be more perfectly completed; and at laſt, when the flame ceaſes, let the calcined zinc be taken out of the crucible. Another piece of zinc muſt then be thrown into the crucible, and the operation repeated as long as it becomes neceſſary. The calcined zinc is to be prepared in the ſame manner as antimony.

Calcined zinc is more pure than tutty or pompholyx, and likewiſe calamine, the natural ore of this metal, and therefore more fitted for medicinal purpoſes. It has been applied externally, but has alſo been highly recommended by GAUBIUS, in doſes to adults from one grain to four or five in epileptic complaints: of late it has been given in larger doſes. It has alſo been

administered in several spasmodic affections, where medicines possessing a tonic power have been thought requisite, and has been attended with good consequences. See also ZINCUM, Materia Medica.

ZINCUM VITRIOLATUM;
vulgo
VITRIOLUM ALBUM.
Vitriolated zinc.
Edin.

Take of
Zinc, cut into pieces, three ounces;
Vitriolic acid, five ounces;
Water, twenty ounces.

To the acid and water mixed together add the zinc, and when the ebullition has ceased, strain the liquor; after proper evaporation, set it aside in a cold place, to crystallise.

This differs from the common white vitriol in being much purer, and perfectly free from any admixture of copper, or other foreign metallic bodies; and, when thus prepared, supersedes the receipt of the following formula of the London Pharmacopœia.

ZINCUM VITRIOLATUM PURIFICATUM.
Vitriolated zinc purified.
Lond.

Take of
White vitriol, one pound;
Vitriolic acid, one dram;
Boiling distilled water, three pints.

Mix and filter through paper. After a proper evaporation, set it aside in a cold place, to crystallise.

The vitriolic acid is here added to deprive the common white vitriol of any copper or ferruginous matter with which it may be, as is usual, impregnated; but this appears to be more certainly done by the addition of zinc, for this would deprive the other materials of their acid, and cause them to precipitate; whilst the addition of the vitriolic acid would unite the copper or iron matter, and form them into metalline salt, which would crystallise with the vitriolated zinc, and hence remain inseparable.

AQUA ZINCI VITRIOLATI;
vulgo
AQUA VITRIOLICA.
Water of vitriolated zinc.
Edinb.

Take of
Vitriolated zinc, sixteen grains;
Water, eight ounces;
Diluted vitriolic acid, sixteen drops.

Dissolve the vitriol in the water, afterwards add the acid; and filter through paper.

For the medical virtues of these preparations, see VITRIOLUM ALBUM, and ZINCUM, Materia Medica.

SECT. VIII.

PREPARATIONS OF MERCURY.

MERCURY, or quicksilver, is a ponderous metallic fluid, totally volatile in a strong fire, and calcinable by a weaker one (though very difficultly) into a red powdery substance. It dissolves in the nitrous acid, is corroded by the vitriolic, but not acted on by the

marine in its liquid ſtate. It nevertheleſs may be combined with this laſt, if ſkilfully applied in the form of fume. Quickſilver unites, by trituration, with earthy, unctuous, reſinous, and ſimilar ſubſtances, ſo as to loſe its fluidity: triturated with ſulphur, it forms a black maſs, which by ſublimation changes into a beautiful red one.

We have given an account of the general mode of operation of mercury in the Materia Medica: we muſt now therefore proceed to enumerate its preparations, and make ſuch obſervations as their nature, or ſpecific action may require.

HYDRARGYRUS PURIFICATUS;
formerly
ARGENTI VIVI PURIFICATIO.
Purified quickſilver.
Lond.

Take of
Quickſilver,
Filings of iron,—of each four pounds.
Rub them together, and diſtil from an iron veſſel.

If a glaſs retort be made uſe of for this operation, it ought to have a low body, and a long neck; and the neck ſhould be conſiderably inclined downwards, ſo as to allow the elevated mercury a quick deſcent. The receiver ſhould be filled almoſt to the neck of the retort with water; the uſe of this is not to condenſe, but to cool, the diſtilling quickſilver, leſt, falling hot upon the bottom, it ſhould crack the glaſs. The diſtillation may be more conveniently performed in an iron retort, or an iron pot fitted with a head.

The fire ſhould be raiſed no higher than is ſufficient to elevate the mercury; for certain mineral ſubſtances, which are ſaid to be ſometimes mixed with it, prove in part volatile in a degree of heat not much greater than that in which mercury diſtils.

HYDRARGYRUS ACETATUS.
Acetated quickſilver,
Lond. and Edinb.

Take of
Purified quickſilver,
Diluted nitrous acid,—of each half a pound;
Acetated kali, three ounces;
Warm diſtilled water, two pints, or two pounds and an half.
Mix the nitrous acid with the quickſilver in a glaſs veſſel, and digeſt with a gentle heat for twenty-four hours, that the quickſilver may be diſſolved. Pour this nitrated quickſilver into a ſolution of the acetated kali previouſly made in warm water (heated to about 90 degrees), and the acetated quickſilver is precipitated. Waſh this firſt with cold diſtilled water, and then diſſolve it in as much boiling diſtilled water as is ſufficient for the purpoſe. Filter the ſolution through paper, and ſet it aſide to cryſtalliſe.

This is conſidered as the mildeſt of the preparations of the mercurial ſalts; and is ſaid to be the baſis of KEYSER's pills. It may be given like calomel in doſes of a few grains, in ſimilar diſorders and intentions.

HYDRARGYRUS CUM CRETA;
vulgo
MERCURIUS ALCALIZATUS.
Quickſilver with chalk.
Lond.

Take of
Pure quickſilver, three ounces;
Prepared chalk, five ounces.
Grind them together in a glaſs mortar, till the mercurial globules diſappear.

The medicine, when duly prepared, is an *uſeful alterative*; and

may be given, in *cutaneous* or *venereal* cases, from two or three grains to a scruple.

MERCURIUS SACCHARATUS.

Sugared mercury.

Edinb.

Take of
Pure quicksilver,
Brown sugar-candy,—of each half an ounce;
Essential oil of juniper berries, sixteen drops.
Grind them together in a glass mortar, until the mercury ceases to appear.

The essential oil, here added, is said to be a very useful ingredient; not only promoting the extinction of the quicksilver (which however is still not a little difficult and tedious), but likewise improving the medicine. The intention, in this and the foregoing process, is only to divide the mercury by the interposition of other bodies; for when thus managed (as already observed) it has very powerful effects; though, whilst undivided, it seems to be altogether inactive. Sugar alone apparently answers this intention; but, on the commixture of aqueous fluids, the sugar dissolves by itself, leaving the mercury to run together again in its original form. The addition of the oil is said in great measure to prevent this inconvenience. The dose of this medicine, as an alterative, is from two or three grains to a scruple.

HYDRARGYRUS CUM SULPHURE.

Lond.

HYDRARGYRUS SULPHURATUS NIGER.

Edinb.

formerly

ÆTHIOPS MINERALIS.

Quicksilver with sulphur.

Lond.

Take of
Purified quicksilver,
Flowers of sulphur,—of each one pound.
Grind them together, in a glass or stone mortar, until the globules disappear.

Edinb.

Take of
Purified quicksilver,
Flowers of sulphur,—each equal weights.
Grind them together in a glass or stone mortar, with a glass pestle, till the mercurial globules totally disappear.
An æthiops is made also with a double quantity of mercury.

The union of the mercury and sulphur might be greatly facilitated by the assistance of a little warmth. Some are accustomed to make this preparation in a very expeditious manner, by melting the sulphur in an iron ladle, then adding the quicksilver, and stirring them together till the mixture be completed. The small degree of heat here sufficient, cannot reasonably be supposed to do any injury to substances, which have already undergone much greater fires, not only in the extraction from their ores, but likewise in the purifications of them directed in the Pharmacopœia, for making the *hydrargyrus sulphuratus ruber*. In the process, they are exposed in conjunction to a strong fire, without suspicion of the compound's receiving any ill quality from it. Thus much is certain, that the ingredients are more perfectly united by heat, than by the degree of the triture usually bestowed upon them. From the æthiops prepared by triture, part of the mercury is apt to be spued out on making it into an electary or pills. From that made by fire, no separation is observed to happen.

Quicksilver with sulphur is one of the most inactive of the mer-

curial preparations. Some practitioners have boldly asserted its possessing extraordinary virtues; and most people imagine it a medicine of some efficacy. But what benefit is to be expected from it in the common doses of eight or ten grains, or a scruple, may be judged hence, that it has been taken in doses of several drams, and continued for a considerable time, without producing any remarkable effect. Sulphur eminently abates the power of all the more active minerals, and seems to be at the same time restrained by them from operating in the body itself. Boerhaave, who is in general sufficiently liberal in the commendation of medicines, disapproves the æthiops in very strong terms. "It cannot enter the absorbent vessels, the lacteals or "lymphatics; but passes directly "through the intestinal tube, "where it may happen to destroy "worms, if it operate luckily. "They are deceived who expect "any other effects from it; at least "I could never find them. I am "afraid, it is unwarily given, in "such large quantities, to children "and persons of tender constitu-"tions. As being a foreign mass, "unconquerable by the body, it is "the more to be suspected, since "it there continues long, sluggish "and inactive. It does not raise "a salivation, because it cannot "come into the blood. Who "knows the effects of a sub-"stance, which, so long as it re-"mains compounded, seems no "more active than any ponderous "insipid earth?" The black sulphurated quicksilver, with a double proportion of mercury, now received into the Edinburgh Pharmacopœia, has a greater chance of operating as a mercurial; and probably the quantity of mercury might be still further increased to advantage.

HYDRARGYRUS PRÆCIPITATUS CINEREUS;
vulgo
PULVIS MERCURII CINEREUS.
Ash-coloured precipitated quicksilver. Edinb.

Take
Quicksilver,
Dilute nitrous acid, — of each equal weights.

Mix them so that the quicksilver may dissolve; dilute the solution with pure water, and add of water of ammonia, as much as will be sufficient totally to free the quicksilver from the acid: then let the matter precipitated be washed with pure water, and dried.

This is a calx of quicksilver precipitated from its solution in the nitrous acid, by the volatile alkali; and the liquor is a true nitrous ammonia. And these precipitates from the nitrous acid are more complete calces, than those from any other menstruum, because of the great attraction the nitrous acid has for phlogiston, and the ready disposition to part with its fixed air. However, great care should be taken that there should be neither too great nor too small a proportion of nitrous acid in completing the solution. This precipitate has been much celebrated for the cure of venereal affections; and from the experience of several respectable practitioners, it has been proved to be a very valuable preparation of quicksilver.

It may be given in doses of from one to six or seven grains; and gradually increased according to its effects.

HYDRARGYRUS SULPHURATUS RUBER;
formerly

CINNABARIS FACTITIA.

Red sulphurated quicksilver.
Lond.

Take of
Purified quicksilver, forty ounces;
Sulphur, eight ounces.

Melt the sulphur, and mix into it the quicksilver. If the mixture happen to catch flame, extinguish it by covering the vessel. The matter is afterwards to be reduced into powder, and sublimed.

It has been customary to order a larger quantity of sulphur than here directed; but these smaller proportions answer better; for, the less sulphur, the finer coloured is the cinnabar.

As soon as the mercury and sulphur begin to unite, a considerable explosion frequently happens, and the mixture is very apt to take fire, especially if the process be somewhat hastily conducted. This accident the operator will have previous notice of, from the matter's swelling up, and growing suddenly consistent. As soon as this happens, the vessel must be immediately close covered.

During the sublimation, care must be taken that the matter rise not into the neck of the vessel, so as to block up and burst the glass. To prevent this, a wide-necked bolt-head, or rather an oval earthen jar, coated, should be chosen for the subliming vessel. If the former be employed, it will be convenient to introduce, at times, an iron wire, somewhat heated, in order to be the better assured that the passage is not blocking up; the danger of which may be prevented, by cautiously raising the vessel higher from the fire.

If the ingredients were pure, no fæces will remain. In such case, the sublimation may be known to be over, by introducing a wire as before, and feeling the bottom of the vessel, which will then be perfectly smooth. If any roughness or inequalities be perceived, either the mixture was impure, or the sublimation is not completed; if the latter be the case, the wire will soon be covered with the rising cinnabar.

The preparers of cinnabar in large quantity employ earthen jars, which in shape pretty much resemble an egg. These are of different sizes, according to the quantity intended to be made at one sublimation, which sometimes amounts to two hundred weight. The jar is usually coated from the small end, almost to the middle, to prevent its breaking, from the vehemence or irregularity of the fire. The greater part, which is placed uppermost, not being received within the furnace, has no occasion for this defence. The whole secret, with regard to this process, is (1) the management of the fire, which should be so strong as to keep the matter continually subliming to the upper part of the jar, without coming out of its mouth, which is covered with an iron plate; (2) to put into the subliming vessel only small quantities of the mixture at a time.

A method is mentioned in the Practical Chemistry of making cinnabar without sublimation, by agitating or digesting mercury in the volatile tincture of sulphur, already described. I have found a sulphureous liquor, more easily preparable, to have a like effect. The solution for *lac sulphuris* will, with some address, succeed.

The principal use of cinnabar is as a pigment. It was formerly held in great esteem as a medicine, in *cutaneous foulnesses*, *gouty* and *rheumatic pains*, *epileptic cases*, &c. but, of late, it has lost much of its reputation. It appears to be nearly simi-

lar to the black ſulphurated quickſilver, already ſpoken of. CARTHEUSER relates, that having giving cinnabar in large quantities to a dog, it produced no ſenſible effect, but was partly voided along with the fæces unaltered, and partly found entire in the ſtomach and inteſtines upon opening the animal. The celebrated FREDERICK HOFFMAN, after beſtowing high encomiums on this preparation, as having, in many inſtances within his own knowledge, perfectly *cured epilepſies* and *vertigoes* from contuſions of the head (where it is probable, however, that the cure did not ſo much depend upon the cinnabar, as on the ſpontaneous recovery of the parts from the external injury), obſerves, that the large repeated doſes, neceſſary for having any effect, can be borne only where the firſt paſſages are ſtrong; and that if the fibres of the ſtomach and inteſtines be lax and flaccid, the cinnabar, accumulated and concreting with the mucous matter of the parts, occaſions great oppreſſion; which ſeems to be an acknowledgment that the cinnabar is not ſubdued by the powers of digeſtion, and has no proper medicinal activity. There are indeed ſome inſtances of the daily uſe of cinnabar's having brought on a ſalivation: perhaps becauſe the cinnabar, made uſe of in thoſe caſes, contained a leſs proportion of ſulphur than the ſorts commonly met with. The *regulus* of *antimony*, and even *white arſenic*, when combined with a certain quantity of common ſulphur, ſeem to have their deleterious power deſtroyed: on ſeparating more and more of the ſulphur, they exert more and more of their proper virulence. It does not ſeem unreaſonable to preſume, that quickſilver may have its activity varied in like manner; that, when perfectly ſatiated with ſulphur, it may be inert; and that, when the quantity of ſulphur is more and more leſſened, the compound may have greater and greater degrees of the proper efficacy of mercurials.

Cinnabar is ſometimes uſed in fumigations againſt *venereal ulcers in the noſe*, *mouth*, and *throat*. Half a dram of it burnt, the fume being imbibed with the breath, has occaſioned a violent ſalivation. This effect is by no means owing to the medicine as cinnabar. When ſet on fire, it is no longer a mixture of mercury and ſulphur, but mercury reſolved into fume, and blended in part with the volatile vitriolic acid; in either of which circumſtances, this mineral, as already obſerved, has very powerful effects.

SOLUTIO HYDRARGYRI SIMPLEX.

Simple ſolution of quickſilver.

Take of
Pure quickſilver, one dram;
Gum arabic, two drams.

Rub them together in a ſtone mortar; adding, very gradually, diſtilled water of fumitory, till the quickſilver thoroughly diſappear in the mucilage.

After they have been thus rubbed together, and perfectly mixed, add
Syrup of kermes, half an ounce;
Diſtilled water of fumitory, eight ounces.

This is PLENCK's ſimple mercurial ſolution, which will be eaſily prepared, and become a more elegant medicine, if, inſtead of gum arabic, the mucilage of gum tragacanth—inſtead of ſyrup of kermes, honey, or ſyrup of white poppy—for water of fumitory roſe water, are made uſe of.

This, however, is certainly a good preparation of quickſilver, inaſmuch as it has been found that quickſilver, mixed with mucilaginous ſubſtances in this form, is not

likely to produce diarrhœa, or ſalivation; the mucilage tending to prevent its action on the inteſtines and ſalivary glands to a remarkable degree.

This compound is not ſuppoſed to be the globules of quickſilver minutely divided, ſo as to become imperceptible, and diffuſed through the mucilaginous liquid; but a true calx of quickſilver formed by trituration. Hence, much depends on the operation for completely perfecting this compoſition; a more certain medicine, it has been ſaid, may be formed, by minutely mixing a determinate quantity of the *hydrargyrus præcipitatus cinereus*, with mucilaginous and other acid ſubſtances.

HYDRARGYRUS CALCINATUS;

formerly

MERCURIUS CALCINATUS.

Calcined quickſilver.

Lond.

Take of purified quickſilver, one pound.

Expoſe the quickſilver, in a flat-bottomed glaſs cucurbit, to a ſand-heat of 600 degrees, until it becomes a red powder.

This preparation is one of the moſt active preparations of quickſilver, and by ſome highly eſteemed in *venereal caſes*, and ſuppoſed to be the moſt efficacious and certain of all the mercurials. It may be advantageouſly given in conjuction with opiates. A bolus or pill, containing from half a grain to two grains of this calx, and a quarter or half a grain or more of opium, with the addition of ſome warm aromatic ingredient, may be taken every night. Thus managed, it acts mildly, though powerfully, as an alterative and diaphoretic. Given by itſelf in larger doſes, as four or five grains, it proves a rough emetic and cathartic.

HYDRARGYRUS NITRATUS RUBER;

Lond. Edin.

formerly

MERCURIUS CORROSIVUS RUBER;

Lond.

MERCURIUS CORROSIVUS PRÆCIPITATUS;

Edinb.

Red nitrated quickſilver.

Lond.

Take of
Purified quickſilver,
Nitrous acid,—of each a pound;
Muriatic acid, one dram by weight.

Mix them in a glaſs veſſel and diſſolve the quickſilver in a ſand bath; then raiſe the fire until the matter forms into red cryſtals.

Edinb.

Take of
Quickſilver,
Diſtilled nitrous acid,—of each, a pound.

Let the quickſilver be diſſolved and the ſolution evaporated by a ſlow fire, into a dry, white maſs, which being powdered and put into a glaſs cucurbit, and ſubjected to a fire gradually increaſed, the matter muſt be conſtantly ſtirred with a glaſs rod, that it may be heated equally, until a little of it, taken out with a glaſs ſpoon, and cooled, exhibits red ſhining ſcales; then let the veſſel be removed from the fire.

The marine acid, ordered in the firſt proceſs, diſpoſes the mercurial calx to aſſume the bright ſparkling look admired in it; which, though perhaps no advantage to it as a medicine, ought nevertheleſs to be inſiſted on by the buyer as a mark of its goodneſs and ſtrength. As ſoon as the matter has gained this appearance, it ſhould be immediately removed from the fire, otherwiſe it will ſoon loſe it again. The prepara-

tion of this red nitrated quickſilver, in perfection, is ſuppoſed by ſome to be a ſecret not known to our chemiſts; ſo that we are under a neceſſity of importing it from abroad. This reflection ſeems to be founded on miſinformation. We ſometimes indeed receive conſiderable quantities from Holland; but this depends upon the ingredients being commonly cheaper there than with us, and not upon any ſecret in the manner of the preparation.

This preparation is an *eſcharotic*, and, in this intention, is frequently employed by the ſurgeons, with unguentum refinæ flavæ, and other dreſſings, for *conſuming fungous fleſh in ulcers*, and the like purpoſes. It is ſubject to great uncertainty in point of ſtrength; more or leſs of the acid exhaling, according to the degree and continuance of the fire. The *beſt criterion of its ſtrength*, as already obſerved, is *its brilliant appearance;* which is alſo the mark of its genuineneſs. If *mixed with minium*, which it is ſometimes ſaid to be, the *duller hue will diſcover the abuſe*. This admixture may be more certainly detected by means of fire. The mercurial part will totally evaporate, leaving the minium behind.

Some have ventured to give this medicine internally, in *venereal, ſcrophulous*, and other *obſtinate chronic diſorders*, in doſes of two or three grains, and more. But certainly the milder mercurials, properly managed, are capable of anſwering all that can be expected from this; without occaſioning violent anxieties, tormina of the bowels, and other ill conſequences, which the beſt management can ſcarcely prevent this corroſive preparation from ſometimes doing. The chemiſts have contrived many methods of correcting and rendering it milder, by diveſting it of a portion of the acid; but to no very good purpoſe, as they either leave the medicine ſtill too corroſive, or render it ſimilar to others which are procurable at an eaſier rate.

MERCURIUS CORALLINUS.

Coralline mercury.

Pour on nitrated quickſilver about thrice its weight of rectified ſpirit of wine, and digeſt them together, with a gentle heat, for two or three days, frequently ſhaking the veſſel. Then ſet fire to the ſpirit, keeping the powder continually ſtirring till all the ſpirit is burnt away.

It is ſuppoſed, that all the more violent preparations of this kind, compoſed of metallic bodies united with acids, are rendered milder by digeſtion in ſpirit of wine; the acid being dulcified, or in part abſorbed by the ſpirit. This evidently happens in ſome caſes, where the proportion of acid is large, or ſufficient to render the compound ſoluble in water: but that it happens equally in others, I cannot affirm. Thus much is certain, that the mercurius corallinus, whether from this cauſe, or barely from ſome of the acid's being diſſipated by the heat of the burning ſpirit, proves conſiderably milder than the nitrated quickſilver was at firſt. It is ſtill, however, a medicine of great activity, and ſeems to be ſcarce ſufficiently ſafe for internal uſe. A few grains of it generally *prove cathartic* or *emetic*, and *ſometimes occaſion violent ſymptoms.*

HYDRAGYRUS MURIATUS;

Lond.

HYDRAGYRUS MURIATUS CORROSIVUS;

Edin.

vulgo

MERCURIUS CORROSIVUS SUBLIMATUS, vel ALBUS.

Muriated, or corroſive muriated quickſilver.

Lond.

Take of

Purified quickſilver, two pounds;
Vitriolic acid, thirty ounces;
Dried ſea-ſalt, four pounds.

Mix the quickſilver with vitriolic acid in a glaſs veſſel, and boil in a ſand-heat, to dryneſs. Mix it when cold with the ſea-ſalt in a glaſs veſſel; then ſublime in a glaſs cucurbit, with a heat gradually raiſed; and laſtly, ſeparate the ſublimed matter from the ſcoria.

Edin.

Take of
Quickſilver,
Dilute nitrous acid,—of each, four ounces;
Dried ſea-ſalt,
Vitriolated iron,— of each, five ounces.

Let the quickſilver be diſſolved in the nitrous acid, and the ſolution evaporated to a perfectly dry maſs; then add the ſea-ſalt, and vitriolated iron. When well rubbed and mixed together, let them be put into a phial, which they will about half fill; and ſublimed from ſand, firſt with a gentle fire, which muſt be afterwards gradually increaſed.

Both theſe preparations conſiſt only of mercury and the acid of the ſea ſalt united together. In the latter proceſs, the materials being mixed and expoſed to the fire, firſt the vitriol parts with its acid; which, diſlodging thoſe of the nitre and marine ſalt, takes their place. The marine acid, reſolved into fume and aſſiſted by the nitrous, diſſolves the mercury now alſo ſtrongly heated. This acid, though it very difficultly acts on mercury, yet when thus once united with it, is more ſtrongly retained thereby than any other acid. The nitrous ſpirit, therefore, having nothing to retain it (for its own baſis, and that of the ſea-ſalt are both occupied by the vitriolic; and that which the vitriolic forſook to unite with theſe, is now ſcarcely combinable with it), ariſes; leaving the mercury and marine acid to ſublime together, when the heat ſhall be ſtrong enough to elevate them. Some ſmall portion of the marine ſpirit ariſes along with the nitrous; and hence this compound acid has been employed, formerly, for making the red corroſive.

It appears, therefore, that the vitriol, and baſes of the nitre and ſea-ſalt, are of no further uſe in this proceſs, than as convenient intermedia for facilitating the union of the mercury with the marine acids. They likewiſe ſerve to afford a ſupport for the ſublimate to reſt upon, which thus aſſumes the form it is expected in, that of a placenta or cake.

There are ſundry other ways of making this preparation, or of combining mercury with the marine acid; but that adopted by the London college is one, at leaſt, of the beſt. For there, mercury, corroded by the vitriolic acid into a white maſs, is mixed with an equal quantity of ſea-ſalt and ſet to ſublime; the vitriolic acid will quit the mercury to unite with the baſis of the ſea-ſalt; and the acid of the ſea-ſalt, now ſet at liberty, will unite with the mercury, and ſublime with it into the compound required. The diſcovery of this method is generally attributed to Boulduc; though it is found alſo in KUNCKEL's *Laboratorium Chymicum.*

If the mercury be corroded by the nitrous, inſtead of the vitriolic acid; the event will be the ſame; that acid equally quitting the mercury, and ſetting looſe the marine; and the ſublimate made by this method is the ſame with the foregoing; but as the quantity of fixt matter is ſmall, it difficultly aſſumes the form of a cake. It requires, indeed, ſome ſkill in the operator, to give it this appearance when either proceſs is followed.

When large quantities are made, this form may be eafily obtained, by placing the matrafs no deeper in the fand than the furface of the matter contained in it; and removing a little of the fand from the fides of the glafs, as foon as the flowers begin to appear in the neck; when the heat fhould likewife be fomewhat lowered, and not at all raifed during the whole procefs. The fublimation is known to be completed when the edges of the cryftalline cake, which will form upon the furface of the caput mortuum, appear fmooth and even, and a little removed from it.

Our apothecaries rarely, and few even of the chemifts, attempt the making of this preparation themfelves; greateft part of what is ufed among us comes from Venice and Holland. This foreign fublimate has been reported to be adulterated with arfenic. Some affirm that this dangerous fraud may be difcovered by the fublimate's turning black on being moiftened with the alkaline ley; which by others is denied. As this point feemed of fome importance to be determined, I made fundry experiments with this view, which convinced me of the infufficiency of alkalies for difcovering arfenic. Alkaline ley, poured into a folution of pure arfenic, and into a mixture of the two folutions in different proportions, produced no blacknefs in any: and though the pure fublimate, and the mixtures of it with arfenic, exhibited fome differences in thefe trials, yet thefe differences were neither fo conftant, nor fo ftrongly marked, as to be laid down, univerfally, for criteria of the prefence or abfence of arfenic. Different fpecimens of fublimate, known to be pure, differed confiderably in this refpect; probably from their holding a little more or lefs mercury in proportion to the acid, or from their retaining fome fmall portion of thofe acids which were employed in the preparation as intermedia.

Some chemifts deny the practicability of this adulteration. There is a procefs, common in books of chemiftry, wherein fublimate and arfenic being mixed together and fet to fublime, they do not arife in one mafs, or yield any thing fimilar to the preparation here intended: the arfenic abforbs the acid of the fublimate, and is reduced thereby into a liquid or butyraceous confiftence; while the mercury, thus freed from the acid, diftils in its running form: if the quantity of arfenic be infufficient to decompound the whole of the fublimate, the remainder of the fublimate concretes diftinct from the arfenical butter. Whence they conclude, that arfenic and fublimate cannot be united together into a cryftalline cake, the form in which this preparation is brought to us.

The above experiment is not altogether decifive; for though arfenic and fulphur do not affume the required form by the common procefs, it is poffible they may by fome other management. It will therefore be proper to point out means for the fatisfaction of thofe who may be defirous of convincing themfelves of the genuinenefs of this important preparation. Let fome of the fublimate, powdered in a glafs mortar, be well mixed with twice its weight of black flux, and a little filings or fhavings of iron: put the mixture into a crucible capable of holding four or five times as much; give a gradual fire till the ebullition ceafes, and then haftily increafe it to a white heat. If no fumes of the garlic fmell can be perceived during the procefs; and if the particles of iron retain their form, without any of them being melted; I think we may be

ſecure that the mixture contained no arſenic.

SUBLIMATE is a moſt violent corroſive, preſently corrupting and deſtroying all the parts of the body it touches. A ſolution of it in water, in the proportion of about a dram to a quart, is made uſe of for *keeping down proud fleſh*, and *cleanſing foul ulcers*, and a more dilute ſolution as *a coſmetic*, and for *deſtroying cutaneous inſects*. But a great deal of caution is requiſite even in theſe external uſes of it.

Some have nevertheleſs ventured to give it internally, in the doſe of one-tenth or one-eighth of a grain. BOERHAAVE relates, that if a grain of it be diſſolved in an ounce or more of water, and a dram of this ſolution, ſoftened with ſyrup of violets, taken twice or thrice a day, it will perform wonders in many reputed incurable diſtempers; but particularly cautions us not to venture upon it, unleſs the method of managing it be well known.

Sublimate diſſolved in vinous ſpirits has of late been given internally in larger doſes; from a quarter of a grain to half a grain. This method of uſing it was brought into vogue by baron VAN SWIETEN at Vienna, particularly for venereal maladies; and ſeveral trials of it have been made in this kingdom alſo with ſucceſs. Eight grains of the ſublimate are diſſolved in ſixteen ounces of rectified ſpirit of wine or proof ſpirit; the rectified ſpirit diſſolves it more perfectly, and ſeems to make the medicine milder in its operation, than the proof ſpirit of the original preſcription of VAN SWIETEN. Of this ſolution, doſes from one to two ſpoonfuls, that is, from half an ounce to an ounce, are given twice a day, and continued till all the ſymptoms are removed; obſerving to uſe a low diet, with plentiful dilution, otherwiſe the ſublimate is apt to purge, and gripe ſeverely. It generally *purges more or leſs at the beginning*, but afterwards ſeems to operate chiefly by *urine* and *perſpiration*.

Sublimate conſiſts of mercury united with a large quantity of marine acid. There are two general methods of deſtroying its corroſive quality, and rendering it mild; combining with it ſo much freſh mercury as the acid is capable of taking up, and ſeparating a part of the acid by means of alkaline ſalts, and the like. On the firſt principle, calomel is formed; on the latter, white precipitate.

SOLUTIO HYDRARGYRI MURIATI.

vulgo

SOLUTIO MERCURII CORROSIVI SUBLIMATI.

Solution of muriated quickſilver.

Take of

Muriated quickſilver, ſix grains;
Sal ammoniac, twelve grains;
Diſſolve in a pound of diſtilled water;

If hard water be uſed for this purpoſe, the ſolution ſuffers a kind of decompoſition, from the nitrous ſelenite of the water.

A ſolution of muriated quickſilver, and ſal ammoniac, in a ſmall proportion of water, uſed to be mixed with bread, ſtarch, or wheat flower, and given in form of pills, and was conſidered a ſafe and pleaſant way of adminiſtering this powerful medicine, as the diſagreeable taſte of the muriated quickſilver was avoided, and the quantity given at each doſe could be accurately aſcertained: plentiful dilution was alſo recommended, during the continuance of this exhibition. See the article PILLS, where will be found a particular formula.

This ſolution may be alſo uſed for waſhing venereal and other ſores; and, where it is found too

acrid for that purpoſe, it may be lowered by the addition of a little water.

CALOMELAS.

Lond.

HYDRARGYRUS MURIATUS MITIS.

Edinb.

formerly

MERCURIUS DULCIS SUBLIMATUS.

Calomel.

Lond.

Take of
Muriated quickſilver, one pound;
Purified quickſilver, nine ounces;
Rub them together till the globules diſappear, and ſublime;—then rub all together again, and ſublime; and in the ſame manner repeat the ſublimation four times; afterwards, rub the matter to a fine powder, and waſh it with boiling diſtilled water.

Edinb.

Take of
Muriated quick-ſilver, reduced to powder in a glaſs mortar, four ounces;
Pure quick-ſilver, three ounces and an half;
Mix them well together, by long trituration, in a glaſs or marble mortar, until the quick-ſilver ceaſes to appear. Put the powder into an oblong phial, of ſuch a ſize, that only one third of it may be filled; and ſublime it from a ſand heat. When the ſublimation is finiſhed, let the phial be broken, and the red powder about the bottom, and the white about the neck, both thrown away, but the remaining maſs ſublimed three or four times, and reduced into a very fine powder.

The trituration of corroſive ſublimate with quick-ſilver is a very noxious operation. For it is almoſt impoſſible, by any care, to prevent the lighter particles of the former from ariſing, ſo as to affect the operator's eyes and mouth. It is nevertheleſs of the utmoſt conſequence, that the ingredients be perfectly united before the ſublimation is begun. It is neceſſary to pulveriſe the ſublimate, before the mercury is added to it; but this may be ſafely performed, with a little caution; eſpecially if, during the pulveriſation, the matter be now and then ſprinkled with a little ſpirit of wine. This addition does not at all impede the union of the ingredients, or prejudice the ſublimation: it will be convenient not to cloſe the top of the ſubliming veſſel with a cap of paper at firſt (as is uſually practiſed), but to defer this till the mixture begins to ſublime, that the ſpirit may eſcape.

The rationale of this proceſs deſerves particular attention; and the more ſo, as a miſtaken theory herein has been productive of ſeveral errors with regard to the operation of mercurials in general. It is ſuppoſed, that the dulcification, as it is called, of the muriated quick-ſilver, is owing to the ſpicula or ſharp points, on which its corroſiveneſs depends, being broken and worn off by the frequent ſublimations. If this opinion were juſt, the muriated quick-ſilver would become mild, without any addition, barely by repeating the ſublimation; but this is contrary to all experience. The abatement of the corroſive quality of the ſublimate is entirely owing to the combination of ſo much freſh mercury with it, as is capable of being united; and by whatever means this combination is effected, the preparation will be ſufficiently dulcified. Triture promotes the union of the two, whilſt ſublimation tends rather to diſunite them. The prudent operator, therefore, will

not be ſolicitous about ſeparating ſuch mercurial globules as appear diſtinct after the firſt ſublimation. He will endeavour rather to combine them with the reſt, by repeating the triture and digeſtion.

The college of Wirtemberg require their *calomel* to be only twice ſublimed; and the Auguſtan but once; and NEUMANN propoſes making it directly, by a ſingle ſublimation, from the ingredients which the muriated quick-ſilver is prepared from, by only taking the quick-ſilver in a larger proportion. If the medicine, made after either of theſe methods, ſhould prove in any degree acrid, water, boiled on it for ſome time, will diſſolve and ſeparate that part in which its acrimony conſiſts. The marks of the preparation being ſufficiently dulcified, are, its *being perfectly inſipid to the taſte*, and *indiſſoluble by long boiling in water*. Whether the water, in which it has been boiled, has taken up any part of it, may be known by dropping into the liquor a ley of any fixt alkaline ſalt, or any volatile alkaline ſpirit: if the decoction has any mercurial impregnation, it will grow turbid on this addition: if otherwiſe, it will continue limpid. But here care muſt be taken not to be deceived by an extraneous ſaline matter in the water itſelf: moſt of the common ſpring waters turn milky on the addition of alkalies; and therefore, for experiments of this kind, diſtilled water, or rain water, ought to be uſed.

Mercurius dulcis, ſeven times ſublimed, has been commonly called *Calomelas*, and *Aquila alba*; names which are now dropt by the Edinburgh college. *Calomelas*, though yet retained by the London college, is indeed a very improper name for a white preparation, the word implying a black colour. By grinding mercurius dulcis with volatile ſpirits, it becomes blackiſh, and this perhaps is the true calomel.

Calomel appears to be one of the moſt uſeful preparations of this mineral: it holds an intermediate place between the *hydrargyrus acetatus*, which is one of the mildeſt ſaline preparations, and *hydrargyrus muriatus*, one of the moſt acrid.

Calomel is conſidered as a good *ſialagogue*, *diaphoretic*, and *alterant*; is an efficacious medicine for *clearing the hepatic ſyſtem*, either given alone, joined with antimonials, or with other of the cholagogues. Many of the more elaborate proceſſes are no other than attempts to produce from mercury ſuch a medicine as this really is. The doſe, for *raiſing a ſalivation*, is ten or fifteen grains, taken in the form of a bolus or pills, every night or oftener, till the ptyaliſm begins. As an *alterant* and *diaphoretic*, it is given in doſes of five or ſix grains; a purgative being occaſionally interpoſed, to prevent its affecting the mouth. It anſwers, however, much better, when given in ſmaller quantities, as one, two, or three grains every morning and evening, in conjunction with ſuch ſubſtances as determine its action to the ſkin, as the extract or reſin of guaiacum; the patient at the ſame time keeping warm, and drinking liberally of warm diluent liquors. By this method of managing it, *obſtinate cutaneous* and *venereal diſtempers* have been ſucceſsfully cured, without any remarkable increaſe of the ſenſible evacuations.

HYDRARGYRUS MURIATUS MITIS.

Lond.

HYDRARGYRUS MURIATUS PRÆCIPITATUS.

Edinb.

Mild muriated quick-ſilver.

Lond.

Take of
Purified quickſilver,
Diluted nitrous acid,—of each half a pound;
Mix them in a glaſs veſſel, and wait until the quickſilver is diſſolved. Then, in a boiling heat, diſſolve the nitrated quickſilver, and pour it out immediately into a glaſs veſſel, where there is another boiling ſolution, conſiſting of
Sea-ſalt, by weight, four ounces;
Diſtilled water, eight pints;
After the powder has ſubſided, let the clear liquor which ſwims at the top be poured off, and the remaining powder waſhed with hot water, until it becomes inſipid: then let it be dried on filtering paper, with a gentle heat.

Edinb.

Take of
Dilute nitrous acid, eight ounces;
Quick-ſilver, eight ounces, and a little more:
Pour theſe into a bolt-head, which ſet by, looſely ſtopped, avoiding the vapours. An hour afterwards, ſet the veſſel upon heated ſand, which heat muſt be gradually increaſed for four hours, until the mixture begins to boil ſlightly for a quarter of an hour, ſhaking in the mean time the veſſel very often. But it is neceſſary that a little more quickſilver ſhould have been added than this can diſſolve, that the mixture ſhould be at leaſt perfectly ſaturated. Pour this mixture, whilſt warm, into eight pints of boiling water, wherein four ounces and an half of ſea-ſalt has been diſſolved, thoroughly and quickly mixing them all together. After the matter has ſubſided, pour off the ſaline water, and waſh the muriated quick-ſilver, by often pouring upon it warm water, and this repeated until it becomes totally taſteleſs.

This is ſuppoſed to poſſeſs the ſame virtues as calomel, and is adminiſtered in ſimilar doſes; but it certainly is ſomewhat a milder preparation.

It has been ſuppoſed by ſome that this medicine was a new invention of SCHEELES, intended as a cheap ſubſtitute for calomel, of which there is this remark in the laſt edition of the London Pharmacopœia: "that it is equal, and "ſimilar in every reſpect to *calomel*, "for the muriatic acid here is as "perfectly ſaturated, and combined with the quick-ſilver, as "in the more tedious and expenſive proceſs for the preparation "of calomel."

PANACEA MERCURII.

Mercurial panacea.

Take any quantity of levigated calomel, and four times as much ſpirit of wine. Digeſt them together in a ſand-heat for twenty days, frequently ſhaking the veſſel; then pour off the ſpirit, and dry the powder for uſe.

This preparation differs very little, if at all, from the foregoing; for, as LEMERY obſerves, the ſpirit of wine does not diſſolve any part of the calomel. Some chemiſts have therefore recommended a proof ſpirit, or common water, as more ſuitable for this purpoſe than rectified ſpirit. If any part indeed of the calomel remains not ſufficiently dulcified, this will be diſſolved by boiling in water, and conſequently the preparation becomes milder; but if the calomel be well made, even water will have no effect upon it; the mercury and ſpirit of ſalt being ſo cloſely united to each other, as not to admit of any ſeparation by the means here propoſed. Nor indeed does good mercurius dulcis want any of its acid to be taken away, as being

already ſufficiently ſafe and mild in its operation. The Edinburgh college, therefore, who received this preparation in former editions of their Pharmacopœia, have now rejected it.

CALX HYDRARGYRI ALBA, *formerly* MERCURIUS PRÆCIPITATUS ALBUS.

White calx of quick-ſilver.

Take of
Muriated quick-ſilver;
Sal ammoniac;
Water of prepared kali,—of each half a pound.

Diſſolve firſt the ſal ammoniac, and afterwards the muriated quick-ſilver, in diſtilled water, and then add the water of prepared kali; waſh the precipitated powder till it becomes inſipid.

This preparation is uſed chiefly in ointments, in which intention its fine white colour is no ſmall recommendation to it. For internal purpoſes, it is rarely employed, nor is it at all wanted. It is nearly ſimilar to mercurius dulcis, but leſs certain in its effects. Muriated quickſilver, as we have already ſeen, conſiſts of mercury united with a large proportion of acid: it is there dulcified by adding as much freſh mercury as is ſufficient to ſatiate all the acid; here, by ſeparating all the acid that is not ſatiated. This laſt way ſeems an unfrugal one, on account not only of the loſs of the acid, but of the volatile ſpirit neceſſary for abſorbing it. The operator may, however, if it ſhould be thought worth while, recover the volatile ſalt from the liquor, by adding to it, after the precipitate has been ſeparated, a proper quantity of pot-aſh, and diſtilling with a gentle heat, in the ſame manner as for the ſpirit or volatile ſalt of ſal ammoniac; for a true ſal ammoniac is regenerated, in the precipitation, from the union of the volatile ſpirit with the muriatic acid of the ſublimate. It is by no means adviſable to uſe the liquor itſelf as a ſolution of ſal ammoniac, or to ſeparate the ſal ammoniac from it by evaporation and cryſtalliſation, as a part of the quickſilver might be retained, and communicate dangerous qualities: but the volatile ſalt ſeparated by diſtillation may be uſed without fear of its containing any quickſilver, none of which will ariſe with the heat by which volatile ſalts are diſtilled.

Fixt alkalies anſwer as effectually, for precipitating ſolutions of ſublimate, as the volatile. But the precipitate, obtained by means of the former, inſtead of being white as with the latter, is generally of a reddiſh yellow or orange colour. If ſal ammoniac be diſſolved along with the muriated quick-ſilver, the addition of fixt alkalies will now, extricating the volatile alkali of the ſal ammoniac, occaſion as white a precipitation, as if the volatile alkali had been previouſly ſeparated and employed in its pure ſtate.

The ſal ammoniac, beſides its uſe in the capital intention to make a white precipitation, promotes the ſolution of the ſublimate, which, of itſelf, is difficultly, and ſcarce at all totally ſoluble by repeated boiling in water. For, however ſkilfully it is prepared, ſome part of it will have an underproportion of acid, and conſequently approach to the ſtate of calomel. A good deal of care is requiſite in the precipitation. For, if too large a quantity of the fixt alkaline ſolution be imprudently added, the precipitate will loſe the elegant white colour for which it is valued.

This calx is ſometimes adulterated with ceruſs, which ceruſs will be left upon burning the ſophiſticated compound, as formerly mentioned when ſpeaking of the adul-

teration of *hydrargyrus nitratus ruber*, with *minium*.

HYDRARGYRUS VITRIOLATUS.

Lond. Edinb.

formerly

MERCURIUS EMETICUS FLAVUS.

Lond.

TURPETHUM MINERALE.

Edinb.

Vitriolated quickſilver.

Lond.

Take of

Purified quickſilver, one pound;

Vitriolic acid, fifteen ounces;

Mix them in a glaſs veſſel, and heat by degrees, until they unite. Let the whole be thoroughly dried, with a ſtrong fire; and then pour upon it a large portion of hot diſtilled water. This maſs immediately grows yellow, and falls to powder. Then ſuffer it to ſettle, pour off the water, and waſh the powder in ſeveral parcels of freſh water, until it becomes inſipid.

Edinb.

Take of

Quick-ſilver, four ounces;

Vitriolic acid, eight ounces:

Let them be put into a retort, and diſtilled from a ſand bath to drynefs; the white calx left at the bottom, be powdered, and thrown into warm water. It will immediately become of a yellow colour, which it is neceſſary to purify by frequent ablutions.

The quantity of oil of vitriol, formerly directed, was double to that now employed by the Edinburgh college. The reduction now made in this article greatly facilitates the proceſs.

Boerhaave directs this preparation to be made in an open glaſs, ſlowly heated, and then placed immediately upon burning coals; care being taken to avoid the fumes, which are extremely noxious. This method will ſucceed very well, with a little addreſs, when the ingredients are in ſmall quantity: but where the mixture is large, it is better to uſe a retort, placed in a ſand-furnace, with a recipient, containing a ſmall quantity of water, luted to it. Great care ſhould be taken, when the oil of vitriol begins to bubble, to ſteadily keep up the heat, without at all increaſing it, till the ebullition ceaſes, when the fire ſhould be augmented to the utmoſt degree, that as much as poſſible of the redundant acid may be expelled.

If the matter be but barely exſiccated, it proves a cauſtic ſalt, which in the ablution with water will almoſt all diſſolve, leaving only a little quantity of vitriolated quickſilver: the more of the acid has been diſſipated, the leſs of the remaining quick-ſilver will diſſolve, and conſequently the yield of vitriolated quick-ſilver will be the greater; fire expelling only the acid (viz. ſuch part of the acid as is not completely ſatiated with mercury) while water takes up always, along with the acid, a proportionable quantity of the mercury itſelf.—Even when the matter has been ſtrongly calcined, a part will ſtill be ſoluble: this evidently appears upon pouring into the waſhings a little ſolution of fixt alkaline ſalt, which will throw down a conſiderable quantity of yellow precipitate, greatly reſembling the turpeth, except that it is leſs violent in operation.

From this experiment, it appears, that the beſt method of edulcorating this powder is, by impregnating the water, intended to be uſed in its ablution, with a determined proportion of fixt alkaline ſalt: for by theſe means, the waſhed turpeth will not only turn out greater in quantity, but, what is of more

conſequence, always have an equal degree of ſtrength; a circumſtance which deſerves particularly to be conſidered, eſpecially in making ſuch preparations as, from an error in the proceſs, may prove too violently corroſive to be uſed with any tolerable degree of ſafety.

It is neceſſary to employ warm water, if we are anxious for a fine colour: if cold water be uſed, the precipitate will be white.

It is obſervable, that though the ſuperfluous acid is here abſorbed from the mercury by the alkaline ſalt; yet in ſome circumſtances this acid forſakes that ſalt to unite with mercury. If a combination of vitriolic acid with fixt alkali be diſſolved in water, and the ſolution added to a ſolution of mercury in aquafortis; the vitriolic acid will unite with the mercury, and form with it a turpeth, which falls to the bottom; leaving only the alkali diſſolved in the aquafortis, and united with the acid thereof into a regenerated nitre. On this principle depends the preparation deſcribed by WILSON, under the title of *An excellent precipitate of mercury;* which is no other than a true turpeth, though not generally known to be ſuch. It is made by diſſolving four ounces of kali vitriolatum in ſixteen ounces of ſpirit of nitre; diſſolving in this compound liquor four ounces of mercury; abſtracting the menſtruum in a ſand-heat; and edulcorating with water the gold-coloured maſs which remains.

Vitriolated quickſilver is a *ſtrong emetic*, and in this intention operates the moſt powerfully of all the mercurials that can be ſafely given internally. Its action however is not confined to the primæ viæ; it will ſometimes *excite a ptyaliſm*, if a purgative be not taken ſoon after it. This medicine is uſed chiefly in *virulent gonorrhœas*, and *other venereal caſes*, where there is a great flux of humours to the parts: it is ſaid likewiſe to have been employed with ſucceſs, in robuſt conſtitutions, *againſt leprous diſorders*, and *obſtinate glandular obſtructions:* the doſe is from two grains to ſix or eight. It may be given in doſes of a grain or two as an *alterative* and *diaphoretic* after the ſame manner as the *hydrargyrus calcinatus.*

Dr. HOPE has found the vitriolated quick-ſilver is the moſt convenient errhine he has had occaſion to employ.

This medicine has been recommended as the moſt effectual *preſervative againſt the hydrophobia.* There are ſeveral examples of its preventing madneſs in dogs that had been bitten; and ſome, of its performing a cure after the madneſs was begun. From ſix or ſeven grains to a ſcruple may be given every day, or every other day, for a little time, and repeated at the two or three ſucceeding fulls and changes of the moon. Some few trials have likewiſe been made on human ſubjects, bitten by mad dogs; and in theſe alſo vitriolated quick-ſilver, uſed either as an emetic or alterative, ſeemed to have good effects. See James's Treatiſe on Canine Madneſs.

The waſhings of vitriolated quick-ſilver are uſed by ſome externally, for the *itch* and *other cutaneous foulneſſes.* In ſome caſes mercurial lotions may be proper, but they are always to be uſed with great caution. This is by no means an eligible one, as being extremely unequal in point of ſtrength; more or leſs of the mercury being diſſolved, as obſerved above, according to the degree of calcination.—The Pharmacopœia of Paris directs a mercurial waſh free from this in-

convenience, under the title of *Aqua mercurialis*, or *Mercurius liquidus*. It is composed of one ounce of mercury, dissolved in a sufficient quantity of nitrous acid, and diluted with thirty ounces of distilled water. In want of distilled water, rain water may be used; but of spring waters there are very few which will mix with the mercurial solution, without growing turbid and precipitating a part of the mercury.

Besides the preparations here mentioned, there are a variety of others, which may be seen in the Preparations of Quicksilver, arranged according to BERGMAN's Table of Elective Attractions; and in the following one, taken from Dr. SCHWEDIAUR's Treatise on the Venereal Disease; of which those marked with the asterisk are chiefly in use.

TABULA exhibens diversa ex HYDRARGYRO PRÆPARATA et COMPOSITA, hactenus cognita †.

I. HYDRARGYRUM SIMPLICITER PURIFICATUM.

* Hydrargyrum purificatum.
Angl. *Quick-silver, crude purified mercury*; Germ. *Reines queck-silber*. Gal. *Mercure pure*.
Syn. Mercurius crudus purificatus *officinarum*.
Argentum vivum purificatum.

II. PRÆPARATA IN QUIBUS HYDRARGYRUM SOLUMMODO DIVISUM ESSE VIDETUR.

1. Decoctum Hydrargyri, i. e. Hydrargyrum simpliciter in aqua coctum.

2. Extracto Glycyrrhizæ subactum.

3. Gummi aut mucilagine, e. g. Gummi Arabico, Tragacanthæ, &c.
* Hydrargyrum gummosum.
Syn. Mercurius gummosus, inventore *Plenck*.

COMPOSITA.
* α Pilulæ ex hydrargyro gummoso.
Syn. Pilulæ ex mercurio gummoso. *Plenck. Pharm. Chir.*

† Literæ, quibus præparata et composita notantur, significant: O. Officinarum; L. Pharmacopœia Londinensis; S. Pharm. Suecica; D. Pharm Danica; E. Pharm. Edinburgensis; B. Dispensatorium novum Brunswicense; E. *paup.* Pharm. Edinburgensis Pauperum; T. Pharm. Nosocomii Sti. Thomæ Londinensis; G. Pharm. Nosocomii Sti. Georgii Londinensis.

β Solutio mercurialis gummosa. *Ibid.*
Syn. Mixtura mercurialis. *G.*
γ Potio mercurialis. *B.*
δ Lac mercuriale. *Plenck.*

4. Resina aut Balsamo; e. g. Terebinthina, Balsamo Copaivæ, &c.
*Hydrargyrum terebinthinatum, &c.

COMPOSITA.
* Pilulæ ex hydrargyro terebinthinato.
Pilulæ mercuriales. *L.*
Pilulæ mercuriales laxantes. *G.*
Pilulæ mercuriales sialagogæ. *D.*
Injectio mercurialis. *E. Paup.*

5. Pinguedine animali aut oleis unguinosis; e. g. Axungia porcina, anserina; butyro Cacao.
* Hydrargyrum unguinosum.
* Unguentum hydrargyri. Vid. infra *Hydrargyrum Sebinum.*
Syn. Unguentum ex hydrargyro cœruleum. *E.*
Unguentum mercuriale, seu unguentum Neapolitanum.

COMPOSITA.
α Unguentum cœruleum fortius. *L.*
Unguentum cœruleum mitius. *L.*
Unguentum mercuriale. *D.*
β Cer tum mercuriale *L.*
γ Emplastrum mercuriale. *O.*
Emplastrum ex hydrargyro. *E.*
Emplastrum ex gummi ammoniaco cum mercurio. *L.*
Emplastrum commune cum mercurio. *L.*
Emplastrum de ranis cum mercurio.

6. Terra Calcarea; e. g. Creta, Lapidibus aut Chelis Cancrorum, &c.
Mercurius alkalisatus. *E.*
Pulvis mercurialis. *G.*

III. PRÆPARATA IN QUIBUS HYDRARGYRUM, MEDIANTE IGNE ET LIBERO AERIS ACCESSU, IN CALCEM VERTITUR.

* Hydrargyrum calcinatum.
Syn. Mercurius calcinatus. *L. S.*
Mercurius præcipitatus per se. *L.*

COMPOSITA.
* Pilulæ ex hydrargyro calcinato.
Pilulæ syphiliticæ. *T.*
Pilulæ ex mercurio calcinato. *G.*
Pilulæ ex mercurio calcinato anodynæ. *G.*

IV. PRÆPARATA IN QUIBUS HYDRARGYRUM PARTIM DIVISUM, PARTIM SOLUTUM ESSE, VIDETUR.

1. Saccharo, Manna, Conſerva Roſarum, Cynoſbati, &c.
* Saccharum hydrargyratum.

COMPOSITA.
* Trochiſci ex hydrargyro ſaccharato.
Bolus cœruleus. *T.*
Bolus mercurialis. *G.*
Syrupus Hydrargyri. *S.*
* Mel hydrargyratum.

COMPOSITA.
Pilulæ Æthiopicæ. *E.*
Pilulæ mercuriales purgantes. *E. paup.*
Pilulæ Belloſti.

3. Sulphure purificato.
* Hydrargyrum ſulphuratum.
a Trituratione aut fuſione.
* Hydrargyrum ſulphuratum nigrum.
Æthiops mineralis. *O.*
COMPOSITA.
Pulvis Æthiopicus. *G.*

b Sublimatione.
* Hydrargyrum ſulphuratum rubrum.
Cinnabaris factitia, ſeu artificialis. *O.*
COMPOSITA.
Pulvis antilyſſus Sinenſis. *O.*

c Præcipitatione. Vid. infra *Hydrargyrum vitriolatum.*
4. Sulphure Antimonii.
a Trituratione.
* Sulphur antimonii hydrargyratum.
Æthiops antimonialis. *O.*
COMPOSITA.
Pilulæ Æthiopicæ. *E. D.*

b Sublimatione.
Sulphur antimonii hydrargyratum rubrum.
Syn. Cinnabaris antimonii. *O.*
COMPOSITA.
Bolus Cinnabarinus. *G.*

V. PRÆPARATA IN QUIBUS HYDRARGYRUM MEDIANTE ACIDO IN FORMAM SALIS AUT CALCIS MUTATUM EST.

1. Acido Sebi. 2. Acido Muriatico. 3. Acido Sacchari. 4. Acido Succini. 5. Acido Arſenici. 6. Acido Acetoſellæ. 7. Acido Phoſphori. 8. Acido Vitrioli. 9. Acido Sacchari Lactis. 10. Acido Tartari. 11. Acido Citri. 12. Acido Nitri. 13. Acido Fluoris mineralis. 14. Acido Aceti. 15. Acido Boracis. 16.

Acido Cœrulei Berolinensis. 17. Acido Molybdænæ. 18. Acido Tungstenico. 19. Acido aëreo.

I. *Hydrargyrum cum acido sebi combinatum.*
Hydrargyrum sebinum.
* *Præp.* Unguentum hydrargyri.

II. *Cum acido muriatico.*
* Hydrargyrum muriatum.
* *Hydrargyrum muriatum fortius.*
A. Sublimatione.
* Hydrargyrum muriatum fortius sublimatum.
Syn. Mercurius sublimatus corrosivus.
Mercurius sublimatus albus. *O.*
Mercurius cum sale ammoniaco sublimatus.
B. Præcipitatione.
Ex acido nitri, mediante acido muriatico dephlogisticato, inventore *Bertholet.*
Hydrargyrum muriatum fortius præcipitatum.

Composita.
α Solutio sublimati spirituosa (*Van Swieten*).
Syn. Solutio mercurii sublimati corrosivi. *E.*
Mixtura mercurialis. *S.*
Mercurius sublimatus solutus. *G.*
β * Solutio hydrargyri muriati fortioris aquosa.
Pilulæ e mercurio corrosivo albo. *S.*
Dr. Ward's white drop.
Syrop du Cuisinier.
γ * Lotio syphilitica flava, s. lotio ex hydrargyro muriato fortiori.
Syn. Aqua phagedænica. *O.*
Liquor mercurialis. *A.*
Lotio mercurialis. *T.*
δ Solutio sublimati balsamica. *Plenck.*
ε * Liquor ad condylomata.
Syn. Aqua caustica pro condylomatibus. *Plenck.*
* *Hydrargyrum muriatum mitius;* i. e. acidum muriaticum hydrargyro superfaturatum.
A. Sublimatione.
Syn. Mercurius dulcis (sublimatione paratus). *O.*
Mercurius dulcis sublimatus. *L.*
Calomel seu calomelas. *L.*
Aquila alba.
Panacea mercurialis.
Mercurius dulcis lunaris. *Schroeder.*
B. Præcipitatione.
Ex acido nitroso, mediante sale communi, inventore *Scheele.*
* Hydrargyrum muriatum mitius præcipitatum.
Mercurius præcipitatus dulcis.
Calx hydrargyri muriata præcipitata.
a Ex acido muriatico, mediante alkali vegetabili.
Mercurius præcipitatus albus. *L.*

b Ex acido muriatico mediante alkali minerali.
Mercurius præcipitatus albus. *A.*
c Ex acido muriatico mediante alkali volatili.
Mercurius præcipitatus albus. *E.*
d Ex acido muriatico mediante cupro.
Mercurius præcipitatus viridis. *E.*

COMPOSITA.
Bolus mercurialis. *E.*
Bolus jalappæ cum mercurio. *Ib.*
Bolus rhei cum mercurio. *Ib.*
Pilulæ calomelanos. *G.*
Pilulæ Plummeri. *E.*
Pilulæ alterantes Plummeri. *O.*
Pilula depurans. *T.*
Pulvis Plummeri. *O.*
Pilulæ mercuriales purgantes. *A.*
Pilulæ catarrhales purgantes. *D.*
Pilulæ laxantes cum mercurio. *Ib.*
Pulvis e ſcammonio cum mercurio. *T.*
* Lotio ſyphilitica nigra, lotio ex hydrargyro muriato mitiori.
Syn. Lotio mercurialis. *G.*
Unguentum e mercurio præcipitato. *L.*
Linimentum mercuriale. *E. Paup.*

III. *Cum acido ſacchari.*
a Hydrargyrum ſaccharatum. *Bergman.*
* b Saccharum hydrargyratum, ſeu
Hydrargyrum ſaccharo cando ſubactum.

IV. *Cum acido ſuccini.*
Hydrargyrum ſuccinatum. *Bergman.*
V. *Cum acido arſenici.*
Hydrargyrum arſenicatum. *Bergman.*

VI. *Cum acido oxalis acetoſellæ.*
Hydrargyrum oxalinum. *Bergman.*

VII. *Cum acido phoſphorico.*
Hydrargyrum phoſphoratum. *Bergman.*
Præcipitatione ex acido nitroſo mediante urina recenti.
Roſa mineralis. *O.*

VIII. *Cum acido vitriolico.*
* a Hydrargyrum vitriolatum.
Vitriolum mercurii. *O.*
Oleum mercurii. *O.*
b Hydrargyrum vitriolatum flavum.
Turpethum minerale. *O.*
Mercurius emeticus flavus. *L.*
Mercurius flavus. *E.*

Mercurius præcipitatus luteus. *D.*
Turpethum nigrum. *O.*

c Hydrargyrum præcipitatum ex acido nitroſo mediante hepate ſulphuris aut calcis.
Mercurius præcipitatus niger. *O.*

IX. *Cum acido ſacchari lactis.*

X. *Cum acido tartari.*

a Hydrargyrum tartariſatum. *Bergman.*

* b Tartarus hydrargyratus; i. e. hydrargyratum cum tartaro purificato unitum. *Terre feuilletée mercurielle*, inventore *Preſſavin.*

c Præcipitatione ex acido nitroſo mediante acido tartari.

* Hydrargyrum tartariſatum flavum; vulgo, *Pulvis Conſtantinus.*

d Præcipitatione ex acido muriatico et acido tartari junctis mediante alkali vegetabili.

* Hydrargyrum tartariſatum album; vulgo, *Pulvis argenteus.*

XI. *Cum acido citri.*

Hydrargyrum citratum. *Bergman.*

XII. *Cum acido nitroſo.*

* Hydrargyrum nitratum.

a Calcinatum mediante igne.

* Hydrargyrum nitratum rubrum.

Mercurius corroſivus ruber. *L. E.*
Mercurius præcipitatus ruber.
Pulvis principis. *O.*
Mercurius corallinus. *L.*
Mercurius tricolor. *O.*
Panacea mercurii. *O.*
Arcanum corallinum.
Panacea mercurii rubra. *O.*

COMPOSITA.

Balſamus mercurialis. *Plenck.*
Unguentum ophthalmicum. *St. Ives.*
Balſamum ophthalmicum rubrum. *D.*
Unguentum præcipitatum. *G.*
Unguentum ad lippitudinem. *T.*
Unguentum mercuriale rubrum. *D.*
Unguentum pomatum rubrum. *D.*

* b Acidum nitri hydrargyratum; i. e. hydrargyrum in acido nitroſo ſolutum.
Solutio mercurii. *E.*

COMPOSITA.

Unguentum citrinum. *E. S.*

* c Præcipitatione.
Ex acido nitri mediante alkali volatili.

α Hydrargyrum nitratum cinereum.

Pulvis mercurii cinereus. *E.*
Turpethum album. *O.*
β Ex acido nitroſo mediante alkali volatili vinoſo (ſpiritu ſalis ammoniaci vinoſo).
Turpethum nigrum.
Mercurius præcipitatus niger.
γ Ex acido nitroſo mediante alkali vegetabili.
Mercurius præcipitatus fuſcus, inventore *Würtz.*
δ Ex acido nitroſo mediante cupro.
Mercurius præcipitatus viridis. *B.*

XIII. *Cum acido fluoris mineralis.*
Hydrargyrum fluoratum. *Bergman.*

XIV. *Cum acido aceti.*
* Hydrargyrum acetatum. *Bergman.*

COMPOSITA.
Trochiſci, *S.* pilulæ *Keyſeri.*

XV. *Cum acido boracis.*
Hydrargyrum boraxatum. *Bergman.*

XVI. *Cum acido cœrulei Berolinenſis.*

XVII. *Cum acido molybdænæ.*

XVIII. *Cum acido tungſtenico.*

XIX. *Cum acido aëreo.*
Hydrargyrum aëratum. *Bergman.*

SECT. VIII.

PREPARATIONS OF ANTIMONY.

ANTIMONY is compoſed of a metal, united with ſulphur or common brimſtone.

If powdered antimony be expoſed to a gentle fire, the ſulphur exhales; the metallic part remaining in form of a white calx, reducible, by proper fluxes, into a whitiſh brittle metal, called *regulus.* This is readily diſtinguiſhed from the other bodies of that claſs, by *its not being ſoluble in aqua fortis.* Its proper menſtruum is *aqua regia.*

If *aqua regia* be poured upon crude antimony, the metallic part will be diſſolved; and the ſulphur thrown out, partly to the ſides of the veſſel, and partly to the ſurface of the liquor, in form

of a greyiſh yellow ſubſtance. This, ſeparated and purified by ſublimation, appears on all trials the ſame with pure common brimſtone.

The metal, freed from the ſulphur naturally blended with it, and afterwards fuſed with common brimſtone, reſumes the appearance and qualities of crude antimony.

The antimonial metal is a medicine of the greateſt power of any known ſubſtance. A quantity too minute to be ſenſible on the tendereſt balance, is capable of producing virulent effects, if taken diſſolved or in a ſoluble ſtate. If given in ſuch a form as to be immediately miſcible with the animal fluids, *it proves violently emetic*; if ſo managed as to be more ſlowly acted on, *cathartic*; and in either caſe, if the doſe be extremely ſmall, *diaphoretic*. Thus, though vegetable acids extract ſo little from this metal, that the remainder ſeems to have loſt nothing of its weight, the tinctures prove, in no large doſes, *ſtrongly emetic*, and in ſmaller ones *powerfully diaphoretic*. The regulus has been caſt into the form of pills, which acted *as virulent cathartics*, though without ſuffering any ſenſible diminution of weight in their paſſage through the body; and this repeatedly, for a great number of times.

This metal, diveſted of the inflammable principle which it has in common with other metallic bodies that are reduced to a calx, becomes indiſſoluble and inactive. The calx nevertheleſs, urged with a ſtrong fire, melts into a glaſs, as eaſy of ſolution, and as virulent in operation, as the regulus itſelf. The glaſs, thoroughly mingled with ſuch ſubſtances as prevent its ſolubility, as wax, reſins, and the like, is again rendered mild.

Vegetable acids, as already obſerved, diſſolve but an extremely minute portion of this metal. The ſolution nevertheleſs *proves powerfully emetic* and *cathartic*. The nitrous and vitriolic acids only corrode it into a powder, to which they adhere ſo ſlightly as to be ſeparable in good meaſure by water, and totally by fire, leaving the regulus in form of a calx ſimilar to that prepared by fire alone. The muriatic acid has a very different effect. This reduces the regulus into a violent corroſive, and though it difficultly unites with, yet very cloſely adheres to it, inſomuch as not to be ſeparable by any ablution, nor by fire, the regulus ariſing along with it. The nitrous or vitriolic acids expel the marine, and thus reduce the corroſive into a calx ſimilar to the foregoing.

Sulphur remarkably abates the power of this metal: and hence crude antimony (in which the regulus appears to be combined with from one fourth to one half its weight of ſulphur) proves altogether mild. If a part of the ſulphur be taken away, by ſuch operations as do not deſtroy or calcine the metal, the remaining maſs becomes proportionably more active.

The ſulphur of antimony may be expelled by deflagration with nitre. The larger the quantity of nitre, to a certain point, the more of the ſulphur will be diſſipated, and the preparation will be the more active. If the quantity of nitre be more than ſufficient to conſume the ſulphur, the reſt of it, deflagrating with the inflammable principle of the regulus itſelf, renders it again mild.

The ſulphur of antimony is likewiſe abſorbed, in fuſion, by certain metals, and by alkaline ſalts. Theſe laſt, when united with ſulphur, prove a menſtruum for all the metals (zinc excepted), and hence, if the fuſion be long continued, the

regulus is taken up, and rendered soluble in water.

PULVIS ANTIMONIALIS.

Lond.

ANTIMONIUM CALCAREO-PHOSPHORATUM.

Edinb.

Antimonial powder.

Lond. and Edinb.

Take of

Antimony, coarsely powdered;

Hartshorn shavings (or those of bone or ivory, *Edinb.*)—of each two pounds.

Mix, and put them into a broad iron pot, heated to a white (red, *Edinb.*) heat, constantly stirring, till the mass acquires a greyish colour. Powder it when cold, and put it into a coated crucible. Lute to it another crucible, with a small hole in the bottom, inverted; raise the fire by degrees again to a white heat, and keep it so for two hours. When cold, reduce it to a very fine powder.

In this preparation the calx of antimony is united with that part of the hartshorn, bone, or ivory shavings, which cannot be destroyed by fire, *its absorbent earth.*

This may be considered as a very good substitute for JAMES's *powder*, which, though, appears both milder and more uniform in its operation. For JAMES's powder may be given sometimes in as large adoses as sixteen grains; yet few practitioners will prescribe more than six grains the *antimonial powder* for a dose.

"May not," says the translator of the London Pharmacopœia, "*different quantities* of sulphur in "*equal weights* of the *crude mineral*, "employed in making the *pulvis* "*antimonialis*, vary its power as a "medicine?"

This powder, properly prepared, is of a white colour. It is a mild antimonial preparation, and may be given as an alterant from three to six grains for a dose. It sometimes, however, vomits in this quantity; in larger, it proves emetic, and operates by the intestines.

CROCUS ANTIMONII MEDICINALIS.

Medicinal crocus of antimony.

Take of

Antimony, eight parts;

Nitre, one part.

Mix, and throw them, by little at a time, into a red-hot crucible: when the deflagration ceases, take the crucible out of the fire, and reduce the matter into powder.

This preparation is sufficiently mild, though considerably more active than the crude mineral: eighteen or twenty grains will in some constitutions operate, though very gently, both upwards and downwards. It appears to be nearly similar to the *medicinal regulus* hereafter described.

In this and the following processes with nitre, the operator must observe to throw into the crucible only a little of the matter at a time, and to wait till the deflagration of one parcel is over before another is added; for if much were put in at once, the deflagration would be so violent, that great part of the matter would be thrown over the crucible. The powder is most conveniently introduced by means of a small iron ladle. Care must be taken not to bring back with the ladle any spark of coal, which would set fire to the rest of the mixture.

CROCUS ANTIMONII MITIOR.

The milder crocus of antimony.

Take of

Antimony, two parts;

Nitre, one part.

Mix them together, and throw the powder by degrees into a red-hot crucible. As soon as the deflagration ceases, remove the matter from the fire (without suffer-

ing it to melt) and reduce it into powder.

This preparation is called *mitior*, not in regard to the crocus above described, but to that which follows. It acts much more powerfully than the foregoing; the increase of the nitre occasioning a greater quantity of the sulphur of the antimony to be dissipated. The London committee received it in their first draught, with the character of an antimonial of mild operation, which had proved a successful medicine in numerous instances, without any one example of its being unsafe. Some trials, however, afterwards reported to them, where the operation of this and the following crocus were compared, induced them to lay this preparation aside. It appears to differ from the other only in being less violent.

CROCUS ANTIMONII.

Crocus of antimony, commonly called Crocus metallorum, and by foreign writers, Hepar antimonii, or Liver of antimony.

Lond.

Take of
Sea salt, one ounce;
Antimony, powdered,
Nitre, powdered,— of each, one pound.

Mix and inject them by degrees into a crucible heated to a white heat, and raise the heat until the mixture melts. Pour it out, and when cold, separate the scoriæ.

Edinb.

The mixture of antimony and nitre, made as above, is to be injected into a red-hot crucible. When the detonation is over, separate the reddish metallic matter from the whitish crust, powder and edulcorate it by repeated washings with hot water, until it becomes insipid.

Here the antimonial sulphur is almost totally consumed, and the metallic part left divested of its corrector. These preparations, given from two to six grains, *act as violent emetics*, greatly disordering the constitution. But here it may be observed, that the operation of antimony, whose reguline part is not joined with an acid, must be liable to variations, according to the quantity and condition of the acid in the stomach. Their principal use *is in maniacal cases;* as the basis of some other preparations; and among the farriers, who frequently give to horses an ounce or two a day, divided into different doses, as an alterative. In these and other quadrupeds, this medicine acts *chiefly as a diaphoretic.*

The chemists have been accustomed to make the crocus with a less proportion of nitre than directed above; and without any further melting, than what ensues from the heat that the matter acquires by deflagration, which, when the quantity is large, is very considerable. A little common salt is added to promote the fusion. The mixture is put by degrees into an iron pot, or mortar, somewhat heated, and placed under a chimney. When the first ladle-full is in, a piece of lighted charcoal is thrown to it, which sets the matter on fire. The rest of the mixture is then added by little and little: the deflagration is soon over, and the whole appears in perfect fusion. When cold, a considerable quantity of scoriæ are found upon the surface; which scoriæ are easily knocked off with a hammer. The acid of the sea salt added to the process of the London Pharmacopœia considerably promotes the fusion; and its acid, it is said, may very much increase the activity of the crocus as a medicine.

CROCUS ANTIMONII LOTUS.

Washed crocus of antimony.

Reduce the crocus into a very sub-

tile powder, and boil it in water. Then, throwing away this water, wash the powder several times in fresh warm water, until it becomes perfectly insipid.

This process is designed chiefly to fit the crocus for the preparation of tartarised antimony, and of the antimonial emetic wine. If the crocus were employed for those purposes without washing, the alkaline salt, with which it is in some degree impregnated from the deflagration of the nitre, would in part satiate the acids of the tartar and of the wine; and thus, impeding their action on the metallic part of the antimony, render the medicines very precarious in strength. That uncertainties of this kind may be the more effectually guarded against, the glass, or rather the pure regulus of antimony, is by some preferred to the crocus, both for the emetic tartar and wine. The Edinburgh college, as appears in the foregoing process, does not allow the crocus to be kept in its unwashed state; making the ablution a part of the preparation of it.

EMETICUM MITE ANTIMONII.

A mild antimonial emetic.

Take of

Antimony, one part;

Nitre, two parts.

Grind them together, and throw them by little and little into a red-hot crucible. When the deflagration is over, the remaining matter, which proves white, is to be washed for use.

The quantity of nitre is here so large, as to consume not only the sulphur of the antimony, but likewise great part of the inflammable principle of the regulus. BOERHAAVE, from whom this preparation is taken, informs us, that it is so mild, as often to occasion only some light nausea and gentle vomiting, with a large discharge of saliva, and thick urine. Its effects seem to be nearly the same with those of the *regulus medicinalis* and *crocus medicinalis*.

ANTIMONIUM CALCINATUM;

formerly

CALX ANTIMONII.

Calcined antimony.

Lond.

Take of

Antimony, powdered, eight ounces;

Nitre, powdered, two pounds.

Mix them, and let them be gradually injected into a crucible, heated to a white heat; burn the white matter about half an hour; and when cold, powder it, and wash it with distilled water.

ANTIMONIUM USTUM cum NITRO;

vulgo

CALX ANTIMONII NITRATA.

Antimony calcined with nitre.

Edinb.

Take of

Antimony, calcined as for making the glass,

Nitre,—of each, equal parts.

Mix them together, and put them into a crucible; keep it in a red heat for an hour; afterwards take it out of the crucible, powder it, and wash it often in hot water till it becomes insipid.

The antimonium calcinatum, when freed by washing from the saline matter, is extremely mild, if not altogether inactive. HOFFMAN, LEMERY, and others, assure us, that they have never experienced from it any such effects as its usual title imports. BOERHAAVE declares, that it is a mere metallic earth, entirely destitute of all medicinal virtue. The common dose is from five grains to a scruple, or half a dram; though WILSON relates, that he has known it given

by half ounces, and repeated two or three times a day, for several days together.

Some report, that this calx, by being kept for a length of time, contracts an emetic quality. Whence it has been concluded, that the powers of the reguline part are not entirely destroyed; that the preparation has the virtues of other antimonials which are given as alteratives, that is, in such small doses as not to stimulate the primæ viæ; and that, therefore, calcined antimony, as it is certainly among the mildest preparations of that mineral, may be used for children, and such delicate constitutions where the stomach and intestines are easily affected. The observation, however, from which these conclusions are drawn, does not appear to be well founded. LUDOVICI relates, that after keeping the powder for four years, it proved as mild as at first: and the Strasburgh Pharmacopœia, with good reason, suspects, that where the calx has proved emetic, it had either been given in such cases, as would of themselves have been attended with this symptom (for the great alexipharmic virtues, attributed to it, have occasioned it to be exhibited even in the more dangerous malignant fevers, and other disorders, which are frequently accompanied with vomiting), or that it had not been sufficiently calcined, or perfectly freed from such part of the regulus as might remain uncalcined. The uncalcined part being grosser than the true calx, the separation is effected by washing over with water, in the same manner as is already directed for separating earthy powders from their grosser parts.

It has been observed, that when calcined antimony is prepared with nitre abounding with sea salt, of which all the common nitre contains some portion, the medicine has proved *violently emetic*. This effect is not owing to any particular quality of the sea salt, but to its quantity, by which the proportion of the nitre to the antimony is rendered less.

The *nitrum stibiatum* is produced by the deflagration of the sulphur of the antimony with the nitre, in the same manner as the *sal polychrest*, from which it differs no otherwise than in retaining some portion of the antimonial calx.

In the remark upon calcined antimony, in the London Pharmacopœia, it is there said, "That it is "indeed one of the mildest anti-"monials: but if it be true, that it "proves emetic after long expo-"sure to the air; and that by means "of the black flux a regulus may "be obtained from it, some ef-"fect may be presumed." The translator, Dr. HEALDE, hopes to be excused, if he says, that he prepared the calx lota himself, in the year 1741; that he has ever since used it, a space of above forty years, often designedly to excite nausea — and continues deceived, if, when genuine, it is an inefficacious medicine. It is generally given in small doses, from ten grains to a scruple, to promote a diaphoresis.

The second preparation, or the antimonium ustum cum nitro, is certainly a medicine of much more activity than the former; and instead of being one of the mildest of the antimonials, it often operates with great violence, when given in doses of a few grains only. This is supposed to be nearly the same with Dr. JAMES's fever powder (though some difference is allowed), notwithstanding their effects have, from observation, been proved nearly the same.

Some practitioners have given the preference to the use of this

preparation to that of the *antimonium tartarisatum*, when long continued nausea was required, and purging intended. But like every other antimonial preparation, where the reguline part is only rendered active by the acid in the stomach, the antimonium ustum is in all cases of uncertain operation, sometimes proving perfectly inert, and at other times very violent in its effects. Its dose is generally from ten to twelve grains; and this is often given all at once (an inconvenience not attending tartarised antimony); the quantity and effects of which we can generally measure with surprising minuteness.

CERUSSA ANTIMONII.

Ceruss of antimony.

Take of

Regulus of antimony, one part;
Nitre, three parts.

Deflagrate them together, as in the foregoing process.

The results of both processes appear to be altogether the same. It is not necessary to use so much nitre here, as when antimony itself is employed; for the sulphur which the crude mineral contains, and which requires for its dissipation nearly an equal weight of nitre to the antimony, is here already separated. Two parts of nitre to one of the regulus are sufficient. It is better, however, to have an over proportion of nitre than an under one, lest some parts of the regulus should escape being sufficiently calcined.

It may be proper to observe, that though crude antimony and the regulus yield the same calces, yet the salts separated in washing the calces are very different. As crude antimony contains common sulphur, the acid of the sulphur unites with the alkaline basis of the nitre, and the result is a neutral salt. As the regulus contains the phlogistic or inflammable principle, but no sulphur, the nitre is alkalised, as it would be by charcoal or similar inflammable bodies, and is at the same time rendered more acrimonious than the common alkaline salts. If only equal parts of the regulus and nitre be employed, and the fire kept up strong for an hour or more, the salt will prove more caustic than even the potential cautery. But the causticity of the salt will still be far greater, if, instead of the simple regulus of antimony, the martial regulus be used.

REGULUS ANTIMONII MEDICINALIS.

Medicinal regulus of antimony.

Take of

Antimony, five ounces;
Sea salt, four ounces;
Prepared kali, one ounce.

Grind them into powder, and throw the mixture, by little at a time, into a red-hot crucible; occasionally breaking, with an iron rod, the crust that forms on the surface. When the fusion is completed, pour out the matter into a heated cone, gently shaking it now and then, or striking it on the sides, that the regulus may settle to the bottom. When grown cold, beat off the scoriæ, and grind the regulus into a powder, which is to be kept in a close-stopt vial.

This medicine is nearly similar in quality to one made with one-eighth of nitre, already described: in both processes, the antimony is freed from a small portion of its sulphur, which is dissipated in flame by the nitre, and absorbed by the alkaline salt. This preparation is greatly celebrated by HOFFMAN, and other German physicians, in sundry obstinate chronical disorders, and esteemed one of the best antimonials that can be given with safety as *alterants*. It operates chiefly as a *diaphoretic*, and

ſometimes, though rarely, *proves emetic*. The doſe is from three or four grains to twenty.

This regulus, reduced to a ſubtile powder, is the genuine FEBRIFUGE POWDER of Craanius (*Pharm. Boruſſo-Brandenburg*, edit. 1734, page 107.) and has been greatly commended in all kinds of fevers, both of the intermittent and continual kind (*Pharm. Argent.* 1725, page 252.) It is ſaid that a doſe or two has frequently removed theſe diſorders, by occaſioning *either a ſalutary diaphoreſis*, or *acting mildly by ſtool or vomit*. The colour of the levigated powder is a purpliſh brown The antimonial emetic of BOERHAAVE, already mentioned, which is white, is nearly ſimilar to it in its medicinal effects.

The common ſalt ſeems to be of no further uſe in the proceſs, than as it ſerves to promote the fuſion; and even for this it is not neceſſary. The medicine is ſaid to be rather more mild and certain in operation, if prepared without it.

REGULUS ANTIMONII.

Regulus of antimony.

Take of
Antimony,
Nitre,
Crude tartar,--of each equal parts.

Grind them ſeparately into a powder, then mix, and rub them all together. Throw the powder, at ſeveral times, into a red-hot crucible, taking care to break the cruſt, which forms on the ſurface, with an iron rod: when the detonation is over, let a ſtrong fire be made, that the matter may flow like water; then pour it out into a warm greaſed cone, which is to be gently ſtruck on the ſides, that the regulus may ſeparate and fall to the bottom. When grown cold, let the regulus be cleared from the ſcoriæ that lie a-top of it.

In this proceſs (which is taken from the edition of the Edinburgh Pharmacopœia, publiſhed in the year 1744), an alkaline ſalt is produced from the nitre and tartar, in ſuch quantity as entirely to abſorb the ſulphur of the antimony: the alkali, thus ſulphurated, will take up more or leſs of the reguline part, according to its quantity, and the continuance of the fuſion.

As the ingredients are above proportioned, the yield of regulus proves extremely ſmall, and if the fuſion be long continued, ſcarce perceptible; almoſt the whole of it being taken up into the ſcoriæ. In order to obtain the largeſt quantity, the nitre ought to be diminiſhed one half. It is convenient to rub the nitre and tartar together, and deflagrate them in an iron ladle or pan, before their mixture with the antimony; for by theſe means, the loſs of ſome part of the antimony, which otherwiſe happens from the vehemence of the deflagration, will be prevented, a ſmaller crucible will ſerve, and leſs time and labour complete the proceſs.

The mixture of nitre and tartar, deflagrated together, will reduce any of the antimonial calces (as the diaphoretic antimony, ceruſs, or antimony calcined by itſelf) into regulus; the oily matter of the tartar ſupplying the inflammable principle, which all calces require for their revival into a metallic form; and the alkaline ſalt promoting their fuſion. It is the common reducing flux of the chemiſts; by whom it is called, from its colour, the *black flux*. The largeſt yield of regulus, hitherto obtained from antimony, has been got by calcining it without addition, as directed hereafter for making glaſs of antimony, and reviving the calx by fuſion, with this, or ſimilar compoſitions. Mr. GEOFFROY, who firſt communicated this method to the French academy, ſeems to look

upon ſoap (the ſubſtance he happened to make uſe of himſelf) as the only one that will ſucceed; but the effects of this are not different from thoſe of the foregoing flux. Both conſiſt of an alkaline ſalt, and an inflammable (not ſulphureous) ſubſtance, which are the only materials here neceſſary. Upon the whole, the moſt advantageous proceſs for obtaining this regulus appears to be the following.

Let powdered antimony be calcined or roaſted over a gentle fire, as directed hereafter for making the glaſs. Mix the calx with about equal its weight of ſome reducing flux, ſuch as the black flux above mentioned. Melt the mixture in a crucible, with a quick fire, and when in thin fuſion pour it into a cone heated over a ſmoaky flame. The pure regulus will fall to the bottom, the ſcoriæ floating at the top.

SULPHUR ANTIMONII PRÆCIPITATUM.

Lond. Edinb.

vulgo

SULPHUR AURATUM ANTIMONII.

Edinb.

Precipitated ſulphur of antimony.

Lond.

Take of

Antimony powdered, two pounds;

Water of pure kali, four pints;

Diſtilled water, three pints.

Mix, and boil them with a ſlow fire for three hours, conſtantly ſtirring, and adding the diſtilled water as wanted; ſtrain the hot ley through a double linen cloth; and into the liquor, whilſt yet hot, drop by degrees as much vitriolic acid as is ſufficient to precipitate the ſulphur; waſh off with warm water the vitriolated kali.

The ſame proceſs is given in the Edinburgh Pharmacopœia, except that the boiling is ordered to be performed in an iron pot covered, often ſtirring with an iron ſpatula.

The foregoing preparation is not ſtrictly ſulphur. It contains a conſiderable quantity of the metallic part of the antimony, which is reducible from them by proper fluxes. The quantity of regulus taken up will be different, according to the degree of fire employed, and the length of time that the fuſion is continued. It, therefore, muſt needs be liable to great variation in point of ſtrength, and in this reſpect it is perhaps, the moſt precarious, though ſome have affirmed that it is the moſt certain, of the antimonial medicines.

The foregoing preparation proves emetic when taken on an empty ſtomach, in a doſe of four, five, or ſix grains; but in the preſent practice, it is ſcarce ever preſcribed in this intention; being chiefly uſed as an *alterative deobſtruent*, particularly in cutaneous diſorders. Its emetic quality is eaſily blunted, by making it up into pills with reſins or extracts, and giving them on a full ſtomach. With theſe cautions, it has been increaſed to the rate of ſixteen grains a day, and continued for a conſiderable time, without occaſioning any diſturbance upwards or downwards. As its ſtrength is precarious, it ſhould be taken at firſt in very ſmall doſes, and increaſed by degrees according to its effect.

A compoſition of the ſulphur antimonii præcipitatum with mercurius dulcis, has been found a *powerful*, yet *ſafe alterative in cutaneous diſorders*; and has completed a cure after ſalivation had failed. In *venereal caſes*, likewiſe, this medicine has produced excellent effects. A mixture of equal parts of the ſulphur and calomel (well triturated together, and made into pills with extracts, &c.) may be taken from four to eight or ten grains, morning and night; the

patient keeping moderately warm, and drinking after each dose a draught of a decoction of the woods, or similar liquors. This medicine generally promotes perspiration, scarce occasioning any tendency to vomit or purge, or affecting the mouth.

KERMES MINERALIS.

Kermes mineral.

Take of
Antimony, sixteen ounces;
Any fixt alkaline salt, four ounces;
Water, one pint.

Boil them together for two hours, then filter the warm liquor. As it cools, the kermes will precipitate. Pour off the water, and add to it three ounces of fresh alkaline salt, and a pint more of water: in this liquor boil the remaining antimony as before; and repeat the process a third time, with the addition of only two ounces of alkaline salt, and another pint of water; filtering the liquor as at first, and collecting the powders which subside from them in cooling.

This medicine has of late been greatly esteemed in some places, under the names of *Kermes mineral*, *pulvis Carthusianus*, *poudre des Chartreux*, &c. It was originally a preparation of Glauber, and for some time kept a great secret; till at length the French king purchased the preparation from M. de la Ligerie, for a considerable sum, and communicated it to the public in the year 1720. In virtue, it is not different from the sulphurs abovementioned. All of them owe their efficacy to a part of the regulus of the antimony, which the alkaline salt, by the mediation of the sulphur, renders soluble in water.

PANACEA ANTIMONII.

Panacea of antimony.

Take of
Antimony, six ounces;
Nitre, two ounces;
Common salt, an ounce and a half;
Charcoal, an ounce.

Reduce them into a fine powder, and put the mixture into a red-hot crucible, by half a spoonful at a time, continuing the fire a quarter of an hour after the last injection. Then either pour the matter into a cone, or let it cool in the crucible, which when cold must be broken to get it out. In the bottom will be found a quantity of regulus; above this a compact liver-coloured substance: and on the top, a more spongy mass: this last is to be reduced into powder, edulcorated with water, and dried, when it appears of a fine golden colour.

This preparation is supposed to have been the basis of LOCKYER'S PILLS, which were formerly a celebrated purge. Ten grains of the powder mixed with an ounce of white sugar-candy, and made up into a mass with mucilage of gum tragacanth, may be divided into an hundred small pills; of which one, two, or three, taken at a time, are said to work gently by stool and vomit. The compact liver-coloured substance, which lies immediately above the regulus, operates more churlishly. This last appears to be nearly of the same nature with the *crocus antimonii*, and the former with the *antimonium cum sulphure*.

ANTIMONIUM VITRIFICATUM;

formerly

VITRUM ANTIMONII.

Vitrified antimony.

Lond.

Take of antimony, powdered, four ounces.

Burn it in a broad earthen vessel, raising the fire gradually, and stirring with an iron rod, until

it no longer emits any ſmoke.— With this powder fill two-thirds of a crucible, and fit on a cover; let the heat at firſt be moderate, and afterwards ſtronger, until it melts into glaſs, which may be poured from the crucible.

VITRUM ANTIMONII.

Glaſs of antimony.

Edinb.

Strew antimony reduced to a coarſe powder like ſand, upon a ſhallow earthen unglazed veſſel, and place upon a moderate fire, that the antimony may be ſlowly heated, ſtirring the powder conſtantly at the ſame time, that the antimony may not run into lumps: white vapors, ſmelling like ſulphur, will ariſe; when theſe, with the ſame degree of fire become deficient, increaſe the fire a little, that vapors may again exhale, and thus perſiſt till the powder brought to a red heat exhales no more vapors. This powder ſhould be put into a crucible, and melted with a very ſtrong fire, until it puts on the appearance of liquified glaſs; then let it be poured out upon a braſs plate, or diſh, made hot.

The calcination of antimony, to fit it for making a tranſparent glaſs, ſucceeds very ſlowly, unleſs the operator be very wary and circumſpect in the management of it. The moſt convenient veſſel is a broad ſhallow diſh, or a ſmooth flat tile, placed under a chimney. The antimony ſhould be the purer ſort, ſuch as is uſually found at the apex of the cones. This, groſsly powdered, is to be evenly ſpread over the bottom of the pan, ſo as not to lie above a quarter of an inch thick on any part. The fire ſhould be at firſt no greater than is juſt ſufficient to raiſe a fume from the antimony, which is to be now and then ſtirred; when the fumes begin to decreaſe, increaſe the heat, taking care not to raiſe it ſo high as to melt the antimony, or run the powder into lumps; after ſome time the veſſel may be made red-hot, and kept in this ſtate, until the matter will not, upon being ſtirred, any longer fume. If this part of the proceſs be duly conducted, the antimony will appear in an uniform powder, without any lumps, and of a grey colour.

With this powder fill two-thirds of a crucible, which is to be covered with a tile, and placed in a wind-furnace. Gradually increaſe the fire, till the calx be in perfect fuſion, when it is to be now and then examined by dipping a clean iron wire into it. If the matter, which adheres to the end of the wire, appear ſmooth and equally tranſparent, the vitrification is completed, and the glaſs may be poured out upon a hot ſmooth ſtone, or copper-plate, and ſuffered to cool by ſlow degrees, to prevent its cracking and flying in pieces. It is of a tranſparent yellowiſh red colour.

The glaſs of antimony uſually met with in the ſhops, is ſaid to be prepared with certain additions: which may perhaps render it not ſo fit for the purpoſes here deſigned. By the method above directed, it may be eaſily made, in the requiſite perfection, without any addition.

As antimony may be rendered nearly or altogether inactive by calcination, it might be expected that the calx and glaſs of the preſent proceſs would be likewiſe inert. But here the calcination is far leſs perfect than in the other caſe, where the inflammable principle of the regulus is totally burnt out by deflagration with nitre; there the calx is of perfect whiteneſs, and a glaſs made from that calx (with the addition of any ſaline flux, for of itſelf it will not vitrify) has little

colour: but here ſo much of the inflammable principle is left, that the calx is grey, and the glaſs of a high colour. The calcined antimony is ſaid by BOERHAAVE to be violently emetic. Experience has ſhown that the glaſs is ſo, inſomuch as to be unſafe for internal uſe. It is employed chiefly, in the preſent practice, as being ſubſervient to ſome other preparations, particularly the emetic tartar and antimonial wine; and in combination with wax, and ſome other ſubſtances, by which its power is obtunded.

VITRUM ANTIMONII CERATUM.

Cerated glaſs of antimony.
Edinb.

Take of
Yellow wax, a dram;
Glaſs of antimony, reduced into powder, an ounce.
Melt the wax in an iron veſſel, and throw into it the powdered glaſs; keep the mixture over a gentle fire for half an hour, continually ſtirring it; then pour it out upon a paper, and when cold grind it into powder.

The glaſs melts in the wax, with a very ſoft heat. After it has been about twenty minutes on the fire, it begins to change its colour, and in ten more comes near to that of Scotch ſnuff, which is a mark of its being ſufficiently prepared. The quantity here ſet down loſes about one dram of its weight in the proceſs.

This medicine has for ſome time been greatly eſteemed in *dyſenteries:* ſeveral inſtances of its good effects, in theſe caſes, may be ſeen in the fifth volume of the Edinburgh Eſſays, from which the above remarks on the preparation are taken. The doſe is from two or three grains to twenty, according to the age and ſtrength of the patient. In its operation, it makes ſome perſons ſick and vomit; it purges almoſt every one; though it has ſometimes effected a cure, without occaſioning any evacuation or ſickneſs.

Mr. GEOFFROY gives two ſingular preparations of glaſs of antimony, which ſeem to have ſome affinity with this. One is made by digeſting the glaſs, moſt ſubtilely levigated, with a ſolution of maſtich made in ſpirit of wine, for three or four days, now and then ſhaking the mixture; and at laſt evaporating the ſpirit, ſo as to leave the maſtich and glaſs exactly mingled. Glaſs of antimony thus prepared is ſaid not to prove emetic, but to act merely as *a cathartic*, and that not of the violent kind. A preparation like this was firſt publiſhed by Hartmann, under the name of *chyliſta.*

The other preparation is made by burning ſpirit of wine upon the glaſs three or four times, the powder being every time exquiſitely rubbed upon a marble. The doſe of this medicine is from ten grains to twenty or thirty. It is ſaid to operate mildly both *upwards* and *downwards*, and ſometimes to *prove ſudorific.*

ANTIMONIUM MURIATUM.

Lond. and Edinb.
formerly
CAUSTICUM ANTIMONIALE *and*
BUTYRUM ANTIMONII.
Muriated antimony.
Lond. and Edinb.

Take of
Crocus of antimony powdered,
Vitriolic acid,—each one pound;
Dried ſea ſalt, two pounds.
Pour the vitriolic acid into a retort, adding by degrees the ſea-ſalt and crocus of antimony, previouſly mixed; then diſtil in a ſand bath. Let the diſtilled matter be expoſed to the air for ſeveral days, and pour the liquid from the dregs.

In the former edition of the Edinburgh Diſpenſatory the *butyrum antimonii*, as this preparation

was called, was made by adding one part of crude antimony to two parts of muriated quickſilver, which after being thoroughly mixed was diſtilled from a retort; in which proceſs an oily liquor aſcended and congealed in the neck of the retort, appearing like ice: this was melted down by a live coal cautiouſly applied, and this oily matter was rectified in a glaſs retort into a pellucid liquor. However, now the college has adopted the ſame method as that of London, which is conſidered not only as a leſs dangerous proceſs, but alſo preferable to any other.

The muriated antimony appears to be a ſolution of the metallic part of the crocus in the marine acid. If regulus of antimony were added in the diſtillation of ſpirit of ſea ſalt without water, a like ſolution would be made.

When the congealed matter that riſes into the neck of the retort is liquefied by the moiſture of the air, it proves leſs corroſive than when melted down and rectified by heat; though it ſeems, in either caſe, to be ſufficiently ſtrong for the purpoſes for which it is intended, as the *conſuming of fungous fleſh*, and the *callous lips of ulcers*. It is remarkable, that though this ſaline concrete readily and almoſt entirely diſſolves by the humidity of the air, only a ſmall quantity of white powder ſeparating, it nevertheleſs will not diſſolve on putting water to it directly. Even when previouſly liquefied by the air, the addition of water will precipitate the ſolution.

And accordingly, by the addition of water is formed, that once celebrated powder named *Mercurius Vitæ*, or *Algeroth's Powder*, which has not now any place in either of the Pharmacopœias.

MERCURIUS VITÆ, ſeu PULVIS ALGEROTHI.

Mercury of life, or Algeroth's powder.

Take of

Rectified butter of antimony, as much as you pleaſe.

Pour to it a ſufficient quantity of ſpring water, and an exceeding white powder will be precipitated. Edulcorate this by repeated affuſions of warm water, and dry it by a ſlow fire.

This powder has not, as its name ſhould ſeem to imply, any thing of mercury in it, but is ſolely compoſed of the reguline part of the antimony, corroded by the acid ſpirit of ſea ſalt; which acid is ſo cloſely united, as not to be ſeparated by any ablution with water. LE MORT directs ſome alkaline ſalt to be diſſolved in the water, in order to obtund the acid. Several other methods alſo have been contrived for correcting and abating the force of this violent emetic; but they either leave it ſtill virulent, or render it inert. It has therefore for a long time been laid aſide by practitioners; and the Edinburgh college, who retained it in a preceding edition, have at a late reviſal of their Pharmacopœia expunged it.

ARSENICUM ANTIMONIATUM.

Antimoniated arſenic,

vel

CAUSTICUM ARSENICALE,

Arſenical cauſtic.

Take of

Powdered antimony, two ounces;
Arſenic, one ounce.

Let theſe be fluxed together till they are perfectly united, and afterwards reduced to powder.

This is a moſt uſeful compoſition, well calculated for the reduction of excreſcences, or for the removal of parts in ill-conditioned ulcers, which ſeem to obſtruct their healing; it was a favourite application of the late Mr. JUSSAMOND's, in his treatment of cancers; and may

be reduced to any degree of mildness, by the addition of powdered opium, which assists in reducing the violence of the pain.

BEZOARDICUM MINERALE.

Bezoar mineral.

Take any quantity of muriated antimony, newly rectified, and gradually drop into it nitrous acid, till the effervescence ceases.—Draw off the spirit in a glass vessel, placed in a sand-heat, till a dry powder remains behind. Add to this a little fresh nitrous acid, and again exsiccate it. Repeat this a third time: then commit the powder in a crucible to a naked fire, till it has received an almost white heat, and detain it in this state for half an hour.

This preparation may be easier made, and with greater safety to the operator, by dropping the butter of antimony into three or four times its weight of nitrous acid, and distilling the mixture in a retort, until a dry white mass is left behind, which is afterwards to be calcined, as above directed. It may likewise be made by distilling nitrous acid from the mercurius vitæ, and calcining the remainder; or by deflagrating the mercurius vitæ with thrice its weight of pure nitre. This last method, proposed by WEDELIS, is followed by the Augustan college.

Bezoar mineral was formerly held in great esteem as a *diaphoretic*; but its reputation is at present almost lost. It is not different in medical virtue, or in any sensible quality, from the calces of antimony made directly by deflagration with nitre, some of which have generally supplied its place in the shops. It appears at first extraordinary, that the violent caustic, muriated antimony, should be rendered indolent by the corrosive spirit of nitre. How this happens will be easily understood, upon considering that the nitrous acid expels the marine (to which the caustic quality is owing), and is itself expelled from most metallic substances by fire.

ANTIMONIUM TARTARISATUM.

Lond. Edinb.

formerly

TARTARUM EMETICUM.

Tartarised antimony.

Lond.

Take of

Crocus of antimony, powdered, one pound and an half;

Crystals of tartar, two pounds;

Distilled water, two gallons.

Boil them in a glass vessel about a quarter of an hour: filter the liquor through paper, and set it by to crystalise.

Edinb.

Take of

Muriatic antimony, any quantity.

Infuse it in hot water, in which has been dissolved, before-hand, as much fixed alkaline vegetable salt, well purified, as will precipitate all the antimony, which being well washed, should be dried; and boil nine drams of it with two ounces and an half of crystals of tartar, finely powdered, in five pounds of water, till the powders are dissolved; strain the solution, evaporate to a pellicle, and set it to crystallize.

Though we have here two very different modes for procuring the tartarised antimony, still the product is the same, the reguline part of antimony united with the acid of tartar.

To which mode the preference ought to be given is doubtful, as from both a very good compound may be formed. By some the method adopted by the Edinburgh college is thought most eligible, for

when it is formed from the precipitate from the muriatic acid, there is the leaſt chance of its being uncertain in its operation. BERGIUS and others have recommended the precipitation to be made by water; but when it is procured by an alkaline ley, it is more certainly freed from the muriatic acid, and will of courſe be milder.

By employing the waſhed crocus, as in the firſt proceſs, it proves of a whiter colour, and likewiſe more certain in ſtrength; though it will ſtill be ſomewhat precarious in this laſt reſpect, if the cryſtalliſation be complied with: for ſome of the tartar, even though the operation be performed with a good deal of care, will be apt to ſhoot by itſelf, retaining little or nothing of the antimony. It ſhould ſeem therefore more eligible, as ſoon as the ſolution has paſſed the filter, to proceed to the total evaporation of the liquor, or at leaſt to evaporate lower than is uſual for cryſtalliſation, that the whole may ſhoot at once; but in order to ſecure the uniform ſtrength, after the cryſtals are all ſeparated from the liquor, they ought to be beat together in a glaſs mortar, into a fine powder, which will anſwer the deſired purpoſe.

The tartariſed antimony is one of the beſt of the *antimonial emetics*, acting more powerfully than the quantity of crocus contained in it would do by itſelf, though it does not ſo much ruffle the conſtitution. And indeed antimonials in general, when thus rendered ſoluble by vegetable acids, are more ſafe and certain in their effects, than the violent preparations of that mineral exhibited by themſelves; the former never varying in their action from a difference in the food taken during their uſe, or ſimilar circumſtances, which occaſioning more or leſs of the others to be diſſolved, make them operate with different degrees of force.—Thus crude antimony, where acid food has been liberally taken, has ſometimes proved violently emetic; whilſt, in other circumſtances, it has no ſuch effect.

The doſe of tartariſed antimony, when deſigned to produce the full effect of an emetic, is from four to ſix or eight grains. It may likewiſe be advantageouſly given in ſmaller doſes, half a grain for inſtance, as a *diaphoretic* and *alterative* in cutaneous diſorders; and added, in the quantity of a grain, as a ſtimulus to ipecacuanha, &c. Added to purgative medicines, in ſmall doſes, it certainly aſſiſts to their operation, and makes them act more quickly.

Before we quit this ſubject, it may be neceſſary to make one obſervation—that the activity of the reguline part of antimony depends upon its union with acids; the union being formed either in the ſtomach, with the acid to be met with in that organ, or from, and before it is adminiſtered internally: hence it is why the calces are ſo uncertain in their operation, ſometimes operating violently, at others, not at all; and hence may it be accounted for why they produce ſuch different effects, at different times; very ſmall doſes being much more active at one time, than doſes much increaſed are at another.—Hence it is obvious why the preparations, conſiſting of the reguline part of antimony already in combination with an acid, are the moſt certain and conſtant in their operations; and ſuch is the tartariſed antimony, whoſe doſes and effects may be meaſured with great exactneſs.

Dr. BLACK's TABLE of the PREPARATIONS of AATIMONY.

The Preparations of Antimony are obtained either from the crude antimony, or from the pure metallic part of it called regulus.

FROM CRUDE ANTIMONY.

I. BY SIMPLE PULVERISATION.

Antimonium præparatum. *Ed.* et *Lond.*

II. BY THE ACTION OF HEAT AND AIR.

Flores antimonii, sine addito.
Vitrum antimonii. *Ed.* et *Lond.*
Vitrum antimonii ceratum. *Ed.*

III. BY THE ACTION OF FIXED ALKALIES.

1. Joined with it by fusion. HEPARS of antimony.
Hepar antim. mitissimum, *vulgo* Regulus antim. medicinalis.
Hepar for the Kermes mineral of Geoffroy.
Hepar for the tinctura antimonii. *Lond.*
2. Acting upon it in the form of a watery solution.
Kermes mineralis.
Sulphur antim. præcipitatum. *Ed.* et *Lond.*
Vulgo Sulphur auratum antimonii.

IV. BY MELTING OR DEFLAGRATING IT WITH NITRE, WHICH PRODUCES EITHER CROCI OR CALCES OF ANTIM.

Crocus antim. mitissimus, *vulgo* Regulus antim. medicinalis.
Crocus antimonii mitior.
Crocus antimonii. *Lond.*
Crocus antimonii, *vulgo* Crocus metallorum. *Ed.*
Crocus antimonii lotus. *Lond.*
Antimon. emeticum mitius. Boerh.
Calx antimonii nitrata. *Ed.* *Vulgo* James's powder.
Calx antimonii. *Lond.* *Vulgo* Antim. diaphoreticum.

V. BY THE ACTION OF ACIDS.

Antimon. Vitriolatum.—Klaunig.
Antimon. catharticum.—Wilson.
Causticum antimoniale, *vulgo* Butyrum Antim. *Ed.*
Causticum antimoniale.—*Lond.*
Mercurius vitæ, sive pulvis Algarotti.
Bezoardicum minerale.
Florus antim. cum sale ammoniaco.
Tartarus antimonialis,—*vulgo* emeticus. *Ed.* et Tartarus emeticus. *Lond.*
Vinum antimoniale. *Ed.* et *Lond.*
Vinum e tartaro antimoniali. *Ed.*

FROM THE REGULUS.

This metal separated from the sulphur by different processes, is called *Regulus antimonii simplex*, *Regulus antimonii martialis*, *Regulus jovialis*, &c. From it were prepared,

I. BY THE ACTION OF HEAT AND AIR,

Flores argentei, sive nix antim.

II. BY THE ACTION OF NITRE,

Cerussa antimonii.
Stomachicum Poterii.
Antihecticum Poterii.
Cardiacum Poterii.

Preparations which have their name from antimony, but scarcely contain any of its metallic part.

Cinnabaris antimonii. *Lond.*

Tinctura antimonii. *Lond.*

In the various preparations of antimony, the reguline part is either combined with an acid, or in a condition to be acted upon by acid in the stomach; and the general effects of antimonials are, diaphoresis, nausea, full vomiting and purging, which perhaps may be best obtained by the forms of prepared antimony and emetic tartar. Some allege that antimonials are of most use in fevers when they do not produce any sensible evacuation, as is said to be the case sometimes with James's powder. Some therefore prefer it in typhus, and emetic tartar in synochus, in which there is the appearance at first of more activity in the system, and more apparent cause for evacuation.

SECT. IX.

Preparation of Bismuth.

THIS metal resembles in appearance the regulus of antimony; but differs greatly from it, in its pharmaceutical properties and medical qualities. It melts in a very small heat, long before ignition; and totally dissolves, with great effervescence, in dilute nitrous acid, which only corrodes the antimonial metal. As a medicine, it seems, when pure, to have little or no effect; though some preparations of it were formerly accounted diaphoretic. At present, only one preparation comes under the notice of the apothecary or chemist, and that designed for external use.

Magisterium bismuthi.

Magistery of bismuth.

Dissolve bismuth in a proper quantity of dilute nitrous acid, without heat, adding the bismuth by little and little at a time. Pour the solution into sixteen times its quantity of fair water. It will grow milky, and on standing for some time, deposit a bright white precipitate: the addition of spirit of wine will expedite the precipitation. Wash the powder in fresh parcels of water; and dry it in a shady place betwixt two papers.

This preparation is of some esteem *as a cosmetic*, which is the only use to which it is now applied. The diaphoretic virtues, attributed to it when taken internally, have very little foundation, and by the present practice are not at all regarded. It was proposed to be received in our Pharmacopœia at a late revisal, but was found much too insignificant to be admitted there.

SECT. X.

COMPOUND METALLIC PREPARATIONS.

LAPIS MEDICAMENTOSUS.

The medicinal stone.

Lond.

TAKE of
Litharge,
Bole armenic, or French bole,
Alum,—each half a pound;
Colcothar of green vitriol, three ounces;
Vinegar, a quarter of a pint.

Mix and dry them till they grow hard.

This preparation is employed externally as *an astringent*, for *fastening loose teeth*, *preserving the gums*, *healing* and *drying up ulcers* and *wounds*, and *repressing defluxions of thin acrid humours upon the eyes*. It is sometimes used in injections for checking a gonorrhœa, after the virulence is expelled. A preparation much resembling this is said, in the memoirs of the French academy, to be greatly esteemed among the surgeons in the army as a vulnerary.

SPECIFICUM ADSTRINGENS MAETZII.

An astringent preparation taken from Maetz, which has been sold under the name of Colbatch's styptic powder.

Take any quantity of iron filings, and as much spirit of salt as will rise above them three or four inches. Digest them together with a gentle heat, till the spirit cease to act on the metal. Then pour off the liquor, evaporate it to one half, and add thereto an equal weight of sugar of lead. Continue the evaporation, with a small heat, until the matter remain dry, and assume a red colour.

If the process be stopt as soon as it becomes dry, it has exactly the appearance of Colbatch's powder. It must be kept close from the air, otherwise it deliquiates.

This is said to be *the styptic*, with which so much noise was made some time ago by the author of the *Novum Lumen Chirurgiæ*; and for the sale of which, a patent was procured: only in that was used the vitriolic acid, instead of muriatic in this; a difference not very material. The preparation stands recommended in *all kinds of hæmorrhages* and *immoderate fluxes*, both internally and externally: the dose is from four grains to twelve. It is undoubtedly an efficacious styptic, but for internal use a dangerous one. See the article LEAD, and its *preparations*.

ANTIHECTICUM POTERII.

Poterius's antihectic.

Take of
Martial regulus of antimony, six ounces;
Fine tin, three ounces.

Melt these together in a crucible; then pour them out into a warm greased mortar, and when the mass is grown cold, grind it into a powder. Add to this thrice its weight of pure nitre, and deflagrate the mixture in a crucible, throwing in only a spoon-

ful at a time; then calcine it [that is, keep it in fusion] for an hour; and, having afterwards ground it into an impalpable powder, pour on it a sufficient quantity of warm water. Stir them well together with a pestle, till the water grows milky, which, thus loaded with the finer parts of the powder, is to be poured off, and fresh water put to the remainder. Repeat this operation till nothing but indissoluble fæces remain behind. Suffer all the milky liquors to rest. A powder will fall to the bottom, which is to be washed with repeated affusions of warm water, and lastly dried for use.

The regulus of antimony should be melted before the tin is added to it; for, if they both be put into the crucible together, a part of the tin will be dissipated by the heat requisite for the fusion of the regulus.

The chemists have been greatly divided with regard to the proportion which these two ingredients ought to bear to one another. Some vary so much from the present prescription, as to order two parts of the antimonial regulus to one of tin; others no more than one part to six. Nor have they agreed upon the colour which this preparation ought to have; some preferring that which is perfectly white, whilst others look upon a blueish tinge as a mark that the proportions have been duly observed, and the operation regularly performed. In the process above, it seems intended to be white: for without the observance of certain encheireses, not there mentioned, as particularly calcining the powder after the ablution, it will scarce have any thing of a blueish cast.

Practical physicians do not differ less in the accounts which they give of the virtues of this celebrated medicine. Some extol it as an excellent *diaphoretic*, &c. others are ready to vouch, that it has done most eminent service in *hectical cases*; whilst many, of no small note, are not only confident that it has none of the virtues attributed to it, but utterly condemn it as unsafe, and capable of producing the very disorders said to be remedied by its use. This affair probably will not be satisfactorily determined, till the virtues of *calx of tin* and *calx of antimony* (of which this medicine is a mixture) shall be better ascertained than they are at present. In the mean time, the use of the *antihectic* is in common practice laid aside; and is not likely to be ever introduced again.

BEZOARDICUM JOVIALE.

Bezoar with tin.

Take of

Regulus of antimony, three ounces;

Pure tin, two ounces;

Muriated mercury, five ounces.

Melt the regulus of antimony in a crucible, and put to it the tin, so as to make a new regulus; to which, after being levigated, add the muriated mercury, and distil the mixture in a retort. Let the muriated antimony which arises in this process, be fixed, by three repeated distillations, with thrice its own quantity of nitrous acid. The powder is then to be calcined; thrown, whilst ignited, into a proper quantity of spirit of wine; and afterwards dried for use.

This preparation is not greatly different from the foregoing. The muriated antimony seems to contain more of the tin, than of the antimonial regulus, united with the marine acid of the muriated quick-silver. The nitrous spirit expels the marine, and is itself afterwards expelled in the calcina-

tion; leaving the powder a mere calx, similar to one prepared from the ſame ingredients in a leſs troubleſome manner, by deflagration with nitre.

ÆTHIOPS ANTIMONIALIS.

Antimonial æthiops.

Let equal quantities of antimony and ſea ſalt be melted together in a crucible for an hour; when grown cold, a regulus (improperly ſo called) will be found in the bottom. This is to be ſeparated from the ſcoriæ that lie above it, and ground with an equal weight of purified quick-ſilver, until they are united.

This medicine is ſaid to be of remarkable efficacy *in venereal caſes of long ſtanding*, *in cancerous tumours*, *ſcorbutic* and *ſcrophulous diſorders*, *obſtinate glandular obſtructions*, and *ſundry other chronical diſtempers* which elude the force of the common medicines. A few grains may be given at firſt; and the doſe gradually increaſed, according to its operation, to a ſcruple or more. It acts chiefly by *promoting perſpiration*. In ſome conſtitutions, it *proves purgative*; and, in others, if the doſe be conſiderable, *emetic*.

Sundry other preparations of this kind have been held by ſome people in conſiderable eſteem, though not taken notice of by common practice. They have been generally compoſed of mercury, united by triture either with crude antimony, the medicinal regulus, or the golden or precipitated ſulphur.

Mr. MALOUIN, of the faculty of Paris, made trial of different methods for uniting mercury and crude antimony into an æthiops. Thoſe which ſucceeded I ſhall here extract from his *Chimie Medicinale*.

On grinding together two parts of antimony and one of mercury, the mercurial globules diſappeared in three hours, and the compound proved ſimilar in appearance to the æthiops made with the ſame proportions of mercury and common ſulphur.—Equal parts of the antimony and mercury were united with much more difficulty, requiring the triture to be continued for two days; though it was found alſo, even with theſe proportions, that when the mercury was added, not all at once, but by little and little, the union might be effected in five hours.—As common æthiops is made more perfect, in regard to the intimate union of the ingredients, by heat than by triture; the moſt perfect antimonial æthiops alſo was obtained by means of fire, in the following manner.

A heated crucible is to be rubbed in the inſide with tallow, immediately covered, and ſet in the fire. When red-hot, throw in the antimony, beaten into coarſe powder, and cover the veſſel again. When the antimony is melted, take the crucible out of the fire, throw in a ſmall bit of tallow, pour an equal weight of heated quick-ſilver on different parts of the ſurface, cover the crucible for a moment, and, while the mixture is ſtill fluid, pour it out into a heated iron mortar. When grown cold, reduce it into a powder, which is to be levigated on a marble.

On this black powder the author directs ſome ſpirit of wine to be burnt two or three times. This may very ſafely be omitted, as it can nowiſe affect the medicine.—The only difficulty in the proceſs relates to the degree of heat of the melted antimony. If it be not ſufficiently fluid, the mercury cannot equally unite with it: and, if over hot, great part of the mercury will be diſſipated.

Mr. MALOUIN commends this æthiops, as a medicine of great efficacy in *glandular obſtructions, obſtinate cutaneous maladies of different kinds, inveterate rheumatiſms*, &c. It acts moſt commonly by *urine* and *perſpiration*, rarely purges, or occaſions only ſome ſlight nauſea. The doſe is from one grain to twenty, two or three times a day, that is, from one to ſixty grains in a day.—In ſome perſons a dram has no ſenſible operation; others are moved by ſix grains.

PART IV.

MEDICINAL COMPOSITIONS.

CHAPTER I.

POWDERS.

THIS form receives ſuch materials only, as are capable of being ſufficiently dried to become pulverable without the loſs of their virtue. There are many ſubſtances, however, of this kind, which cannot be conveniently taken in powder. *Bitter acrid, fetid drugs*, are too diſagreeable;—*emollient* and *mucilaginous herbs* and *roots* are too bulky;—*pure gums cohere*, and become tenacious in the mouth;—*fixt alkaline ſalts* liquefy upon expoſing the compoſition to the air;—and *volatile alkalies* exhale.

The doſe of powders, in extemporaneous preſcription, is generally about half a dram: it rarely exceeds a whole dram; and is, not often, leſs than a ſcruple. Subſtances which produce powerful effects in ſmaller doſes, are not truſted to this form, unleſs their bulk be increaſed by additions of leſs efficacy. Thoſe which require to be given in larger ones, are better fitted for other forms.

The uſual vehicle for taking the lighter powders, is any agreeable thin liquid. The ponderous powders, particularly thoſe prepared from metallic ſubſtances, require a more conſiſtent vehicle, as ſyrups; for, from thin ones, they ſoon ſubſide. Reſinous ſubſtances likewiſe are moſt commodiouſly taken in thick liquors: in thin ones, they are apt to run into lumps, which are not eaſily again diſſoluble.

General rules for making powders.

I.

Particular care ought to be taken that nothing carious, decayed, or impure, be mixed in the compoſition of powders: the ſtalks and corrupted parts of plants are to be ſeparated.

II.

The dry aromatics ought to be ſprinkled, during their pulveriſation, with a few drops of any proper water.

III.

The moiſter aromatics may be

dried with a very gentle heat, before they are committed to the mortar.

IV.

Gums, and ſuch other ſubſtances as are difficultly pulverable, ſhould be pounded along with the drier ones, that they may paſs the ſieve together.

V.

No part ſhould be ſeparated for uſe, until the whole quantity put into the mortar has paſſed the ſieve, and the ſeveral ſiftings been mixed together; for thoſe parts of one and the ſame ſubject, which powder firſt, may prove different, at leaſt in degree of efficacy, from the reſt.

VI.

Powders of aromatics are to be prepared only in ſmall quantities at a time, and kept in glaſs veſſels very cloſely ſtopt.

If powders be long kept, and not carefully ſecured from the air, their virtue is in great meaſure deſtroyed, although the parts in which it conſiſts ſhould not in other circumſtances prove volatile. Thus, though the virtues of *ipecacuanha* be ſo fixt as to remain entire even in extracts made with proper menſtrua, yet, as the college of Wirtemberg obſerves, if the powdered root be expoſed for a length of time to the air, it loſes its emetic quality.

PULVIS ANTILYSSUS.

Powder againſt the bite of a mad dog.

Take of

Aſh-coloured ground liverwort, two ounces;

Black pepper, one ounce.

Beat them together into a powder.

In a former Pharmacopœia, the quantity of pepper was equal to that of the herb: which rendering the powder greatly too hot, the above diminution of it became neceſſary. The virtue which this medicine has been celebrated for is expreſſed in its title. The doſe is a dram and a half, to be taken in the morning faſting, in half a pint of cow's milk warm, for four mornings together.

Upon the authority of Dr. MEAD, this formula has had a place in both the London and Edinburgh Pharmacopœias; but is now deſervedly rejected, as a medicine inefficacious.

PULVIS ARI COMPOSITUS.

Compound powder of arum.

Take of

Arum roots, newly dried, two ounces;

Calamus aromaticus,

Burnet ſaxifrage roots, — of each one ounce;

Canella alba, ſix drams;

Vitriolated tartar, two drams.

Mix and make them into a powder.

The *pulvis ari compoſitus* was originally intended as a *ſtomachic:* and in *weakneſſes* and *relaxations of the ſtomach*, accompanied with a ſurcharge of viſcid humours, it is doubtleſs a very uſeful medicine. It frequently alſo has good effects in *rheumatic caſes*, of which I have known ſome inſtances. The doſe may be from a ſcruple to a dram, two or three times a day, in any convenient liquor. It ſhould be uſed as freſh as poſſible, for its virtue ſuffers greatly in keeping. The arum root in particular, its capital ingredient, ſoon loſes the pungency in which its efficacy principally conſiſts.

PULVIS CRETACEUS.

Chalk powder.

Edinb.

Take of

White prepared chalk, four ounces;

Nutmeg, half a dram;

Cinnamon, one dram and an half.

Mix into a powder.

Theſe powders are conſidered as

warm abſorbents, and given in diarrhœa, particularly ſuch as ariſe from acidity; and that with opium, in caſes of great irritability, where the aromatic abſorbents require the aſſiſtance of a ſedative.

PULVIS e CRETA COMPOSITUS ſine OPIO.

Compound powder of bole without opium.

Lond.

Take of
Prepared chalk, half a pound;
Cinnamon, four ounces;
Tormentil-root,
Gum Arabic, — each three ounces;
Long pepper, half an ounce.
Reduce theſe ingredients into powder.

PULVIS e CRETA COMPOSITUS cum OPIO.

Compound powder with opium.

Lond.

Take of
Compound powder of chalk, eight ounces;
Hard purified opium, powdered, one dram and an half.
Mix them.

PULVIS CERUSSÆ COMPOSITUS.

Compound powder of ceruſſe.

Lond.

Take of
Ceruſſe, five ounces;
Sarcocolla, an ounce and a half;
Gum tragacanth, half an ounce.
Beat them together into a powder.

This compoſition is the *trochiſci albi* of Razi, brought back to its original ſimplicity with regard to the ingredients, and without the needleſs trouble of making it into troches. It is employed for external purpoſes, as in *collyria*, *lotions*, and *injections*, for *repelling acrimonious humours*, and in *inflammations*.

PULVIS CHELARUM CANCRI COMPOSITUS.

Compound powder of crab's-claws.

Lond.

Take of
Crab's-claws, prepared, one pound;
Chalk, prepared,
Red coral, prepared, — each three ounces.
Mix them.

Theſe powders have loſt ſeveral of their ingredients, without any injury to their virtues; and poſſibly they would ſtill bear a further reduction; for both the crab's-eyes and claws are by themſelves at leaſt as effectual as any compoſition of them with pearls and coral. In ſome of our hoſpitals, the following compoſition is ſubſtituted.

PULVIS TESTACEUS COMPOSITUS.

Compound teſtaceous powder.

Take of
Oyſter-ſhells, prepared, one pound;
White chalk, half a pound.
Mix them together.

This cheap abſorbent powder is at leaſt equally valuable, as a medicine, with the more coſtly and compounded crab's-claw and bezoardic powders of the ſhops. Theſe kinds of preparations are given from half a ſcruple to half a dram, for abſorbing or deſtroying acidities in the firſt paſſages; which ſeems to be the only good effect that can be reaſonably expected from theſe ſimple antacid earths. If they meet with no acid to diſſolve them, they promiſe to be injurious, rather than beneficial. — They have often been given in fevers, under the notion of *alexipharmacs* and *ſudorifics*, from a ſuppoſition that theſe diſorders are occaſioned by a latent acid; and, though this theory is now exploded, the practice built upon it is, in good meaſure, ſtill continued. So far are abſorbents from being uſeful in theſe caſes, that ſubſtances of a directly contrary quality, *mild acidulous liquors*, are in general the moſt ſucceſsful remedies, where-

ever the vis vitæ is not too far depressed; and, where it is, the insipid indolent earths can contribute nothing to support or raise it.

It may here be proper to take notice of a quality hitherto little expected from these kinds of substances; that of *strongly promoting putrefaction*. Flesh mixed with a small proportion of chalk, and exposed to a heat equal to that of the human body, not only corrupts sooner than without this addition, but likewise in a far greater degree, resolving in a few days into a perfect mucus. This quality of the absorbent powders (for the discovery of which, with many other curious experiments on the same subject, the public is obliged to the ingenious Dr. PRINGLE) seems to forbid their use in all those kinds of fevers where the animal juices are already too much disposed to a putrefactive state. We have before observed, that, in these cases, though very frequently employed, they are at best unserviceable. Perhaps their ill effects would be oftener seen, if it were not for the quantity of acids usually given in acute diseases.

PULVIS CONTRAYERVÆ COMPOSITUS.

Compound powder of contrayerva.
Lond.

Take of
Compound powder of crab's-claws, a pound and a half;
Contrayerva-root, five ounces.
Make them into a powder.

These powders were formerly directed to be made up into balls with water (and then called LAPIS CONTRAYERVÆ); a piece of trouble now laid aside as needless; for it was necessary to reduce the balls into powder again before they could be used. Nor did that form contribute, as has been imagined, to their preservation; for it is scarce to be supposed, that the powder will lose more by being kept for a reasonable length of time in a close-stopt glass, than the balls will, in the humectation with water, and exsiccation in the air, before they are fit for being put by to keep. These medicines have a much better claim to the title of *alexipharmic* and *sudorific*, than the two foregoing compositions. The contrayerva by itself is such, and proves very serviceable in low fevers, where the vis vitæ is weak, and a *diaphoresis* to be promoted. It is possible, that the crab's-claws powders are of no further service, than as they divide this powerful ingredient, and render it supportable to the stomach.

PULVIS IPECACUANHÆ COMPOSITUS;

vulgo

PULVIS DOVERI.

Compound powder of ipecacuanha.
Lond. Edinb.

Take of
Ipecacuanha,
Hard purified opium, — each, powdered, one dram;
Vitriolated kali, or lixiva, one ounce.
Mix them.

In this, as well as all other powders, where opium, scammony, aloes, calomel, or any other active ingredients enter the composition, the operator should be particularly careful, that they should be equally distributed, lest different portions should differ in strength.

This powder is considered as one of the most certain sudorifics of which we are in possession, and hence supposed to be a very effectual remedy in *rheumatisms*, and also useful in other disorders, where a cuticular discharge is wanted to be promoted; hence it is given in dropsy, &c. The dose is from five to six grains to sixteen or upwards, according as the patient's strength and stomach are able to bear it.

It is neceſſary to obſerve, that patients ſhould avoid much drinking immediately after it has been adminiſtered—becauſe that may occaſion it to be rejected by vomiting, before any other effect can be produced.

PULVIS OPIATUS.

Opiate powder.

Lond.

Take of
Hard purified opium, one dram;
Burnt and prepared hartſhorn, nine drams.
Mix them.

This powder may be conſidered as a good opiated abſorbent; and where there are prevalent acidities on the ſtomach, probably aſſiſt the opium in preventing the acidity from weakening its effects, and by forming with the acid a neutral ſalt, may in ſome degree prove a ſudorific. It may alſo become an uſeful ſuccedaneum for the pulvis ipecacuanhæ compoſitus, in patients whoſe ſtomachs are ſo circumſtanced, as to be eaſily moved by very ſlight doſes of ipecacuanha, as is ſometimes the caſe. Beſides, as ten grains of this powder contain one of opium, we can exhibit opium in any ſmall quantity which may be required, with the greateſt nicety.

PULVIS JALAPÆ COMPOSITUS.

Compound powder of jalap.

Edinb.

Take of
Jalap root, one ounce;
Cryſtals of tartar, two ounces.
Mix, and rub them together diligently for ſome time, ſo as that they may form a very fine powder.

The addition of the cryſtals of tartar is ordered to correct the griping effects of the jalap, which it is ſaid effectually to do, if they are beat very well together, and a very perfect and minute mixture formed. It is an excellent purgative, well calculated to clear the inteſtinal tubes and evacuate the ſerous fluids from the ſyſtem in general.

PULVIS E MYRRHA COMPOSITUS.

Compound powder of myrrh.

Lond.

Take of
Dried ſavin,
Dried rue,
Myrrh,
Ruſſian caſtor, — of each one ounce.
Rub them together into a powder.

This is a reformation of the *trochiſci e myrrha*, a compoſition contrived by Rhazes againſt uterine obſtructions. It may be taken in any convenient vehicle, or made into boluſes, from a ſcruple to a dram or more, two or three times a day.

PULVIS E SCAMMONIO COMPOSITUS.

Compound powder of ſcammony.

Lond.

Take of
Scammony,
Extract of jalap, — of each two ounces;
Ginger, half an ounce.
Powder them ſeparately, and mix them.

PULVIS SCAMMONII COMPOSITUS CUM ALOE.

Compound powder of ſcammony with aloes.

Lond.

Take of
Scammony, ſix drams;
Hard extract of jalap,
Socotorine aloes, — of each one ounce and a half;
Ginger, half an ounce.
Powder them ſeparately, and mix them.

This medicine is well calculated to afford relief in obſtinate coſtiveneſs, in doſes of from five to ten grains; for the combination of the

three powerfully purgative ingredients conſtitutes a very active compoſition, particularly to torpid habits, where ſuch medicines become neceſſary.

PULVIS SCAMMONII CUM CALOMELANE.

Powder of ſcammony, with calomel.

Take of
Scammony, haif an ounce;
Calomel,
Double refined ſugar,—of each two drams.
Rub them ſeparately to powder, and mix them.

Here the ſcammony is aſſiſted in its operation, by the calomel; which not only renders it uſeful in caſes of obſtinate conſtipation, but alſo in dropſies, where a large diſcharge of water is required; for, by the ſtimulant power of calomel, the abſorbent ſyſtem is very likely to have its action much increaſed.

This powder has been uſually prepared with diaphoretic antimony and cryſtals of tartar, and called, from its firſt publiſher, PULVIS CORNACHINI, which, in the Edinburgh Pharmacopœia, is thus directed.

Take of
Diaphoretic antimony,
Cream of tartar,
Scammony,—each equal parts.
Make them into a powder.

This may be given to the quantity of a dram or more. The tartar and antimonial calx appear to be no further uſeful, than as they divide the texture of the ſcammony; though Cornachini propoſes notable advantage from ſome deobſtruent quality in the tartar, whereby the veſſels ſhall be opened, and the noxious humours prepared for expulſion; and from the preparation of antimony, though it have no ſenſible operation, he expects ſome ſhare of the ſame ſucceſs which ſometimes attends the rougher preparation of that mineral.

Edinb.

Take of
Scammony,
Cryſtals of tartar,—of each two ounces.
Mix, and let them be well rubbed together, that they may form a powder.

Here we have two preparations, differing very widely in the compoſition, though bearing the ſame name, one of them that of the London Pharmacopœia, highly increaſing the purgative power of the ſcammony, and the heating quality of the compoſition, whilſt that of Edinburgh has added not only a ſlight auxiliary, but alſo a cooling corrector. Though they may both of them be ſerviceable, under particular circumſtances, we cannot avoid confeſſing, that, in general, we ſhould prefer that of Edinburgh.

PULVIS E SENA COMPOSITUS.

Compound powder of ſena.
Lond.

Take of
Cryſtals of tartar,
Sena,—each two ounces;
Scammony, half an ounce;
Ginger, two drams.
Powder the ſcammony by itſelf; and all the other ingredients together. Then mix them.

This powder is given as a cathartic, in the doſe of two ſcruples, or a dram. The ſpice is added, not only to divide, but to warm the medicine, and make it ſit eaſier on the ſtomach. The ſcammony is uſed as a ſtimulus to the ſena.—The quantity of the latter neceſſary for a doſe, when not aſſiſted by ſome more powerful material, is too bulky to be conveniently taken in this form.

PULVIS ASARI COMPOSITUS.

Lond. Edinb.
formerly

PULVIS STERNUTATORIUS.
Lond.
PULVIS CEPHALICUS.
Edinb.
Compound powder of asarabacca.
Lond.

Take of
Sweet asarabacca,
Marjoram,
Syrian herb mastich,
Lavender flowers, — of each, dried, equal weights.
Powder them together.

PULVIS CEPHALICUS.
Cephalic powder.
Edinb.

Take of
The leaves of asarum, three parts;
Lavender flowers,
Leaves of marjoram,—one part.
Beat them together into a powder.

These powders are both agreeable and efficacious errhines, and superior to most of those usually sold under the name of herb snuff.

In cases of obstinate *head-achs*, and of *inflammations of the eyes, of long continuance*, they have proved very efficacious remedies, for they differ very little in their effects:—they have also been of use in *rheumatic pains of the face*, and *some species of tooth-ach.*

Five or six grains, snuffed up the nose at bed-time, will act the next day as a powerful errhine, occasioning a frequent sneezing, and copious discharge from the nose. But care must be taken, during the operation, to avoid exposure to the cold air.

PULVIS ALUMINIS COMPOSITUS.
vulgo
Compound powder of alum.
Edinb.

Take of
Alum, one ounce and an half;
Gum kino, three drams.
Rub them together into a fine powder.

This powder has long been in repute as an astringent, under the title of PULVIS STYPTICUS HELVETII. Though, by substituting the gum kino, instead of the dragon's blood, which used to have a place in this formula, the medicine is much improved, in as much as the gum possesses more certain and superior astringent powers. It is undoubtedly a very powerful medicine; particularly efficacious in uterine hæmorrhages. Some direct the ingredients to be melted together before they are powdered. But this circumstance does not appear to be necessary.

PULVIS E SUCCINO COMPOSITUS.
Compound powder of amber.
Lond.

Take of
Amber prepared,
Gum arabic,—each ten drams;
Juice of hypocistis,
Balaustines,
Japan earth,—each five drams;
Olibanum, half an ounce;
Strained opium, one dram.
Beat them together into a powder.

This powder is composed of the more unexceptionable ingredients of the TROCHISCI E CARABE of a former Pharmacopœia. The articles omitted, which are as many in number as those now retained, were manifestly absurd or superfluous; and the making it up into troches, a very unnecessary trouble. The medicine, as now reformed, may be looked upon as an useful and tolerably elegant astringent; though possibly the ingredient which it receives name from, contributes little to its virtue. Two scruples of the composition contain one grain of opium.

PULVIS E TRAGACANTHA COMPOSITUS.
Compound powder of gum tragacanth.
Lond.

Take of
Gum tragacanth,
Gum arabic,
Starch,—each an ounce and an half;
Double refined ſugar, three ounces.
Grind them into a powder.

This powder is a mild emollient; and hence becomes ſerviceable in *hectic caſes*, *tickling coughs*, *ſtrangury*, *ſome kind of alvine fluxes*, and other diſorders *proceeding from a thin acrimonious ſtate of the humours*, or *an abraſion of the mucus of the inteſtines*. They ſoften, and give a greater degree of conſiſtency to the former, and defend the latter from being irritated or excoriated by them. All the ingredients coincide in theſe general intentions. The doſe is from half a dram to two or three drams, which may be frequently repeated.

PULVIS ALOES CUM CANELLA.
formerly
HIERA PICRA.
Powder of aloes, with canella.

Take of
The gum of Socotorine aloes, one pound;
White canella, three ounces.
Beat them ſeparately into powder, and then mix them together.

This is an uſeful aloetic purgative, the canella being a good corrector of the aloes. It is ſeldom, however, given in this form, more frequently in electuary, or pills; and uſed to form the baſis of a tincture, called tinctura ſacra; ſacred tincture.

PULVIS ALOES CUM FERRO,
inſtead of the
PILULÆ ECPHRACTICÆ.
Powder of aloes, with iron.
Lond.

Take of
Socotorine aloes, an ounce and an half;
Myrrh, two ounces;
Dried extract of gentian,
Vitriolated iron,—of each one ounce.
Let them be powdered ſeparately, and then mixed together.

This is a uſeful deobſtruent, and often given in caſes of obſtructed catamenia, as all the articles are calculated to promote that ſalutary diſcharge.

PULVIS ALOES CUM GUAIACO,
inſtead of the
PILULÆ AROMATICÆ.
Powder of aloes, with guaiacum.
Lond.

Take of
Socotorine aloes, one ounce and an half;
Gum reſin of guaiacum, one ounce;
Aromatic powder, half an ounce.
Rub the aloes and gum reſin ſeparately, to powder; and then mix them with the aromatic powder.

This, when taken in ſmall doſes, promotes perſpiration, in larger ones, is a warm purgative.

PULVIS AROMATICUS;
formerly
SPECIES AROMATICA.
Lond. Edinb.
Aromatic powder.
Lond.

Take of
Cinnamon, two ounces;
Leſſer cardamom ſeeds, huſked,
Ginger,
Long pepper,—each one ounce.
Beat them together into a powder.
Edinb.

Take of
Cinnamon,
Leſſer cardamom ſeeds,
Ginger,—each two ounces.
Beat them together into a powder.

Both theſe compoſitions are agreeable, hot, ſpicy medicines; and may be uſefully taken in *cold phlegmatic habits*, and *decayed conſtitutions*, for *warming the ſtomach*,

promoting digeſtion, and *ſtrengthening the tone of the viſcera.* The doſe is from ten grains to a ſcruple and upwards. The firſt is conſiderably the warmeſt, by the introduction of the long pepper.

PULVIS DIGESTIVUS.

Digeſtive powder.

Take of
Vitriolated magneſia,
Rhubarb,—each equal parts.

The ſalt quickens the purgative effect of the rhubarb, whilſt the rhubarb increaſes the tone of the ſtomach: hence it is ſuppoſed to aſſiſt the digeſtive powers, at the ſame time that it empties the inteſtines.

PULVIS DYSENTERICUS.

Dyſenteric powder.
Edinb.

Take of
Rhubarb, one ounce;
Calcined hartſhorn, half an ounce;
Gum Arabic, three drams;
Caſcarilla bark, two drams.
Mix and reduce them to a very fine powder.

In this compoſition is united to a *tonic purgative* a ſtill *ſtronger tonic* in the caſcarilla; an *abſorbent*; and a *demulcent*; the powers of which will render it a very uſeful medicine in dyſenteric caſes, after the violence of the diſeaſe is conquered; and when there remains a debilitated and abraded ſtate of the inteſtines.

PULVIS FUMALIS.

Fumigation powder.

Take of
Olibanum,
Amber,
Maſtich,—each three parts;
Storax, two parts;
Benzoin and Labdanum, each one part.

Its title expreſſes its uſe, giving out on burning a fragrant odour, to counteract offenſive ſmells, fumigating a ſick room; and counteracting putrid or other noxious vapours diffuſed in the atmoſphere.

PULVIS ARTHRITICUS AMARUS.

Bitter gout powder.
Pariſ.

Take of
Gentian root,
Round birthwort root,
Rhapontic root,
Germander leaves,
Groundpine leaves,
Leſſer centaury tops,—of each equal parts.
Make them into a powder.

Compoſitions of this kind were in uſe among the ancient Greek phyſicians, and made a conſiderable part of their practice in gouty and arthritic complaints. But while they beſtow great praiſes on them in cold and phlegmatic conſtitutions, they very properly condemn them as being extremely hurtful in the hot and bilious. Afterwards, on account probably of the ill conſequences ariſing from their indiſcriminate uſe, theſe medicines fell into neglect, till the introduction of the Greek volumes into the weſtern parts of Europe, when they were tranſcribed by ſome of the earlier medical writers, and brought into ſome eſteem in Italy, Germany, Switzerland, &c. A form differing from the above only in the omiſſion of the rhapontic root, was ſome years ago brought thence, as a family receipt, by a perſon of high rank, who having experienced remarkable benefit from it in an hereditary gout, ordered it to be printed, and copies delivered to all who ſhould aſk for them. (See the Medical Obſervations and Inquiries, publiſhed by a ſociety of phyſicians in London, vol. i. p. 126.) The directions for uſing this medicine are to the following effect:

"Take one dram of the powder "every morning faſting, in a cup "of any agreeable liquor, faſting

"an hour and a half after it.—"Continue this for three months "without interruption, then di-"minish the dose to three quarters "of a dram for three months "longer, then to half a dram for "six months more. After the first "year, it will be sufficient to take "half a dram every other day. "As this medicine operates in-"sensibly, it will take perhaps "two years before any great be-"nefit is received. In rheuma-"tisms that are only accidental, a "few of the dram doses may do: "but in habitual rheumatisms, "and such as are of long standing, "it must be taken as for the gout. "The remedy requires patience, as "it operates but slow in both "cases."

Dr. CLEPHANE remarks (in the learned and judicious paper above referred to) that this medicine will probably do good in many cases, for in many cases there is reason to believe it extremely proper; but that an indiscriminate use of it will probably again do what a like abuse formerly did, bring a good medicine into disrepute.

PULVIS NITROSUS.

Nitrous powder.

Take of
Purified nitre, three ounces;
Salt of sorrel, one ounce;
Double refined sugar, ten ounces.
Let them be mixed.

This is a very convenient and agreeable form of exhibiting nitre; for, whilst the sugar serves to divide and diffuse it, it corrects its taste, and the salt of sorrel adds to its cooling power.

PULVIS CARMINATIVUS.

Carminative powder.

Take of
Aniseed,
Sweet fennel seed,—each two scruples;
Ginger, one scruple;
Nutmegs, half a scruple;
Fine sugar, half a dram.
Reduce them into a powder, for four doses.

This powder is employed for *expelling flatulencies arising from indigestion*, particularly those to which hypochondriacal and hysterical persons are subject. It is likewise usefully given in the *gripes of young children*, either mixed with their food or otherwise.

PULVIS DIURETICUS.

Diuretic powder.

Take of
Purified nitre, ten grains;
Salt of amber, four grains;
Oil of turpentine, three drops;
Fine sugar, one scruple.
Drop the oil upon the sugar, then add the salts, and grind the whole together.

This powder is a very *efficacious diuretic*, and may be given to advantage in cases where the assistance of such forcing medicines is required. The salts somewhat abate the heating quality of the oil, and, at the same time, cool and relax the passages.

PULVIS ROBORANS.

Strengthening powder.

Take of
Extract of Peruvian bark, twelve grains;
Salt of steel, two grains;
Oil of cinnamon, one drop;
Fine sugar, half a dram.
Having mixed the oil with the sugar, add the other ingredients, and grind the whole well together, for two doses.

This medicine has a much better title to the appellation of a strengthener, than those usually met with under that name in Dispensatories. In *lax habits, debilities of the nervous system*, and *the weaknesses peculiar to either sex*, it has generally good effects.

PULVIS ad STRUMAS.

Powder against the king's evil.

Take of
Burnt ſponge, one ſcruple;
Nitre,
Coralline,
Fine ſugar,—each half a ſcruple.
Reduce them into powder.

This powder is recommended in *ſcrophulous diſorders* and *obſtructions of the glands.* It is ſuppoſed to *open* and *deterge the minute veſſels,* and *carry off the offending matter by urine.* Dr. MEAD informs us, in his *Monita Medica,* that he very frequently experienced its good effects. He uſed to give the quantity above preſcribed twice a day, with three or four glaſſes of the leſs compounded lime-water along with each doſe. If the patient were much emaciated, the lime-water was mixed with about an equal quantity of milk.

PULVIS VERMIFUGUS.

Vermifuge powder.

Take of 1.
Tanſy flowers,
Worm-ſeed,—each three drams;
Salt of ſteel, one dram.
Make them into a powder.

Take of 2.
Tin reduced into fine powder, two drams;
Æthiops mineral, half a dram;
Fine ſugar, one ſcruple.
Mix them well together.

Take of 3.
Choice rhubarb, three drams;
Scammony,
Calomel,—each one dram.
Mix and make them into a powder.

All theſe compoſitions are well calculated for the purpoſe expreſſed in the title. The firſt is given in the hoſpitals, in doſes of half a dram twice a day; which quantity contains about four grains and a half of the ſalt of ſteel. The ſecond is divided into three or four doſes; one of which is taken every morning, and a cathartic on the day following. The third, which is a briſk purgative, is uſed in the quantity of half a dram, after the others have been premiſed; or it is taken once or twice a week without their aſſiſtance.

CHAPTER II.

Troches and Lozenges.

TROCHES and lozenges are compoſed of powders made up with glutinous ſubſtances into little cakes, and afterwards dried. This form is principally uſed for the more commodious exhibition of certain medicines, by fitting them to diſſolve ſlowly in the mouth, ſo as to paſs by degrees into the ſtomach. Hence theſe preparations have generally a conſiderable proportion of ſugar, or other materials grateful to the palate. Some powders have likewiſe been reduced into troches, with a view to their preſervation; though poſſibly for no very good reaſons; ſince the moiſtening, and afterwards drying them in the air, muſt in this light be of greater injury, than any advantage accruing from this form can counterbalance.

General rules for making troches.

I.

The three firſt rules laid down for making powders, are alſo to be obſerved in the powders for troches.

II.

If the maſs prove ſo glutinous as to ſtick to the fingers in making up, the hands may be anointed with any convenient ſweet or aromatic oil; or ſprinkled with powder of ſtarch, or with that of liquorice.

III.

In order to thoroughly dry the troches, put them on an inverted ſieve, in a ſhady, airy place, and frequently turn them.

IV.

Troches are to be kept in glaſs veſſels, or in earthen ones well glazed.

TROCHISCI AMYLI.

Lond.

TROCHISCI ARABICI.

Edinb.

vulgo

TROCHISCI BECHICI ALBI.

Troches of ſtarch.

Lond.

Take of

Double refined ſugar, a pound and a half;
Starch, an ounce and a half;
Liquorice, ſix drams;
Florence orris root, half an ounce.

Reduce theſe ingredients into powder, which is to be made up into troches with a proper quantity of mucilage of gum tragacanth.

Edinb.

Take of

White ſugar, one pound;
Gum arabic, four ounces;
Starch, one ounce.

Reduce them to a fine powder, and make them into a maſs with roſe water, and form them into troches.

Theſe compoſitions are very agreeable pectorals, and may be uſed at pleaſure. They are calculated for *ſoftening acrimonious humours*, and *allaying the tickling in the throat*, which provokes coughing.

TROCHISCI GLYCYRRHIZÆ.

Lond. Edinb.

vulgo

TROCHISCI BECHICI NIGRI.

Troches of liquorice.
Lond.

Take of
Extract of liquorice,
Double-refined ſugar,—each ten ounces;
Gum tragacanth, powdered, three ounces.

Rub them together, and drop upon them ſo much water as will make the maſs ſoft enough to be formed into troches.

Edinb.

Take of
Extract of liquorice,
Gum arabic,—each four ounces;
White ſugar, eight ounces.

Diſſolve them in boiling water, and ſtrain; afterwards evaporate the liquor with a gentle fire, to a proper conſiſtence to be made into troches.

Theſe compoſitions are deſigned for the ſame purpoſes as the white pectoral troches before deſcribed. In foreign Pharmacopœias there are ſome other troches of this kind, under the titles of *trochiſci bechici flavi* and *rubri;* the former are coloured with ſaffron, the latter with bole armenic. The diſſolving and ſtraining of the extract of liquorice and gum arabic, as now ordered in the latter of theſe preſcriptions, is a conſiderable improvement; not only as they are by thoſe means more uniformly mixed than they can well be by beating; but likewiſe as they are thereby purified from the heterogeneous matters, of which both thoſe drugs have commonly no ſmall admixture.

TROCHISCI de MINIO.

Red lead troches.

Take of
Red lead, half an ounce;
Muriated quick-ſilver, one ounce;
Crumb of the fineſt bread, four ounces.

Make them up with roſe-water into oblong troches.

Theſe troches are employed only for external purpoſes as eſcharotics. They are powerfully ſuch, and require a good deal of caution in their uſe.

TROCHISCI CRETÆ.

Lond. Edinb.

vulgo

TABELLÆ CARDIALGICÆ.

Troches of chalk.
Lond.

Take of
Chalk prepared, four ounces;
Crabs' claws, prepared, two ounces;
Cinnamon, half an ounce;
Double refined ſugar, three ounces.

Rub them to powder, and with mucilage of gum arabic make troches.

Edinb.

Take of
Chalk, prepared, four ounces;
Gum arabic, one ounce;
Nutmeg, one dram;
Double refined ſugar, ſix ounces.

Let them be well mixed together in powder, and with the addition of water, make them into troches.

TROCHISCI MAGNESIÆ.

Troches of magneſia.
Lond.

Take of
Calcined magneſia, four ounces;
Double refined ſugar, two ounces;
Ginger, powdered, one ſcruple.

Rub them together, and with mucilage of gum arabic make them into troches.

Theſe troches are intended for relieving pains in the ſtomach, ariſing from acidities: in the former, the union of the acid is ſaid to form a reſtringent; with the latter, a purgative ſalt: according to the ſtate of the patient's bowels

with regard to coſtiveneſs or laxity, one or other of them may be adminiſtered.

TROCHISCI NITRI.

Troches of nitre.
Lond. Edinb.

Take of
Nitre purified, four ounces;
Double refined ſugar, one pound;
Tragacanth, powdered, ſix ounces.
Rub them together, and make troches.

This is a very agreeable form for the exhibition of nitre; though, when the ſalt is thus taken without any liquid (if the quantity be conſiderable), it is apt to occaſion uneaſineſs about the ſtomach, which can only be prevented by large dilution with aqueous liquors. In ſome caſes of difficult deglutition, theſe troches have been ſaid to be employed with ſucceſs.

TROCHISCI E SCILLA.

Troches of ſquills.

Take of
Baked ſquills, half a pound;
Wheat flower, four ounces.
Beat them together, and form the maſs into troches, which are to be dried with a gentle heat.

This preparation is uſed only as an ingredient in the theriaca. The deſign of baking the ſquills is, to abate their acrimony; and making it afterwards into troches ſeems the moſt convenient way of drying it. Common wheat flour is as fit for this purpoſe as any, though that of the white vetch has been generally directed.

TROCHISCI SULPHURIS.

Troches of ſulphur.
Lond.

Take of
Flowers of ſulphur, waſhed, two ounces;
Double refined ſugar, four ounces.
Beat them together, and adding ſome mucilage of quince ſeeds, form them into troches.

Theſe troches can only be conſidered as an agreeable formula for ſulphur, no alteration taking place in that ſubſtance.

TROCHISCI GLYCYRRHIZÆ CUM OPIO.

Troches of liquorice, with opium.
Edinb.

Take of
Purified opium, two drams;
Tincture of Tolu, half an ounce.
Let the opium be well rubbed with the tincture, until it is totally diſſolved; then gradually add, of ſimple ſyrup, eight ounces; extract of liquorice, ſoftened with warm water, five ounces.

Whilſt beating them diligently, ſprinkle gradually in five ounces of powdered gum arabic. Dry them ſo as to form troches, each weighing ten grains. Six of theſe troches contain one grain of opium.

Added to the effects of theſe viſcid matters in tickling coughs depending upon irritation of the fauces, which they relieve by involving acrid humors, or lining and defending the membranes from their ſtimulus;—opium muſt, moſt undoubtedly, have a conſiderable ſhare, by more immediately diminiſhing the irritability of the parts themſelves.

TROCHISCI CATECHU.

Troches of Catechu.

Take of
Japan earth, two ounces;
Gum tragacanth, half an ounce;
White ſugar, one pound;
Roſe-water, a ſufficient quantity.
Make them into troches.

A preparation of this kind, with the addition of ambergris and muſk, which are here more prudently omitted, has long been in ſome eſteem as a *mild reſtringent*,

&c. under the title of CATECHU. Medicines of this clafs in general are excellently fitted for the form of troches; for, when flowly and gradually received into the ftomach, as this form occafions them to be, they produce much better effects, than if an equal quantity were taken at once. The troches of catechu are fufficiently palatable, and of confiderable fervice in fome *kinds of coughs*, thin *acrid defluxions*, *diarrhœas*, &c.

TROCHISCI ANTHELMINTICI.

Anthelmintic or worm fugar-cakes.

Take of 1
Powdered tin, half a dram;
Fine fugar, half an ounce;
Rofe-water, a fufficient quantity to make them into a mafs for tablets.

Take of 2
Scammony,
Calomel,—each four grains;
Fine fugar, half an ounce;
Rofe-water, a fufficient quantity to make them into tablets.

Thefe compofitions are calculated for children, who are not eafily prevailed on to take anthelmintic medicines in lefs agreeable forms. If the firft be made ufe of, it muft be repeated three or four mornings fucceffively, after which a purge is to be taken: the fecond, if it require repetition, is to be given only every other morning. The proportions of the ingredients are to be varied, according to the age and ftrength of the patient.

TROCHISCI SIALAGOGI.

Sialagogue troches.

Take of
Pellitory of Spain, half an ounce;
Maftich, two drams;
Oil of cloves and marjoram, each one dram;
Yellow wax a fufficient quantity.

Make them into troches or pellets.

One of thefe troches is to be occafionally held in the mouth, and chewed, to promote a difcharge of faliva; which they effect by warming and ftimulating the falival glands.

TROCHISCI STOMACHICI.

Stomachic troches.

Take of
Hard extract of Peruvian bark, one dram;
Oil of cinnamon,
Oil of mint,—each ten drops;
Fine fugar, four ounces.

Make them into troches, with mucilage of gum tragacanth.

Thefe troches are of fervice for warming and ftrengthening the ftomach, expelling flatulencies, and promoting digeftion. For thefe purpofes they are as effectual as any thing that can well be contrived in this form.

TROCHISCI SUAVEOLENTES.

Sweet-fmelling troches.

Take of
Strained ftorax, one fcruple;
Ambergris, fifteen grains;
Mufk, feven grains:
Oil of cinnamon, fix drops;
Fine fugar, one ounce.

Make them into fmall troches with mucilage of gum arabic.

CHAPTER III.

PILLS.

TO this form are peculiarly adapted those drugs which operate in a small dose; and whose nauseous and offensive taste or smell require them to be concealed from the palate

Pills dissolve the most difficultly in the stomach, and produce the most gradual and lasting effects, of all the internal forms. This is in some cases of great advantage; in others it is a quality not at all desirable, and sometimes may even be of dangerous consequence; particularly with regard to emetics, which, if they pass the stomach undissolved, and afterwards exert themselves in the intestines, operate there as violent cathartics. Hence emetics are, among us, scarce ever given in pills. And hence to the resinous and difficultly soluble substances, saponaceous ones ought to be added, in order to promote their solution.

Gummy resins and *inspissated juices* are sometimes soft enough to be made into pills, without addition. Where any moisture it requisite, spirit of wine is more proper than syrups or conserves, as it unites more readily with them, and does not sensibly increase their bulk.—Light *dry powders* require syrup, or mucilages:—and the more ponderous, as the mercurial and other metallic preparations, thick honey, conserve, or extracts.

Light powders require about half their weight of syrup, and of honey about three-fourths their weight, to reduce them into a due consistence for forming pills. Half a dram of the mass will make five or six pills of a moderate size.

General rules for making pills, from the Edinburgh Pharmacopœia.

I.

The three first rules, formerly laid down for making powders, are here also to be carefully observed.

II.

Gums and inspissated juices are to be first softened with the liquid prescribed; then add the powders, and continue beating them all together till they are perfectly mixed.

III.

The masses for pills are best kept in bladders, which should be moistened, now and then, with some of the same kind of liquid with which the mass was made up, or with some proper aromatic oil.

PILULÆ ALOETICÆ.

Aloetic pills.

Edinb.

Take of

Socotorine aloes in powder,
Hard extract of gentian, — each two ounces.

Make them into a mass with simple syrup.

PILULÆ ALOES COMPOSITÆ.

Compound aloetic pills.

Lond.

Take of

Socotorine aloes powdered, one ounce;
Extract of gentian, half an ounce;

Oil of caraway, two ſcruples;
Syrup of ginger, as much as is ſufficient.

Beat them together.

Theſe compoſitions have been in uſe for ſome time, as a deobſtruent, in *cachectic indiſpoſitions*. They are adminiſtered as warming and ſtomachic laxatives, and are uſed in jaundice, and in cures of obſtructed menſes. They are ſeldom given for full purging; but if that ſhould be required, a ſcruple or half a dram of the maſs is directed to be made into pills of a moderate ſize for one doſe.

PILULÆ de JALAPPA.

Jalap pills.

Take of
Extract of jalap, two ounces;
Aromatic ſpecies, half an ounce;
Simple ſyrup, enough to make them into a maſs.

This is an uſeful and active purgative, operating in the ſame manner as the *pulvis jalappæ compoſitus*. One of the ſame kind, with powdered jalap in ſubſtance inſtead of the extract, is uſed in ſome of our hoſpitals, as a cheap and effectual purge.

PILULÆ E SCAMMONIO CUM ALOE.

Pills of ſcammony with aloes.

Take of
Socotorine aloes, one dram;
Aromatic ſpecies, half a dram;
Scammony, one ſcruple;
Soft extract of liquorice, as much as is ſufficient to reduce them into a maſs of a due conſiſtence for being formed into pills.

This warm purgative is recommended for removing the crudities, &c. after a ſurfeit or debauch, and for preventing arthritic and other complaints incident to thoſe, who live high. The quantity above deſcribed may be made into thirty pills, of which five or ſix are to be taken for a doſe.

PILULÆ CUPRI.

Copper pills.
Edinb.

Take of
Ammoniacal copper, ſixteen grains;
Crumb of bread, four ſcruples;
Water of ammonia, ſufficient to form it into a maſs, which let be divided into thirty-two equal parts.

This preparation is conſidered as the mildeſt of the cuprous ſaline preparations, and has been recommended in epilepſy, and hyſteria, as a powerful tonic. See CUPRUM, Materia Medica.

PILULÆ ALOES CUM COLOCYNTHIDE;
vulgo
PILULÆ COCCIÆ.

Aloetic pills with colocynth.

Take of
Socotorine aloes,
Scammony,—each two ounces;
Colocynth, one ounce;
Vitriolated kali ſulphurated,
Oil of cloves,—of each two drams.

Let the vitriolated kali ſulphurated be ſeparately reduced into powder; then mix in the oil, and make the whole into a maſs with ſyrup of buckthorn.

Let the aloes and ſcammony with the kali be reduced to powder, then the colocynth rubbed into a very fine powder, and the oil be mixed together: finally make it into a maſs with mucilage of gum arabic.

By the diminution of coloquintida in this preſcription, the ingredients are reduced to the proportions wherein they are ſet down in the original of Galen; and what is of greater conſequence, the medicine becomes leſs ungrateful to the ſtomach, and leſs virulent in its operation. Half a dram of the maſs contains nearly four grains of

coloquintida, eight of aloes, and eight of ſcammony.

PILULÆ ECPHRACTICÆ PURGANTES.

Purging deobſtruent pills.

Take of
Socotorine aloes,
Extract of black hellebore,
Scammony,—each one ounce;
Gum ammoniacum,
Reſin of guaiacum,—each half an ounce;
Vitriolated tartar, two drams;
Eſſential oil of juniper berries, one dram.

Beat them into a maſs, with a ſufficient quantity of ſyrup of buckthorn.

This compoſition may be given, from eight or ten grains to a ſcruple or half a dram, according as it is intended to keep the belly open or to purge. Half a dram of the maſs contains about ſix grains of each of the capital purgative ingredients; aloes, ſcammony, and extract of hellebore.

In the former London Diſpenſatory there uſed to be a formula for the *pilulæ ecphractiсæ*, and *pilulæ aromaticæ*, which was one of the ingredients in the ecphractic pills; the places of theſe are ſupplied, the firſt by the *pulvis aloes cum ferro*, and the ſecond by the *pulvis aloes cum guaiaco*. See POWDERS.

PILULÆ FŒTIDÆ.

Fetid pills.

Take of
Aſafœtida,
Ruſſian caſtor,—each one dram and a half;
Camphor, half a dram;
Oil of hartſhorn, twenty-four drops.

Beat the camphor with the aſafœtida, then add the caſtor and oil of hartſhorn, and make the whole into a maſs.

Theſe pills are well calculated to counteract ſpaſmodic affections of the alimentary canal, eſpecially thoſe connected with flatulence.

PILULÆ GALBANI COMPOSITÆ;

formerly

PILULÆ GUMMOSÆ.

Compound galbanum pills.

Lond.

Take of
Galbanum,
Opoponax,
Myrrh,
Sagapenum,—each one ounce;
Aſafœtida, half an ounce.

Make them into a maſs with ſyrup of ſaffron.

PILULÆ ASÆFŒTIDÆ COMPOSITÆ;

vulgo

PILULÆ GUMMOSÆ.

Compound aſafœtida pills.

Edinb.

Take of
Aſafœtida,
Galbanum,
Myrrh,—each one ounce;
Oil of amber, rectified, one dram.

Make them into a maſs with ſimple ſyrup.

All theſe pills are deſigned for *antihyſterics* and *emmenagogues*, and very well calculated for anſwering thoſe intentions: half a ſcruple, a ſcruple, or more, may be taken every night or oftener. The fetid pills of our former Pharmacopœias were conſiderably purgative. The purgative ingredients are now omitted, as the phyſician may eaſily, in extemporaneous preſcription, compound theſe pills with cathartic medicines, in ſuch proportions as particular caſes ſhall require.

The following compoſitions are calculated for the ſame intentions as the foregoing deobſtruent, fetid, and gum pills.

Take of
Aſafœtida,
Wood-ſoot,
Myrrh,—each two ounces;

Oil of amber, one dram and a half;
Syrup of ſugar, a ſufficient quantity.

Mix and make them into a maſs, according to art.

Take of 2.
Aſafœtida, one dram;
Martial flowers, half a dram;
Oil of amber, eight drops;
Balſam of Peru, a ſufficient quantity to reduce them into a maſs.

Take of 3.
Aſafœtida,
Gum ammoniacum,
Myrrh,
Aloes,
Ruſt of ſteel prepared,
Extract of gentian,—each one ſcruple;
Syrup of ginger, as much as will make the other ingredients into a maſs.

Take of 4.
Galbanum, one dram;
Salt of ſteel, half a dram;
Aſafœtida,
Aromatic ſpecies, — each one ſcruple;
Tincture of myrrh, as much as will make them into a maſs.

In hyſterical diſorders, after bleeding and purging, where a ſanguine and plethoric habit indicates theſe evacuations, chalybeate medicines are in general the moſt to be relied upon; eſpecially when joined, as in theſe compoſitions, with bitters and deobſtruent gums. At firſt taking, they are apt to increaſe the complaints (as the experienced Sydenham obſerves), and occaſion great diſorders both of body and mind; which, however, ſoon go off, or may be relieved by a proper doſe of opium given at bed-time. A dram of either of the maſſes is to be made into twelve pills, one or two of which may be taken for a doſe, twice or thrice a day.

PILULÆ HYDRARGYRI.

Edin. and Lond.
vulgo

PILULÆ MERCURIALES.

Quickſilver pills.
Edinb.

Take of
Quickſilver,
Manna,—of each one ounce;
Liquorice powder, two ounces.

Rub the quickſilver with the manna in a glaſs mortar, till the mercurial globules ceaſe to appear, adding a little mucilage of gum arabic occaſionally; afterward add the liquorice powder, and with a little water beat it into a maſs, and form it immediately into four hundred and eighty pills.

Lond.

Take of
Purified quickſilver, two drams;
Conſerve of roſes, three drams;
Liquorice fine powdered, one dram.

Grind the quickſilver with the conſerve, until the globules diſappear; then add the liquorice powder, and mix them together.

By theſe pills we have one of the beſt modes of giving mercury in its moſt ſimple form; by which means, we can throw a larger proportion of quickſilver into the ſyſtem, without producing ſalivation, than by any other means; and upon this circumſtance very often our ſucceſs depends in obſtinate venereal caſes. Of theſe pills may be given from two to four or ſix in a day, according to the effect we wiſh to produce.

PILULÆ de GAMBOGIA.

Gamboge pills.

Take of
Socotorine aloes,
Extract of black hellebore,
Gamboge,
Mercurius dulcis, —each two drams;

Essential oil of juniper berries, half a dram;
Syrup of buckthorn, a sufficient quantity.

Beat them into a mass.

This is a strong mercurial purgative, in which the mercurial preparation is not liable to the uncertainty with which the crude quicksilver is accompanied in the foregoing compositions. The dose is from ten or fifteen grains to half a dram. This last quantity contains of aloes, extract of hellebore, gamboge, and mercurius dulcis, about five grains each.

PILULÆ HYDRARGYRI MURIATI MITIS,
sive
CALOMELANOS COMPOSITÆ;
vulgo
PILULÆ PLUMMERI.

Mild muriated quicksilver pills, or compound pills of calomel.

Take of
Mild muriated quicksilver,
Sulphur of antimony, precipitated,—each six drams;
Extract of gentian,
White Spanish soap,—of each two drams.

Let the mild muriated quicksilver be rubbed with the sulphur, and well mixed; afterwards let the extract and soap be added, and beat into a mass with simple syrup.

These pills have long been considered as a very useful alterant, and bore formerly a very high character in that point of view; but it has been thought by some, that every good purpose to be answered by these pills, might be more readily procured by the common mercurial pill, or from calomel in a more simple state.

PILULÆ ÆTHIOPICÆ.

Æthiopic pills.

Take of
Quicksilver, six drams;
Honey, half an ounce;
Precipitated sulphur of antimony,
Gum guaiacum powdered,—of each half an ounce.

Rub the quicksilver with the honey in a glass mortar, till the mercurial globules cease to appear; afterwards add the sulphur of antimony and guaiacum, and make it into a mass with the mucilage of gum Arabic.

These pills are much more efficacious than those of a former edition; the æthiops mineral, there ordered, being exchanged for a more active composition. In their present form, they resemble Dr. Plummer's pills, described in the Edinburgh Essays, to which they are preferable in one respect, that they are less apt to run off by stool. They are an useful alterative both in *cutaneous* and *venereal disorders*. One fourth part of the quantity above prescribed may be made into sixty pills; of which, from one to four may be taken every night and morning, the patient keeping moderately warm during the whole time that this course is continued.

I shall here insert some other formulæ of mercurial pills, which may be occasionally had recourse to, and of which the greater part has been kept as secrets in particular hands.

Take of 1.
Crude quicksilver,
Hard extract of guaiacum,—each one dram and a half;
Essential oil of sassafras, twenty drops;
Venice turpentine, a sufficient quantity.

Grind the quicksilver with the turpentine, till they are perfectly incorporated. Then add the other ingredients, and reduce the whole into an uniform mass,

which is to be made into forty pills. Two, three, or more of these may be taken for a dose.

Take of 2.
Calomel,
Prepared chalk,—each one scruple;
Mucilage of gum Arabic, a sufficient quantity.

Make them into twelve pills, of which the dose is from one to three.

Take of 3.
Calomel, half a scruple;
Softer extract of guaiacum, one dram;
Essential oil of sassafras, ten drops.

Mix, and make them into a mass, for twenty pills; the dose of which is from one to six.

Take of 4.
Calomel, half a scruple;
Camphor, half a dram;
Soft extract of guaiacum, as much as is sufficient to make them into a mass, which is to be formed into twenty pills: the dose is from one to six.

Take of 5.
Calomel, half a scruple;
Venice turpentine, as much as will reduce it into a mass of a proper consistence; which is to be formed into five pills, for as many doses.

Take of 6.
Hydrargyrus calcinatus,
Purified opium, — each two grains;
Balsam of Peru, as much as will make them into a mass; which is to be formed into two pills, for two doses.

Take of 7.
Vitriolated quicksilver, two scruples;
Purified opium, one scruple;
Mucilage of gum Arabic, as much as is sufficient to reduce them into a mass, which is to be formed into twenty pills, for as many doses.

The *mercurius corallinus* may be made into pills in the same manner, and taken in the same dose.

Take of 8.
Calomel, half a scruple;
Crude antimony, finely levigated, one dram;
Conserve of orange-peel, as much as will reduce them into a mass.

This is to be formed into ten pills. The dose is from one to three.

Take of 9.
Calomel,
Precipitated sulphur of antimony,—each five grains;
Socotorine aloes, fifteen grains;
Balsamic syrup, a sufficient quantity to reduce them into a mass; which is to be made into five pills, for as many doses.

The method of managing these mercurial medicines, as alteratives, is, to give small doses every morning and evening; and rather prolong the time of continuing their use, than increase the dose. The patient ought to keep warm, and drink of warm diaphoretic liquors; as infusion of sassafras, decoction of the woods, the simple or compound lime-water, &c.

PILULÆ E STYRACE.

Storax pills.

Take of
Strained storax, two ounces;
Saffron, one ounce;
Strained opium, five drams.

Beat them together till perfectly united.

These are contrived for dissolving more slowly in the stomach than the saponaceous pills, and consequently for producing more gradual and lasting effects. One grain of opium is contained in five grains and four-fifths of a grain of the mass.

PILULÆ PECTORALES.

Pectoral pills.

Edinb.

Take of
- Gum ammoniacum, half an ounce;
- Balſam of Tolu, two drams;
- Flowers of benzoine,
- Engliſh ſaffron,—each one dram;
- Common ſyrup, a ſufficient quantity.

Make them into a maſs according to art.

This compoſition is very well contrived for promoting expectoration, and may be uſefully given in common colds, and in difficulty of breathing proceeding from viſcid phlegm: the doſe is from ſix or eight grains to a ſcruple or more. It is here conſiderably improved. The balſam of Tolu is introduced in the room of myrrh, the flowers of benzoine for benzoine in ſubſtance; and aniſated balſam of ſulphur, which encumbered the old form, is omitted. Here it may be obſerved, that though ſeveral compoſitions be denominated pectorals, they are nevertheleſs in virtue very diſſimilar. Thus the pectoral decoction, the ſyrup, and the troches, are calculated for ſoftening, lubricating, and incraſſating thin tickling humours; whilſt the pectoral pills, the elixir, and the oxymel, tend to ſtimulate and deterge the veſſels, and attenuate or diſſolve thick, tenacious juices.

PILULÆ ALOES CUM MYRRHA;

vulgo

PILULÆ RUFI.

Aloetic pills and myrrh.

Lond.

Take of
- Socotorine aloes, two ounces;
- Myrrh,
- Saffron,—each one ounce.

Rub the aloes and myrrh ſeparately, then make them into a maſs with ſyrup of ſaffron.

Edinb.

Take of
- Socotorine aloes, two ounces;
- Myrrh, one ounce;
- Saffron, half an ounce.

Beat them into a maſs with a proper quantity of common ſyrup.

The virtues of this medicine may be eaſily underſtood from its ingredients. The pills, given to the quantity of half a dram or two ſcruples, prove conſiderably cathartic; but they anſwer much better purpoſes in ſmaller doſes as laxatives or alteratives.

PILULÆ RHÆI COMPOSITÆ;

vulgo

PILULÆ STOMACHICÆ.

Compound rhubarb pills.

Edinb.

Take of
- Rhubarb, one ounce;
- Socotorine aloes, ſix drams;
- Myrrh, half an ounce;
- Vitriolated tartar, one dram;
- Eſſential oil of mint, half a dram;
- Syrup of orange-peel, a ſufficient quantity.

Make them into a maſs.

This pill is intended for moderately warming and ſtrengthening the ſtomach, and evacuating crude viſcid humours. A ſcruple of the maſs may be taken twice a day.

PILULÆ SCILLÆ;

formerly

PILULÆ SCILLITICÆ.

Squill pills.

Lond.

Take of
- Powdered ginger,
- Spaniſh ſoap, — each three drams;
- Gum ammoniacum, two drams;
- Freſh dried ſquill, powdered, one dram.

Beat them together.

PILULÆ EX HYDRARGYRO MURIATO.

Muriated quickſilver pills.

Take of
- Muriated quickſilver,

Purified ſal ammoniac,—each one ſcruple;
Diſtilled water, as much as is ſufficient to melt them;
Powder of marſhmallow root, ſixteen ſcruples;
Honey, two drams.

Mix them them into a maſs, and form pills, each weighing three grains.

Each of theſe pills contains about an eighth of a grain of muriated quickſilver; which may be given with equal ſafety, as certain efficacy, and are leſs offenſive to the taſte than the *ſolutio hydrargyri muriati*, to which the reader is referred.

Theſe are elegant and commodious forms for the exhibition of ſquills, whether for promoting expectoration, or in the other intentions to which that medicine is applied. As the virtue of the compounds is chiefly from the ſquills, the other ingredients are often varied in extemporaneous preſcription. The difference betwixt the two is very trifling: the ſoap can be of no great uſe, conſidering the quantity in which it is exhibited in this compound; and the proportion of the ſquills in the London formula, is one part to eight, whilſt that of Edinburgh is one to nine.

PILULÆ SCILLITICÆ.

Squill pills.

Edinb.

Take of
Gum ammoniacum,
Leſſer cardamom ſeeds, in powder,
Extract of liquorice,—of each one dram;
Squills, dried, and finely powdered, one ſcruple.

Mix them well together, and make them into a maſs with ſimple ſyrup.

PILULÆ EX ELATERIO.

Pills of elaterium.

Take of
Pureſt gum ammoniac, two ounces;
Socotorine aloes,
Gamboge,—each two drams;
Elaterium, half a dram.

Mix them by means of the compound tincture of gentian, into a maſs for the formation of pills, each weighing two grains.

Some have conſidered theſe pills to conſiſt of too many powerful purgative ingredients; and have, therefore, adviſed the elaterium, which is one of our moſt powerful cathartics, to be formed by itſelf into pills, with extract of gentian, conſidered as a corrective to the nauſeating property of the elaterium. Each of which pills ſhould contain half a grain of this active material, one or two pills to be taken every hour, till they begin to operate; but it ſhould only be exhibited in thoſe caſes when the patient retains a conſiderable degree of ſtrength.

PILULÆ OPII.

Opium pills.

Lond.

Take of
Hard purified opium, two drams;
Extract of liquorice, one ounce.

Beat them together until they are perfectly united.

Edinb.

Take of
Purified opium, half an ounce;
Extract of liquorice, two ounces;
Spaniſh ſoap, an ounce and an half;
Jamaica pepper, an ounce.

Let the opium and extract be ſoftened ſeparately with proof ſpirit of wine, and beat into a pulp, mix them; then add the ſoap, and the pepper reduced to powder; and beat them well together into a maſs.

In *the former* of theſe pills every five grains of the maſs contain one of opium; in *the latter*, nine grains contain near the ſame quantity.

Either of these will answer the purpose of that more elaborate compound formerly called *pilulæ pacificæ*, of STARKEY, and by him communicated to MATTHEWS; for the whole efficacy of them depended upon the opium; for the other ingredients were prescribed in too trifling quantities to produce any good effect. The soap here is supposed to promote the solution of the opium, and render the action of the opium quicker upon the stomach; and the pepper probably prevents nausea, and makes it sit easier on that organ.

PILULÆ BACHERI.

Bacher's pills.

Take of
Extract of black hellebore,
Purified myrrh,—of each one ounce;
Powder of carduus benedictus, two scruples.
Mix them into a mass according to art, to be dried in the air till it be fit for the formation of pills, each weighing one grain.

According to circumstances, the doses of these pills are varied from one to thirty in the course of the day. They have been held in high reputation for the cure of the dropsy, where remarkable debility and re axation attends, on account of the tonic and evacuant power they were thought to possess.

They have, however, by no means supported the reputation they were said to possess, whilst confined as a nostrum within the hands of BACHER.

PILULÆ PICEÆ.

Tar pills

Take any quantity of tar, and mix with it as much powdered elecampane root as will reduce it to a proper thickness for being formed into pills.

The powder here mixed with the tar, though of no great virtue, is a very useful addition, not only for procuring it a due consistence, but likewise as it divides the resinous texture of the tar, and thus contributes to promote its solution by the animal juices. In the Edinburgh infirmary, half a dram of the mass, made into middle-sized pills, is given every morning and evening, in disorders of the breast, scurvies, &c.

PILULÆ ROBORANTES.

Strengthening pills.

Take of 1.
Hard extract of Peruvian bark, one dram;
Salt of steel, ten grains;
Oil of cinnamon, five drops;
Balsam of Peru, as much as will reduce them into a mass.

Take of 2.
Olibanum, one dram;
Styptic powder, two scruples;
Salt of steel, one scruple;
Syrup of sugar, a sufficient quantity to make them into a mass.

In a lax state of the fibres, debilities of the nervous system, and some decays of constitution, the first of these compositions is an effectual strengthener and restorative. If the quantity prescribed be made into twenty pills, one or two of these may be taken for a dose, and repeated twice a day. The other is a stronger styptic, and is used for restraining immoderate alvine evacuations, and sanguineous or serous discharges from the remoter parts.

Take of 3.
Aromatic species,
Extract of gentian,—each one dram;
Extract of Peruvian bark, half a dram;
Elixir of aloes, as much as will reduce them into a mass.

These pills are serviceable for *warming* and *strengthening a weak cold stomach, expelling flatulencies*, and *promoting digestion*. If ten pills be made out of a dram of the mass, two may be taken thrice a day, about an hour before meals.

CHAPTER IV.

Boluses.

BOLUSES differ little in consistence from electaries, being only somewhat stiffer, so as to retain their figure without spreading or falling flat.

This form is very convenient for the exhibition of the more powerful medicines, which require their dose to be exactly adjusted, as the stronger alexipharmacs, cathartics, and opiates. As boluses are chiefly intended for immediate use; volatile salts, and other materials, which, if the mass were to be kept, would exhale or swell it, are frequently admitted into them.

The quantity of a bolus very seldom exceeds a dram. If the ingredients be of the lighter kind, even this will be too bulky to be commodiously swallowed.

The lighter powders are made up with syrup; a scruple or twenty-six grains of the powder, with as much syrup as will bring it to a due consistence, makes a bolus sufficiently large.

The more ponderous powders, as the mercurial ones, are commonly made up with conserve: syrups scarce holding them together. For the testaceous powders also an addition of conserve is used; though if made up with this alone, they would be too bulky.

Both the light and ponderous powders may be conveniently made up with mucilage, which increases the bulk less than the other additions, and occasions them to pass down more freely.

The officinal Pharmacopœias have no formula of this kind: most of the following compositions are taken from our hospitals.

Bolus alexipharmacus.

Alexipharmac bolus.

Take of 1.
Compound powder of contrayerva, half a scruple;
Syrup of wild poppies, or saffron, a sufficient quantity to make it into a bolus.

Take of 2.
Virginian snakeroot, half a scruple;
Confection of kermes, as much as is sufficient.

Mix and make them into a bolus.

Take of 3.
Virginian snakeroot,
Contrayerva root,—each eight grains;
Saffron, three grains:
Syrup of meconium, a sufficient quantity to reduce them into a bolus.

Take of 4.
Virginian snakeroot, fifteen grains;
Castor, ten grains;
Syrup of sugar, as much as is sufficient.

Mix and make them into a bolus.

Take of 5.
Camphor, two grains;
Saffron, five grains;
Cordial confection, one scruple.

Mix and make them into a bolus.

Take of 6.
Camphor, two grains;
Nitre,
Contrayerva root,—each ten grains;

Syrup of clove july-flowers, as much as will make them into a bolus.

Take of 7.
Musk, ten grains;
Cordial confection, one scruple.

Make them into a bolus.

Take of 8.
Musk, ten grains;
Salt of hartshorn, or of ammoniac prepared, five grains;
Thebaic extract, half a grain;
Syrup of saffron, a sufficient quantity.

Make them into a bolus.

These boluses are designed for low depressed fevers, in which medicines of this kind are generally prescribed, for keeping up *the vis vitæ, raising the pulse*, and *promoting a diaphoresis*. The compositions differ in strength, nearly according to the order in which they stand. The two last are of great power, and are designed chiefly for *cases accompanied with convulsive symptoms*, which are often abated by them.

BOLUS EX ALUMINE.

Alum bolus.

Take of
Alum,
Extract of Peruvian bark,
Nutmeg,—each ten grains;
Simple syrup, as much as will reduce them into a proper consistence for a bolus.

Or,

Take of
Compound powder of alum,
Tragacanth,—each fifteen grains.

Form them into a bolus, with syrup of white poppy.

These are *very strong astringents*, and used with success in violent uterine hæmorrhages, and other immoderate secretions which require to be speedily restrained.—They may be taken twice a day; or if the flux be very violent, every four or six hours, till it abate.

BOLUS E CAMPHORA.

Camphor bolus.

Take of
Camphor, half a scruple;
Gum arabic, half a dram;
Syrup of marshmallows, a sufficient quantity to make them into a bolus.

This is a very convenient form for the exhibition of camphor: this drug, however, when thus given by itself in large doses, is apt to nauseate the stomach; and rarely has so good effects as when mixed in small quantities with nitre or similar substances, and frequently repeated.

BOLUS E CASTOREO.

Castor bolus.

Take of
Castor, one scruple;
Salt of hartshorn, five grains;
or oil of hartshorn, five drops;
Simple syrup, a sufficient quantity.

Make them into a bolus.

This medicine is given in *hysterical* and *hypochondriacal disorders*, and likewise as an *alexipharmac in fevers*. Its virtues, which are great and unquestionable, seem to depend more upon the fetid animal oil, or volatile salt, than on the drug from which it takes its name.

BOLUS CATHARTICUS.

Purgative bolus.

Take of 1.
Jalap, one scruple;
Jamaica pepper,
Crystals of tartar,—each five grains;
Syrup of buckthorn, as much as will reduce them into a mass of a due consistence.

Take of 2.
Scammony, ten grains;
Soluble tartar, one scruple;
Soft extract of liquorice, a sufficient quantity.

Let the scammony be well ground with the soluble tartar, then add the extract, and make them into a bolus.

Take of 3.
Gamboge,
Cryftals of tartar,—each eight grains;
Syrup of ginger, a fufficient quantity to reduce them into a bolus.

Take of 4.
Elaterium, two grains;
Extract of jalap, half a fcruple;
Cryftals of tartar, one fcruple;
Syrup of orange peel, a fufficient quantity to make them into a bolus.

The virtues of thefe compofitions are fufficiently obvious; the firft is a mild purgative; the two laft too ftrong to be in general ventured on; and the other of intermediate degrees of ftrength.

BOLUS CATHARTICUS CUM MERCURIO.

Purgative bolus with mercury.

Take of 1.
Jalap, one fcruple;
Calomel, five grains;
Solutive fyrup of rofes, as much as is fufficient to make them into a bolus.

Take of 2.
Gamboge, feven grains;
Calomel,
Aromatic fpecies,—each half a fcruple;
Syrup of buckthorn, a fufficient quantity to make a bolus.

The firft of thefe compofitions is a fafe and mild mercurial cathartic: the fecond is too ftrong for general ufe.

BOLUS DIAPHORETICUS.

Diaphoretic bolus.

Take of 1.
Compound powder of contrayerva,
Crude fal ammoniac,—each one fcruple;
Simple fyrup, a fufficient quantity to form them into a bolus.

Take of 2.
Antimonial powder, from two to fix grains;
Conferve of hips, a fcruple;
Syrup of fugar, fufficient to form a bolus.

Take of 3.
Tartarifed antimony, from one quarter to one grain;
Compound powder of crabs' claws, ten grains;
Syrup of marfh mallows, fufficient to form a bolus.

The bolufes are given in *fevers*, and *other cafes where a diaphorefis is to be promoted.* Sal ammoniac is for this purpofe one of the moft efficacious of the neutral falts. It requires, however, when thus given in a folid form, to be affifted by warm diluents, frequently repeated; which not only promote its action, but likewife prevent its fitting uneafy on the ftomach.

To the antimonial bolufes may be added any other of the diaphoretic fubftances, acids and alkalies excepted, becaufe the firft might render the antimonial powder too violent in its operation, and the laft would decompound the tartarifed antimony, and probably render the precipitated calx inert.

BOLUS DIURETICUS.

Diuretic bolus.

Take of 1.
Frefh fquills, fix grains;
Compound powder of arum, ten grains;
Ginger, five grains;
Syrup of orange peel, a fufficient quantity.

Make them into a bolus.

This compofition is recommended by Dr. MEAD, to be taken every morning *in hydropic cafes*, for promoting urine. He obferves, that in thefe diforders, diuretic medicines vary greatly in their effects, thofe which anfwer fufficiently in one perfon, failing in another; and that the fquill and its preparations are, of all others, thofe which moft generally fucceed.

Take of 2.
Fresh powder of fox-glove, two grains;
Conserve of wormwood, or orange peel, one scruple;
Aromatic powder, four grains;
Syrup of sugar, sufficient to form a bolus.

To be administered twice a day.

The quantity of the fox-glove may be gradually increased to as much as the stomach will bear with ease; if it should prove purgative, it may be joined with opium, or with jalap, if intestinal evacuations are necessary to be promoted. This is esteemed by some practitioners to be one of the most certain diuretics, of which we are in possession, and many proofs have been adduced to prove its efficacy in hydropic cases.

BOLUS AD DYSENTERIAM.

Bolus against the dysentery.

Take of 1.
The cordial confection,
French bole,—each one scruple;
Thebaic extract, one grain.

Make them into a bolus.

This composition is excellently well calculated for the purpose expressed in its title. Dr. MEAD assures us, that he has never found any medicine more effectual, either for *restraining the flux*, or *healing the exulcerated membranes*. Previously to the use of this or other like medicines, the first passages must be cleansed by mild emetics and cathartics, as ipecacuanha and rhubarb.

Take of 2.
Powder of simarouba, from half a scruple to half a dram;
Syrup of white poppy, sufficient to make a bolus.

This is to be taken three or four times a day, and in some dysenteries, particularly the serosa-bilious, bloody and mucous, is esteemed a specific, by several practitioners, after proper evacuations have been premised. In old obstinate dysenteries and diarrhœaus brought from warm climates, it has been radically effectual in forming the cure.

BOLUS EMMENAGOGUS.

Emmenagogue bolus.

Take of 1.
Socotorine aloes, eight grains;
Saffron, four grains;
Guinea pepper, two grains;
Oil of savin, two drops;
Conserve of rue, as much as is sufficient to reduce them into a due consistence.

Take of 2.
Salt of steel, one grain;
Myrrh, half a scruple;
Cordial confection, fifteen grains.

Make them into a bolus.

Take of 3.
Black hellebore root, eight grains:
Fresh squills, four grains;
Essential oil of pepper-mint, two drops;
Conserve of orange peel, as much as is sufficient to make them into a bolus.

All these are medicines of great power for promoting or exciting the menstrual flux. The two first are calculated for lax phlegmatic habits; the third, for persons of a sanguine temperament, where chalybeate medicines cannot be borne.

Take of 4.
Powder of savine, from half a scruple to half a dram;

Make it into a bolus with syrup of saffron — to be taken twice a day.

BOLUS FEBRIFUGUS.

Febrifuge bolus.

Take of
Peruvian bark, one scruple;
Cascarilla, half a scruple;
Mucilage of quince seeds, a sufficient quantity to make them into a bolus.

This elegant composition is excellently well adapted to the cure of intermittent fevers; and may be given in cases where the Peruvian bark by itself would be less pro-

per. Where aromatics, chalybeates, bitters, &c. are alſo requiſite, they are either to be premiſed, or occaſionally interpoſed.

BOLUS HYSTERICUS.

Hyſteric bolus.

Take of
Muſk,
Aſafœtida, each ſix grains;
Caſtor, half a ſcruple;
Syrup of ſaffron, as much as is ſufficient to make them into a bolus.

This medicine is very well contrived for the purpoſe expreſſed in its title. It is of great ſervice both in *hyſterical* and *hypochondriacal* diſorders; and often gives relief in the *depreſſions*, *faintings*, *flatulent cholics*, *head-achs*, and other ſymptoms, attending them. It may be taken twice a day, along with any ſuitable liquor.

BOLUS ILIACUS.

Iliac bolus.

Take of
Cathartic extract, one ſcruple;
Purified opium, one grain.
Make them into a bolus.

This bolus is preſcribed by Dr. MEAD, for eaſing the pain, and procuring ſtools, in the iliac paſſion, and dry belly-ach; where the irritating cathartics, exhibited by themſelves, are thrown up by vomit. The uſe of this medicine is to be preceded by plentiful bleeding, and accompanied by purgative clyſters of the more acrid kind; and its operation promoted by infuſion of ſena, mixed with a little of the elixir ſalutis, or tincture of ſena.

BOLUS CUM CALOMELANE.

Bolus with calomel.

Take of
Calomel, from five to fifteen grains;
Conſerve of roſes, half a dram.
Mix and make them into a bolus.

This bolus is given every night, or oftener, for raiſing a ſalivation, in venereal, and other diſorders, which require that herculean operation. It is likewiſe taken at night as an alterative, to be carried off next morning by a cathartic.—Mercurials exhibited in this manner have generally better effects than when joined with purgatives directly.

BOLUS HYDRARGYRI VITRIOLATI.

Bolus with vitriolated quick-ſilver.

Take of
Vitriolated quick-ſilver, ſix grains;
Conſerve of roſes a ſufficient quantity.
Make them into a bolus.

This is a ſtrong emetic, and given in *venereal* and *leprous diſeaſes*; particularly in the caſe of *foul ulcers of long ſtanding*, the cleanſing and cure of which are frequently promoted by it. The violence of its operation limits its uſe to robuſt conſtitutions.

BOLUS PECTORALIS.

Pectoral bolus.

Take of
Spermaceti, fifteen grains;
Gum ammoniacum, ten grains;
Salt of hartſhorn, five grains;
Simple ſyrup, as much as is ſufficient.
Mix and make them into a bolus.

In *colds of long ſtanding*, *old coughs*, *aſthmas*, and *beginning conſumptions*, this bolus generally gives relief; eſpecially if bleeding be premiſed, and repeated, if neceſſary, at proper intervals.

BOLUS RHEI CUM CALOMELANE.

Bolus of rhubarb with calomel.

Take of
Choice rhubarb, twenty-five grains;
Calomel, five grains;
Simple ſyrup, as much as will form them into a bolus.

This is a very mild mercurial purgative. It is given to *deſtroy worms*, and in *cachectic*, *chlorotic*, and ſimilar diſorders.

BOLUS RHEUMATICUS.

Rheumatic bolus.

Take of

Extract of guaiacum, half a dram;

Salt of hartshorn, seven grains;

Simple syrup, a sufficient quantity.

Make them into a bolus.

In *chronical rheumatisms*, whether the remains of a rheumatic fever, or a continuation of pains that proceeded at first from neglected colds, this bolus has been given with good effects, once a week or oftener: the patient keeping warm, and drinking warm liquors, to promote its operation as a *cathartic* and *diaphoretic*. Its use ought to be accompanied by venæsection—which is to be repeated every eight or ten days as long as the blood is fizy. This medicine is likewise exhibited in *sciatic*, *arthritic*, and *other pains not accompanied with a fizinesS of blood*. In these it much more frequently fails than in the true rheumatism.

BOLUS SCILLITICUS.

Scillitic bolus.

Take of

Fresh squills, twelve grains;

Aromatic powder, half a scruple;

Oil of pepper-mint, one drop.

Beat them well together into an uniform mass, of a due consistence for a bolus.

This is a warm, *stimulating*, and *attenuating medicine*, and may be given to great advantage in cases where the natural secretions are obstructed or suppressed from a viscidity or sluggishness of the juices. The efficacy of the squills is promoted by the additional ingredients, which at the same time warm and strengthen the stomach and intestines, and prevent the composition from being thrown up by vomit, which this quantity of squills, given by itself, would be in many constitutions.

BOLUS SUDORIFICUS.

Sudorific bolus.

Take of

Camphor, five grains;

Thebaic extract, one grain;

Syrup of orange peel, a sufficient quantity to reduce them into a bolus.

This medicine is one of the *most effectual sudorifics*, generally exciting a copious sweat. In many cases where this intention is to be answered, whether acute or chronical, it may be given to great advantage.

BOLUS TEREBINTHINATUS.

Turpentine bolus.

Take of

Chio turpentine, one scruple;

Powdered liquorice, a sufficient quantity.

Make them into a bolus.

This is a convenient form for the exhibition of turpentine, the liquorice powder answering the same intention here as the elecampane root in the *pilulæ piceæ*.

CHAPTER V.

ELECTARIES.

ELECTARIES are compoſed chiefly of powders mixed up with ſyrups, &c. into ſuch a conſiſtence, that the powders may not ſeparate in keeping, that a doſe may be eaſily taken up on the point of a knife, and not prove too ſtiff to ſwallow.

Electaries receive chiefly the milder alterative medicines, and ſuch as are not ungrateful to the palate. The more powerful drugs, as *cathartics*, *emetics*, *opiates*, and *the like*, (except in officinal electaries to be diſpenſed by weight) are ſeldom truſted in this form, on account of the uncertainty of the doſe;—diſguſtful ones, *acrids*, *bitters*, *fetids*, cannot be conveniently taken in it;—nor is the form of an electary well fitted for the more ponderous ſubſtances, as *mercurials*, becauſe they are apt to ſubſide in keeping, unleſs the compoſition be made too ſtiff.

The lighter powders require thrice their weight of honey, or ſyrup boiled to the thickneſs of honey, to make them into the conſiſtence of an electary; of ſyrups of the common conſiſtence, twice the weight of the powders is ſufficient.

Where the common ſyrups are employed, it is neceſſary to add likewiſe a little conſerve, to prevent the compound from drying too ſoon. Electaries of Peruvian bark, for inſtance, made up with ſyrup alone, will often in a day or two grow too dry for taking.

Some powders, eſpecially thoſe of the leſs grateful kind, are more conveniently made up with mucilages than with ſyrups, honey, or conſerve. The three laſt ſtick about the mouth and fauces, and thus occaſion the taſte of the medicine to remain for a conſiderable time; whilſt mucilages paſs freely, without leaving any taſte in the mouth. A little ſoft extract of liquorice, joined to the mucilage, renders the compoſition ſufficiently grateful, without the inconveniencies of the more adheſive ſweets.

The quantity of an electary directed at a time, in extemporaneous preſcription, is rarely leſs than an ounce, or more than three ounces.

General rules for making electaries.

I.

The rules already laid down for decoctions and powders in general, are likewiſe to be obſerved in making decoctions and powders for electaries.

II.

Gums, inſpiſſated juices, and ſuch other ſubſtances as are not pulverable, ſhould be diſſolved in the liquor preſcribed: then add the powders by little and little, and keep the whole briſkly ſtirring, ſo as to make an equable and uniform mixture.

III.

Aſtringent electaries, and ſuch as have pulps of fruits in their compoſition, ſhould be prepared only in ſmall quantities at a time.

For aſtringent medicines loſe greatly of their virtue, on being kept in this form; and the pulps of fruits are apt to become ſour.

IV.

The ſuperfluous moiſture of the

pulps ſhould be exhaled over a gentle fire, before the other ingredients are added to them.

V.

Electaries, if they grow dry in keeping, are to be reduced to the due conſiſtence, with the addition of a little Canary wine; and not with ſyrup or honey. By theſe means, the doſe will be the leaſt uncertain; a circumſtance deſerving particular regard, in thoſe eſpecially which are made up with ſyrup, and contain a large quantity of opium, as the *confectio opiata*, &c.

ELECTARIUM ad DYSENTERICOS.

Antidyſenteric electary.

Edinb.

Take of

Japonic confection, two ounces;

Locatelli's balſam (beaten up with a ſufficient quantity of yolk of egg) one ounce;

Powdered rhubarb, half an ounce;

Syrup of marſhmallows, a ſufficient quantity.

Mix and make them into an electary.

This compoſition is extremely well contrived for the purpoſe expreſſed in its title. Aſtringents or opiates by themſelves rarely have place in dyſenteries, even after the firſt paſſages have been evacuated by an emetic or a full doſe of rhubarb. They eaſe the pain and moderate the flux for a time, but the ſhort relief is apt to be followed by dangerous or even fatal conſequences from the retention of the acrid and corrupted humours. The rhubarb which the college of Edinburgh has now added from the practice of the infirmary, in good meaſure prevents this accumulation, without much counteracting the ſalutary effects of the other materials. In many caſes, however, it may be ſtill neceſſary to interpoſe that laxative drug by itſelf. The doſe of the electary is the bulk of a large nutmeg, once or twice a day, according to the urgency of the ſymptoms. One dram contains about one-ſixth part of a grain of opium.

ELECTARIUM CASIÆ.

Electary of caſia.

Lond.

Take of

Solutive ſyrup of roſes,

Pulp of caſia, freſh extracted,—each half a pound;

Manna, two ounces;

Pulp of tamarinds, one ounce.

Grind the manna in a mortar, and diſſolve it in a water-bath, ſaturated with ſea-ſalt, in the ſyrup; then add the pulps, and continue the heat until the whole is reduced to the conſiſtence of an electary.

Edinb.

Take of

Pulp of caſia, ſix ounces;

Tamarinds,

Manna,—of each one ounce and a half;

Syrup of pale roſes, ſix ounces.

Rub the manna with the ſyrup, in a warmed mortar, and add the pulps; and, with the heat continued, reduce the whole into an electary.

Theſe compoſitions are very convenient officinals, to ſerve as a baſis for purgative electaries, and ſimilar purpoſes; as the pulping of a ſmall quantity of the fruits, for extemporaneous preſcription, is ſufficiently troubleſome; the tamarinds give them a pretty taſte, and do not ſubject them, as might be expected, to turn ſour: after ſtanding for four months, the compoſition was found no ſourer than when firſt made up They are likewiſe uſefully taken by themſelves, in the quantity of two or

three drams occasionally, for gently loosening the belly in costive habits.

ELECTARIUM SENÆ.

Lond. Edinb.

formerly

ELECTARIUM LENITIVUM.

Electary of sena.

Lond.

Take of
- Figs, one pound;
- Sena, eight ounces;
- Pulp of tamarinds,
- Pulp of casia,
- Pulp of French prunes,—each half a pound;
- Coriander seeds, four ounces;
- Liquorice, three ounces;
- Double refined sugar, two pounds and a half.

Pulverise the sena along with the coriander seeds, and sift out ten ounces of the powder. The remainder is to be boiled with the figs and liquorice, in four pints of distilled water, to one half; then strain and press out the liquor, and evaporate it to the weight of a pound and a half. In this dissolve the sugar, so as to make it into a syrup, and add this syrup, by little and little, to the pulps; lastly, mix in the powder.

Edinb.

Take of
- Sena leaves, eight ounces;
- Coriander seeds, four ounces;
- Liquorice root, three ounces;
- Figs, one pound;
- Pulp of tamarinds,
- Casia fistularis,
- French prunes,—each half a pound:
- Double refined sugar, two pounds and a half.

Proceed as directed in the former process.

These electaries may be occasionally taken to the quantity of a nutmeg or more, for loosening the belly in costive habits. They are likewise frequently employed in clysters for the same purpose.

ELECTARIUM PECTORALE.

Pectoral electary.

Take of
- Rob of elder-berries, two ounces;
- Spermaceti dissolved in a sufficient quantity of yolk of egg, half an ounce;
- Flowers of benzoine, one dram;
- Balsamic syrup, as much as is sufficient to make the other ingredients into an electary.

This is a very useful medicine in tickling coughs and common colds, calculated both to obtund acrimony and promote expectoration. It may be used two or three times a day, in doses of about the quantity of a small nutmeg. Taken to the bulk of a large nutmeg, at bed-time, it generally not only relieves the breast, but tends to procure a salutary diaphoresis or sweat in the night. It is here improved from former editions, by substituting rob of elder-berries for conserve of roses, and spermaceti for compound powder of gum tragacanth.

ELECTARIUM SCAMMONII.

Electary of scammony.

Lond.

Take of
- Scammony, in powder, an ounce and a half;
- Cloves,
- Ginger,—each, six drams;
- Essential oil of caraway seeds, half a dram;
- Rose syrup, as much as is sufficient.

Let the spices be ground together, and mixed with the syrup; then add the powdered scammony, and afterwards the oil of caraway.

This electary is a warm, brisk purgative. It is a reform of the *electarium caryocostinum* of our pre-

ceding Dispensatories, a composition which was greatly complained of, as being inconvenient to take, on account of the largeness of its dose. A dram and an half of this, which contains fifteen grains of scammony, is equivalent to half an ounce of the other.

ELECTARIUM CATECHU;
vulgo.
CONFECTIO JAPONICA.
Electary of catechu.
Edinb.

Take of
Extract of catechu, four ounces;
Gum kino, three ounces;
Cinnamon,
Nutmeg,—of each, one ounce;
Opium, dissolved in a sufficient quantity of Spanish white wine, one dram and a half;
Syrup of red roses, boiled to the consistence of honey, two pounds and a quarter.

Mix, and make an electary.

This is an elegant composition, the ingredients forming a cordial, sedative, restringent electary, very applicable in cases of any severe fluxes of the passive kind, where the constitution is reduced to a state of debility, and the spirits rendered low. In active hæmorrhages the aromatics prohibit its use.

BALSAMUM CEPHALICUM.
Cephalic balsam.

Take of
Expressed oil of nutmegs, one ounce;
Distilled oil of cloves,
of lavender,
of rosemary,—each half a dram;
of amber, half a scruple;
Balsam of Peru, one dram.

Liquefy the oil of nutmegs in a silver vessel: and, when taken from the fire, mix into it the distilled oils and the balsam, according to art.

This medicine is recommended to be rubbed on the *temples*, and on *paralytic limbs*, for warming the part and comforting the nerves; and to be smelt to, for refreshing and enlivening the spirits. Some have also given it inwardly as a *warm cordial*, in *languid cases*, and in *debilities of the nervous system.*—There are abundance of preparations of this kind in foreign Pharmacopœias, composed each of only one essential oil, incorporated with the expressed oil of nutmegs; which last is to be previously freed from its flavour (by distillation with water) that the smell of the former may not be injured thereby. In the room of this prepared sebaceous matter, a mixture of white wax and oil olive might be used. In the *Practical Chemistry*, a general process is given for the making of these kinds of preparations, under the title of

BALSAMUM ODORIFERUM.
An odoriferous balsam.

Take of
Oil olive,
White bees' wax,—each two ounces.

Put the oil into a china bason, placed in a pan of boiling water, and slice the wax into it. Stir them together with a clean knife, or small spatula, till the wax is melted: then remove the vessel out of the hot water, and when the matter begins to thicken, drop in four drams of any odoriferous essential oil, as that of cinnamon, nutmegs, mace, lemon-peel, rhodium, lavender, rosemary, &c. or of a mixture of two or three of the oils; to which may be added one dram of essence of ambergris, which will heighten the smell of the oils without communicating any of its own. Keep the whole constantly stirring, that they may be perfectly mixed; and as soon as this is done, plunge the ves-

ſel into cold water, to prevent the diſſipation of the eſſential oils.

Theſe kinds of balſams may be made of any colour, ſo as to reſemble in this reſpect alſo, as well as in ſmell, the vegetable, from which the eſſential oil, you make uſe of, was drawn. A little of the pigment, called by the painters *ſap-green*, being previouſly ground with the oil olive, will give a fine green; — a *little cinnabar*, a ſcarlet;—*turmeric*, a lemon colour;—*Pruſſian blue*, a violet;—and *cochineal*, a fine purpliſh hue.

MITHRIDATIUM, five CONFECTIO DAMOCRATIS.

Mithridate, or the confection of Damocrates.

Lond.

Take of
- Cinnamon, fourteen drams;
- Myrrh, eleven drams;
- Agaric,
- Indian nard,
- Ginger,
- Saffron,
- Seeds of mithridate muſtard,
- Frankincenſe,
- Chio turpentine,—each ten drams;
- Camels' hay,
- Coſtus, or, in its ſtead, zedoary,
- Indian leaf, or, in its ſtead, mace,
- Stœchas,
- Long pepper,
- Hartwood ſeeds,
- Hypociſtis,
- Storax ſtrained,
- Opopanax,
- Galbanum, ſtrained,
- Opobalſam, or, in its ſtead, expreſſed oil of nutmegs,
- Ruſſian caſtor,—each one ounce;
- Poley mountain,
- Scordium,
- Carpobalſam, or, in its ſtead, cubebs,
- White pepper,
- Candy carrot ſeed,
- Bdellium, ſtrained,—each ſeven drams;
- Celtic nard,
- Gentian root,
- Dittany of Crete,
- Red roſes,
- Macedonian parſley ſeed,
- Leſſer cardamom ſeeds, huſked,
- Sweet fennel ſeed,
- Gum arabic,
- Opium, ſtrained,—each five drams;
- Calamus aromaticus,
- Wild valerian root,
- Aniſeed,
- Sagapenum, ſtrained,—each three drams;
- Meum athamanticum,
- St. John's wort,
- Acacia, or, in its ſtead, terra Japonica,
- Bellies of ſkinks,—each two drams and a half;
- Clarified honey, thrice the weight of all the other ingredients.

Warm the honey, and mix with it the opium diſſolved in wine; melt the ſtorax, galbanum, turpentine, and opobalſam (or expreſſed oil of nutmegs) together in another veſſel, continually ſtirring them about, to prevent their burning. With theſe ſo melted mix the hot honey, at firſt by ſpoonfuls, and afterwards in larger quantities at a time. When the whole is grown almoſt cold, add by degrees the other ſpecies reduced into powder.

THERIACA ANDROMACHI.

Venice Treacle.

Take of
- Troches of ſquills, half a pound;
- Long pepper,
- Opium, ſtrained,
- Vipers dried,—each three ounces;
- Cinnamon,
- Opobalſam, or, in its ſtead, expreſſed oil of nutmegs,—each two ounces;
- Agaric,
- Florence orris root,

Scordium,
Red roſes,
Navew ſeeds,
Extract of liquorice,—each an ounce and a half;
Indian nard,
Saffron,
Amomum,
Myrrh,
Coſtus, or, in its ſtead, zedoary,
Camels' hay,—each one ounce;
Cinquefoil root,
Rhubarb,
Ginger,
Indian leaf, or, in its ſtead, mace,
Dittany of Crete,
Horehound leaves,
Calamint leaves,
Stœchas,
Black pepper,
Macedonian parſley ſeed,
Olibanum,
Chio turpentine,
Wild valerian root,—each ſix drams;
Gentian root,
Celtic nard,
Spignel,
Poley mountain, St. John's wort, Groundpine } leaves,
Germander tops, with the ſeed,
Carpobalſam, or, in its ſtead, cubebs,
Aniſeed,
Sweet fennel ſeed,
Leſſer cardamom ſeeds, huſked,
Biſhop's weed, Hartwort, Treacle muſtard } ſeeds,
Hypociſtis,
Acacia, or, in its ſtead, Japan earth,
Gum arabic,
Storax, ſtrained,
Sagapenum, ſtrained,
Terra Lemnia, or, in its ſtead, bole armenic or French bole,
Green vitriol calcined,—each an ounce;
Small (or, in its ſtead, the long) birthwort root,
Leſſer centaury tops,
Candy carrot ſeed,
Opopanax,
Galbanum, ſtrained,
Ruſſian caſtor,
Jew's pitch, or, in its ſtead, white amber prepared,
Calamus aromaticus,—each two drams;
Clarified honey, thrice the weight of all the other ingredients.

Let theſe ingredients be mixed together, after the ſame manner as directed in making the mithridate.

Theſe celebrated electaries are almoſt the only remains, which the late reformation has left in the ſhops, of the wild exuberance of compoſition, which the ſuperſtition of former ages brought into vogue. The theriaca is a reformation of mithridate, made by Andromachus, phyſician to Nero. The mithridate itſelf is ſaid to have been found in the cabinet of Mithridates, king of Pontus. The firſt publiſhers of this pompous arcanum were very extravagant in their commendations of its virtues; the *principal of which was made to conſiſt in its being a moſt powerful preſervative againſt all kinds of venom.* Whoever took a proper quantity in a morning, was enſured from being poiſoned during that whole day. This was confirmed by the example of its ſuppoſed inventor, who, as Celſus informs us, was by its conſtant uſe ſo fortified againſt the commonly reputed poiſons, that none of them would have any effect upon him when he wanted their aſſiſtance. But the notions of poiſons, which prevailed in thoſe ruder ages, were manifeſtly erroneous. Before experience had furniſhed mankind with a competent knowledge of the powers of ſimples, they were under perpetual alarms from an apprehenſion of poiſons, and buſied themſelves in

contriving compositions which should counteract their effects; accumulating together all those substances which they imagined to be possessed of any degree of alexipharmac power. Hence proceed the voluminous antidotes which we meet with in the writings of the ancient physicians. Yet it does not appear that they were acquainted with any real poison, except the *cicuta*, *aconitum*, and *bites of venemous beasts*; and to these they knew of no antidote whatever. Even admitting the reality of the poisons, and the efficacy of the several antidotes separately, the compositions could no more answer the purposes expected from them, than the accumulating of all the medicinal simples into one form could make a remedy against all diseases.

Yet, notwithstanding the absurdity in the original intention of these medicines, and their enormity in point of composition; as they contain several powerful materials, whose virtues, though greatly prejudiced, yet are not destroyed, by their multiplicity and contrariety; the compounds have been found, from repeated experience, to produce very considerable effects, as *warm opiate diaphoretics*.

The colleges, however, of London and Edinburgh, paying very little deference to antiquity or common prejudice, have ventured at length to discard these venerable reliques, and very properly; and have substituted in their room an elegant and simple form, equivalent to them both in efficacy, under the title of

CONFECTIO OPIATA;
formerly
PHILONIUM LONDINENSE.
Opiated confection.
Lond.

Take of
Long pepper,
Ginger,
Caraway seeds,—each two ounces;
Hard purified opium, six drams;
Syrup of white poppies, boiled to the consistence of honey, thrice the weight of the other ingredients.

Heat the syrup, and carefully mix with it the opium; then add the other ingredients, reduced into powder.

ELECTARIUM OPIATUM;
vulgo
ELECTARIUM THEBAICUM.
Opiated electary.
Edinb.

Take of
Aromatic powder, six ounces;
Virginian snake root, finely powdered, three ounces;
Purified opium, dissolved in white wine, half an ounce;
Clarified honey, half a pound.

Mix into an electary.

This composition consists of very powerful ingredients, and is doubtless capable of answering every thing that can be reasonably expected from the more voluminous theriaca of Andromachus. The London college also had formerly their theriaca composed of the less exceptionable ingredients of Andromachus's. But as these medicines have for a long time been chiefly employed for external purposs, in the way of cataplasm, the *theriaca Londinensis* is now omitted, and its place supplied by a cataplasm composed of a few well chosen articles, under the name of *cataplasma e cymino*, of which hereafter. For internal use, none of the theriacas are at present so much regarded as they have been heretofore; practitioners having introduced in their room extemporaneous boluses of Virginian snake-root, camphor, contrayerva, and the like, which answer all their intentions; with this advantage, that they may be given either with or without opium, an ingredient which renders the others prejudi-

cial in cases where they might otherwise be proper.

With regard to the quantity of opium in the foregoing compositions, one grain thereof is contained in four drams of the mithridate; in three scruples, fifteen grains of the Venice treacle; and in five scruples of the *theriaca Thebaica*. The proportion of opium will vary a little, according to the time that they have been kept; their moisture by degrees exhaling, so as to leave the remainder stronger of the opium, than an equal weight was at first. A change of this kind is taken notice of by many writers, but falsely attributed to an imaginary fermentative quality of the ingredients; by which they were supposed, from their multiplicity and contrariety, to be continually exalting and improving the virtues of one another.

A good deal of care is requisite, in making these compositions, to prevent the waste which is apt to happen in the pounding, and which would render the proportion of opium to the other ingredients precarious. The intention of dissolving the opium in wine, for these and other electaries, is, that it may be more uniformly mingled with the rest.

These compositions fully supply the place of the CONFECTIO DAMOCRATIS, or mithridate; and of the THERIACA ANDROMACHI, or Venice treacle;—two farraginous masses, which are very deservedly banished from both the London and Edinburgh Pharmacopœias, and retained by some others merely to show the height at which compositions in medicine had at one time arrived. On this account only, have they not been obliterated from the present edition of this work.

ELECTARIUM ALTERANS.

Alterative electary.

Take of

Crude antimony, finely levigated, three drams;
Resin of guaiacum, two drams;
Oil of sassafras, six drops;
Conserve of red roses, one ounce and a half;
Balsamic syrup, as much as is sufficient.

Grind the resin and the levigated antimony well together; and, having mixed these with the oil (dropt on a little sugar) and the conserve, let the whole be softened with the syrup into a due consistence.

This medicine is used against cutaneous foulnesses, obstructions of the glands, and impurities of the blood and juices. Dispensatory writers in general lay the principal stress, in compositions of this kind, upon the calx, cerussa, or cinnabar of antimony, preparations which are far inferior to the crude mineral, and very ill deserve the great character which has been usually given of them. The bulk of a small nutmeg of this electary may be taken every morning and evening with a little of the simple or compound lime-water.

ELECTARIUM ANTIDYSENTERICUM.

Antidysenteric electary.

Take of

Yellow wax, three drams;
Spermaceti, two drams;
Conserve of red roses, an ounce and a half;
Oil of almonds, half an ounce;
Balsamic syrup, a sufficient quantity.

Let the wax and spermaceti be melted in the oil, over a gentle fire, and then mixed with the conserve and syrup.

Where sharp irritating humours have eroded the intestines, and laid open the mouths of the blood-vessels, this soft healing electary is often of great use. It is said that fluxes of long standing, contracted

in the Indies, which had yielded nothing to medicines of the restringent kind, have been removed by this, which supplies the natural mucus of the bowels that the flux has carried off, heals the excoriations, and obtunds the acrimonious humours.

ELECTARIUM CHALYBEATUM.

Chalybeate electary.

Take of 1.
- Salt of steel, one dram;
- Candied nutmegs,
- Candied ginger,—each half an ounce;
- Oil of cinnamon, five drops;
- Conserve of orange peel, one ounce;
- Balsamic syrup, as much as is sufficient to make them into an electary.

Take of 2.
- Rust of steel, or steel prepared with sulphur, six drams;
- Candied ginger, one ounce;
- Conserve of orange peel, three ounces;
- Syrup of orange peel, as much as will reduce them into a proper consistence.

Take of 3.
- Conserve of orange peel, one ounce and an half;
- Extract of chamomile, two drams;
- Rust of iron, one dram and an half;
- Aromatic powder, one dram;
- Rhubarb, in powder, two drams;
- Syrup of saffron, sufficient to form an electary.

These elegant chalybeate medicines are given not only in *cachectic* and *chlorotic cases*, and *menstrual obstructions*; but likewise in *low hysteric* and *melancholic disorders*; and for *warming and invigorating the habit in great debilities* and *decays of constitution*. In either of these intentions, the bulk of a small nutmeg is to be taken twice a day, and its effects promoted by moderate exercise.

ELECTARIUM DEOBSTRUENS.

Deobstruent electary.

Take of
- Gum ammoniacum,
- Hard soap,—each a dram;
- Powdered squills, one scruple;
- Conserve of orange peel, half an ounce:
- Syrup of ginger, as much as is sufficient to reduce the other ingredients into the consistence of an electary.

Where the breast is oppressed by thick phlegm, or the viscera obstructed, this electary may be taken twice or thrice a day to the bulk of a small nutmeg at a time. The quantity here prescribed is sufficient for six or eight doses.

ELECTARIUM E GUMMI GUAIACO.

Electary of gum guaiacum.

Take of
- Gum guaiacum,
- Compound powder of arum,
- Canella alba,—each six drams;
- Conserve of orange peel, two ounces;
- Syrup of orange peel, as much as will bring them into a proper consistence.

In chronical *rheumatisms*, *pains* and *aches in general* (that are not accompanied with inflammation), and some kinds of *paralytic numbnesses*, this warm stimulating electary may be taken to the quantity of a nutmeg twice a day.

ELECTARIUM EX HELLEBORO NIGRO.

Electary of black hellebore.

Take of
- Black hellebore root,
- Extract of savin,
- Compound powder of myrrh,—each half an ounce;
- Canella alba, two drams;
- Syrup of orange peel, as much as is sufficient.

Mix and make them into an electary.

This electary is employed in one of our hospitals for promoting the

natural evacuations from the uterus: for which purpose, it is undoubtedly a medicine of great power. It may be taken to the quantity of half a dram twice a day.

ELECTARIUM JOVIALE.

Tin electary.

Take of
Pure tin,
Quicksilver,—each an ounce.
Let them be formed into an amalgama—then add,
Oyster shells prepared, one ounce.
Reduce the whole to a powder.
Mix equal quantities of this powder, and conserve of wormwood together, and form an electary, with syrup of saffron.

Two or three drams of this electary may be taken twice a day. It has been concluded, that the union of two such powerful anthelmintics as the *stannum* and *quicksilver*, was well calculated to expel the tænia; and accordingly it has been said, that this electary has succeeded, when other remedies have failed.

ELECTARIUM NITROSUM.

Nitrous Electary.

Mix one part of powdered nitre very well with eight parts of conserve of roses: these form an electary, very well calculated to throw into the habit a large quantity of nitre, without offending the stomach: hence may it be employed very advantageously in all active hæmorrhages, particularly in that of the lungs; or in any other cases, where circumstances require the copious use of nitre.

ELECTARIUM PRO GINGIVIS.

Electary for the gums.

Take of
Powdered myrrh, three drams;
Cream of tartar,
Cochineal,—of each one dram and a half.
Grind them very well together, in a glass mortar: then add
Melted honey, four ounces;
Powdered cloves, one dram.

In cases of spongy or ulcerated gums, this application may be used with safety, and sometimes with advantage; when the tincture of myrrh, that so long favourite remedy, cannot be used, on account of the menstruum in which the myrrh is dissolved.

ELECTARIUM AD NEPHRITICOS.

Nephritic electary.

Take of
Lenitive electary, an ounce and a half;
Venice turpentine, one ounce;
Eggshells prepared [or prepared oystershells] half an ounce;
Choice rhubarb, one dram;
Syrup of marshmallows, as much as is sufficient.
Dissolve the turpentine in the yolk of an egg, and then mix the whole together, according to art, so as to make thereof an electary.

This composition, taken from the Edinburgh infirmary, is contrived for cleansing the urinary passages in *nephritic disorders*. Turpentine, properly divided by earthy powders, is a safe, and, at the same time, one of the most powerful diuretics that can in these cases be ventured on. The rhubarb and laxative electary are very useful additions; for the belly ought here to be always kept open, though the stronger purgatives are very improper. A dram of the electary may be taken once or twice a day, along with an infusion of marshmallow roots, sweetened with a spoonful of honey.

ELECTARIUM PARALYTICUM.

Paralytic electary.

Take of
Mustard seed,
Conserve of rosemary,—each one ounce;

Compound ſpirit of lavender, two drams.

Beat the muſtard ſeed with a little water, that the pulp may be preſſed through a hair ſieve; then mix with it the conſerve and the ſpirit.

This is a very efficacious medicine for *paralytic diſorders*, *tremors*, and *numbneſs of the limbs*, the *decays accompanying old age*, and *in all caſes where ſolids require* to be *ſtimulated*, or *ſluggiſh ſtagnant juices to be put in motion*. It ought to be taken every morning and evening, or oftener, to the bulk of a large nutmeg; with a glaſs of rich wine, or any proper julep, after it.

ELECTARIUM E CORTICE PERUVIANO.

Electary of Peruvian bark.

Take of 1.
Peruvian bark, three ounces;
Caſcarilla, half an ounce;
Syrup of orange peel, a ſufficient quantity.

Take of 2.
Peruvian bark, three ounces;
Virginian ſnakeroot, one ounce;
Syrup of orange peel, a ſufficient quantity.

Take of 3.
Peruvian bark, three ounces;
Crude ſal ammoniac, three drams;
Syrup of lemon juice, a ſufficient quantity.

Take of 4.
Peruvian bark, three ounces;
Colcothar of vitriol, ſix drams;
Simple ſyrup, a ſufficient quantity.

Take of 5.
Peruvian bark, three ounces;
Alum, one ounce:
Syrup of lemon juice, as much as is ſufficient.

Take of 6.
Extract of Peruvian bark, one ounce;
Extract of logwood,
Extract of liquorice,—each half an ounce;
Mucilage of quince ſeeds, as much as is ſufficient to reduce the other ingredients into the conſiſtence of an electary.

All theſe compoſitions are very elegant and efficacious in the intentions for which they are deſigned. The FIRST is calculated for *common intermittent fevers*, in the cure of which the virtues of the bark are greatly aſſiſted by the caſcarilla.—The SECOND and THIRD are given in thoſe intermittents, which happen in *cachectic habits*, and perſons *ſubject to obſtructions of the viſcera*, where the bark by itſelf, on account of its aſtringency, would be prejudicial. The FOURTH is a good *ſtrengthener in laxities* of the *ſolids*, and *decays of conſtitution*;—and the FIFTH a *powerful ſtyptic* in *fluxes and hæmorrhages*, particularly in the *diabetes* and *fluor albus*. The bulk of a nutmeg of each may be taken at a time, and repeated according to the exigency of the caſe.—The SIXTH is a very agreeable form for the exhibition of Peruvian bark to thoſe who are more than ordinarily offended with its taſte; the ſubſtances here joined effectually covering its taſte, at the ſame time that they coincide with it in virtue. The compoſition is a very elegant and pleaſant one, and well deſerves a place in the ſhops. It may either be given in the form of a bolus or electary, in the doſe of a dram or more; or diſſolved in any ſuitable liquor into a draught.

ELECTARIUM PURGANS ACIDUM.

An acid purgative electary.

Take of
Pulp of tamarinds, two ounces;
Cryſtals of tartar, two drams.
Make them into an electary.

This is an uſeful *cooling laxative*, in *hot bilious diſpoſitions*, or *inflammatory diſeaſes*. The bulk of a

nutmeg may be taken every hour, or oftener, till it begins to operate, or the ſame quantity may be taken once a day occaſionally in dry coſtive habits.

ELECTARIUM TEREBINTHINATUM.

Terebinthinate electary.

Take of

Rectified oil of turpentine, half an ounce;

Honey, one ounce;

Powdered liquorice, as much as is ſufficient to form an electary.

This electary has been highly recommended in *chronic rheumatiſm*, particularly that ſpecies called the *iſchias*, or more commonly ſciatica; and has been ſaid to cure where other powerful remedies have been tried in vain. It is certainly a good *ſtimulating diuretic*; and the ſpirit of turpentine may be introduced into the habit, in the form here preſcribed, in larger quantity, and with more eaſe, than by any other.

ELECTARIUM SISTENS.

Binding electary.

Take of

The Japonic confection, two ounces;

Extract of logwood, one ounce;

Syrup of dry roſes, as much as will reduce them into a proper conſiſtence for an electary.

This electary is calculated for the relief of dyſenteries, and other inteſtinal fluxes, after the acrid humours have been duly evacuated by mild cathartics, &c. The quantity of a nutmeg may be taken every four or five hours.

CHAPTER VI.

LOHOCHS.

A *Lohoch*, *eclegma*, *linctus*, or *lambative*, is a ſoft compound deſigned to be licked or *ſlowly ſwallowed down*, of a middle conſiſtence between a ſyrup and electary, at leaſt never ſo thin as the former, nor ſo thick as the latter.

Theſe preparations are generally compoſed of expreſſed oils, mixed with ſyrups, and ſimilar ſubſtances. In making them, the ſyrup is firſt to be mixed with a little ſugar, and then briſkly beaten up in a mortar, with the oil, which will thus readily incorporate, eſpecially if the ſyrup be of the acid kind. Two ounces of ſyrup, a dram of ſugar, and an ounce of expreſſed oil, form a linctus of a due conſiſtence; which may be made thicker at pleaſure by adding more oil, or thinner by an increaſe of the ſyrup.

Any oily ſubſtance, as ſpermaceti, &c. may likewiſe be reduced into this form: and inſtead of ſugar, powders more agreeable to the intention of emollients or pectorals, may be uſed; as the compound powder of gum tragacanth, or the troches of ſtarch, gum arabic, or liquorice, or conſerve of hips, will anſwer the purpoſe of forming a ſmooth and pleaſant linctus. But the form at beſt is very unſightly and diſagreeable, and ſubſtances of this kind render it more ſo.

LOHOCH COMMUNE.

Common lohoch.

Take of
- Freſh-drawn oil of almonds,
- Syrup of marſhmallows, or balſamic ſyrup,—each one ounce;
- White ſugar, two drams.

Mix and make them into a lohoch.

LOHOCH EX AMYLO.

Starch lohoch.

Take of
- Starch, two drams;
- Japan earth, one dram;
- Balſamic ſyrup,
- Whites of eggs, beaten up into a thin fluid,—each one ounce.

Mix and make them into a lohoch.

LOHOCH DE LINO.

Lohoch of linſeed.

Take of
- Freſh-drawn linſeed oil,
- Balſamic ſyrup,—each one ounce;
- Flowers of ſulphur waſhed,
- White ſugar,—each two drams.

Mix and make them into a lohoch.

LOHOCH DE MANNA.

Lohoch of manna.

Take of
- Calabrian manna,
- Freſh-drawn oil of almonds,
- Syrup of violets,—each, equal parts.

Mix and make them into a lohoch.

LOHOCH SAPONACEUM.

Saponaceous lohoch.

Take of
- Caſtile ſoap, one dram;
- Oil of almonds, one ounce;
- Syrup of lemon juice, one ounce and a half.

Mix and make them into a lohoch.

LOHOCH DE SPERMATE CETI.

Lohoch of ſpermaceti.

Take of
- Spermaceti, two drams;
- Freſh-drawn oil of almonds, half an ounce;
- Balſamic ſyrup, one ounce.

Mix the ſpermaceti with a ſufficient quantity of yolk of eggs. Then

add the oil and ſyrup, and make them into a lohoch.

LOHOCH BALSAMICUM.

Balſamic lohoch.

Take of

Spermaceti, two drams;

Balſam of Peru, one dram;

Syrup of marſhmallows, two ounces.

Let the ſpermaceti and balſam be well worked up with a ſufficient quantity of yolks of eggs; and then mix with them the ſyrup.

LINCTUS SOLUTIVUS.

Solutive lohoch.

Take of

Conſerve of hips, one ounce;

Solutive ſyrup of roſes,

Oil of olive,—each four ounces.

Mix and make them into a lohoch.

The principal uſe of lohochs is in diſorders of the internal parts of the mouth, fauces, and œſophagus; as in aphthæ, and tickling coughs from defluxions in the firſt paſſages. For, however they may have been celebrated, under the vague appellation of pectorals, in affections of the breaſt and lungs, it is not to be expected, that their emollient lubricating quality can reach thoſe parts, or that they can give any relief in the true pulmonary cough. The ſlow manner in which they are ſwallowed down renders them well adapted to correct acrimony and irritation in the throat and about the mouth of the ſtomach; though the free uſe of ſuch unctuous compoſitions is ſoon liable to pall the appetite.

LINCTUS ACIDULUS.

Acidulous linctus.

Take of

Conſerve of red roſes, two ounces;

Weak ſpirit of vitriol, four ſcruples, or as much as is ſufficient to give a grateful acidity.

Mix them together.

This linctus is of a different nature from the foregoing preparations, and is uſed as a light reſtringent and detergent. It rather ſtrengthens than relaxes the ſtomach, is ſufficiently agreeable in taſte, and of a fine red colour. So much at preſent are theſe forms of medicine diſregarded, that they have been totally rejected from both the London and Edinburgh Pharmacopœias; though all but the three laſt had a place in the former editions of the Edinburgh Diſpenſatories. As lambatives they may be uſeful in tickling coughs; excoriations of the fauces; aphthous ulcerations; but cannot be conſidered as advantageous in any other view.

CHAPTER VII.

EMULSIONS AND SYRUP.

IN the foregoing chapter, oils were united with watery liquors called syrups, by the mediation of sugar and conserves, into thick unctuous compounds. The present chapter contains mixtures of oily, resinous, and similar bodies, with water, in a liquid form, of a white colour resembling milk, and hence called emulsions, or milks.

Emulsions have been generally prepared by grinding the oily seeds of plants, or kernels of fruits, along with common water, or any agreeable simple distilled water. In this process, the oil of the subject is, by the mediation of the other matter, united with the aqueous fluid; and hence they possess some share of the emollient virtue of the pure oil; with this advantage, that they are agreeable to the palate, and not apt to turn rancid or acrimonious by the heat of the body, which the pure oils in some inflammatory cases may do.

Emulsions, besides their use as medicines themselves, are excellent vehicles for certain substances which cannot otherwise be so conveniently taken in a liquid form. Thus camphor, triturated with almonds, readily unites with water into an emulsion, and in this form is conveyed into the remotest parts of the body, with sufficient efficacy to answer intentions of moment, at the same time that its heat and pungency are softened by the unctuosity of the almonds.

Pure oils, balsams, resins, and other similar substances, are likewise rendered miscible with water, into emulsions or milky liquors, by the intervention of mucilages. The white or yolk of an egg unites these bodies also with water, but less elegantly.

Several of the gummy resins, as *ammoniacum, galbanum, myrrh,* and others, are reducible into emulsions by trituration with water alone; their resinous part being rendered dissoluble by the mediation of the gummy.

LAC AMYGDALÆ,
formerly
EMULSIO COMMUNIS.
Almond milk.
Lond.

Take of
Sweet almonds blanched, one ounce and a half;
Double-refined sugar, four drams;
Distilled water, two pints.

Beat the almonds with sugar, then rubbing them well together, add the water by degrees, and strain the liquor.

EMULSIO COMMUNIS.
Common emulsion.
Edinb.

Take of
Sweet almonds, one ounce;
Water, two pounds and a half.

Blanch the almonds, and beat them in a stone mortar, and gradually pour upon them the water; and strain off the liquor.

If, whilst the almonds are beating, two ounces of mucilage of gum arabic be added, the preparation is called EMULSIO ARABICA, *the Arabic emulsion.*

Great care should be taken, that the almonds are not become rancid by keeping; which will not only render the emulsion extremely un-

pleaſant, a circumſtance of great conſequence in a medicine that requires to be taken in large quantities, but likewiſe give it injurious qualities little expected from preparations of this claſs. Theſe liquors are principally made uſe of for *diluting* and *obtunding acrimonious humours;* particularly in *heat of urine* and *ſtrangurigs* ariſing either from a natural ſharpneſs of the juices, or the operation of cantharides, or other irritating medicines. In theſe caſes, they are to be drunk frequently, in the quantity of half a pint or more at a time.

Some have ordered emulſions to be boiled, with a view to deprive them of ſome imaginary crudity; but by this proceſs they quickly ceaſe to be emulſions; the oil ſeparating from the water, and floating diſtinct upon the ſurface. Acids, and vinous ſpirits, produce a like decompoſition. On ſtanding alſo for ſome days, without addition, the oily matter ſeparates, and riſes to the top, not in its pure form, but in that of a thick cream. Theſe experiments prove the compoſition of the emulſions made from the oily ſeeds of kernels, and at the to ſame timepoint out ſome cautions be attended to in their preparation and uſe.

Theſe emulſions are to be conſidered as poſſeſſing nearly the ſame qualities; but that with the gum arabic certainly poſſeſſes a much greater demulcent power.

EMULSIO CAMPHORATA.

Camphorated emulſion.

Edinb.

Take of

Camphor, one ſcruple;
Sweet almonds, ten in number;
Double-refined ſugar, one dram;
Water, ſix ounces.

Grind the camphor and almonds well together in a ſtone mortar, and add by degrees the water. Then ſtrain the liquor, and diſſolve in it the ſugar.

This is a very commodious form for the exhibition of camphor; the unctuous quality of the almonds in great meaſure covering its pungency. In fevers that require the aſſiſtance of this powerful diaphoretic drug, a ſpoonful of the emulſion may be taken every three or four hours.

LAC AMMONIACI.

Milk of ammoniacum.

Lond.

Take of

Gum ammoniacum, two drams;
Diſtilled water, half a pint.

Grind the gum-reſin with the water, in a mortar, until the gum be diſſolved.

This liquor is employed for *attenuating tough phlegm*, and *promoting expectoration*, in the humoural aſthmas, coughs, and obſtructions of the viſcera. It may be given to the quantity of two ſpoonfuls twice a day.

In the ſame manner may be made the LAC ASÆFŒTIDÆ, and of the other gum-reſins. The milk of aſafœtida is uſed in ſpaſmodic, hyſterical, and other nervous affections; and not only given internally but in the form of glyſter, particularly in NERVOUS ASTHMA. It is ſaid to anſwer the ſame purpoſe as when given in ſubſtance.

All, even the pureſt, reſinous ſubſtances, by an addition of gum or mucilage, may be formed into emulſions. They may be alſo made miſcible with water, by triturating them with a few drops of *water of kali*. Or the maſs which thus becomes ſaponaceous, may be conveniently exhibited in pills.

EMULSIO PURGANS.

A purging emulſion.

Take of

Sweet almonds, blanched, two drams;

Fine sugar, one dram;
Gum Arabic, half a dram;
Scammony, ten grains;
Simple cinnamon water, one ounce.

Dissolve the gum in the cinnamon water, and, having ground the scammony with almonds and sugar, pour on the liquor by little at a time, continuing to grind them together, so as to make them into an emulsion.

This emulsion is an *agreeable* and *effectual purgative*. It may be prepared with different proportions of the scammony, at pleasure: other *purgative resins*, as that of jalap, may be substituted to the scammony; a proper quantity of any syrup to the sugar; and to the cinnamon water, any other simple water that may be more acceptable: but spirituous waters, for reasons already mentioned, have no place. Some have employed an infusion of liquorice, which appears to be a very proper addition in these kinds of preparations, as it coincides with the almonds in correcting the irritating power of the purgative material.

EMULSIO OLEOSA SIMPLEX.

Simple oily emulsion.

Take of
Oil of almonds,
Syrup of marsh mallows,—each, one ounce and a half;
Distilled water, seven ounces.

Mix—and if one dram of ammonia prepared is added, the EMULSIO OLEOSA VOLATILIS will be formed; or this may be done by adding a sufficient quantity of ammonia.

Where pure oil is not apt to sit easy on the stomach, by the addition of alkali this inconvenience is often remedied, and the medicine rendered useful in *coughs, hoarseness*, and similar affections, where no circumstances occur to prevent the use of volatiles.

EMULSIO OLEOSA.

Oily emulsion.

Take of
Oil olive, a quarter of a pint;
Spirit of hartshorn, two drams;
Simple pennyroyal water, twelve ounces;
Pectoral syrup, an ounce and a half.

Mix them together.

This composition is often used *against recent colds*, for *alleviating the cough*, and *promoting expectoration*. Where the complaints are of long standing, these kinds of medicines have no place; nor is their use in any case to be long continued, as they relax the stomach, pall the appetite, and increase the disorder.

A much more elegant oily emulsion, for all the intentions in which the simple lubricating quality of expressed oils is wanted, may be prepared in the following manner.

Take an ounce of powdered gum Arabic, and the same quantity of common water. Dissolve the gum in the water, that it may form a thick mucilage; to which add by degrees four ounces of fresh-drawn oil of almonds, rubbing them well together in a mortar till they incorporate into a smooth white mass. Then pour in by little and little, continuing the agitation, four ounces of common water; to which may be added nutmeg water, rose water, and simple syrup, of each two ounces.

This appears to be the pleasantest form that oils can be given in. The union is also more perfect, and the oil less disposed to separate on standing, than in the emulsions obtained by other means. Even strong acids added to this emulsion produce no decomposition in it. But alkalies can have no place in this form. For these, as we have observed upon another occasion, precipitate pure gums themselves from water.

EMULSIO SPERMATIS CETI.

Emulſion of ſpermaceti.

Take equal parts of ſpermaceti and of mucilage of gum Arabic. Rub them together in a mortar till they are incorporated into a thick maſs, which may be diluted at pleaſure with water, as in the foregoing proceſs.

Emulſions of ſpermaceti, or ſpermaceti draughts, are commonly prepared by means of yolks of eggs; and are ſufficiently uniform. Thoſe made with mucilage, as here directed, have this advantage, that they are leſs diſagreeable in taſte, and not liable to grow rancid. The mixture of the ſpermaceti and mucilage may be kept, for many days, in a ſtate fit for being diluted, by gradual additions of water, into a ſmooth emulſion.

EMULSIO CUM ARO.

Emulſion with arum root.

Take of

Freſh arum root,
Gum Arabic,—each, two drams;
Spermaceti, two ſcruples;
Common water, five ounces;
Nutmeg water,
Syrup of orange peel,—each, half an ounce.

Diſſolve the gum Arabic, with a part of the water, into a mucilage, which is to be beaten with the ſpermaceti into a ſmooth paſte.

To this add the arum root, previouſly beaten by itſelf into a pulp; and rub them well together that they may be thoroughly mixed. Then gradually pour in the waters and the ſyrup.

Freſh arum root may be taken in this form without the leaſt inconvenience from the pungency, with which the root itſelf ſo violently affects the mouth. I have given a ſpoonful of the emulſion every ſix hours, or oftener, in caſes of the *rheumatic kind*, and generally with great benefit. The more immediate effect experienced from it was that of warming the ſtomach, and promoting ſweat, which in ſome inſtances it did profuſely.

SYRUPUS HYDRARGYRI.

Syrup of quickſilver.

Take of

Purified quickſilver, one dram;
Gum arabic, three drams;
Roſe-water, as much as is ſufficient for reducing the gum into a mucus.

Let them be rubbed in a marble mortar till the quickſilver totally diſappears; then, by degrees, mix with it four ounces of ſimple ſyrup.

This, when it is properly prepared, is an agreeable preparation for children, where the ſtate of their health requires the uſe of mercurials, as alteratives; it is one of the mildeſt ſort, nor is apt to ſalivate, or paſs off too freely by the bowels. The *Syrupus papaveris albi* is preferable to roſe-water for forming the mucus.

CHAPTER. VIII.

JULEPS, MIXTURES, AND DRAUGHTS.

BY JULEP is commonly underſtood an agreeable liquor, deſigned as a vehicle for medicines of greater efficacy, or to be drank after them, or taken occaſionally as an auxiliary. In this light their baſis is generally common water, or a ſimple diſtilled water, with one-fourth or one-third its quantity of a diſtilled ſpirituous water: this mixure is ſweetened with ſugar, or any proper ſyrup, or acidulated with vegetable or mineral acids, or impregnated with other medicines ſuitable to the intention; care being taken that theſe additions be ſuch, as will not render the compound unſightly or unpalatable. The quantity uſually directed at a time, in common preſcription, is ſix or eight ounces, to be taken by ſpoonfuls.

A MIXTURE, more ſtrictly ſo called, receives more efficacious materials, whether ſoluble in water, as extracts or ſalts, or indiſſoluble, as powders; more regard being here had to the medicinal intention, than to the ſightlineſs or palatableneſs of the compound. There is indeed no preciſe diſtinction between the two; the ſame compoſition being often called by one a julep, and by another a mixture; though, in general, few would give the name of julep to a very diſagreeable liquor, or that of mixture to a very pleaſant one.

A DRAUGHT differs from a julep or mixture only in being preſcribed in leſs quantity, the whole being intended for one doſe.

MIXTURA CAMPHORATA; *formerly*

JULEPUM e CAMPHORA.

Camphorated mixture.

Lond.

Take of
Camphor, one dram;
Double-refined ſugar, half an ounce;
Boiling diſtilled water, one pint.

Grind the camphor firſt with a little rectified ſpirit of wine; and afterwards with the ſugar, till they are perfectly mixed. Then add the water by little and little, let the mixture cool in a cloſe veſſel, and laſtly paſs it through a ſtrainer.

There is generally ſome difficulty in making camphor mix well with water:—if it was firſt rubbed down with mucilage; or with almonds, as in the Emulſio Camphorata, the mixture would be more eaſily effected.—But it will diſſolve moſt effectually in a watery menſtruum, when joined with myrrh.

MIXTURA CAMPHORATA CUM MYRRHA.

Camphorated mixture with myrrh.

Take of
Camphor,
Myrrh,—each, one dram.

Rub them well together into a powder; then gradually add
Diſtilled water, one pint;
Sugar, half an ounce.

Theſe will form together a perfectly homogeneous mixture.

A ſpoonful or two of either of theſe may be taken where camphor is proper.

But vinegar is ſometimes made uſe of inſtead of water, which forms a very elegant mixture.

MIXTURA E CAMPHORA ACETOSA.

Camphor mixture with vinegar.

Take of

Camphor, one dram;
Gum Arabic, two drams;
Double-refined ſugar, half an ounce;
Vinegar, one pint.

Grind the camphor with a few drops of rectified ſpirit of wine, till it grows ſoft; then add the gum, previouſly reduced to a mucilage, with equal its quantity of water, and rub them together till they are perfectly mixed. To this mixture add by degrees the vinegar with the ſugar diſſolved in it.

By this management, the whole ſubſtance of the camphor is united with, and kept ſuſpended in, the liquor; and conſequently every ſpoonful of the mixture is equivalent to one grain and ſeven eighths of a grain of camphor in ſubſtance. The ſame treatment ſucceeds equally when water is uſed for the menſtruum; and if the aſſiſtance of nitre be required, this alſo may be added in either form.

MIXTURA CRETACEA.

Chalk mixture.

Lond.

Take of

Chalk, prepared, one ounce;
Double-refined ſugar, ſix drams;
Gum Arabic, powdered, one ounce;
Water, two pints.

Mix them together.

POTIO CRETACEA.

Chalk drink.

Edin.

Take of

Prepared chalk, one ounce;
Double-refined ſugar, half an ounce;
Mucilage of gum arabic, two ounces;

Rub them together; and afterwards add by degrees,

Water, two pints and an half;
Spirit of cinnamon, two ounces.

Mix them together.

Theſe compoſitions are nearly ſimilar, and may be conſidered as very agreeable abſorbents, deſigned for heartburns and ſimilar diſorders ariſing from acid juices in the firſt paſſages; and adminiſtered frequently in febrile diarrhœa. The chief uſe of the gum is not only to give a greater degree of conſiſtence to the water, and enable it to keep the powdered chalk ſuſpended; but alſo aſſiſts in ſheathing the primæ viæ, and defending them from the ſtimulus of acrid bile, or other humours which might be offenſive.

MIXTURA MOSCHATA;

formerly

JULEPUM e MOSCHO.

Muſk mixture.

Lond.

Take of

Roſe water, ſix ounces by meaſure;
Muſk, two ſcruples;
Gum arabic,
Double-refined ſugar,—each, one dram.

Firſt grind the ſugar with the muſk, then with the gum, and gradually add to them the roſe-water.

This is an improvement upon the HYSTERIC JULEP WITH MUSK of Bates. Orange flower water is directed by that author; and indeed this more perfectly coincides with the muſk than roſe-water: but as the former is ſcarce procurable in perfection, the latter is here preferred. The mixture appears turbid at firſt; on ſtanding a little time, it depoſits a brown powder, and becomes clear, but at the ſame time loſes great part of its virtue. This inconvenience may be prevented, by thoroughly grinding the muſk with gum arabic, before the addition of the water, as directed in the preceding chapter for making emulſions. By means of the gum, the

whole ſubſtance of the muſk is made to remain ſuſpended in the water. Volatile ſpirits are in many caſes an uſeful addition to muſk, and likewiſe enable water to keep ſomewhat more of the muſk diſſolved, than it would otherwiſe retain. The following compoſition of this kind is uſed in ſome of our hoſpitals.

JULEPUM MOSCHATUM.
Muſk julep.

Take of
Roſe water, ſix ounces;
Compound ſpirit of ammonia, one dram and a half;
Muſk, fifteen grains;
White ſugar, half an ounce.
Grind the muſk with the ſugar, and then mix therewith the other ingredients.

JULEPUM CARDIACUM.
Cordial julep.

Take of 1.
Cinnamon water, ſix ounces;
Spirit of nutmeg, two ounces;
Syrup of orange-peel, half an ounce.
Mix them together.
Take of 2.
Dill-ſeed water, ſix ounces;
Spirit of nutmeg, two ounces;
Compound ſpirit of lavender,
Syrup of ſaffron,—each, two drams.
Mix them together.

JULEPUM CARMINATIVUM.
Carminative julep.

Take of 1.
Fennel-ſeed water, ſix ounces;
Compound juniper water, two ounces;
Syrup of clove july-flowers, half an ounce.
Take of 2.
Pimento water, ſix ounces;
Spirit of aniſeed, two ounces;
Syrup of orange-peel, half an ounce.
Take of 3.
Dill-ſeed water, ſix ounces;
Spirit of caraway, two ounces;
Syrup of ginger, half an ounce.

JULEPUM HYSTERICUM.
Hyſteric julep.

Take of 1.
Pennyroyal water, ſix ounces;
Pimento water, two ounces;
Compound ſpirit of lavender,
Compound ſpirit of ammonia,—each, one dram;
Syrup of clove-july-flowers, half an ounce.
Take of 2.
Dill-ſeed water, four ounces;
Pepper-mint water, two ounces;
Tincture of cardamoms,
Syrup of ginger,—each, two drams.

JULEPUM REFRIGERANS.
A cooling julep.

Take of
Rheniſh wine, five ounces;
Roſe water, two ounces;
Seville orange juice,
Syrup of violets,—each ſix drams.

JULEPUM STOMACHICUM.
Stomachic julep.

Take of 1.
Common mint water, ſix ounces;
Spirit of mint, two ounces;
Syrup of ſaffron, two drams.
Take of 2.
Cinnamon water, ſix ounces;
Spirit of nutmeg,
Compound tincture of cardamoms,—each, one ounce;
Syrup of orange-peel, half an ounce.

The titles of theſe mixtures expreſs the intentions for which they are calculated. Four or five ſpoonfuls of either may be taken occaſionally, or uſed as vehicles and diluters of medicines of greater efficacy.

The following *julapia* are uſed in the Edinburgh infirmary.

JULAPIUM AMMONIACUM.
Ammoniacum julep.

Take of
Milk of ammoniacum, four ounces;

Syrup of ſquills, three ounces.
Mix them together.

Two ſpoonfuls of this mixture may be given twice a day, in *coughs*, *aſthmas*, and *oppreſſions at the breaſt*. It is a medicine of conſiderable efficacy, but not a little unpleaſant, though called a julep in the hoſpitals where it is uſed.

JULAPIUM ANTIHYSTERICUM.
Antihyſteric julep.

Take of
Pennyroyal water, four ounces;
Tincture of valerian, one ounce;
Tincture of caſtor, two drams;
Salt of hartſhorn, ten grains;
White ſugar, ſix drams.
Mix them together.

The virtues of this compoſition are ſufficiently obvious from its title. The doſe is two ſpoonfuls, to be taken twice or thrice a day.

JULAPIUM CARDIACUM.
Cordial julep.

Take of
Pepper-mint water, four ounces;
Pimento water, two ounces;
Compound ſpirit of ammonia,
Tincture of caſtor, — each, two drams;
White ſugar, half an ounce.
Mix and make them into a julep.

This mixture is an uſeful cordial in all *depreſſions of the ſpirits*, in the *ſinkings of low fevers*, and the *languors to which hyſterical* and *hypochondriacal perſons are ſubject*. An ounce, or two ſpoonfuls, may be taken for a doſe, two or three times a day.

JULAPIUM DIAPHORETICUM.
Diaphoretic julep.

Take of
Common mint water, four ounces;
Water of acetated ammonia, two ounces;
Salt of hartſhorn, ten grains;
White ſugar, ſix drams.
Mix them for a julep.

This excellent compoſition is a *very powerful ſudorific*, and anſwers its intention more effectually, and with greater certainty, than many others calculated for the ſame purpoſe. Where a copious ſweat is to be excited, as in *rheumatic diſeaſes*, two ſpoonfuls are to be taken warm in bed every hour, or two hours, till the ſweat break out. If warm diluting liquors be not afterwards ſufficient to keep it up, the ſame medicine is to be occaſionally repeated. Great care ſhould be taken that the water of acetated ammonia ſhould be perfectly ſaturated; for if the vinegar ſhould be redundant, the ſalt of hartſhorn will loſe a proportionate degree of power.

JULAPIUM DIURETICUM.
Diuretic julep.

Take of
Water of acetated ammonia, four ounces;
Compound horſeradiſh water, two ounces;
Syrup of marſhmallows, three ounces.
Mix them together.

The water of acetated ammonia is an excellent *aperient ſaline liquor, capable of promoting evacuation either by the cutaneous pores*, or *the urinary paſſages*, according to the manner of exhibiting it. We have ſeen before, that when taken warm in bed, it proves a powerful ſudorific; eſpecially if aſſiſted by volatile ſalts, ſmall doſes of opiates, or other ſubſtances which tend to determine its action to the ſkin. If the *patient walks about*, in a cool air, it *operates gently, but* for the moſt part *effectually, by urine!* the additions here joined to it correſpond with this intention, and promote its operation. As this medicine excites the urinary diſcharge without heating or irritating the parts, it *takes place not only in dropſies*, but likewiſe in *inflammatory diſorders*, wherever this ſalutary ſecretion is to be promoted. It is given to the quantity of two ſpoonfuls thrice a day.

JULAPIUM FŒTIDUM.
Fetid julep.

Take of
Asafœtida, one dram and a half;
Penny-royal water, six ounces;
Tincture of valerian water, two ounces;
Oil of hartshorn, twenty drops;
White sugar, ten drams.

Rub the asafœtida in the pennyroyal water till it dissolves; and having dropt the oil upon the sugar, mix the whole together.

This composition is not a little fetid and unsightly; it is nevertheless a medicine of great efficacy, in *hypochondriacal* and *hysteric disorders*, *asthmas*, and other nervous complaints: the dose is one spoonful, to be taken thrice a day. It is sometimes prepared without the oil of hartshorn.

JULAPIUM HYDRAGOGUM.
Hydragogue julep.

Take of
Infusion of chamomile-flowers, six ounces;
Tartarised antimony, ten grains;
Syrup of buckthorn, two ounces.

Mix them together.

Two spoonfuls of this julep are given, in *hydropic cases*, every two hours, till it take sufficient effect as a purgative; which it generally does before the quantity here prescribed has been made use of. Tartarised antimony, thus exhibited in small doses, and frequently repeated, proves as certain and powerful a cathartic, as it does an emetic when given in a larger quantity at once. It operates nevertheless, for the most part, with sufficient ease.

JULAPIUM SISTENS.
Binding julep.

Take of
Common mint water, four ounces;
Pimento water, two ounces;
Catechu electary, two drams;
Catechu, in powder, one dram;
Tincture of opium, forty drops;
White sugar, half an ounce.

Mix them well together.

This julep is calculated against *dysenteries* and *diarrhœas;* in which, after proper evacuations, it generally eases the gripes, and restrains the flux. It is to be given three or four times a day, in the quantity of a spoonful at a time.

MIXTURA DIAPHORETICA.
Diaphoretic mixture.

Take of
Common water, six ounces;
Julep of camphor with vinegar, one ounce and a half;
Compound powder of contrayerva, four scruples;
Nitre, two scruples;
Syrup of orange-peel, six drams.

Mix them together.

In hospitals and places ill aired, common inflammatory fevers sometimes change into putrid and malignant ones. To guard against any accident of this kind, as soon as the inflammation begins to abate, or the pulse to soften, three or four spoonfuls of this alexipharmac mixture may be given every six hours. Camphor seems to answer best when thus given in a liquid form; and to be most efficacious in such small doses, for *abating inflammation* and *nervous symptoms*, and likewise for *promoting a gentle diaphoresis.*

MIXTURA ANTIDYSENTERICA.
Antidysenteric mixture.

Take of
Extract of logwood, three drams;
Tincture of catechu, two drams;
Spirit of cinnamon, one ounce;
Distilled water, seven ounces.

Dissolve the extract in the spirit of cinnamon, and then add the common water and the tincture.

In *recent dysenteries*, after the necessary evacuations, a spoonful or two of either of these mixtures may

be given after every motion, or once in four or five hours. If mild opiates fail of procuring reſt, it is a ſign that ſome of the corrupted humours ſtill remain in the bowels, and that it is more proper to go on with the evacuation, than to ſuppreſs the flux. Theſe medicines will ſometimes likewiſe take place in the laſt ſtage of the diſeaſe, when through neglect or miſmanagement it has continued till the ſtrength is much impaired, the inteſtines greatly relaxed, and their villous coat abraded; provided there be *neither ichorous* or *involuntary ſtools*, *aphthæ*, *petechiæ*, *hiccup*, or *great anxiety at the breaſt;* rhubarb, and theſe aſtringents, are to be ſo interpoſed, that at the ſame time the putrid humours are diſlodged, the ſtrength may be ſupported, and the inteſtines braced. See Dr. PRINGLE's excellent Obſervations on the Diſeaſes of the Army, page 254, *&c. ſeq.* where the reader will find a full and ſatisfactory hiſtory of the ſymptoms and cure of this diſtemper, ſo frequent and fatal in the camp.

HAUSTUS ANTIEMETICUS SALINUS.

Saline antiemetic mixture.

Take of

Kali, prepared, half a dram;
Lemon juice, ſix drams;
Cinnamon water, one ounce;
Fine ſugar, one ſcruple.

Mix them together.

This draught is frequently preſcribed, not only for the purpoſe expreſſed in its title, but likewiſe as a ſaline aperient in *icterical*, *inflammatory*, and *other diſorders*, where medicines of that claſs are proper.

MIXTURA CARDIACA.

Cordial mixture.

Take of

Cinnamon water, four ounces;
Spirit of cinnamon, two ounces;
Extract of ſaffron, one ſcruple;
Confection of kermes, ſix drams.

Mix them together.

In *great languors* and *depreſſions*, a ſpoonful of this rich cordial mixture may be taken every half hour.

MIXTURA AD PHTHISIN.

Mixture againſt the phthiſis.

Take of 1.

Balſam of copaiba, one dram;
Common water, four ounces;
Spirit of cinnamon, one ounce;
Syrup of orange peel, half an ounce.

Let the balſam be diſſolved in a proper quantity of yolk of egg, and then mixed with the other ingredients.

Take of 2.

Purified opium, one grain;
Conſerve of roſes, half a dram.

Mix them together for a bolus.

Take of 3.

Oxymel of ſquills, a dram and a half;
Tincture of opium, fifteen drops;
Spirit of cinnamon, two drams;
Common water, two ounces.

Mix them together.

In the advanced ſtate of a conſumption we may diſtinguiſh two ſorts of coughs, one occaſioned by the ulcers, and the other by a thin rheum falling upon the fauces and trachea; which parts being then deprived of their mucus, become extremely ſenſible to irritation. It is this latter kind, perhaps, which is moſt painful and teazing to the patient. The firſt ſort requires balſamics, if the ulcer be open, and the matter can be expectorated. For this purpoſe, the firſt of the above mixtures is a very elegant and effectual formula: two ſpoonfuls are to be taken at a time, twice a day. If the balſam purge, two drams of the camphorated tincture of opium, added to the quantity of the mixture here pre-

ſcribed, will prevent that effect.—*The other kind of cough* can only be palliated by incraſſants; and for that purpoſe, the ſecond of the above compoſitions is one of the moſt ſucceſsful medicines: the conſerve is altogether ſafe, and otherwiſe well adapted to the nature of the diſeaſe, but of weak virtues: the opiate extract is the moſt efficacious ingredient, but is to be given with great caution, as opiates in general are apt to heat, to bind the body, and to obſtruct expectoration. Since theſe bad qualities are in good meaſure corrected by ſquills; as ſoon as the patient begins to complain of reſtleſs nights from coughing, the third mixture may be given at bed-time. See Pringle's Obſervations on the Diſeaſes of the Army.

MIXTURA E VALERIANA.
Valerian mixture.

Take of
Pepper-mint water, twelve ounces;
Wild valerian root, in powder, one ounce;
Compound ſpirit of lavender, half an ounce;
Syrup of orange peel, one ounce.
Mix them together.

Wild valerian root, one of the principal medicines in epilepſies and vertigos, ſeems to anſwer better, when thus exhibited in ſubſtance, than if given in form of tincture or infuſion. The liquors here joined to it excellently coincide, and by their warmth and pungency greatly improve its virtues. Two ſpoonfuls of the mixture may be taken twice or thrice a day.

HAUSTUS CATHARTICUS.
Cathartic draught.

Take of 1.
Scammony, ten grains;
Spirit of roſemary, two drams;
Syrup of buckthorn, ſix drams.
Grind the ſcammony with the ſpirit in a glaſs mortar, and when perfectly incorporated, mix in the ſyrup.

Take of 2.
Jalap, in powder, one ſcruple;
Ipecacuanha, three grains;
Compound juniper water, one ounce;
Infuſion of linſeed, an ounce and a half;
Simple ſyrup, one dram.
Mix them together.

Both theſe compoſitions are *ſtrong cathartics*, yet for the moſt part eaſy and ſafe in operation. They are calculated chiefly for *hydropic caſes*, in which they procure copious evacuations, without weakening or fatiguing the patient ſo much as many other medicines of this kind.

HAUSTUS CATHARTICUS SALINUS.
Saline cathartic draught.

Take of
Vitriolated natron,
Manna,—each, ſix drams;
Boiling water, three ounces;
Tincture of cardamoms, one dram.
Diſſolve the ſalt and manna in the water, and having ſtrained off the liquor, add to it the tincture of cardamoms.

This is a *very elegant* and *agreeable ſaline purgative*. Tincture of cardamoms is one of the beſt additions to liquors of this kind, or to the purging mineral waters, for rendering them acceptable to the ſtomach.

HAUSTUS DIAPHORETICUS.
Diaphoretic draught.

Take of
Water of acetated ammonia,
Syrup of white poppies,—each, half an ounce;
Salt of hartſhorn, five grains.
Mix them together.

This draught is a *very powerful*

ſaline diaphoretic. It is given with ſafety, and often with great benefit, in the beginning of inflammatory fevers, after bleeding; where warm ſubſtances uſually employed, if they fail in bringing out a ſweat, increaſe the fever.

HAUSTUS DIURETICUS.

Diuretic draught.

Take of 1.
- Oxymel of ſquills, one dram and a half;
- Cinnamon water, one ounce;
- Compound ſpirit of lavender,
- Syrup of orange peel,—each, one dram.

Take of 2.
- Vinegar of ſquills, one dram (or one dram and a half);
- Kali prepared, half a dram;
- Lemon juice, ſix drams;
- Cinnamon water, an ounce and a half;
- Spirit of pepper-mint, half an ounce;
- Syrup of orange peel, one dram.

Let the prepared kali and lemon juice be firſt mixed together, and then add to them the other ingredients.

Take of 3.
- Acetated kali, two ſcruples;
- Oxymel of ſquills, one dram by meaſure;
- Diſtilled water, an ounce and a half.

Mix them together.

Take of 4.
- Tincture of cantharides, fifteen drops;
- Kali prepared, half a dram;
- Lemon juice, ſix drams;
- Penny-royal water, an ounce and a half;
- Simple ſyrup, two drams.

Mix them together.

The *two firſt* of theſe elegant and efficacious compoſitions are commended by Dr. MEAD, *for promoting urine in hydropic caſes.* He directs them to be taken every night, or oftener, according to the urgency of the ſymptoms. The ſquill, one of the moſt powerful diuretics, is, by the additions here joined to it, rendered not only more grateful to the palate and ſtomach, but likewiſe enabled more effectually to anſwer the purpoſes intended by it. The other two are taken from our hoſpitals; in which the former, compoſed on the ſame plan with the two preceding, is juſtly diſtinguiſhed by the title of *mitior* or milder; and the latter, containing, beſides the ſaline matter, a moderate doſe of cantharides, by that of *fortior* or ſtronger.

HAUSTUS ANODYNO-DIURETICUS.

An anodyne-diuretic draught.

Take of
- Water of prepared kali, half a dram;
- Tincture of opium, forty drops;
- Pepper-mint water, one ounce;
- Cinnamon water, half an ounce;
- Spirit of cinnamon, two drams;
- Syrup of marſhmallows, one dram.

Mix them together.

Though practitioners have rarely ventured to exhibit opium in dropſies; yet, in thoſe which are accompanied with great pain, this anodyne drug, by eaſing the pain, and removing the ſtricture of the paſſages, which painful ſenſations always occaſion, proves a medicine of great ſervice, and notably promotes the urinary diſcharge. Dr. MEAD has given a remarkable inſtance of the good effects of the mixture above preſcribed, in a perſon labouring under an aſcites and tympany at the ſame time, where the pain was intolerable, the thirſt intenſe, and the urine in very ſmall quantity. The ſtronger purgatives increaſed the diſtemper; ſoap, alkaline ſalts, nitre, and other diuretics, were tried in vain:

this draught (when the patient ſeemed to be beyond any aſſiſtance from medicine) procured unexpected relief, not only a gentle ſleep, and truce from the pain, but likewiſe a copious diſcharge of urine. By repeating the medicine, for a little time, every eight hours, and afterwards uſing corroborants, the cure was perfectly completed.

CHAPTER IX.

LOTIONS, GARGARISMS, INJECTIONS, &c.

AQUA ALUMINIS COMPOSITA; *formerly* AQUA ALUMINOSA BATANEA.

Compound alum water. Lond.

TAKE of
Alum,
Vitriolated zinc,—each half an ounce;
Boiling diſtilled water, two pints.
Boil the ſalts in the water till they are diſſolved, let the ſolution ſettle, and afterwards filter it through paper.

BATES directs the ſalts to be firſt powdered and melted over the fire; but this is needleſs trouble, ſince the melting only evaporates the aqueous parts, which are reſtored again on the addition of the water. This liquor is uſed for *cleanſing* and *healing ulcers and wounds*, and for *removing cutaneous eruptions*; the part being bathed with it hot, three or four times a day. It is ſometimes likewiſe employed as a *collyrium*; and as an *injection*, in the *gonorrhœa* and *fluor albus*, when not accompanied with virulence.

AQUA ALUMINOSA.

Alum water.

Take of
Muriated quickſilver,
Alum,—each two drams;
Water, two pints.
Let the muriated quickſilver and alum be ground into a powder, and boiled with the water, in a glaſs veſſel, to the conſumption of half the water; then ſuffer the liquor to ſettle, and pour it off clear from the ſediment.

This is taken from FALLOPIUS, with the exchange of roſe and plantane waters for common water, which is equally fit for the purpoſe. The compoſition is deſigned chiefly for *cutaneous puſtules* and *ulcerations*.

AQUA ZINCI VITRIOLATI CUM CAMPHORA; *formerly* AQUA VITRIOLICA CAMPHORATA.

Water of vitriolated zinc, with camphor.

Take of
Vitriolated zinc, half an ounce;
Camphorated ſpirit, half an ounce;
Boiling water, two pints.
Mix them, that the vitriol may be diſſolved; and after the fæces have ſubſided, filter the liquor through paper.

Where a large watery diffuſion takes place from the eyes, if without, or with little inflammation, it is frequently employed; but at beginning to employ it, it would be judicious to dilute it with water. In ſome ulcers, particularly thoſe where it is neceſſary to reſtrain a large diſcharge, it is employed externally as a lotion.

AQUA ZINCI VITRIOLATI; *vulgo* AQUA VITRIOLICA.

Water of vitriolated zinc. Edinb.

Take of
White vitriol, ſixteen grains;
Water, eight ounces;
Dilute vitriolic acid, ſixteen drops.
Diſſolve the vitriol in the water; afterwards add the acid, and fil-
Where the eyes are watery or in-

flamed, these solutions of white vitriol are very useful applications: the slightest inflammations will frequently yield to this medicine without any other assistance: in the more violent ones, venæsection and cathartics are to be premised to its use.

AQUA PHAGEDÆNICA.

Phagædenic water.

Take of
Lime-water, one pint;
Muriated quicksilver, half a dram.
Let a solution be made.

This is designed for *washing* and *cleansing old foul ulcers*, and *preventing the growth of fungous flesh*. It is for most purposes rather too acrid to be used without dilution.

GARGARISMA ASTRINGENS.

Astringent gargarism.

Take of
Oak bark, one ounce;
Alum, one dram;
Honey of roses, one ounce;
Water, a pint and a half.
Boil the water with the oak bark, till the liquor, when strained, will amount only to one pint; to which add the alum and the honey.

GARGARISMA COMMUNE.

Common gargarism.

Take of
Infusion of roses, one pint;
Honey of roses, two ounces.
Mix them together.

Or,

Take of
Water, six ounces;
Nitre, one dram;
Honey of roses, one ounce.
Mix them together. Where acids are requisite, forty drops of the diluted vitriolic acid are added to this composition.

GARGARISMA DETERGENS.

Detergent gargarism.

Take of
Emollient decoction, one pint;
Tincture of myrrh, one ounce;
Honey, an ounce and a half.
Mix them together.

GARGARISMA EMOLLIENS.

Emollient gargarism.

Take of
Marshmallow-root, two ounces;
Figs, four in number;
Water, three pints.
Boil them till one pint be wasted, and then strain the liquor.

These liquors are used for washing the *mouth* and *fauces*; the FIRST, where the parts are extremely relaxed; — the SECOND and THIRD, where ulcerations require to be deterged, or the excretion of thick viscid saliva promoted; — and the FOURTH, where the mouth is dry, parched, and rigid, to moisten and soften it. In some cases, volatile spirits may be advantageously joined to these kinds of preparations. Dr. PRINGLE informs us, that, in the inflammatory quinsey, or strangulation of the fauces, he has observed little benefit arising from the common gargles; that such as were of an acid nature seemed to do more harm than good, by contracting the emunctories of the saliva and mucus, and thickening these humours; that the decoction of figs in milk and water seemed to have a contrary effect, especially if some water of ammoniac was added, by which the saliva was made thinner, and the glands brought to secrete more freely; a circumstance always conducive to the cure.

ENEMA DE AMYLO.

Starch glyster.

Take of
Jelly of starch, four ounces;
Linseed oil, half an ounce.
Liquefy the jelly over a gentle fire, and then mix in the oil. Forty drops of liquid laudanum are sometimes added.

ENEMA ANODYNUM, sive OPIATUM.

Anodyne, or opiate glyster.

Take of
Infusion of linseed, six ounces;
Liquid laudanum, forty drops.
Or,
Mutton broth, five ounces;
Opium purified, three grains.

ENEMA ANTICOLICUM.
Glyster against the colic.

Take of
Common decoction, half a pint;
Aloetic wine, one ounce;
Common salt, one dram;
Linseed oil, two ounces.
Mix them together.

ENEMA ASTRINGENS.
Astringent glyster.

Take of
Lime-water, ten ounces;
Electary of catechu, half an ounce.
Mix them together for a glyster, of which one half is to be injected at a time.

ENEMA COMMUNE.
Common glyster.

Take of
Common decoction, twelve ounces;
Lenitive electary, one ounce;
Common salt, half an ounce.
Oil olive, two ounces.
Mix them together.

ENEMA DOMESTICUM.
Domestic glyster.

Take of
Cows' milk, half a pint;
Brown sugar,
Oil olive,—each one ounce.
Mix them together.

ENEMA EMOLLIENS.
Emollient glyster.

Take of
Palm oil, an ounce and a half;
Cows' milk, half a pound.
Let the oil be beaten up with the yolk of one egg, and then add the milk.

ENEMA FŒTIDUM.
Fetid glyster.

Take of
Asafœtida, one dram;
Rue,
Savin,—each two drams;
Oil olive, half an ounce;
Oil of amber, fifteen drops;
Water, nine ounces.
Boil the water with the rue and savin, till a quarter of a pint be wasted. Then strain off the remaining decoction, and mix it with it the asafœtida and the oils. The quantity of the composition here directed, is to be injected at a time.

ENEMA PURGANS.
Purging glyster.

Take of
Common decoction, half a pint;
White soap, one ounce;
Syrup of buckthorn, an ounce and a half.
Mix them together.

ENEMA TEREBINTHINATUM.
Turpentine glyster.

Take of
Common decoction, ten ounces;
Venice turpentine (dissolved in the yolk of an egg), half an ounce;
Linseed oil, one ounce.
Mix them together.

The uses of these compositions are sufficiently obvious from their titles. The *starch*, *anodyne*, *emollient*, and *astringent glysters*, are used in *dysenteries*, and *other alvine fluxes*, to strengthen the tone of the intestines, defend them from being corroded by the acrimonious humours, to heal their exulcerations, and ease the pains which accompany these disorders. — The *turpentine glyster* is injected in nephritic cases; — the *fetid* in hysteric ones. The others are calculated for unloading the intestines of their contents, where the exhibition of purgatives in other forms is improper, or unsafe. Glysters have been looked upon by some a mere topical applications, whose operation was confined to the intestine, into which they are received. But experience has shewn, that in many

cases their action is extended much further. Thus the turpentine glyster promotes the discharge by the kidneys, and communicates to the urine a violet smell; and the anodyne glyster proves narcotic, as if a moderate dose of opium had been swallowed. Persons have been inebriated by spirituous glysters; and some affirm, that life has been supported for several days, by those of a nutritious kind.

INJECTIO BALSAMICA.

Balsamic injection.

Take of
Balsam of Copaiba, half an ounce;
Lime-water, six ounces;
Honey of roses, two ounces.

Let the balsam be well beaten up with the yolk of one egg; and then gradually add the lime-water and honey.

INJECTIO MERCURIALIS.

Mercurial injection.

Take of
Quicksilver,
Balsam of Copaiba,—each half an ounce;
Rose-water, half a pint.

Rub the quicksilver with the balsam, till they be perfectly incorporated, then mix with them the yolk of an egg, and afterwards add the rose-water.

This and the foregoing preparation are designed to be injected into the urethra in virulent gonorrhœas, for cleansing and deterging the parts.

CHAPTER X.

PLASTERS.

PLASTERS are compoſed chiefly of oily and unctuous ſubſtances, united with powders, into ſuch a conſiſtence, that the compound may remain firm in the cold, without ſticking to the fingers; that it may be ſoft and pliable in a ſmall heat; and that by the warmth of the human body it be ſo tenacious, as readily to adhere both to the part on which it is applied, and to the ſubſtance on which it is ſpread.

There is however a difference in the conſiſtence of plaſters, according to the purpoſes to which they are to be applied: thus, ſuch as are intended for the breaſt and ſtomach, ſhould be very ſoft and yielding; whilſt thoſe deſigned for the limbs are made firmer and more adheſive. *An ounce of expreſſed oil, an ounce of yellow wax*, and *half an ounce of any proper powder*, will make a plaſter of the firſt conſiſtence;—for a HARD one, an *ounce more of wax*, and *half an ounce more of powder*, may be added. Plaſters may likewiſe be made of reſins, gummy reſins, &c. without wax, eſpecially in extemporaneous preſcription: for officinals, theſe compoſitions are leſs proper, as they ſoon grow too ſoft in keeping, and fall flat in a warm air.

It has been ſuppoſed, that plaſters might be impregnated with the ſpecific virtues of different vegetables, by boiling the recent vegetable with the oil employed for the compoſition of the plaſter. The coction was continued till the herb was almoſt criſp, with care to prevent the matter from contracting a black colour: after which the liquid was ſtrained off, and ſet on the fire again till all the aqueous moiſture had exhaled. We have already obſerved, that this treatment does not communicate to the oils any very valuable qualities, even relative to their uſe in a fluid ſtate: much leſs can plaſters, made with ſuch oils, receive any conſiderable efficacy from the herbs.

Calces of lead, boiled with oils, unite with them into a plaſter of an excellent conſiſtence, and which makes a proper baſis for ſeveral other plaſters.

In the boiling of theſe compoſitions, a quantity of water muſt be added, to prevent the plaſter from burning and growing black. Such water, as it may be neceſſary to add during the boiling, muſt be previouſly made hot: for cold liquor would not only prolong the proceſs, but likewiſe occaſion the matter to explode, and be thrown about with violence, to the great danger of the operator. This accident will equally happen upon the addition of hot water, if the plaſter be extremely hot.

EMPLASTRUM ANODYNUM.

Anodyne plaſter.

Take of
White reſin, eight ounces;
Tacamahaca, in powder,
Galbanum,—each four ounces;
Cummin ſeeds, three ounces;
Black ſoap, four ounces.

Melt the reſin and the gums together; then add the powdered ſeeds and the ſoap, and make the whole into a plaſter.

This plaster sometimes gives ease in *slight rheumatic pains*, which it is supposed to effect by preventing the afflux of humours to the part, and putting in motion and repelling such as already stagnate there.

EMPLASTRUM ASÆFŒTIDÆ;
formerly
EMPLASTRUM ANTIHYSTERICUM.
Edinb.

Take of
Plaster of litharge,
Asafœtida, stained,—of each two parts,
Yellow wax,
Galbanum, strained,—of each one part.

This plaster is applied to the umbilical region, or over the whole abdomen, in *hysteric cases;* and sometimes with good effect.

EMPLASTRUM CERÆ COMPOSITUM;
E. L.
formerly
EMPLASTRUM ATTRAHENS.
Compound plaster of wax.
Lond.

Take of
Yellow resin, one pound;
Yellow wax,
Tried mutton suet,—each three pounds;
Melt them together, and whilst the mass remains fluid, pass it through a strainer.

This is a very well contrived plaster for the purpose expressed in its title. It is calculated to supply the place of melilot plaster: whose great irritation, when employed for the dressing of blisters, has been continually complained of. This was owing to the large quantity of resin contained in it, which is here for that reason retrenched. It should seem that, when designed only for dressing blisters, the resin ought to be entirely omitted, unless where a continuance of the pain and irritation, excited by the vesicatory, is required. Indeed plasters of any kind are not very proper for this purpose: their consistence makes them sit uneasy, and their adhesiveness renders taking them off painful. CERATES, which are softer and less adhesive, appear much more eligible. The *ceratum spermatis ceti* will serve for general use: and, for some particular purposes, the *ceratum resinæ flavæ* may be applied.

EMPLASTRUM SIMPLEX;
vulgo
EMPLASTRUM CEREUM.
Simple plaster.
Edinb.

Take of
Yellow wax, three parts;
Mutton suet,
White resin,—of each two parts.

This plaster is similar to the foregoing, but the further reduction of the resin renders it for some purposes more eligible.

EMPLASTRUM AD CLAVOS PEDUM.
Plaster for corns on the feet.

Take of
Galbanum dissolved in vinegar, and again inspissated, one ounce;
Pitch, half an ounce;
Litharge plaster, two drams,
Let them be melted together, and then mix with them
Verdegris powdered,
Sal ammoniac, each one scruple;
And make them into a plaster.

This plaster has been much celebrated for the removal of corns, and for alleviating those pains, which they are apt to occasion.—There can be little doubt but that corns may be softened by some of the ingredients of which it is composed: but probably the acrimonious materials may, on the first application, rather contribute to

increaſe than mitigate pains, from their ſtrong ſtimulating power.

EMPLASTRUM PICIS BURGUNDICÆ COMPOSITUM;

formerly

EMPLASTRUM CEPHALICUM.

Compound plaſter of Burgundy pitch. Lond.

Take of
- Burgundy pitch, two pounds;
- Soft labdanum, one pound;
- Yellow resin,
- Yellow wax,—each four ounces;
- The expreſſed oil of nutmegs, one ounce.

Melt the pitch, resin, and wax together; then add, firſt the labdanum, and afterwards the oil of nutmeg.

This plaſter is applied, in *weakneſs* or *pains of the head*, to the temples, forehead, &c. and ſometimes likewiſe to the feet. Schulze relates, that an inveterate rheumatiſm in the temples, which at times extended to the teeth, and occaſioned intolerable pain, was completely cured in two days by a plaſter of this kind (with the addition of a little opium) applied to the part, after many other remedies had been tried in vain. He adds, that a large quantity of liquid matter exuded under the plaſter, in drops, which were ſo acrid as to corrode the cuticle.

The efficacy of the plaſter is attributed more to the ſtimulating power of the Burgundy pitch than to any other ingredient; for when applied by itſelf to a tender ſkin, it often produces veſication, and conſtantly as a rubefacient, creating a ſevere diſcharge very frequently.

EMPLASTRUM de CICUTA, cum AMMONIACO.

Plaſter of hemlock, with ammoniacum.

Take of
- Juice of hemlock leaves, four ounces;
- Gum ammoniacum, eight ounces;
- Vinegar of ſquills, as much as is ſufficient to diſſolve the gum.

Add the juice to this ſolution, and having ſtrained the mixture, boil it to the conſiſtence of a plaſter.

Or it may be made in the following manner:

Take of
- Yellow wax, half a pound;
- Olive oil, four ounces;
- Gum ammoniacum, half an ounce.

After they are melted together, mix with them powdered herb of hemlock, half an ounce.

Theſe plaſters were formerly ſuppoſed to be *powerful coolers* and *diſcutients*, and to be particularly ſerviceable againſt *ſwellings of the ſpleen* and *diſtentions of the hypochondres*. For ſome time paſt, it has been been among us entirely neglected. But the high reſolvent power which Dr. Stock has diſcovered in hemlock, and which he found it to exert in this as well as in other forms, entitles it to further trials. The plaſters appear very well contrived, and the additional ingredients well choſen for aſſiſting the efficacy of the hemlock.

EMPLASTRUM LITHARGYRI:

Lond. Edinb.

formerly

EMPLASTRUM COMMUNE.

Litharge plaſter, uſually called, Diachylon.

Lond.

Take of
- Oil olive, one gallon;
- Litharge, ground into a moſt ſubtile powder, five pounds.

Boil them over a gentle fire with about two pints of water, keeping them continually ſtirring, till the oil and litharge unite, and acquire the conſiſtence of a plaſter. If all the water ſhould

be consumed before this happens, add some more water previously made hot.

Edinb.

Take of
Oil olive, two parts;
Litharge, one part.

The water being added, boil, diligently stirring until the litharge and oil unite into a plaster.

The heat in these processes should be gentle, and the matter kept continually stirring, otherwise it swells up, and is apt to run over the vessel. If the composition proves discoloured, the addition of a little white lead and oil will improve the colour.

These plasters are the common application in *excoriations of the skin, slight flesh wounds*, and the like. They keep the part soft, and somewhat warm, and defend it from the air, which is all that can be expected in these cases from any plaster. Some of our industrious medicine-makers have thought these purposes might be answered by a cheaper composition, and accordingly have added a large quantity of common whiting and hog's lard. This, however, is by no means allowable, not only as it does not stick so well, but likewise as the lard is apt to grow rancid and acrimonious. The counterfeit is distinguishable by the eye.

EMPLASTRUM LITHARGYRI cum RESINA.

Lond.

——— RESINOSUM.

Edinb.

formerly

EMPLASTRUM COMMUNE ADHÆSIVUM.

Litharge plaster with resin.

Lond.

Take of
Common plaster, three pounds;
Yellow resin, half a pound.

Melt the common plaster over a very gentle fire; then add the resin, first reduced into powder, that it may melt the sooner; and mix them all together.

This plaster may otherwise be made, by taking, instead of the common plaster, its ingredients oil and litharge; and adding the resin a little before they have come to the due consistence; then continue the boiling, till the plaster is finished.

It turns out the most elegant when made by this last method.

Edinb.

Take of
Common plaster, five parts;
White resin, one part.

These plasters are used chiefly as adhesives, for keeping on other dressings, &c.

EMPLASTRUM LITHARGYRI COMPOSITUM;

formerly

EMPLASTRUM COMMUNE cum GUMMI.

Compound litharge plaster.

Lond.

Take of
Litharge plaster, three pounds;
Galbanum strained, eight ounces;
Common turpentine, ten drams;
Frankincense, three ounces.

Melt the galbanum with the turpentine, over a gentle fire, and sprinkle in the frankincense, reduced to powder: then gradually mix with these the litharge plaster, previously liquefied by a very gentle heat.

Or, instead of the litharge plaster already made, you may take the oil and litharge boiled together. As soon as these unite, before they have acquired the consistence of a plaster, the other ingredients are to be added.

EMPLASTRUM GUMMOSUM.

Gum plaster.

Edinb.

Take of
Litharge plaster, eight parts;
Gum ammoniac, strained,
Galbanum, strained,

Yellow wax,—of each one part.

Both these plasters are used as digestives and suppuratives; particularly in abscesses, after a part of the matter has been maturated and discharged, for suppurating or discussing the remaining hard part; but whether they derive any advantage from the gums is a very doubtful point.

EMPLASTRUM CUMINI.

Cummin plaster.

Lond.

Take of

Burgundy pitch, three pounds;
Yellow wax,
Cummin seeds,
Caraway seeds,
Bay berries,—each three ounces.

Melt the pitch with the wax; then sprinkle in the other ingredients, first reduced into a powder, and mix the whole well together.

This plaster stands recommended as a moderately *warm discutient;* and is directed by some to be applied to the hypogastric region, for *strengthening the viscera,* and *expelling flatulencies.*

It is doubted whether this plaster derives any advantage from either of the seeds or bayberries, which assist in forming its composition—the Burgundy pitch is alone considered as the active ingredient.

EMPLASTRUM LITHARGYRI COMPOSITUM;

vulgo

EMPLASTRUM DEFENSIVUM seu ROBORANS.

Edinb.

Compound litharge plaster.

Take of

Litharge plaster, twenty-four parts;
White resin, six parts;
Yellow wax,
Olive oil,—of each three parts;
Vitriolated iron calcined, eight parts.

Rub the colcothar with the oil, and afterward add it to the rest when melted.

This plaster is laid round the lips of wounds and ulcers, over the other dressings, for defending them from inflammation, and a fluxion of humours; which however, as Mr. SHARP very justly observes, plasters, on account of their consistence, tend rather to bring on than to prevent.

EMPLASTRUM AMMONIACI cum HYDRARGYRO;

formerly

EMPLASTRUM ex AMMONIACO cum MERCURIO.

Plaster of ammoniacum with quicksilver.

Lond.

Take of

Gum ammoniacum strained, one pound;
Purified quicksilver, three ounces;
Sulphurated oil, one dram by weight, or what is sufficient.

Grind the quicksilver with the sulphurated oil, till it cease to appear; then, having melted the ammoniacum, add it gradually, a little before it cools, to this mixture; and let the whole be perfectly mingled together.

This is a very well contrived mercurial plaster. If in some cases it should not prove adhesive enough, the addition of a small quantity of turpentine will readily make it so.

EMPLASTRUM de BELLADONNA.

Plaster of deadly night shade.

Take of the

Juice of the recent herb belladonna,
Linseed oil,—each nine ounces;
Yellow wax, six ounces;
Venice turpentine, six drams;
Powder of the herb of belladonna, two ounces.

Let them be formed into a plaster according to art. It has been said that BELLADONNA externally applied has a very powerful influence both on the nerves and blood vessels of the parts; and hence considerably affects both the circulation, and the state of sensibility of the part; and hence when applied, particularly in affections of the mammæ and scrotum, in form of plaster, it has *alleviated very great pains*, and had great influence in *discussing tumors*, and *promoting a favourable suppuration.*

EMPLASTRUM LITHARGYRI CUM HYDRARGYRO;
formerly
EMPLASTRUM COMMUNE CUM MERCURIO.
Litharge plaster with quicksilver.
Lond.

Take of
Litharge plaster, one pound;
Quicksilver, three ounces;
Purified sulphurated oil, one dram by weight, or what is sufficient.

Make them into a plaster, after the same manner as the emplastrum ammoniaci cum mercurio.

EMPLASTRUM HYDRARGYRI;
vulgo
CŒRULEUM.
Quicksilver plaster.
Edinb.

Take of
Olive oil,
White resin,—of each one part;
Quicksilver, three parts;
Litharge plaster, six parts.

Melt the oil and resin together, and when cold, rub the quicksilver with them till perfectly incorporated; then add the common plaster melted, by degrees, and accurately mix the whole together.

These mercurial plasters are looked on as *powerful resolvents* and *discutients*, acting with much greater certainty in these intentions, than any composition of vegetable substances alone; the mercury exerting itself in a considerable degree, and being sometimes introduced into the habit in such quantity as to effect the mouth. *Pains in the joints* and *limbs* from a venereal cause, *nodes*, *tophs*, and *beginning indurations of the glands*, are said sometimes to yield to them.

EMPLASTRUM THURIS COMPOSITUM;
formerly
EMPLASTRUM ROBORANS.
Strengthening plaster.

Take of
Litharge plaster, two pounds;
Frankincense, half a pound;
Dragon's blood, three ounces.

Melt the common plaster, and add to it the other ingredients reduced into a powder.

The dragon's blood should be reduced to a very fine powder, otherwise the mixture will not be of an uniform colour.

This is a reformation of the laborious and injudicious composition described in our preceding Pharmacopœias, under the title of EMPLASTRUM AD HERNIAM; and though far the most elegant and simple, is as effectual for that purpose as any of the medicines of this kind. If constantly worn, with a proper bandage, it will, in children, frequently do service; though perhaps not so much from any strengthening quality of the ingredients, as from its being a soft, close, and adhesive covering. It has been supposed, that plasters composed of styptic medicines constringe and strengthen the part to which they are applied; but on no very just foundation; for plasters in general relax rather than astringe; the unctuous ingredients, necessary in their composition, counteracting and destroying the effect of the others.

EMPLASTRUM SAPONIS.

Soap plaſter.
Lond.

Take of
Litharge plaſter, three pounds;
Hard ſoap, half a pound.

Having melted the common plaſter, mix with it the ſoap, and boil them to the conſiſtence of a plaſter. Take care not to let it grow too cold, before you form it into rolls, for then it will prove too brittle.

EMPLASTRUM SAPONACEUM.

Saponaceous plaſter.
Edinb.

Take of
Litharge plaſter, four parts;
Gum plaſter, two parts;
Spaniſh ſoap, ſhaved thin, one part.

Melt the plaſters together, and add the ſoap; afterwards boil it a little, that it may make an emplaſter.

Theſe plaſters have been called reſolvents from the ſoaps of which they are formed, and the laſt is ſuppoſed to poſſeſs ſuperior reſolvent powers from the gum plaſters with which the ſoap is united; but ſome practitioners greatly doubt whether any advantage is derived from either addition.

EMPLASTRUM LADANI COMPOSITUM;

formerly

EMPLASTRUM STOMACHICUM.

Compound plaſter of ladanum.
Lond.

Take of
Ladanum, three ounces;
Frankincenſe, one ounce;
Cinnamon, powdered,
The expreſſed oil of nutmegs, —each half an ounce;
Oil of ſpear mint, one dram.

Having melted the frankincenſe, add to it firſt the ladanum ſoftened by heat, and then the oil of nutmegs. Afterwards mix theſe with the cinnamon and oil of mint; and beat them together in a warm mortar, into a maſs, which is to be kept in a cloſe veſſel.

This is a very elegant ſtomach plaſter. It is contrived ſo as to be eaſily made occaſionally (for theſe kinds of compoſitions, on account of their volatile ingredients, are not fit for keeping), and to be but moderately adheſive, ſo as not to offend the ſkin; and that it may without difficulty be frequently taken off and renewed, which theſe ſorts of applications, in order to their producing any conſiderable effect, require to be.

This plaſter is applied to the pit of the ſtomach, in *weakneſs of that viſcus*, in *vomitings*, *the diſorder* improperly called *the heartburn*, &c. and ſometimes with ſucceſs. The pit of the ſtomach, however, as HOFFMAN has obſerved, is not always the moſt proper place for applications of this kind. If applied *to the five lower ribs of the left ſide, towards the back, the ſtomach will in general receive more benefit from them;* for it appears from anatomical inſpection, that greateſt part of it is ſituated there.

EMPLASTRUM CANTHARIDIS:

formerly

EMPLASTRUM VESICATORIUM.

Bliſtering plaſter.
Plaſter of cantharis.
Lond.

Take of
Plaſter of wax, two pounds;
Cantharides, very finely powdered, one pound;
Prepared hog's lard, half a pound.

Melt the plaſter and lard, and, a little before they coagulate, mix in the cantharides.

Edinb.

Take of

Sheep's ſuet,
Yellow wax,
White reſin,
Cantharides, in fine powder,—of each an equal quantity.

After the reſt are melted, remove them from the fire, and add the cantharides.

Cantharides, if good, ſeldom fail, when applied to the ſkin, of raiſing bliſters; if therefore the plaſter formed of them ſhould not ſucceed in common caſes, it is either owing to miſmanagement, or badneſs of the cantharides themſelves. Great care ſhould be taken in the ſelection of ſuch as are very freſh, and the plaſter ſhould not be over-heated in the making, nor ſhould the plaſter, when made for application, be ſpread with too hot a ſpatula; for either one or the other of theſe circumſtances will prevent their effect from being properly produced.

If ſufficient attention be paid to the circumſtances neceſſary to be obſerved in forming and applying this compoſition, they anſwer every purpoſe fully, and as effectually as the more elaborate compoſitions formerly uſed; which had united with cantharides, black pepper, muſtard, vinegar, verdegris, Venice turpentine, &c.

To ſome conſtitutions bliſtering is a very painful application; which ſome have thought might be mitigated, by the addition of opium, without preventing the good effects for which they were applied.

EMPLASTRUM ANODYNO-DISCUTIENS.

An anodyne and diſcutient plaſter.

Take of
Cummin plaſter, two ounces;
Camphor, three drams;
Thebaic extract, one dram and a half.

Grind the camphor, with ſome drops of oil olive, into a very ſubtile powder, and then mix it with the other ingredients, according to art, into a plaſter.

EMPLASTRUM CALIDUM.

Warm plaſter.

Take of
Gum plaſter, one ounce;
Bliſtering plaſter, two drams.

Melt them together over a gentle fire.

EMPLASTRUM SUPPURANS.

Suppurating plaſter.

Take of
Gum plaſter, an ounce and a half;
Burgundy pitch, half an ounce.

Melt them together.

The uſes of the three foregoing compoſitions, which are taken from our hoſpitals, are ſufficiently obvious from their titles. The warm plaſter is a very ſtimulating application, of great uſe in fixt pains; as in the rheumatiſm, ſciatica, beginning chilblains, &c.

CHAPTER XI.

Ointments, Liniments, and Cerates.

OINTMENTS and liniments differ from plaſters little otherwiſe than in conſiſtence. An officinal plaſter, diluted with ſo much oil as will reduce it to the thickneſs of ſtiff honey, forms an ointment: by further increaſing the oil, it becomes a liniment.

For making ointments, the college of Edinburgh give the following directions. Let the fatty and reſinous ſubſtances be melted over a ſlow fire, afterwards they ſhould be diligently ſtirred, ſprinkling in at the ſame time the dry ingredients, if there ſhould be any, reduced to a very fine powder, until the mixture cooling becomes of a proper conſiſtence.

UNGUENTUM CERÆ;
formerly
UNGUENTUM ALBUM.
Wax ointment.
Lond.

Take of
- Oil olive, one pint;
- White wax, four ounces;
- Spermaceti, three ounces.

Liquefy them by a gentle fire, and keep them conſtantly and briſkly ſtirring, till grown thoroughly cold.

UNGUENTUM CERUSSÆ;
vulgo
Unguentum album.
Ceruſs ointment.
Edinb.

Take of
- Simple ointment, five parts;
- Ceruſſe, one part. M. S. A.

Theſe are uſeful, cooling, emollient ointments, of ſervice in excoriations, and ſimilar frettings of the ſkin. The ceruſs is omitted in the firſt preſcription, on a ſuſpicion that it might produce ſome ill effect, when applied, as theſe unguents frequently are, to the tender bodies of children. Though there does not ſeem to be much danger in this external uſe of ceruſs, the addition of it is the leſs neceſſary here, as there is another ointment containing a more active preparation of the ſame metal, the *unguentum ceruſſæ acetatæ*; which may be occaſionally mixed with this, or employed by itſelf, in caſes where ſaturnine applications are wanted.

UNGUENTUM ÆRUGINIS.
Ointment of verdigris.
Edinb.

Take of
- Ointment of white reſin, fifteen parts;
- Verdigris in fine powder, one part.

This is uſed for cleanſing ſores, and keeping down fungous fleſh. When, from local debility of the veſſels, ulcers continue to run, the tonic power of verdigris promiſes conſiderable advantage.

When it is a little reduced with hog's lard, or the ointment of ſheep's ſuet, it is frequently uſed in caſes of ophthalmia depending on ſcrophula, where the eye lids are principally affected, and with advantage.

UNGUENTUM ANODYNUM.
Anodyne ointment.

Take of
- Olive oil, ten drams;

Yellow wax, four drams;
Crude opium, one dram.

Mix them according to art so as to form an ointment.

This is an useful application for alleviating pain, and though it does not act so quickly as the anodyne balsam, still its action is more permanent.

Besides it is an useful dressing for sores attended with severe pains, to which opium when dissolved in spirit cannot be applied.

UNGUENTUM HÆMORRHOIDALE.

Ointment for the piles.

Take of
Galls, finely powdered, two drams;
Camphor, half a dram;
Hog's lard prepared, one ounce.

The camphor must be first powdered and incorporated with the lard, then let the galls be added.

This ointment is a very useful application for the *piles*, especially if the use of leeches have been premised.

UNGUENTUM RESINÆ FLAVÆ;

formerly

UNGUENTUM BASILICUM FLAVUM.

Yellow ointment of resin.

Lond.

Take of
Oil olive, one pint;
Yellow wax,
Yellow resin,—each one pound.

Melt the wax and resin, over a gentle fire; then add the oil, and whilst the mixture remains hot, strain it.

Edinb.

Take of
Hog's lard, eight parts;
White resin, five parts;
Yellow wax, two parts.

Dissolve them over a gentle fire.

These are commonly employed in dressings, for *digesting*, *cleansing*, and *incarnating wounds* and *ulcers*.

UNGUENTUM BASILICUM VIRIDE.

Green basilicum ointment.

Lond.

Take of
Yellow basilicum, eight ounces;
Oil olive, three ounces by measure;
Verdigris prepared, one ounce.

Mix and make them into an ointment.

This ointment is an efficacious detergent. Our hospitals have been accustomed to prepare an ointment greatly resembling this, under the title of *Unguentum viride detergens*.

UNGUENTUM HYDRARGYRI;

vulgo

UNGUENTUM CŒRULEUM.

Quicksilver ointment.

Take of
Quicksilver,
Mutton suet,—each one part:
Hog's lard, three parts.

Rub them diligently together in a mortar, until the globules totally disappear.

UNGUENTUM HYDRARGYRI NITRATI FORTIUS;

Lond. and Edinb.

vulgo

UNGUENTUM CITRINUM.

Strong ointment of nitrated quicksilver.

Edinb.

Take of
Quicksilver, one ounce;
Nitrous acid, two ounces;
Hog's lard, prepared, one pound.

Dissolve the quicksilver in the spirit of nitre, by digestion in a sand-heat; and, whilst the solution is very hot, mix with it the lard, previously melted by itself, and just beginning to grow stiff. Stir them briskly together, in a marble mortar, so as to form the whole into an ointment. By adding double the quantity of prepared hog's lard,

the UNGUENTUM HYDRARGYRI NITRATI MITIUS is formed.

Though the activity of this nitrated mercurial ſalt is moderated by the animal fat with which it is joined; yet it forms a very active ointment, and is frequently employed with ſucceſs in cutaneous caſes; and other topical affections. In this ſtate the ſaline ſubſtance does not enter the habit ſo quickly as the quickſilver does in the other ointments in which it makes the principal ingredient; hence in ſome caſes it is employed with more freedom. But ſhould it, as it ſometimes does, excoriate, and inflame the parts; or ſhould it grow hard, as it is apt to do from the action of the acid upon the lard, it will be then neceſſary to reduce the ſtrength of the ointment, by the addition of more lard.

UNGUENTUM HYDRARGYRI FORTIUS;

formerly

UNGUENTUM CŒRULEUM FORTIUS.

Stronger ointment of quickſilver.

Lond.

Take of

Hog's lard, prepared, twenty-three ounces;

Quickſilver, two pounds;

Mutton ſuet, prepared, one ounce.

Grind the quickſilver with the ſuet, and a little hog's lard, till the globules diſappear; then gradually add the remainder of the lard, and mix them carefully together.

UNGUENTUM HYDRARGYRI MITIUS;

formerly

UNGUENTUM CŒRULEUM MITIUS.

Milder ointment of quickſilver.

Lond.

Take of

The ſtronger ointment of quickſilver, one part;

Hog's lard, prepared, two parts.

Mix them.

Mercurial unguents have in many caſes the ſame effects with the preparations of this mineral taken internally; and are at preſent frequently employed, not only againſt *cutaneous diſorders*, as alterants; but likewiſe in venereal and other obſtinate caſes, for raiſing a ſalivation. The ptyaliſm excited by unction is ſaid to be attended with the feweſt inconveniencies, and to perform the moſt complete cure. In ſome conſtitutions, mercurials taken inwardly, run off by the inteſtines, without affecting the mouth; and in others, they affect the ſalival glands ſo quickly, as to occaſion a copious ptyaliſm, without extending their action to the remoter parts, and conſequently without removing the cauſe of the diſeaſe.

The ſimple manner in which theſe ointments are made forms one of their excellencies, as they can be rubbed much longer on the ſkin, without fretting or excoriating it, as they uſed to do when turpentine and ſulphurated oil were uſed to deſtroy the globulous appearances of the quickſilver. In ſome very tender ſkins, even theſe ointments will occaſion ſome uneaſineſs; the parts muſt then be occaſionally changed, at which the friction is performed; for whatever parts are made choice of, the quickſilver will be abſorbed into the habit; though the inſides of the legs and thighs are the places where the operation is firſt begun.

UNGUENTUM GUMMI ELEMI COMPOSITUM.

Compound ointment of gum elemi.

Lond.

Take of

Mutton ſuet, prepared, two pounds;
Gum elemi, one pound;
Common turpentine, ten ounces;
Olive oil, two ounces.

Melt the gum with the ſuet, and having taken them from the fire, immediately mix in the turpentine and oil; then, whilſt the maſs remains fluid, ſtrain it off.

This unguent has long been in uſe for *digeſting*, *cleanſing*, and *incarnating*; and for theſe purpoſes is preferred by ſome to all the other compoſitions of this kind.

UNGUENTUM HELLEBORI ALBI.

Ointment of white hellebore.

Take of
White hellebore, powdered, one ounce;
Ointment of hog's lard, four ounces;
Oil of lemon, half a ſcruple.

Mix, and make an ointment.

This is conſidered as an elegant application for cutaneous affections, from the hellebore, which has been held for a long time in high eſtimation for complaints of this ſort; and this is ſaid to be the beſt mode of externally applying it. It is alſo uſed externally in form of lotions, and has in many caſes proved efficacious.

UNGUENTUM NICOTIANÆ.

Ointment of tobacco.

Take of
Tobacco, cut very ſmall, five ounces;
Hog's lard, one pound and an half.

Let theſe be boiled together over a ſlow fire for two or three hours; then ſtrained whilſt hot, and ſtrongly preſſed through linen; or the tobacco may be firſt infuſed in a pint or more of boiling water, and, when cold, added to the lard, and boiled together till the water is perfectly evaporated.

This ointment, it is ſaid, will afford an effectual cure for many cutaneous affections.

UNGUENTUM CALCIS HYDRARGYRI ALBI;
formerly
UNGUENTUM E MERCURIO PRÆCIPITATO.

Ointment of white calx of quickſilver.
Lond.

Take of
Simple ointment, an ounce and a half;
White calx of quickſilver, one dram.

Mix and make an ointment.

This is a very elegant mercurial ointment, and frequently made uſe of againſt cutaneous diſorders. In the laſt Pharmacopœia, two drams of precipitated ſulphur was added, which is in this omitted, and one ſcruple more of the calx added; which may be conſidered as a great improvement, in as much as the ointment now is deprived of its offenſive ſmell, and is made more active.

UNGUENTUM OPHTHALMICUM.

Eye ointment.

Take of
Ointment of tutty, an ounce and a half;
Saturnine ointment, half an ounce;
Camphor, half a dram.

Mix and make them into an ointment according to art.

This ointment may likewiſe be made with two, three, or more times the quantity of camphor.

This unguent is very well contrived for the purpoſe expreſſed in its title; ſcarce any of thoſe commonly met with being of equal efficacy in *inflammations*, and *hot acrid defluxions on the eyes*. But as a good deal of caution is requiſite in

the uſe of ſaturnine applications for ſo tender an organ as the eye; and as compoſitions of this kind may be eaſily formed extemporaneouſly, with ſuch proportions of the ingredients as the preſcriber ſhall think fit; the Edinburgh Pharmacopœia has now omitted it.

UNGUENTUM PICIS.

Ointment of tar.

Lond.

Take of
Mutton ſuet, prepared,
Tar,—each, equal weights.
Melt them together, and ſtrain the mixture whilſt hot.

Edinb.

Take of
Liquid pitch, five parts;
Yellow wax, two parts.

Theſe compoſitions, with the addition of half their weight of reſin, have long been uſed in the ſhops as a cheap ſubſtitute for the black baſilicum.

Theſe ointments, from the tar which they contain, have been conſidered to poſſeſs ſome activity, and have been ſucceſsfully employed againſt ſome cutaneous affections, particularly thoſe of domeſtic animals; and they have frequently been uſeful in the *tinea capitis;* but have little ſhare in the preſent practice.

UNGUENTUM SAMBUCI.

Ointment of elder.

Lond.

Take of
Elder flowers, full blown, four pounds;
Mutton ſuet, prepared, three pounds;
Oil olive, one pint.
Melt the ſuet with the oil, and in this mixture boil the flowers till they be almoſt criſp. Then ſtrain and preſs out the ointment.

This ointment does not ſeem ſuperior to ſome others, which are much neater, and preparable at leſs expenſe. It can ſcarcely be ſuppoſed to receive any conſiderable virtue from the ingredients from which it takes its name.

UNGUENTUM CERUSSÆ ACETATÆ;

Lond. and Edinb.

formerly

UNGUENT. SATURNINUM.

Ointment of acetated ceruſs.

Lond.

Take of
Oil olive, half a pint;
White wax, two ounces;
Acetated ceruſs, two drams.
Let the acetated ceruſs, reduced into a very ſubtile powder, be ground with ſome part of the oil, and the wax melted with the reſt of the oil. Mix both together, and keep them ſtirring till the ointment be cold.

Edinb.

Take of
Simple ointment, twenty parts;
Acetated ceruſs, one part.

Both theſe ointments are *uſeful coolers* and *deſiccatives;* much ſuperior both in elegancy and efficacy to the *nutritum* or *tripharmacum,* held at one time in ſuch high eſtimation.

UNGUENTUM ADIPIS SUILLÆ;

formerly

UNGUENTUM SIMPLEX.

Ointment of hog's lard.

Lond.

Take of
Hog's lard, tried, two pounds;
Roſe water, three ounces by meaſure.
Beat the lard with the roſe water, till they be well mixed. Then melt them over a very gentle fire, and wait, that the water may ſubſide: pour the lard off from the water, and ſtir it well till it grows cold.

UNGUENTUM ROSACEUM;

vulgo

POMATUM.

The rose ointment, commonly called pomatum.
Edinb.

On any quantity of hog's lard, cut into small pieces, and placed in a glazed earthen vessel, pour as much water as will rise above it some inches; and digest them together for ten days, renewing the water every day. Then liquefy the lard with a very gentle heat, and pour it into a proper quantity of rose water. Work them well together; and afterwards, pouring off the water, add to the lard some drops of oil of rhodium.

These ointments are in common use for softening and smoothing the skin, and healing chaps.

The last seems to be superior, as being of a firmer consistence, and likely to remain longer when applied to the part affected. It is also preferred as the basis of other more compound ointments.

UNGUENTUM SIMPLEX.
Simple ointment.
Edinb.

Take of
Oil of olives, five parts;
White wax, two parts.

UNGUENTUM SULPHURIS.
Ointment of sulphur.
Lond.

Take of
Hog's lard, half a pound;
Flowers of sulphur, four ounces;
Essence of lemons, one scruple.
Mix them together.

UNGUENTUM SULPHURIS.
vulgo
UNGUENTUM ANTIPSORICUM.
Ointment of sulphur.
Edinb.

Take of
Sulphur, finely powdered, one part;
Hog's lard, four parts.
Mix, and make them into an ointment.

To every pound of this ointment, half a dram or a dram of oil of lavender, or essence of lemon, may be added.

Sulphur is a *certain remedy for the itch*, more safe and efficacious than mercury. For, as Dr. PRINGLE observes, unless a mercurial unction were to touch every part of the skin, there can be no certainty of success; whereas, by a sulphureous one, a cure may be obtained by only partial unction; the animalcula, which occasion this disorder, being, like other insects, killed by the sulphureous steams which exhale by the heat of the body. As to the internal use of mercury, which some have accounted a specific, there are several instances of men's undergoing a complete salivation for the cure of the lues venerea, without being freed from the itch. But on the contrary, it has been advanced, there have been numberless instances, where men have not been cured by a long course of sulphur, when mercury has afterwards succeeded.

The quantity of ointment, here directed, serves for four unctions: the patient is to be rubbed every night; but to prevent any disorder that might arise from stopping too many pores at once, *a fourth part of the body is to be rubbed at one time.* Though the itch may thus be cured by one pot of ointment, it will be proper to renew the application, and to touch the parts most affected, for a few nights longer, till a second quantity also be exhausted; and, in the worst cases, to subjoin the internal use of sulphur, not with a view to purify the blood, but to diffuse the steams more certainly through the skin; there being reason to believe, that the animalcula may sometimes lie too deep to be thoroughly destroyed by external applications.

UNGUENTUM TUTIÆ.

Ointment of tutty.

Lond.

Let any quantity of prepared tutty be mixed with as much *ointment of ſpermaceti*, as is ſufficient to reduce it into the conſiſtence of a ſoft ointment.

Edinb.

Take of
Simple liniment, five parts;
Tutty prepared, one part.

UNGUENTUM ZINCI.

Ointment of zinc.

Edinb.

Take of
Simple liniment, ſix parts;
Calcined zinc, one part.

Theſe ointments are much employed in affections of the eyes; the latter of which is thought moſt eligible; becauſe the others are ſuppoſed to derive their power from the quantity of zinc they contain, and it is on this account, that the lapis calaminaris is preferred to tutty, in theſe caſes.

UNGUENTUM CANTHARIDIS;

formerly

UNGUENTUM AD VESICATORIA.

Lond.

Ointment of cantharis.

Take of
Cantharis powdered, two ounces;
Diſtilled water, eight ounces;
Ointment of yellow reſin, eight ounces.

Boil the water with the cantharides to one half, and ſtrain. To the ſtrained liquor add the ointment of yellow reſin. Evaporate this mixture in a water-bath ſaturated with ſea ſalt, to the conſiſtence of an ointment.

UNGUENTUM VERMIFUGUM.

Ointment againſt worms.

Take of
Lavender cotton,
Wormwood,
Rue,
Savin,
Tanſy leaves, freſh gathered,—each, two ounces;
Oil olive, a pint and a half;
Hog's lard, one pound;
Yellow wax, three ounces;
Ox gall,
Socotorine aloes,—each, an ounce and a half;
Coloquintida,
Wormſeed,—each, one ounce.

Bruiſe the herbs, and boil them with the oil and lard, till the aqueous moiſture be evaporated; then preſs the liquor through a ſtrainer, melt in it the wax, and afterwards add the other ingredients, boiling and ſtirring them together, ſo as to make an ointment. The aloes, coloquintida, and wormſeed, muſt be previouſly reduced into a very ſubtile powder.

This ointment is rubbed on the bellies of children for deſtroying worms, and *ſometimes*, as is ſaid, *with ſucceſs*. It is taken from a preceding edition of the Edinburgh Pharmacopœia; ſince which it is omitted.

UNGUENTUM PULVERIS CANTHARIDUM FORTIUS.

Ointment of the powder of cantharides.

Edinb.

Take of
Baſilicum ointment, ſeven parts;
Cantharides, powdered, one part.

This ointment is added in the dreſſings for bliſters, intended to be made perpetual, as they are called, or to be kept running for a conſiderable time, which, in many chronic, and ſome acute caſes, they are required to be. Particular care ſhould be taken, that the cantharides employed in this compoſition be reduced into very ſubtile powder, and that the mixture be made as equal and uniform as poſſible.

UNGUENTUM INFUSI CANTHARIDUM MITIUS.

Ointment of the infuſion of cantharides.

Edinb.

Take of
Cantharides,
White resin,
Yellow wax,—each, one ounce;
Hog's lard,
Venice turpentine,—each, two ounces;
Boiling water, four ounces.

Infuse the cantharides in the water, in a close vessel, for a night; then strongly press out and strain the liquor, and boil it with the lard till the watery moisture be consumed; then add the resin, wax, and turpentine, and make the whole into an ointment.

This ointment, containing the soluble parts of the cantharides uniformly blended with the other ingredients, is more commodious, and occasions less pain, though not less effectual in its intention, than the foregoing composition with the fly in substance.

UNGUENTUM SPERMATIS CETI;
formerly
LINIMENTUM ALBUM.
Ointment of spermaceti.
Lond.

Take of
Oil olive, three ounces by measure;
Spermaceti, six drams;
White wax, two drams.

Melt them together over a gentle fire, and keep them constantly and briskly stirring, till grown cold.

This differs only in consistence from the *unguentum ceræ.*

LINIMENTUM AMMONIÆ;
formerly
LINIMENTUM VOLATILE.
Liniment of ammonia.

Take of
Water of ammonia, half an ounce;
Olive oil, one ounce and a half.

Cork the phial, and shake them together.

Dr. PRINGLE observes, that in the *inflammatory quinsey* or *strangulation of the fauces*, a piece of flannel, moistened with this mixture, and applied to the throat, to be renewed every four or five hours, is one of the most efficacious remedies. By means of this warm stimulating application, the neck, and sometimes the whole body, is put into a sweat, which, after bleeding, either carries off or lessens the inflammation. Where the skin cannot bear the acrimony of this mixture, a larger proportion of the oil may be tried.

LINIMENTUM AMMONIÆ FORTIUS.
Stronger liniment of ammonia.
Lond.

Take of
Water of *pure* ammonia, one ounce;
Olive oil, two ounces.

Cork the phial, and shake them together.

OLEUM AMMONIATUM.
Ammoniated oil.
Edinb.

Take of
Oil of olives, two ounces;
Water of caustic ammonia, two drams.

Mix them so that they may unite.

These two differ only from the two former in degree of strength; the pure or caustic water of ammonia being made use of instead of the milder water, and the quantity also being in larger proportion.

These often excite inflammation when liberally applied, and even blister a delicate skin.

Though, against obstinate rheumatic and ischiadic pains, they are often successfully employed externally.

CERATUM SPERMATIS CETI;
formerly
CERATUM ALBUM.

Cerate of ſpermaceti.
Lond.

Take of
Oil olive, a quarter of a pint;
White wax, two ounces;
Spermaceti, half an ounce.
Liquefy them all together, and keep them ſtirring till the cerate be quite cold.

CERATUM SIMPLEX.
Simple cerate.
Edinb.

Take of
Oil of olives, ſix parts;
White wax, three parts;
Spermaceti, one part.

Theſe differ from the ſimple ointment and liniment, only in containing a greater proportion of wax to the oil, and the addition of ſpermaceti; and, therefore, is more eligible only in caſes where a thicker conſiſtence is wanting than the ſimple ointment poſſeſſes.

CERATUM RESINÆ FLAVÆ;
formerly
CERATUM CITRINUM.
Cerate of yellow reſin.
Lond.

Take of
Yellow baſilicum ointment, half a pound;
Yellow wax, one ounce.
Melt them together.

This is no otherwiſe different from the yellow baſilicum, than in being of a ſtiffer conſiſtence, which renders it for ſome purpoſes more commodious.

LINIMENTUM CAMPHORÆ COMPOSITUM.
Compound camphor liniment.

Take of
Camphor, two ounces;
Water of pure ammonia, ſix ounces;
Spirit of lavender, ſixteen ounces by weight.
Mix the water of pure ammonia with the ſpirit, and diſtil from a glaſs retort, with a ſlow fire, ſixteen ounces. Then diſſolve the camphor in the diſtilled liquor.

This approaches near to the empiric Ward's volatile eſſence; but is conſidered as a more elegant and active formula; and there is little doubt but it will be equally efficacious in removing ſome local pains, as particular kinds of headachs, by external application.

LINIMENTUM SIMPLEX.
Simple liniment.
Edinb.

Take of
Oil of olives, four parts;
White wax, one part.

This is only thinner than the unguentum, and may be uſed inſtead of that, where a leſs firm application is neceſſary.

CERATUM LAPIDIS CALAMINARIS.

CERATUM EPULOTICUM.
Calamine cerate.
Lond.

Take of
Oil olive, one pint;
Yellow wax,
Calamine prepared,—each, half a pound.
Liquefy the wax with the oil, expoſe it to the air, and, as ſoon as the mixture begins to grow ſtiff, ſprinkle in the calamine; keeping them conſtantly ſtirring together, till the cerate be quite cold.

Edinb.

Take of
Simple cerate, five parts;
Calamine prepared, one part.

Theſe compoſitions are formed upon the cerate which TURNER ſtrongly recommends in *cutaneous ulcerations* and *excoriations*, and which have been uſually diſtinguiſhed by his name. They appear from experience to be *excellent epulotics*,

and are frequently made uſe of in practice.

* CERATUM SAPONIS.

Soap cerate.

Lond.

Take of

Litharge, in powder, one pound;
The ſharpeſt wine vinegar, one gallon;
Caſtile ſoap, ſhaved thin, half a pound;
Oil olive, one pint;
Yellow wax, two ounces.

Boil the vinegar with the litharge with a ſlow fire, conſtantly ſtirring, until the mixture unites and thickens; then mix in the reſt to make a cerate.

This cerate has been uſed many years, with great ſucceſs, in moſt of our hoſpitals, for defending the parts from defluxions, in fractures, diſlocations, and contuſions; and is univerſally approved of, as a moſt excellent diſcutient.

UNGUENTUM PARALYTICUM.

Palſy ointment.

Take of

Hog's lard,
Oil of bays,—each, four ounces;
Strong ſpirit of vitriol, one ounce.

Mix, and make them into an unguent.

This irritating compoſition is applied to numbed or paralytic limbs. It ſoon reddens and inflames the ſkin, and, when this effect is produced, muſt be taken off; after which, the part is to be anointed with any emollient unguent, as that of elder.

UNGUENTUM DIGESTIVUM.

Digeſtive ointment.

Take of

Yellow baſilicum,
Black baſilicum, — each, eight ounces;
Balſam of turpentine, four ounces.

Mix and make them into an ointment.

LINIMENTUM ANODYNUM.

Anodyne liniment.

Take of

Nerve ointment, three ounces;
Balſam of turpentine, one ounce.

Mix them together.

LINIMENTUM HÆMORRHOIDALE.

Liniment for the piles.

Take of

Emollient ointment, two ounces;
Liquid laudanum, half an ounce.

Mix theſe ingredients with the yolk of an egg; and work them well together.

CERATUM CANTHARIDIS.

Cerate of cantharis.

Lond.

Take of

Cerate of ſpermaceti, ſoftened by fire, ſix drams;
Cantharis, finely powdered, one dram.

Mix them.

The cantharides may be made under this form to act to any extent that is requiſite. It may ſupply the place of either the bliſtering plaſter or ointment; and there are caſes in which it is preferable to either, particularly in caſes of ſmall pox; or for ſupporting a drain under the form of iſſue, as it is leſs apt to ſpread than the ſofter ointment, of which general uſe is made.

LINIMENTUM AQUÆ CALCIS.

Liniment of lime water.

Edinb.

Take of

Oil of linſeed,
Lime water, — of each, equal parts.

Mix.

CERATUM LITHARGYRI ACETATI COMPOSITUM.

Compound cerate of acetated litharge.

Lond.

Take of

Water of acetated litharge, two ounces and a half;
Yellow wax, four ounces;
Olive oil, nine ounces;
Camphor, half a dram.

Rub the camphor with a little of the oil. Melt the wax with the remaining oil, and as ſoon as the mixture begins to thicken, pour on by degrees the water of acetated litharge, and ſtir conſtantly until it is cold; then mix the camphor, which was before rubbed with the oil.

This cerate differs from the ceratum ceruſſæ acetatæ chiefly in conſiſtence, and may be employed in the ſame intentions. It is in many caſes unqueſtionably a very uſeful medicine.

LINIMENTUM OLEOSUM COMPOSITUM.

Compound oily liniment.

Take of
Olive oil, two ounces and a half;
Oil of turpentine, one ounce;
Vitriolic acid, forty drops.

Let the oil of olive, and turpentine, be mixed together, and the vitriolic acid added gradually in an open veſſel. This, though an inelegant, is certainly an efficacious compoſition in chronic affections of the joints, and in the removal of long-exiſting effects from ſprains and bruiſes.

CHAPTER XII.

EPITHEMS.

CATAPLASMA CUMINI.

Cataplasm of cummin.
Lond.

TAKE of
Cummin seeds, one pound;
Bay berries,
Scordium leaves, dried,
Virginian snakeroot—each, three ounces;
Cloves, one ounce;
Honey, thrice the weight of the powdered species.
Make them into a cataplasm.

This is a reformation of the THERIACA LONDINENSIS, which for some time was scarce otherwise made use of than as a warm cataplasm; only such of its ingredients are retained as contribute most to this intention. However, the present practice pays little attention to such complex applications, the same intentions being better answered by compositions infinitely more simple.

CATAPLASMA DISCUTIENS.

Discutient cataplasm.
Edinb.

Take of
Bryony root, three ounces;
Elder flowers, one ounce;
Gum ammoniac, half an ounce;
Sal ammoniac, crude, two drams;
Camphorated spirit of wine, one ounce.
Boil the roots and flowers in a sufficient quantity of water, till they become tender; and, having then bruised them, add to them the gum ammoniacum, dissolved in a sufficient quantity of vinegar, and likewise the sal ammoniac and spirit. Mix the whole together, so as to make them into a cataplasm.

This composition is as good a discutient as any thing that can well be contrived in the form of a cataplasm. In some of our hospitals the following more simple form is made use of.

CATAPLASMA DISCUTIENS.

Discutient cataplasm.

Take of
Barley meal, six ounces;
Fresh hemlock, well bruised, two ounces;
Crude sal ammoniac, half an ounce;
Vinegar, a sufficient quantity.
Boil the meal and the hemlock leaves for a little time in the vinegar, and then mix with them the sal ammoniac.

CATAPLASMA MATURANS.

Ripening cataplasm.
Lond.

Take of
Figs, four ounces;
Yellow basilicum ointment, one ounce;
Galbanum, strained, half an ounce.
Beat the figs thoroughly in a mortar, occasionally dropping in some spirit of wine or strong ale; then carefully mix with them the ointment, first liquefied along with the galbanum.

CATAPLASMA SUPPURANS.

Suppurating cataplasm.
Edinb.

Take of
White lily (or marshmallow) roots, four ounces;
Fat figs, one ounce;
Raw onions, bruised, six drams;
Galbanum, half an ounce;
Yellow basilicum ointment,
Oil of chamomile, by decoction,
—each, one ounce;
Linseed meal, as much as is sufficient.

Let the lily (or marshmallow) roots be boiled along with the figs, in a sufficient quantity of water, till they become tender. Then bruise, and add to them the other ingredients, and make the whole into a cataplasm, according to art. The galbanum must be previously dissolved in the yolk of an egg.

Both these compositions are good suppurants, or ripeners; though their effects probably depend more on their keeping the part soft, moist, and warm, than on any particular qualities of the ingredients.

SINAPISMA.

A sinapism.
Edinb.

Take of
Mustard seed, in powder,
Crumb of bread,—each, equal parts;
Strong vinegar, as much as is sufficient.

Mix and make them into a cataplasm; to which is sometimes added a little bruised garlic.

Or,

Take of
Mustard seed, in powder,
Crumb of bread,—each, two ounces;
Garlic, bruised, half an ounce;
Black soap, one ounce;
Strong vinegar, a sufficient quantity.

Mix and make them into a cataplasm, according to art.

Both these compositions are employed only as *stimulants*. They often inflame the part, and raise blisters, but not so perfectly as cantharides. They are frequently applied to the soles of the feet in the low state of acute diseases, for raising the pulse and relieving the head; and are chiefly regarded for the suddenness of their action.

COAGULUM ALUMINOSUM. CATAPLASMA ALUMINIS.

formerly
Alum cataplasm.
Lond.

Take
Any quantily of the white of eggs.

Agitate it with a sufficiently large lump of alum, till it be coagulated.

This preparation is taken from Riverius. It is an useful astringent epithem for *sore, moist eyes*, and *excellently cools* and *represses* thin *defluxions*. Slighter inflammations of the eyes, occasioned by dust, exposure to the sun, or similar causes, are generally removed by fomenting them with warm milk and water, and washing them with the collyrium described before. Where the complaint is more violent, this preparation, after the inflammation has yielded a little to bleeding, is one of the best external remedies. It is to be spread on lint, and applied at bed-time.

CATAPLASMA EMOLLIENS.

Emollient cataplasm.

Take of
Crumb of bread, eight ounces;
White soap, one ounce;

Cow's milk, fresh, a sufficient quantity.
Boil them a little together.

CATAPLASMA STOMACHICUM.
Stomachic cataplasm.

Take of
The aromatic cataplasm, one ounce;
Expressed oil of mace, two drams;
Anodyne balsam, as much as is sufficient to reduce them into a proper consistence.

CATAPLASMA CAMPHORATUM.
Camphorated cataplasm.

Take of
Aromatic cataplasm, one ounce;
Camphor, one dram.
Mix them together.

CATAPLASMA ISCHIADICUM.
Ischiadic cataplasm.

Take of
Mustard seed, half a pound;
White pepper,
Ginger,—each, one dram;
Simple oxymel, as much as will reduce them into a cataplasm.

The use of these compositions, which are taken from our hospitals, may be easily understood from their titles. The last is a very stimulating application, and frequently vesicates the skin.

TABLE

Exhibiting the Proportion of *Antimony*, *Opium*, and *Quick-silver*, contained in some Compound Medicines of the London and Edinburgh Dispensatories.

Of ANTIMONY.

VINUM ANTIMONII TARTARISATI (wine of tartarised antimony), contains in every ounce two grains of tartarised antimony. Ed. Ph.

Of OPIUM.

TINCTURE OF OPIUM made with purified opium, five grains to every dram. But it appears on evaporating the liquor, that one dram of the tincture contains about three grains and a half of opium. Ed. Ph.

TINCTURA OPII AMMONIATA (tincture of opium ammoniated), nearly one grain in a dram of the liquid. Ed. Ph.

LINIMENTUM OPIATUM (opiated liniment), is made with one scruple of opium in an ounce of the liquid. Ed. Ph.

ELECTARIUM OPIATUM (opiated electary,) contains in every dram almost one grain of opium. Ed. Ph.

ELECTARIUM CATECHU (electary of catechu), contains in one hundred and ninety three grains, one grain of opium. Ed. Ph.

PILULÆ OPII (pills of opium), or thebaic pills, in every dram they have six grains of purified opium; a pill of five grains has half a grain of opium. Ed. Ph.

TROCHISCI GLYCYRRHIZÆ CUM OPIO (troches of liquorice with opium), in every dram have almost one grain of opium. Ed. Ph.

CONFECTIO OPIATA (opiated confection), [Ph. L.] contains one grain in thirty-six.

PULVIS E CRETA COMPOSITUS CUM OPIO (compound powder of chalk with opium), [Ph. L.] contains one grain of opium in about forty-three grains.

PULVIS IPECACUANHÆ COMPOSITUS (compound powder of ipecacuanha), [Ph. L. and Ph. Ed.] contains in ten grains one grain of opium.

PULVIS OPIATUS (opiated powder), [Ph. L.] contains one grain of opium in ten grains.

PILULÆ OPII (pills of opium), [Ph. L.] contain one grain of opium in five grains.

Of QUICKSILVER.

PILULÆ HYDRARGYRI (pills of quicksilver), in every dram contain fifteen grains of quicksilver. Ph. Ed.

PILULÆ HYDRARGYRI MURIATI MITIS (pills of mild muriated quicksilver, or PLUMMER's pills), contain in every dram twenty-two grains and an half of mild muriated quicksilver; a pill of three grains has one grain, and a little more. Ph. Ed.

PILULÆ HYDRARGYRI (quickſilver pills), [Ph. L.] in twelve grains contain four grains of quickſilver.

PULVIS SCAMMONII CUM CALOMELANE (powder of ſcammony with lomel), [Ph. L.] contain in four grains one grain of calomel.

HYDRARGYRUS CUM CRETA (quickſilver with chalk), [Ph. L.] contains in eight grains, three grains of quickſilver.

UNGUENTUM HYDRARGYRI NITRATI FORTIUS (ſtronger ointment of nitrated quickſilver), contain in each dracham four grains of quickſilver, and eight grains of nitrous acid. Ph. Ed.

UNGUENTUM HYDRARGYRI NITRATI MITIUS (milder ointment of nitrated quickſilver), in each dram contains two grains of quickſilver, and four of nitrous acid. Ph. Ed.

UNGUENTUM HYDRARGYRI NITRATI (ointment of nitrated quickſilver), [Ph. L.] contains in one dram twelve grains of nitrated quickſilver.

UNGUENTUM HYDRARGYRI (ointment of quickſilver), contains in every dram twelve grains; but the ſtronger contains in the ſame quantity of the ointment twenty-four grains of quickſilver. Ph. Ed.

UNGUENTUM HYDRARGYRI FORTIUS ET MITIUS (ſtronger and weaker ointment of quickſilver), [Ph. L.] the FORTIUS contains in two drams, one dram of quickſiver; whilſt the MITIUS, or *milder ointment*, has only one dram of quickſilver in ſix drams.

UNGUENTUM CALCIS HYDRARGYRI ALBÆ (ointment of the white calx of quickſilver), [Ph. L.] contains in one dram four grains and an half of the calx.

EMPLASTRUM AMMONIACI CUM HYDRARGYRO (ammoniacum plaſter with quickſilver), Ph. L. contains in five ounces about one ounce of quickſilver.

EMPLASTRUM LITHARGYRI CUM HYDRARGYRO (plaſter of litharge with quickſilver), [Ph. L.] contains in five ounces about one ounce of quickſilver.

EMPLASTRUM HYDRARGYRI (plaſter of quickſilver), in every dram contains about ſixteen grains of quickſilver. Ph. Ed.

INDEX.

THE ſubſequent arrangement of the materials contained in the foregoing pages has been ſo contrived as to prevent the neceſſity of crowding this work with a number of tables, which would render it more voluminous than uſeful;—hence all that is neceſſary to be underſtood to give full information of its particular contents, will readily occur to every reader, by obſerving the method herein adopted:—the aſteriſm denotes the new ſubſtances and compounds inſerted—the Roman letters of the Latin terms mark under what name each may be found—whilſt thoſe of the Italian type ſhow the different terms under which each article has formerly been denominated, or to which they have been altered;—and, when belonging to the Materia Medica, ſpeak the language in general of the Linnæan ſyſtem.—Therefore, when any ſubſtance or compound is wanted to be diſcovered, ſhould the name be in the Italian characters, it will be found in the page referred to, but under ſome of the terms printed in the Roman letter.—The doſes of the medicines annexed to a variety of articles, are to be conſidered as applicable to the adult, and muſt be therefore leſſened when preſcribed to the younger claſſes, in proportion to their years and conſtitutional ſtrength.

A.

ABIES, 76
Abrotanum fœmina, 76
——— mas 76
Doſe ℈ i.—ʒ j.
Abſinthii extractum, 392
D. ʒ ij—℥ j.
——— maritimi, *Conſerva*, 339, 340
——— oleum eſſentiale, 359
Abſinthium maritimum, 77
——— Romanum, 77
——— vulgare, 77
D. ℈ j.—ʒ i.
Acacia, 78
D. ʒ ſs.—ʒ i.
——— *Germanica*. See PRUNA SYLVESTRIS.
Acanthus, 78
——— *ſativus* vel *mollis Virgilii*, 78
Accipenſer ruthenus et huſo, 163
Acetated ammonia, water of, 448
——— ceruſs, 472
——— ceruſs, ointment of, 594
——— kali or lixiva, 446
*——— litharge, compound cerate of, 599
*——— quickſilver, 477
*Aceti ſyrupus, 343
Acetoſa, 78
——— pratenſis, 78
D. ℥ i.—℥ 2.
Acetous acid, 428
Acetum, 78
D. ℥ ſs—℥ iſs.
*——— aromaticum, 305
——— diſtillatum, 429
D. ʒ j.—℥ ſs.
——— lythargyritis, 306
——— prophylacticum, 305

Acetum theriacale, 306
Achillæa ptarmica, 212
——— *millefolii*, 183
Achmilla vulgaris, 81
Acid with vinous ſpirits, *combination of*, 431
Acids, 26
——-, native, 66
——-, mineral, 66
——-, medical effects of, 66
ACID SPIRITS, 425
Acidulous linctus, 564
*Acidum acetoſum, 428
D. ℈j.—ʒj.
——— *benzoicum*, 452
——— muriaticum, 428
D. gtt. x.—gtt. xl.
——— nitroſum, 427
*——— nitroſum dilutum, 427
D. gtt. xv.—gtt. xl.
——— vitriolicum, 425
*——- vitrioli aromaticum, 426
——— vitriolicum dilutum, 426
D. gtt. xv.—xl.
Aconitum, 79
D. gr. ½.—gr. 4.
——— *napellus*, 79
——— *primum pardalianches* of Geſner. See GENTIANA.
Acorus, *baſtard*, 152
——— *calamus*, 114
Acrids, their power, 73
Adder, 260
Adianthum verum, 79
*Aërated ponderous ſpar, 106
——— water, 429
*Aëris fixi aqua, 429
*Æruginis ammoniatæ aqua, 470
——— mel. 352
Ærugo, 80
D. gr. ⅛.—gr. 1.
Æſculus hippocaſtanum, 159
Ætheris vitriolici ſp. 431
D. ʒ ſs.—ʒ ij.
*Æther vitriolicus, 432
D. ʒ ſs.—ʒ ij.
Æthiops antimonialis, 518
——— martialis, 466
——— *mineralis*, 478
Æthuſa meum, 182
AFFINITIES of BODIES, 28
AFFINITIES, TABLE of, 30
AFFINITIES, *table of, between acids and alkalies*, 436
Agallochum, 80
Agaric of the oak, 81
——- female, 81
Agaricus, 80, 81
Agrimonia, 81
——— eupatoria, 81
Air, fixed, 27
Alcaline infuſion, 292
Alcea, 81
Alchimilla, 81
Alchohol, 380
D. ʒ ſs.—ʒ i.
Alder tree, 83
Ale, *aperient*, 315
ALES, MEDICATED, 314
Alexanders, 159
Alexipharmac Boluſes, No. 8. 546
Algeroth's powder, 511
Alimentary ſalt, 226
ALKALIES, WITH OILS and INFLAMMABLE SPIRITS, *combination of*, 419
**Alkali foſſile, or mineral fixed.* See BARILLA.
——— *vegetabile cauſticum*, 409
Alkanet root, 90
Alkekengi, 81
Alkekengi phyſalis, 82
Alkermes confectio, 349
Alliaria, 82
Allio, oxymel ex, 351
——- ſyrupus ex, 343
Allium, 82
D. ʒ j.—℥ ſs.
——— *cepa*, 124
——— *porrum*, 211
——— *ſativum*, 82
All-ſpice, 207
Almonds, bitter and ſweet, 88
——— *oil of*, 282
——— ſoap, 419
Alnus vulg. 83
Aloe, et varietates ejus, 83, 84
——- caballina, 84
——- hepatica, 84
——- *barbadenſis*, 84
——- *perfoliata*, 84
——- ſocotorina, 83
D. gr. xv.—ʒ ſs.
Aloes elixir, 315, 317

Aloes, compound tincture of, 317
——- gummi, 393
——- resina, 393
——-, gum of, 393
——-, resin of, 393
*—— cum ferro pulvis, 528
D. ℈ ss.—℈ j.
——- pilulæ cum colocynthide, 537
*—— pilulæ compos. 536
D. ℈ ss.—gr. xxv.
——- pilulæ cum myrrhâ, 542
D. ℈ ss.—℈ j.
——- pulvis cum canellâ, 528
D. ℈ss.—℈ i.
*—— pulvis cum guaiaco, 528
D. ℈ ss.—℈ i.
*—— tinctura, 316
D. ℥ ss.—℥ i.
——- tinct. compos. 317
D. ʒ ss.—ʒ ii.
——, *wine of*, 307
Aloetic pills, 536
*—— compound pills, 536
——— wood, 80
——— wine, 307
Alsines, 86
——— *mediæ*, 85
Alterative electary, 558
Althæa, 86
D. ʒ ss.—ʒ i.
——— *officinalis*, 85
——— decoctum, 295
——— syrupus, 343
D. ʒ i.—ʒ ij.
Alum, 86
——- bolus, No. 2. 546
——- burnt, 441
——- cataplasm, 602
——, purification of, 441
——- water, 578
————, compound, 578
——- whey, 303
Alumen, 86
D. ℈ ss.—ʒ ss.
——— ustum, 441
*Aluminis pulvis compositus, 527
D. gr. vi.—gr. xv.
——— purificatio, 441
Aluminosum serum, 303
Amara dulcis, 140
Amber, 247
Amber, essence or tincture of, 336
Amber, salt and oil of, purified, and rectified, 455
———, tincture of, 330
Ambergris, 87
Ambra ambrosiaca, 87
Ambræ tinctura seu essentia, 336
Ambragrisea, 87
Ammeos verus, 87
Ammonia, compound spirit of, 424
———, fœtid spirit of, 424
———, liniment of, 597
——— *muriata*, 225
——— præparata, 414
D. ℈ ss.—℈ j.
———, pure water of, 418
———, spirit of, 423
*———, stronger liniment of, 597
———, water of, 415
*Ammoniacal copper, 470
——————- iron, 467
——————-, tincture of, 324
Ammoniaci lac, 566
D. ℥ ss.—℥ j.
——————- purificatio, 275
——————- *salis spir. cum calce vivâ*, 418
Ammoniacum gummi, 88
D. gr. 15.- ʒ ss.
——————- julep, 571
——————, plaster with quicksilver, 586
——————- purified, 275
Ammoniæ acetatæ aqua, 448
D. ʒ ss.—ʒ vi.
——— aqua, 415
D. ʒ ss.—ʒ iss.
——— causticæ aqua, 418
——— linimentum, 423
——— puræ aqua, 418
D. gtt. x.—℈ i.
——— spiritus, 423
D. ʒ ss.—ʒ j.
——— spiritus fœtidus, 424
D. ʒ ss.—ʒ i.
——— spiritus compositus, 424
D. ʒ ss.—ʒ i.
——— spiritus aromaticus, 424
D. ʒ ss.—ʒ i.
Ammoniated arsenic, 511
*——————- oil, 423, 597

Amomum repens, 120
——— *Zinziber*, 265
Amygdalæ amaræ et dulces, 88
Dulces, D. ℥ i.—℥ ij.
——— lac, 565
——— *perficæ*, 199
Amygdalinus ſapo, 419
*Amyli mucilago, 302
*——— trochiſci, 533
Amyris elemifera, 141
——— *Gileadenſis*, 104
Amurca. See OLIVÆ.
Anacardia, 90
Anagallis, 90
——— *arvenſis*, 90
Anchuſa, 90
——— *officinalis*, 112
——— *tinctoria*, 90
Andropogon nardus, 186
Anemone hepatica, 158
——— meadow, 213
——— *pratenſis*, 213
Anethi ſemin. oleum eſſentiale, 360
Aqua, D. ℥ ij.—℥ 4.
——— *fœniculi varietas*, 146
——— *graveolens*, 91
Anethum, 92
D. ℈ ſs.—ʒ i.
Angelica, 92
D. ʒ ſs.—ʒ iſs.
——— *archangelica*, 91
Anhalt water, 384
Anguillæ hepar, 92
*Anguſtura cort. 92
*Anguſturæ extractum, 391
Animal fats, 71
——— oil, 405
——— ſubſtances, 70
——— SUBSTANCES, what, 18 &c.
——— ———, their properties examined, 18
Aniſeeds, eſſential oil of, 359, 360
Aniſum, 92
D. ℈ j.—ʒ ij.
Aniſi ol. eſſen. 360
D. gtt. v.—gtt. xij.
Anodyne diuretic draught, 576
——— fomentation, 301
——— glyſter, 579
*——— liniment 599
*——— ointment, 590
Anodyne plaſter, 582
——— and diſcutient plaſter, 589
ANOMALOUS SALTS, 448
*Anticteric ſpirit, 386
Antiemetic ſaline draught, 574
Antifebrile decoction, 296
Antihectic decoction, 296
Antihecticum Poterii, 516
Anthelmintic or worm ſugar cakes, 535
Anthemis nobilis, 125
——— pyrethrum, 213
Antihyſteric julep, 572
Antilyſſus pulvis, 522
D. ʒ iſs.
Antiphthiſical tincture, 329
Antiſcorbutic infuſion, 292
——— wine, 312
*Antimonialis pulvis, 501
D. gr. 3.—gr. vi.
Antimonial æthiops, 518
——— wine, 307
Antimonii calx, 503
——— ceruſſa, 505
——— crocus, 502
D. gr. ¼.—gr. 1.
——— lotus crocus, 502
——— emeticum mite, 503
——— regulus, 506
——— regulus medicinalis, 505
——— ſulphur præcipitatum, 507
D. gr. ij.—gr. v.
——— tinctura, 331
D. gr. 10—gtt. 60.
——— vitrum ceratum, 510
D. gr. iii.—gr. xx.
Antimonium, 93
D. ℈ i.—ʒ 2.
——— calcinatum, 503
D. ℈ i.—ʒ i.
*——— calcareo-phoſphoratum, 501
D. gr. 3.—gr. 6.
——— muriatum, 510
——— *ſulphuratum*, 93
——— tartariſatum, 512
D. gr. ¼.—gr. 4.
——— uſtum cum nitro, 503
D. gtt. v.—℈ i.
——— vitriſactum, 508
D. gr. ⅛.—gr. 2.
Antimony calcined with nitre, 503

*Antimony, Dr. Black's table of the preparations, 514
———, preparations of, 499
———, tincture of, 331
*———, *tartarised wine of*, 308
Aperient apozem, 297
Apium petroselinum, 205
Apocynum. See VINCETOXICUM.
Apozema aperiens, 297
Apparatus, pharmaceutical, 32
Apples, 178
Aquila alba. See CALOMELAS.
Aqua aluminosa, 578
——— ——— *balanea*, 578
——— ——— composita, 578
——— anhaltina, 384
——— aromatica, 388
——— calcis, 288
D. ℥ 4.—℔ ss.
——— *catapultaria*, 389
——— *hordeata*, 295
——— lixivia caustica, 411
——— *mirabilis*, 387, 388
——— nephritica. See MYRISTICÆ sp.
——— odorifera, 383
——— phagædenica, 579
——— picea, 287
——— rabelliana, 432
——— *reginæ Hungaricæ*, 382
——— *styptica*, 470
——— *vitriolica*, 578, 476
——— *vitriolica camphorata*, 578
——— vulneraria, 389
*Arabici gummi mucilago, 302
D. ʒ i—℥ i.
——— emulsio, 565
Arabicum gummi, 154
D. ʒ ss.—ʒ ij.
**Arbutus uva ursi*, 263
D. ℈ ss.—ʒ i.
Archangel, *white*, 170
Aretii lappæ radix, et semen, 105
Argenti vivi purificatio, 477
Argentum, 94
——— nitratum, 462
——— vivum, 94
D. ℥ ss.—℥ 4.
Argilla vitriolata, 86
Ari conserva, 339
D. ℈ i.—ʒ i.
——— pulvis compositus, 522
D. ℈ i.—ʒ i.
Ari pulvis compositus, why rejected, 339
Aristolochia clematis, 96
——— longa, 96
——— rotunda, 96
D. ℈ i.—ʒ ij.
——— tenuis, 96
——— *serpentaria*, 238
Arnica, 140
D. gr. 2.—gr. 12.
——— *montana*, 140
Aromatic acid of vitriol, 426
——— confection, 399
——— electuary, 399
——— fomentation, 301
——— tincture, 317
——— water, 388
——— wine, 312
Aromaticus pulvis, 528
D. gr. v.—℈ ss.
Aromatics, their power, 73
Arquebusade water, 389
Artemisia, 98
——— *absinthii*, 77
——— *maritima*, 77
——— *abrotani*, 76
——— *santonicum*, 230
——— *vulgaris*, 98
Arum, 98
——— recens, 98
D. gr. 2.—gr. x.
——— *maculatum*, 98
——— emulsion, 568
Arundo saccharifera. See SACCHARUM CANDUM.
*Arsenical caustic, 511
Arsenic, 96
———, yellow, what, 97
———, red, what, 97
Arsenicum, 96
——— antimoniale, 511
Arse-smart, bitter, 199
Asafœtida, 99
D. gr. 12.—ʒ ss.
——— pilulæ compositæ, 538
D. gr. v.—℈ i.
——— lac, 566
D. ℥ ss.—℥ i.
——— plaster, 583
——— tinctura, 322
D. ʒ ss.—ʒ ij.
Asarabacca, 100

Asari pulvis compositus, 526
Asarum, 100
D. gr. 3.—ʒ ss.
——— *Europæum*, 100
——— *hypocystis*, 161
Asclepias vincetoxicum, 259
*Ash-coloured precipitated quicksilver, 479
Ash tree, 148
Aspalathus. See LIGNUM RHODIUM.
Asparagi radix, 100
Asparagus, 100
——— *officinalis*, 100
——— *sativus*, 100
Asplenium scolopendrium, 175
——— *trichomanis*, 256
Astragalus tragacantha, 155
Astringents, their power, 71
———, crocus of iron, 466
———, decoction, 297
———, gargle, 579
———, glyster, 580
Athamanta Cretensis, 138
Atriplex fætida, 101
——— *odora, seu suaveolens*, 111
Atropa belladonna, 239
Aurantia Curassavensia, 102
*Aurantii corticis *tinct.* 318
——— flavedinis corticis Hispalensis *conserva*, 339, 340
——— flos et folium, 101
D. gr. x.—ʒj.
——— e cortice syrupus, 344
D. ʒj.—ʒij.
——— cort. aq. 374
Aurantiorum corticum aqua spirituosa, 386
Aurantium Hispalense, 101
Avena sativa, 101
Avens, 121
Avicennia tomentosa, 90
Auripigmentum, 97
Aurum, 102
**Aurum fulminans, its medical use*, 102
——— musivum. See STANNI PULVIS.
——— *potabile*, what, 102
——— *potabile vegetabile*. See LENTISCUS VEGETABILIS.
Axungia, 102
Axungiæ porcinæ præparatio, 272

B.

Bacheri pilulæ, 544
D. gr. j.—ʒss.
Balaustine. See GRANATUM.
D. ʒss.—ʒiss.
Balm, 180
Balm of gilead, 104
Balm water, 374, 376
———, compound, 381
Balsam of life, 337
——— of Peru, 104
——— of Tolu, 105
Balsamic injection, 581
——— tincture, 318
——— lohoch, 564
*Balsami Peruviani *tinctura*, 318
D. ʒss.—ʒij.
Balsamita mas, 103
Balsamum anodynum, 422
——— *Bateanum*, 422
——— *Canadense*. See TEREBINTHINA ARGENTORATENSIS.
D. ʒj.—ʒj.
——— cephalicum, 554
——— *de Meccá*, 104
——— odoriferum, 554
——— *saponaceum*, 422
——— *sulphuris simplex*, 459
——— *sulphuratum crassum*, 459
——— *traumaticum*, 333
——— *verum*, 104
——— vitæ, 337
Barbadoes tar, 205
Barberry, 108
Bardanæ decoctum, 297
Bardana major, 105
D. ʒss.—ʒss.
*Barilla, 106
D. gr. x.—ʒss.
Barley, common, &c. 159
———, decoction of, 295
———, compound decoction of, 295
*Barytes, 106
**Baryetes aërata*, 106
Bastard hellebore. See HELLEBORUS NIGER.

Baths, 35
Bay-tree, 171
*Baer's whortle berry, 263
Becabunga, 107
D. ℥2.—℥4.
Bee's wax, yellow, 124
Beet-rave, 108
Beet, white and red, 108
—— turnip-rooted, red, 108
Bellis minor, 107
—— *perennis*, 107
Benjamin, compound tincture of, 333
Benzoe, 107
℈ss.—ʒss.
Benzoes tinctura composita, 333
D. ℈ss.—℈ij.
Benzoin, 107
Benzoini tinctura, 336
Benzoinum, 107
Berberis, 108
—— *vulgaris*, 108
Beta, 108
—— *vulgaris*, 108
Betonica, 108
—— *officinalis*, 108
Betony, common, or wood, 108
Betula, 109
—— *alba*, 109
—— *alnus*, 183
Bezoar lapis, 109
—— mineral. 512
—— stone, 109
—— with tin, 517
Bezoardicum joviale, 517
—— minerale, 512
Binding electary, 562
—— julep, 573
Birch tree, 109
Birthworts, 96
Bishop's-weed, 87
Bismuthum, 109
Bismuthi magisterium, 515
Bismuth, preparations of, 515
Bistort, 110
Bistorta, 110
D. ℈ss.—ʒj.
Bitter ale, 314
—— apple, 131
—— infusion, 289
*—— infusion with senna, 289
Bitter purging salt, 225
—— sweet, 140
—— their power, 74
—— wine, 307
Bitumen petroleum, 204
Bitumens and oils, 21
*Black, Dr. his table of antimonial preparations, 514
Black-berry bearing alder. See SPINA CERVINA.
Black-berry bush, 222
—— cherry water, 374, 375
—— currant bush, 219
Blistering plaster, 588
Blood stone, 155
Bohea tea, 253
Bole Armenian, 110
—— French, 110
—— of blois, 110
—— Bohemian, 110
Boles, 110
Boletus igniarius, 81
—— *pini-laricis*, 80
Boli, 110
BOLUSES, 545
Bolus alexipharmacus, No. 8, 546
—— ex alumine, No. 2, 546
—— Armeniæ, 110
—— Gallicus, 110
D. ʒss.—℥2.
—— Blesensis, 110
—— Bohemicus, 110
—— *cum* calomelane, 549
—— —— camphorâ, 546
—— cathartic, No. 4, 546
—— catharticus *cum* mercurio, No. 2, 547
—— e castoreo, 546
—— diaphoreticus, No. 3, 547
—— diureticus, No. 2, 547
—— ad dysenteriam, No. 2, 548
—— hydrargyri vitriolati, 549
—— hystericus, 549
—— iliacus, 549
—— pectoralis, 549
—— *ad* phthisin, 574
—— rhæi *cum* calomelane, 549
—— rheumaticus, 550
—— terebinthinatus, 550
—— scilliticus, 550
—— sudorificus, 550

Bombycis folliculi, 237
Bonus henricus, 111
Borage, 111
Borago, 111
Borago officinalis, 111
Borax, 111
D. ℈ss.—℈2.
Botryos, 111
Box-tree, 113
Bramble, 222
Bran. See TRITICUM.
Brank-ursine, 78
Brassica eruca, 143
——— sativa, 112
——— *oleracea*, 112
Bread. See TRITICUM.
Briar, wild, 137
*Bricks, oil of, 404
Brimstone, 248
British oil. See PETROLEUM.
Brook lime, 107
Broom, 150
Brucea antidysenterica,
——— *ferruginea*. See ANGUSTURA CORTEX.
Bruise-wort, 231
Bruscus, 222
Bryonia alba, 112
Bubon galbanum, 148
Buck-bean, 256
Buckthorn, syrup of, 348
Buglossum, 112
Burdock, decoction of, 297
Burdock, 105
Burgundy pitch, 208
——— compound plaster, 584
Burnt lead, 471
Bursa pastoris, 113
Butcher's broom, 222
Dr. Butler's ale, 315
Butyrum antimonii, 510
Buxum, 113
Buxum sempervirens, 113

C.

Cabbage bark tree, 151
*——— bark tree, decoction of, 298
——— Savoy, 112
——— white and red, 112
Cacao, 113
Cacao, *the oil of*, 283
*Cacuminis genistæ extractum, 392
D. ʒss.—ʒiss.
Cadjuct, bengalis, 139
Calambour. See LIGNUM RHODIUM.
Calamine cerate, 598
Calaminaris lapis, 114
Calamine stone, 114
Calamus aromaticus, 114
D. ℈ss.—ʒ1.
Calamy, 114
Calcination, what, its uses, 60
Calcined antimony, 503
*——— magnesia, 446
——— quicksilver, 482
*——— zinc, 475
Calculus capræ bezoardicæ, 109
Calendula, 114
——— *officinalis*, 114
Calomelas, 487
D. gr. 1—gr. 12.
Calomelanos pilulæ compositæ, 540
Calomel bolus, 549
——— bolus, with rhubarb, 549
Calx antimonii nitrati, 503
——— Jovis 474
——— Jovis. See STANNI PULVIS.
——— viva, 115
Campechense decoctum, 297
Campechensis ligni extract. 392, 398
D. ℈ss.—ʒ1.
Camphor, 116
——— bolus, 546
* ——— compound liniment of, 598
——— water, 377
Camphora, 116
D. gr. 3—℈ 1.
——— *ex lauro*, 116
Camphorata emulsio, 566
——— mixtura, 669
D. ʒss.—ʒ2.
*——— *cum myrrhâ*, 669
Camphorated cataplasm, 603
——— spirit of wine, 335
* Camphoræ aqua, 377
——— mixtura acetosa, 670
Campeachy wood, 174
Canary, 259
Cancer astacus, 117

Cancer marinus, 117
——— *pagurus*, 117
* ——, Plunket's medicine for, 97
Cancrorum chelæ, 117
D. ʒſs.—ʒij.
——— oculi dicti, 117
Candied ſteel, 466
Candy carrot, 138
Canella alba, 117
D. gr. 10.—ʒſs.
Caninæ roſæ, 137
Cannabis ſativa, 118
——— ſemen, 118
Cantharides, 118
D. gr. ¼—gr. 3.
Cantharides infuſion, the mild ointment of, 596
——— powder, the ſtrong ointment of, 596
Cantharidis *tinctura*, 318
D. ℈j.—ʒj.
* Cantharis, cerate of, 599
* ——, ointment of, 596
——, plaſter of, 588
Caper buſh, 119
Capillus veneris, 79
Capparis, 119
——— *ſpinoſa*, 119
Capſicum, 207
Capſicum annuum, 207
——— *baccatum*. See PIPER INDICUM, 207
Caput mortuum, what, 55
Caraway ſeeds, 121
——— ſeeds, eſſential oil of, 359, 360
——— water, 386
Cardamines flores, 119
D. ℈j.—ʒj. 119
——— *pratenſis*, 119
Cardamomi ſem. aq. 386
——— *tinctura*, 319
D. ʒj.—ʒiij.
* ——— tinctura compoſita, 330
D. ʒj.—ʒiij.
Cardamomum minus, 120
D. gr. v.—℈j.
Cardiacæ folia, 120
Cardinal flower, blue, 176
Cardui infuſum, 286
Carduus benedictus, 120
D. gr. x.—℈ß.
Caricæ, 121
Carmelitana aqua, 381
Carminative julep, No. 3, 571
——— powder, 530
Carpobalſamum, 104
Carrot of Crete, 138
——— wild, 13
Carui ol. eſſent. 360
D. gtt. i.—gtt. x.
——— *ſem. aqua*, 386
——— ſpiritus, 386
D. ʒj.—℥ſs.
Carum, 121
Carvum, 121
Carum carui, 121
Caruon, 121
D. ℈ſs.—ʒj.
Caryophyllatæ radix, 121
Caryophyllæ rubræ, 121
D. ℈j.—ʒj. 121
Caryophylli aromatici, ol. eſſ. 360
D. gtt. 3.—gtt. 6.
——— rubri ſyrupus, 345
D. ʒj.—ʒij.
Caryophyllum aromaticum, 121
D. gr. v.—℈j.
Caſcarilla, 141
D. ℈ſs.—ʒi.
*Caſcarillæ extract. 398
D. ℈ſs.—ʒſs.
* ——— *tinctura*, 319
D. ʒſs.—ʒjſs.
Caſſia electary, 552
——— of the cane, 122
——— fiſtularis, 122
D. ℥ſs.—ʒj.
——— *fiſtula*, 122
Caſſia lignea, 123
——— *ſenna*, 236
* Caſſiæ lign. aq. 374
Caſtor bolus, 546
Caſtor oil, 219
Caſtorei aqua, 374
——— *tinctura*, 320
Dʒj.—ʒjſs.
——— *tinctura compoſita*, 320
Caſtoreum, 123
Gr.—z—℈j.
Caſtor fiber, 123
Caſumunar, 123
Cataplaſma aluminis, 602
——— camphoratum, 603

Cataplasm of cummin, 601
Cataplasma discutiens, 601
——— emolliens, 602
——— ischiadicum, 603
——— maturans, 601
——— stomachicum, 603
——— suppurans, 602
Catechu, 162
D. gr. xv.—ʒij.
Catechu decoctum, 299
——— electarium, 554
——— infusum, 289
——— tinctura, 324
D. ʒj.—ʒij.
——— trochisci, 534
Cathartic bolus, with mercury, No. 2, 547
——— boluses, No. 4, 546
——— draught, No. 2, 575
Cathartics, their power, 75
Cat-mint, 187
Cauliflower, 112
Causticum antimoniale, 510
*——— arsenicale, 511
*——— commune acerrimum, 409
——— *commune fortius*, 410
——— commune mitius, 410
Caustic lixivial water, 411
Causticum lunare, 462
Cayenne pepper. See PIPER INDICUM.
Ceanothus Americana. See LOBELIA.
Celandine, 126
Centaurea benedicta, 120
Centaurii minoris fol. 120
D. ℈j.—ʒi
Centaury, *the lesser*, 124
Cepa, 124
Cephalic ale, 315
Cephalic balsam, 554
——— infusion, 292
*——— purging wine, 310
*——— wine, 310
Cera alba, 124
D. ℈j.—ʒi.
——— flava, 124
Cerasa, 124
Cerasorum nigrorum aqua, 374, 375
Cerates, 590
Ceratum album, 597
*Ceratum cantharidis, 599
Ceratum citrinum, 597
——— *epuloticum*, 598
Cerated glass of antimony, 510
Ceratum lapidis calaminaris, 598
*——— lithargyri acetati compos. 599
——— resinæ flavæ, 597
——— saponis, 599
*——— simplex, 597
——— spermatis ceti, 597
Ceræ oleum, 404
*Cerefolii aqua, 374, 377
Cerevisia amara, 314
——— aperiens, 315
——— Butleri, 315
——— cephalica, 315
——— diuretica, 315
——— ad scorbuticos, 315
Cerus. See PLUMBUM.
Cerus of antimony, 505
Cerus ointment, 590
Cerussa, 471
Cerussa acetata, 472
D. gr. ss.—gr. 2.
Cerussæ pulvis compositus, 523
D. gss.—gr. 2.
Currants. See VITIS VINIFERA.
Chalk, *white*, 134
Chalybeate electary, No. 3, 559
Chalybis rubigo pp. 465
Chalybs, 144
Chamædryos, 125
Chamæpityos folia, 126
Chamæmeli decoctum, 300
——— flores, 125
D. ℈ss.—ʒi.
——— ol. essent. 361
Chamomile, *single-flowered*, 125
——— *double-flowered*, 126
Chamæmeli extract. 392
D. ℈ss.—ʒj.
Chamomile flowers, decoct. of, 300
——— flowers, essential oil of, 361
Chærefolii folia, 125
Chei, or tea. See RHODODENDRON CRYSANTHEMUM.
Chelarum cancrorum compositus pulvis, 523
D. ʒss.—ʒi.
Chelidonium majus, 126

Chenopodium ambrosiodes folio sinuato, 111
——— *bonus Henricus*, 111
——— *botryos*, 111
——— *vulvariæ*, 101
Chervil, 125
*Chervil water, 374, 377
Cherry, 124
Cherry, *black, red, morello*, 125
——— winter, 82
Chinchina regia. See CORTEX PERFLAV.
China root, 126
Chinæ radix, 126
Chickweed, 86
Chio turpentine, 251
D. ℈j—ʒj.
Chocolate nuts, 113
Chocolate *nut, the oil of*, 283
Cichorium endivia, 142
Cichorei radix, 127
——— *intybi*, 127
Cicutæ folia, 127
D. gr.2.—℈i.
Cinara, 128
D. gr. v.—℈i.
——— *scolymus*, 128
Cinchona officinalis, 200
Cinchonæ cortex, 128
——— *officinalis*, 128
D. ℈j.—ʒ2.
——— decoctum, 298
D. ℥2—℥6.
——— extractum, 393, 398
D. ℈ss.—ʒss.
——— *infusum*, 287
——— resina, 396
——— *tinctura*, 320
D. ʒj.—℥ss.
——— *tinctura ammoniata*, 320
D. ʒss.—ʒij.
——— tinct. com. 321
D. ʒj.—℥ss.
Cineres clavellati, 128
Cineres Russici, 128
Cinnabar, 129
D. gr. x.—ʒss.
Cinnabaris factitia, 479, 480
——— nativa, 129
Cinnamon, 129
Cinnamomi cort. 387
D. gr. v.—℈j.
Cinnamomi cort. aqua, 374, 375
D. ℥2.—℥4.
Cinnamon, essential oil of, 361
D. gtt. j.—gtt. jjj.
Cinnamomi infusum, 293
*——— syrupus, 343
——— *tinctura*, 320
D. ʒj.—ʒiij.
——— tinctura composita, 317
D. ʒj.—ʒij.
* Cinnamon, syrup of, 343
——— water, 374, 375
——— compound tincture of, 317
Cinnamomum, 129
D. gr. v.—℈j.
Cinquefoil, 199
Cissampelos pareira, 198
Cistus Cretica. See LADANUM.
Citreorum cortex, &c. 129
Citrus aurantium, 101
——— *Medica*, 129, 175
Citrons, 129
Civet, 264
Clary, *garden*, 159
Clarifying honey, 273
Clematis recta, 146
Clove, *aromatic*, 121
——— July flowers, 121
——— July flowers, syrup of, 345
Cloves, essential oil of, 360
Coagulum aluminosum, 602
Coating of glasses, 36
Coccinella, 130
D. gr.2.—℈ss.
Coccus cacti, 130
——— *quercûs cocciferæ*, 166
Cochineal, 130
Cochinilla, 130
Cochlearia armoracia, 215
——— *hortensis*, 130
D. ℥2—℥4.
——— marina, 130
——— *angelica*, 130
Cocos butyracea, 196
Cochleariæ spiritus, 383
——— spiritus aureus, 384
Coffea, 130
——— Arabica, 130
Coffee, 128
* Colchici acetum, 304

Colchici syrupus, 345
*——— oxymel, 351
D. ʒſs.—ʒi.
Colchicum, 130
D. gr. i.—gr. vi.
——— *autumnale*, 130
Colcothar vitrioli, 467
Colcothar of vitriol. See VITRIOLUM CALCINATUM.
Coleworts, 112
Colic, glyſter againſt, 580
**Colica Pictonum*, a remedy for, 105
Colocynthidis extractum comp. 398
D. gr. v.—gr. xxv.
Colocynthis, 131
D. gr. ʒ—gr. v.
Coloquintida, 131
——— compound extract of, 399
Coltsfoot, 257
Columbæ radix, 132
D. gr. x—℈j.
* Columbæ tinctura, 321
D. ʒj.—ʒiij.
Comfrey, *larger*, 133
Comminution, its different modes, 57
Comminution, its effects in many caſes uſeful, 58
Common gargle, No. 2, 579
——— glyſter, 580
——— lohoch, 563
——— ſalt, 226
——— turpentine, 252
* Compound oily liniment, 600
——— water of acetated litharge, 472
——— water of vitriolated copper, 470
Concremation, what, 60
Coneſſi, 132
Confectio aromatica, 399
D. gr. xv.—ʒi.
——— *cardiaca*, 399
——— Damocratis, 555
——— Japonica, 554
——— opiata, 557
D. gr. x. ʒſs.
Conii maculati fol. 127
CONSERVES, method of preparing them, 338
Conſolida major, 133
Contrayerva, 133
D. gr. x.—ʒſs.
Contrayervæ pulvis compoſitus, 524
D. gr. xv.—ʒſs.
Convallaria majalis, 174
Convolvulus jalapa, 161
——— *mechoacanna*, 179
——— *ſcammonia*, 233
——— *turpethum*, 257
Cooling julep, 571
Copaiba balſamum, 103
D. ℥j.—ʒj.
Copaifera officinalis, 103
Copper, preparations of, 469
Copperas. See VITRIOLUM VIRIDE.
Coral, *red*, 133
Coralline mercury, 483
Corallium rubrum, 133
D. ʒſs.—ʒi.
Cordial julep, No. 3. 571, 572
——— mixture, 574
Cordia myxa, 236
Coriandri ſemen, 133
D. ℥j.—ʒi.
Cornachini pulvis, 526
*Corn plaſter, 583
Corn-roſe, 198
Cornu cervi, 133
D. ʒſs.—ʒi.
Cornu cervi liquor, 413
D. ſs.—ʒij.
——— oleum, 413
D. gtt. x.—gr. xl.
——— ſal. 413
D. gr. v.—gr. xx.
——— ſpiritus, 413
——— decoctum, 294
D. ℥ß—℔ſs.
——— gelatina, 302
——— uſtio, 273
Cornus fœmina. See SPINA CERVINA.
Coſtmary, 103
Cortex Chinæ. See CORT. PERUV. FLAV.
Corticis exterioris aurantii Hiſpalenſis CONSERVA, 339
D. ʒ ſs.—ʒj.
——— Peruviani infuſum, 287
——— *Peruviani extract.* 393, 398
——— *Peruviani tinct. ſimp.* 320
Count Palmer's powder, 440
Cowhage, 139

Cow-itch, 139
Cowslip, 198
Crabs' claws, 117
Crabs' eyes, so called, 117
Cream of tartar, 449
Cream of tartar. See TARTAR.
Cremor tartari, 449
D. 32—ʒj.
Creta, 134
D. ʒss.—32.
——, è pulvis compositus sine opio, 523
D. ʒss.—ʒj.
——, *cum* opio, 523
D. ℈j.—℈ij.
Cretacea mixtura, 670
D. ʒij.—ʒiv.
*——— potio, 670
Cretaceus pulvis, 522
Cretæ oleum. See AMMONIÆ AQUA.
—— trochisci, 533
Croci extractum, 396
—— syrupus, 345
D. ʒj.—ʒij.
—— tinctura, 322
Crocus, 134
——— *sativus*, 134
D. gr. v.—℈j.
——— antimonii medicinalis, 501
——— antimonii mitior, 501
——— of antimony, 502
——— Martis aperiens, 466
——— astringens, 466
——— metallorrm, 502
Croton cascarilla, 141
—— *lacciferum*, 169
Crystalline forms of different salts, 439
Crystallisation, its different modes specified, 50
——— of salts, 436
Crystals of tartar, 448
Cubebæ, 134
D. gr. v.—℈j.
Cuckow flower, 119
*——— pint, conserve of. 339
Cucumbers, *garden*, 135
Cucumber, wild, *preparation of*, 281
Cucumis agrestis, 135
——— *colocynthidis*, 131
——— hortensis, 135
Cucumis sativus, 135
——— *melo*, 181
Cucurbitæ semen, 135
——— *lagenariæ*, 135
Cummin seed, 137
——— essential oil of, 361
——— plaster, 586
Cumini cataplasma, 601
——— *cymini*, 137
*Cupri ammoniati aqua, 470
D. gr. v.—gr. xxx.
*——— pilulæ, 537
——— vitriolati aqua composita, 470
Cuprum, 135
——— *nativum*, 135
*——— ammoniacum 470
——— *vitrioli*, 262
Curassao oranges, 103
Curcuma, 136
——— *longa*, 136
D. ℈j.—ʒj.
Cursuta, 137
Cursutæ rad. 137
Currants, 263
*———, *black*, syrup of, 346
Cycas circinalis, 224
Cydonia mala, 137
*Cydonii mali seminum mucilago, 302
Cydoniorum syrupus, 345
Cymini semen, 137
D. ℈j.—ʒj.
——— sem. ol. essent. 361
Cynosbati fructus, 137
Cynosbati fructûs *conserva*, 340
D. ʒij.—ʒj.
Cyperi longi rad. 137
Cyperus, *long*, 137
Cyprus turpentine, 251

D.

Dactyli fructus, 138
Daisy, common, 107
Damask plumb, *little black*. See PRUNA GALLICA.
Damask rose, 220
Damask rose water, 374, 377
Dandelion, 138
*Dandelion, extract of, 394
Danewort, 141
Daphnes mezerei, 182

Dates, 138
Datura ſtramonium, 245
Daucus carota, 138
Daucus Creticus, 138
Daucus ſylveſtris, 138
D. ℥j.—ʒj.
Dead nettle, 170
Deadly night ſhade, 239
Deadly night-ſhade plaſter, 586
Decocta diuretica, 298
Decoction for a glyſter, 300
——— for a fomentation, 300
DECOCTIONS, FOMENTATIONS, and MUCILAGES, from p. 293 to p. 303.
Decoctions in water, 285
Decoctum album, 294
——— antifebrile, 296
——— antihecticum, 296
——— aſtringens, 297
——— commune pro clyſtere, 300
——— *commune*, 300
——— febrifugum, 297
——— pro fomento, 300
——— *pectorale*, 295
Deflagration, what, 61
Delphinii ſtaphis agria, 245
Dens leonis, 138
D. ʒj.—ʒʒ.
Deobſtruent compoſitions of different ſorts, 538, 539
Deobſtruent electary, 559
DEPURATION, different modes ſpecified, 48
Deſpumation of honey, 273
Detergent gargle, 579
Detonation, what, 61
Diacodion, 346
Dianthi caryophylli, 121
Diaphoretic boluſes, No. 3. 547
——— draught, 575
——— julep, 572
Dictamnus albus, 147
Dictamnus Creticus, 139
Digeſtive ointment, 599
*Digeſtive powder, 529
*Digitalis folia, 139
——— *purpurea*, 139
D. gr. ſs.—gr. ij.
Dill, 91
Dill ſeeds, eſſential oil of, 360
Dilute nitrous acid, 427
Diſcutient cataplaſm, 601
*Diſtillata aqua, 375
*Diſtilled water, 375
Diſtillation, how performed, 53
——— of two kinds, what, 53
Dittany of Crete, 139
Dittany, *white* or *baſtard*, 147
Diuretic ale, 315
——— boluſes, No. 2. 547
Diuretic decoctions, 298
——— draught, No. 4, 576
——— infuſion, 293
——— julep, 572
——— powder, 530
Dock, 170
Dock, *great water*, 170
Dog-berry tree. See SPINA CERVINA.
Dogſbane. See VINCETOXICUM.
Dog's mercury. See MERCURIALIS HERBA.
Dog roſe, 137
Dolichos, 139
——— *pruriens*, 139
Domeſtic glyſter, 580
*Doronicus Germanicus, 140
D. gr. ii.—gr. xii.
Dorſtenia contrayerva, 133
Doveri Pulvis, 524
Dragon's blood, 229
DRAUGHTS, 569
*Drink with chalk, 670
Dropwort, 145
Dulcamara, 140
Dwarf elder, 141
Dyachylon, 584
Dyſenteric boluſes, No. 2, 548
*Dyſenteric powder, 529
Dyſentery, electary againſt, 552, 558

E.

EARTHS, 22
——— ſolutions in different acids, 22, 23
———, not ſoluble in different acids, 24

Earths, insipid, 67
Earths, absorbent, 67
———, medical effects of, 67
———, their power of destroying acids, Tables of, 68, 69
——— not dissoluble in acids, 69
Earth, argillaceous, 70
———, hard crystalline, 69
Eau des Carmes, 381
Eau de Rabel, 432
Eau de Luce, 425
Ebuli folia, &c. 141
Eel's liver, 92
Egg oil, 283
*Elaterio, pilulæ ex, 543
Elaterium, 135, 281
D. gr. ss.—gr. iv.
Elatheria, 141
Elder, *common black-berried*, 228
Elder berry, *inspissated juice of*, 279
Elder ointment, 594
Elecampane, 142
ELECTARIES, 551
Electarium aromaticum, 399
——— alterans, 558
——— cassiæ, 552
D. ʒi.—ʒiss.
——— caryocostinum. See SCAMMONII ELECTARIUM.
Electary of catechu, 554
Electarium chalybeatum, No. 3, 559
Electarium è cortice Peruviano, No. 6, 561
——— deobstruens, 559
——— ad dysentericos, 552, 558
——— pro gingivis, 560
——— è gummi guaiaco, 559
——— ex helleboro nigro, 559
——— Joviale, 560
——— ad nephriticos, 560
——— nitrosum, 560
——— opiatum, 557
——— paralyticum, 560
——— pectorale, 553
——— purgans acidum, 561
*——— terebinthinatum, 562
——— thebaïcum, 557
Electary of scammony, 553
Electarium sennæ, 553
D. ʒss.—ʒss.
——— sistens, 562
Elemi, *gum*, 141
D. gr. x.—ʒss.
Eleutheria, 141
D. gr. x.—ʒss.
Elixir of health, 329
——— *paregoricum*, 328
——— proprietatis vitriolicum, 333
——— *proprietatis*, 333
——— *sacrum*, 335
——— *salutis*, 329
——— stomachicum, 317
*Elm bark, decoction of, 300
D. ʒiv.—℔ss.
*Elm tree, 263
Elutriation, what, 59
Emetics, their power, 75
Emollient cataplasm, 602
——— gargle, 579
——— glyster, 580
Emplastrum ex ammoniaco cum mercurio, 586
Emplastrum ammoniaci cum hydrargyro, 586
——— anodynum, 582
——— anodyno - discutiens, 589
——— *antihysterico*, 583
——— asafœtidæ, 583
——— *attrahens*, 583
*——— de belladonna, 586
——— cantharidis, 588
——— calidum, 589
——— *cœruleum*, 587
——— *cephalicum*, 584
——— ceræ compositum, 583
——— *cereum*, 583
——— de cicutâ cum ammoniaco, 584
*——— ad clavos pedum, 583
——— *commune*, 584
——— *commune adhæsivum*, 585
——— *commune cum gummi*, 585
——— *commune cum mercurio*, 587
——— cumini, 586
——— *defensivum*, 586

Emplastrum gummosum, 585
——— ad herniam. See EMPLASTRUM THURIS COMPOS.
——— hydrargyri, 587
——— ladani compositum, 588
——— lithargyri, 584
——— lithargyri compositum, 585, 586
——— lithargyri cum hydrargyro, 587
——— lithargyri cum resinâ, 585
——— picis Burgundicæ compositum, 584
——— resinosum, 585
——— *roborans*, 586, 587
——— saponaceum, 588
——— saponis, 588
——— simplex, 583
——— *stomachicum*, 588
——— suppurans, 589
——— thuris compositum, 587
——— *vesicatorium*, 588
Empyreuma, what, 53
Emulsio Arabica, 565
——— cum aro, 568
D. ℥ss.—℥i.
Emulsion, camphorated, 566
Emulsio communis, 565
Emulsio oleosa, 567
*——— oleosa simplex, 567
——— oleosa volatilis, 567
——— purgans, 566
EMULSIONS, 565
Endivia, 142
Enema de amylo, 579
——— anodynum, 579
——— anticolicum, 580
——— astringens, 580
——— commune, 580
——— domesticum, 580
——— emolliens, 580
——— fœtidum, 580
——— opiatum, 579
——— purgans, 580
——— terebinthinatum, 580
Enis Veneris, 467
Enula campana, 142
D. ℥j.—℥j.
Enulæ campanæ extractum, 392
Epithema volatile, 423
EPITHEMS, 601
Erucæ semen, 143
Eryngii radix, 143
D. ʒj.—ʒiij.
Eryngium *maritimum*, 143
Eryngo, 143
Erysimi alliariæ fol. 82
Erysimum, 143
——— *officinale*, 143
Ethiopic pills, 540
Evaporation, how performed, 52
Eupatorium cannabinum, 143
Euphorbium, 144
Euphorbia officinarum, 144
EXPRESSED AND INSPISSATED JUICES, 277
Expression, how performed, 55
Exsiccation, its different modes, 56
Extemporaneous volatile aromatic spirit, 424
Extinction, what, its use, 58
Extract of lead. See PLUMBUM.
EXTRACTION, different modes specified, 47
EXTRACT BY LONG DIGESTION, 400
——— WITH RECTIFIED SPIRITS, 394
——— WITH SPIRIT AND WATER, 397
——— WITH WATERS, 390
———, *general rules for making them.* 390
Extractum catharticum, 399
Eye ointment, 593
Extractum Martis. See VINUM FERRI.

F.

Fat, 102
Fæculæ, *what so called*, 57, 281
Fœnicul. sem. aq. 374, 376
D. ℥ij.—℥iv.
Fœniculi sem. oleum essentiale, 361
Fœniculus dulcis, 146
D. ℈i.—ʒi.
Fœnugreek, 147
Fœnum Græcum, 147

Fetid glyſter, 580
——— julep, 573
Featherfew, wild, 179
Febrifuge decoction, 297
Febrifuge powder of CRAANIUS. See REGULUS ANTIM. MEDICINALIS.
Febrifuge wine, 313
Fennel, *common*, 146
Fennel flower, 188
Fennel ſeeds, eſſential oil of, 361
Fennel ſeed water, 374, 376
Fern, *common male*, 145
Ferri ammoniacalis tinctura, 324
D. ℈i.—ʒij.
Ferri muriati tinctura, 324
D. gtt. x.—ʒ ſs.
*Ferri ſquamæ purificatæ, 465
D. gr. vi.—ʒ ſs.
Ferri tinctura, 324
Ferri vinum, 308
D. ʒi.—℥ ſs.
Ferrum, 144
D. gr. vi.—ʒ ſs.
Ferrum ammoniacale, 467
D. gr. ij.—gr. x.
——— *ammoniatum*, 467
*Ferrum tartariſatum, 467
D. gr. ij.—gr. x.
Ferrum vitriolatum, 262, 468
D. gr. i.—gr. vi.
Ferrum vitriolatum exſiccatum, 442
*Ferrum vitriolatum uſtum, 467
Ferula aſa fœtida, 99
Fetid pills, 538
Feverfew, 179
Ficus carica, 121
Figwort, 235
Figs, 121
Filings of iron prepared, 465
Filipendula, 145
——— *ſpinea*, 145
Filix mas, 145
D. ʒi.—℥ ſs.
Fir tree, 76
Fiſh glue, 163
Five emollient roots, 265
Five opening roots, 265
Flake lead. See CERUSSA ACETATA.
Flammula Jovis, 146
Flax, *common*, 175
——, *purging*, 175
Flea wort, 212
Fleſh glue. See SARCOCOLLA.
Flores Benzoes, 452
D. gr. x.—℈i.
Flores Benzoini, 452
Flores martiales, 467
Flores zinci, 475
Flower or meal, 256
Flowers of Benzoine, 452
Flowers in chemical operations, how diſtinguiſhed from ſublimates, 55
Flower de luce *water*, 152
Fluids, different weights, Table of, 40
Fluids, ſolubility of, Table of, 42
Fluxes, what, 61
——— reducing, 61
Flux, black, what, 61
FOMENTATIONS. See DECOCTIONS.
Foſſile tar, oil of, 404
Fotus anodynus, 301
——— aromaticus, 301
——— *communis*, 300
——— roborans, 301
Four carminative flowers, 266
——— capillary herbs, 266
——— cordial flowers, 266
——— greater cold ſeeds, 266
——— greater hot ſeeds, 266
——— leſſer cold ſeeds, 266
——— leſſer hot ſeeds, 266
Fox-glove, 159
Fragaria, 147
——— *veſca*, 147
Frangula. See SPINA CERVINA.
Frankincenſe, 254
Fraxinella, 147
Fraxinus, 148
——— *excelſior*, 148
French lavender, 245
Fucus veſiculoſus, 215
Fuga dæmonum. See HYPERICUM.
Fuliginis, *ſpiritus, ſal, oleum*, 416
Fuliginis tinctura, 322
Fuligo lignorum combuſtorum, 148
Fumaria, 148
——— *officinalis*, 148
*Fumigation powder, 529
Fumitory, 148

Furnaces, the different kinds, 32
Fusion, how performed, 59
———, for what purposes used, 59

G.

Galanga minor, 148
Galangal, 148
Galbani pilulæ comp. 538
D. ℈ss.—ʒ ss.
*Galbani tinctura, 323
D. ʒ i.—ʒ iij.
Galbanum, 148
D. gr. x.—ʒ ss.
Gallæ, 149
D. gr. x.—ʒ ss.
Galls, 149
Gamboge, 149
Gambogia, 149
D. gr. ij.—gr. xii.
Gambogiâ, pilulæ de, 539
Garden mint, 181
Garlic, 82
Garlic, oxymel of, 351
Garlic, syrup of, 343
Gargarisma astringens, 579
———— commune, No. 2, 579
———— emolliens, 579
———— detergens, 579
GARGARISMS, 578
Gei urbani radix, 121
Genista, 150
D. ℈ i.—ʒ i.
Genista Canariensis, 173
*Geoffræa, 151
*———— *inermis*, 151
*Geoffrææ decoctum, 298
Gentian, 150
Gentian, compound infusion of, 289
Gentian, *compound tincture of*, 317
Gentiana, 150
D. ℈ss.—ʒ i.
———— *lutea*, 150
Gentiana purpurea, 137
Gentiana centaureum, 124
Gentianæ extractum, 391
D. ℈ss.—℈ ij.
Gentianæ infusum compositum, 289
D. ℥ ij.—℥ iv.
Gentianæ *tinctura composita*, 317
D. ʒ i.—ʒ iij.
Gentianæ vinum compositum, 307
*Gileadense balsamum, 104
Ginger, 265
Ginger, syrup of, 349
*Ginger, tincture of, 332
*Ginseng, 151
D. ℈ i.—ʒ i.
Gladiolum luteum, 152
Glass of antimony, 509
Glecoma hederacea, 155
Glycyrrhiza, 152
D. ʒ ss.—ʒ i.
———— *glabra*, 152
Glycyrrhizæ extractum, 391
D. ʒ i.—℥ ss.
Glycyrrhizæ trochisci, 533
Gnaphalium arenarium. See STŒCHAS.
Gold, 102
Gold, some observations upon, 462
Goldilocks. See STŒCHAS.
Golden rod, 261
Golden stœchas. See STŒCHAS.
Gourd, 135
Gout bitter powder, 529
Gramen caninum, 153
Granatum, 153
D. ℈ ss.—ʒ ss.
Granulation, what, 58
*Gratiola, 153
D. ℈ ss.—ʒ ss.
———— *officinalis*, 153
Green basilicum ointment, 591
Green tea, 253
Green vitriol, 262
Ground ivy, 155
Ground pine, 126
Guaiaci tinctura ammoniata, 322
D. ʒ i.—℥ ss.
Guaiacina tinctura volatilis, 322
Guaiacinum elixir, 332
Guaiacinum vinum, 314
*———— cum helleboro, 314
*Guaiacinum volatile elixir, 322
Guaiacum, 154
D. ʒ ss.—ʒ i.
———— *officinale*, 154
Guaiacum, ammoniated tincture of, 322

Guaiacum electary, 559
Guaiacum, elixir of, 332
*Guaiaci oleum, 403
*Guaiacum, oil of, 403
Guaiaci resina, 396
Guaiacum, resin of, 396
Guaiacum wine, 314
*——— with hellebore, 314
Guilandina moringa, 187
Guinea pepper, 207
*Gum arabic, mucilage of, 302
—— elemi, compound ointment of, 592
—— *hedera*, 155
—— plaster, 585
Gummi rubrum astringens, 167
Gums, an electary for, 560
*Gum tragacanth, mucilage of, 302

H.

Hæmatites lapis, 155
Hæmatoxyli decoctum, 297
——— extractum, 392, 398
D. ℈ ss.—ʒ ss.
Hæmatoxylon Campechianum, 174
Hairy wild poppy, 198
Halicacabi, 82
Hartshorn, 133
Hartshorn, the burning of, 274
———, decoction of, 294
——— jelly, 302
Hart's penny-royal, 213
——— tongue, 175
Haustus anodyno-diureticus, 576
——— antiemeticus salinus, 574
——— catharticus, No. 2. 575
——— catharticus salinus, 575
——— diaphoreticus, 575
——— diureticus, No. 4. 576
Heart's ease, 260
Hedera arborea, 155
——— *helix*, 155
——— terrestris, 155
Hedge hyssop, 153
——— mustard, 143
*Helleboraster, 156
D. ℈ ss.—ʒ i.
Hellebore black, electary of, 559
Hellebore *white*, 156
*Hellebore white, decoction of, 299
*Hellebori albi decoctum, 299
——— nigri extractum, 391
D. gr. ij.—℈ ss.
——— tinctura, 325
D. ℈ j.—ʒ i.
Helleborus albus, 156
D. gr. i.—gr. v.
——— *fœtidus*, 156
——— niger, 157
D. gr. x.—℈ i.
Hemlock, 127
——— dropwort, 191
———, *inspissated juice of*, 280
——— plaster with ammoniacum, 584
Hemp agrimony, 143
——— seed, 118
Henbane, *common wild or black*, 160
Henbane, *oil of*, 283
Hepar antimonii, 502
Hepatica nobilis, 158
Hepar sulphuris, 460
Herba Britannica. See Hydrolapathum.
Herba pedicularis. See STAPHISagria.
Herbe aux poux. See STAPHISagria, 245
Herb Bennet, 121
Herb mercury, 181
Hermodactylus, 158
Herniaria, 158
——— *glabra*, 158
Hiera picra, 528
Hip tree, 137
Hips, conserve of, 340
Hippocastanum, 159
Hipposelinum, 159
——— *Theophrasti*, 159
Hordei decoctum, 295
D. ℥ iv.—℔ ss.
——— decoctum compositum, 295
D. ℥ iv.—℔ ss.
Hordeum, 159
——— distichum, 159
——— Gallicum, 159
——— mundatum, 159
——— perlatum, 159
Hoffman's mineral anodyne liquor, 432

Hog's lard, 103
Mutton suet. See Axungia, 103
Hog's lard, ointment of, 594
Hog's lard, preparation of, 272
Hog lice, 183
Hog's fennel, 205
Honey, 179
Honey, acetated, 350
Honeys, medicated, 350
Hops, 177
Horehound, *white*, 178
Horminum sativum, 159
Horse chesnut, 159
Horse radish, 215
Horse radish, compound spirit of, 388
Humulus lupinus, 177
Hungary water, 382
Hydragogue julep, 573
Hydrargyri calx alba, 490
*Hydrargyri muriati solutio, 486
*——— pilulæ, 539
D. ℈ ss.—℈ j.
*——— solutio simplex, 481
*——— syrupus, 568
Hydrargyrus cum sulphure, 478
D. ℈ j.—ʒ i.
*Hydrargyri tabula præparationum variarum ex auctore Schwediaur, 493
Hydrargyrus, 94
D. ʒ ss.—ʒ iv.
*——— acetatus, 477
D. gr. i.—gr. x.
——— calcinatus, 482
D. gr. ss.—gr. ij.
——— cum cretâ, 477
D. ℈ss.—ʒss.
——— muriatus, 483
D. gr. ⅛.—gr. ss.
——— muriatus corrosivus, D. gr. ⅛.—gr. ss. 483
——— *muriatus mitis*, 487, D. gr. i.—gr. xii. 488
*Hydrargyri muriati mitis pilulæ, 540
*Hydrargyrus muriatus præcipitatus, 488
——— nitratus ruber, 482
——— purificatus, 477
*——— præcipitatus cinereus, 479
Hydrargyrus cum sulphure, 478
D. ℈i.—ʒi.
——— sulphuratus niger, D. ℈j.—ʒj. 478
——— sulphuratus ruber, D. gr. x.—ʒss. 479
——— vitriolatus, 491
D. gr. ss.—gr. iv.
Hydrolapathum, 170
Hyoscyamus luteus. See NICOTIANA.
*——— niger, 160
——— succ. spissat. 161
*———, *Oil of*, 283
Hypericum, 160
D. ℈j.—ʒj.
——— *perforatum*, 160
Hypocistis, 161
Hyssopi aqua, 374, 376
Hyssopus, 161
——— *officinarum cærulea*, sive *spicata*, 161
Hysteric bolus, 549
——— julep, No. 2. 571

I.

Jack by the hedge, 82
Jalapæ extractum, 398
D. ℈ ss.—℈ i.
Jalapæ resina, 395
Jalapii tinctura, 323
D. ʒ i.—ʒ ss.
Jalapium, 161
D. gr. x.—ʒ ss.
Jalappa, pilulæ de, 537
*Jalappæ pulvis compositus, 525
Jamaica pepper, 207
*——— water, 374, 377
Japan earth, decoction of, 299
Japonic decoction, 295
Japonica tinctura, 324
Japonicæ terræ decoctum, 299
Japonicum infusum, 289
Japonicum decoctum, 295
Jasminum Arabicum, 130
Jasminum, 162
——— *officinale*, 162
Ichthyocolla, 163
Iliac bolus, 549

Imperatoria, 163
——— *oſtruthium*, 163
Incineration, what, 60
Indian nard, 186
INFUSIONS IN BOILING WATER, 289
——— IN DIFFERENT MENSTRUA, 265
——— IN WATER, 285
Infuſum alcalinum, 292
——— amarum, 289
D. ℥ij.—℥iv.
Infuſum amarum ſimplex, 289
——— amarum purgans, 289
*——— amarum cum ſenna, 289
——— antiſcorbuticum, 292
——— cephalicum, 292
Infuſion of cinnamon, 293
Infuſum diureticum, 293
——— paralyticum, 293
Infuſum ſennæ commune, 290
Injectio balſamica, 581
——— mercurialis, 581
INJECTIONS, 578
Inula helenium, 142
Ipecacuanha, 163
D. gr. x.—ʒ ſs.
*Ipecacuanhæ pulvis compoſitus, D. ℈ ſs.—ʒ ſs. 524
——— tinctura, 309
D. ʒ j.—℥ ſs.
——— vinum, 309
D. ʒ i.—℥ ſs.
Iris florentina, 165
D. ℈ j.—ʒ j.
—— *paluſtris*, 152
—— *pſeudocorus*, 152
—— *tuberoſa*, 158
Iron, 144
IRON, PREPARATIONS OF, 464
*Iron ſcales purified, 465
—— vitriol of, dried, 442
Iſchiadic cataplaſm, 603
Iſinglaſs, 163
Iſis nobilis, 133
*Juglans, 165
——— *regia*, ſee Mat. Med. 165
Julapium ammoniacum, 571
——— antihyſtericum, 572
——— diaphoreticum, 572
——— diureticum, 572
Jalapium fœtidum, 573
——— hydragogum, 573
——— ſiſtens, 573
Julepum è camphorâ, 669
——— cardiacum, No. 2, 571, 572
——— carminativum, No. 3, 571
JULEPS, 569
Julepum hyſtericum, No. 2, 571
——— *è moſcho*, 570
——— refrigerans, 571
——— ſtomachicum, No. 2, 571
Juniperi baccæ, 166
D. ʒ ſs.—ʒ j.
——— *communis*, 166
——— baccarum rob, 394
Juniper berries, 166
——— berries, rob of, 394
——— berry, eſſential oil of, 359, 361
Juniperi comp. aq. 387
Juniper, compound ſpirit of, 387
Juniperi ol. eſſ. 361
D. gtt. ij.—gtt. x.
Juniperi ſps. comp. 387
D. ʒ i.—℥ ſs.
Juniperus Lycia, 192
——— *Sabina*, 223
Ivy, 155

K.

Kali acetatum, 446
D. ℈ j.—ʒ j.
—— *impurum*, 128
—— muriatum. See AMMONIÆ AQUA.
Kali nitratum, 188
*Kali præparatum, 407
D. gr. x.—ʒ ſs.
——, prepared water of, 408
—— præparati aqua, 408
D. ʒ ſs.—ʒ jſs. 408
—— è puro calx, 410
—— puri aqua, 409
D. gtt. x.—gtt. xl.
*—— purum, 409
—— ſulphuratum, 460
—— tartariſatum, 449
D. ʒ ij.—℥ i.

Kali vitriolatum. See AMMONIÆ AQUA.
—— vitriolatum, 442
D. ʒ ij.—℥ i.
Kempferia rotunda, 264
*Kino, D. gr. x.—ʒ ſs. 167
Kino tinctura, 324
Kermes, 166
——, confection of, 349
—— mineralis, 508
Kermeſinus ſyrupus, 346

L.

Lac, 168
Lac, *gum reſin*, 169
—— ſtick. } See LACCA.
—— ſeed. }
—— ſhell. }
Lac ſulphuris, 460
Lacca, 169
Laccæ tinctura, 324
Lactis ſaccharum, 452
Lactuca viroſa, 170
—— ſuccus ſpiſſat.
D. gr. i.—gr. iv.
Ladanum, 169
D. gr. x.—ʒ ſs.
Ladanum compound plaſter, 588
Ladies' ſmock, 119
Lady's mantle, 81
Lakeweed, 199
LAMBATIVES, 563
Lamium album, 170
Lapathum, 170
Lapis calcareus purus recens uſtus, 115
—— medicamentoſus, 516
*Lateritium oleum, 404
Laudanum liquidum, 327
—— See OPII VINUM.
Lavender, 171
——, compound ſpirit of, 382
——, cotton, 76
——, eſſential oil of, 359, 362
—— ſpirits of, 382
Lavendula, 171
D. ℈i.—ʒſs.
—— *ſpica*, 171
—— *ſtœchas*, 245
Lavendulæ flor. ol. eſſentiale, 362
D. gtt. i.—gr. v.
—— ſpiritus, 382
D. ʒi.—℥ſs.
—— ſpiritus comp. 382
D. ʒſs.—ʒij.
Laurus, 171
D. ℈ſs.—ʒſs.
—— *nobilis*, 171
—— *caſſia*, 123
—— *cinnam.* 129
—— *ſaſſafras*, 232
Lauſskraut. See STAPHISAGRIA.
Laxative whey, 303
Lichen caninus, 172
—— cinereus terreſtris, 172
*—— Iſlandicus, 173
Lignorum decoctum, 296
D. ℥ iv.—℔ſs.
—— eſſentia, 337
—— eſſentia concentrata, 337
Lilium album, 174
—— *candidum*, 174
Lignum aloes, 80
—— Rhodium, 173
—— tinctile Campechenſe, 174
D. ℈i.—ʒi.
Liguſticum leviſticum, 172
Lilium convallium, 174
Lily of valley, 174
Lime tree, 254
—— water, 288
*——, liniment of, 599
*Limonis corticis aqua, 374
—— cort. oleum eſſentiale,
D. gtt. ii.—gr. iv. 362
—— ſucci ſyrupus, 346
D. ʒi.—ʒij.
Limonum ſuccus, et cortex, 175
Linctus acidulus, 564
LINCTUS', or LOHOCHS, 563
—— ſolutivus, 564
Linden tree, 254
Lingua cervina, 175
Lini infuſum, 292
Linimentum album, 597
—— ammoniæ, 597
*—— ammoniæ fortius, 597
*—— aquæ calcis, 599
—— anodynum, 599
—— hæmorrhoidale, 599

*Linimentum camphoræ compositum, 598
*——— oleosum compositum, 600
——— opiatum, 422
——— *saponaceum*, 422
*——— simplex, 598
——— tutiæ, 596
——— *volatile*, 423, 597
LINIMENTS, 590
Linseed, 175
Linseed, infusion of, 292
——— lohoch, 563
Linum catharticum, 175
——— sativum, 175
——— *usitatissimum*, 175
Liquidambra styraciflua, 247
Liquor anodynus mineralis Hoffmanni, 432
Liquorice, 152
*——— with opium, troches of, 534
Litharge. See PLUMBUM.
——— plaster, 584
——— compound plaster, 585, 586
——— plaster with quicksilver, 587
——— plaster with resin, 585
——— *vinegar of*, 306
*Lithragyri acetata aqua, 472
*——— *acetata aqua composita*, 472
Liverwort, *ash-coloured ground*, 172
——— *eatable*, 173
——— *eryngo-leaved*, 173
——— *noble*, 158
Lixiva acetata, 446
*——— purificata, 411
——— e tartaro, 407
——— tartarisata, 449
——— vitriolata, 442
——— vitriolata sulphurea, 443
Lixivium saponarium, 409
Lobelia, 176
Lobelia syphilitica, 176
Logwood, 174
——— decoction of, 297
——— extracts, 392, 398
Lohoch ex amylo, 563
——— balsamicum, 564
Lohoch commune, 563
——— de lino, 563
——— de mannâ, 563
——— saponaceum, 563
——— de spermate ceti, 563
LOHOCHS, or LINCTUS', 563
Lopeziana, 176
Lotio saponacea, 422
LOTIONS, 578
Lovage, 172
Louse-wort. See STAPHIS AGRIA.
LOZENGES, or TROCHES, 532
Lujula, 176
D. ℥i.—℥ij.
Lujulæ fol. conserva, 339, 340
D. ʒij.—℥i.
Lunar pills, 464
Lupini albi sem. 177
Lupulus, 177
Lutes, 36
Lycoperdon, 177
——— *bovista*, 177

M.

Mace, essential oil of, 362
Macis, D. gr. x.—℈i. 177
——— oleum essentiale, 362
Madder, 221
Maetzius's astringent specific, 516
Magistery of bismuth, 515
Magnesia alba, 440, 445
D. ʒss.—ʒ2.
——— *vitriolata*, 225
D. ʒ2.—℥i.
*——— usta, 446
D. ℈i.—ʒi.
*——— trochisci, 533
Maidenhair, *English*, 256
——— true, 79
Majorana, 177
D. ℈i.—ʒi.
Mala, 178
Malacca bean, 90
Male speedwell, 258
Malicorium. See GRANATUM.
Mallow, 177
Malva, D. ʒss.—ʒi. 177
——— *sylvestris*, 177
Malva verbenaca, 81

Manna, 178
D. ℥ss.—℥ʒ.
Manna flake } See MANNA.
——— factitious. }
——— *ex fraxino orno.* 178
——— lohoch, 563
——— *thuris.* See OLIBANUM.
Maranta galanga, 148
Marigold, garden, 114
Marjoram, essential oil of, 362
——— *sweet,* 177
——— *wild,* 196
Marjoranæ oleum essentiale, 362
Marsh-mallow, 86
Marsh-mallows, decoction of, 295
———, syrup of, 343
Marsh trefoil, 256
Marrubium, 178
D. ℈i.—ʒi.
——— *album vulgare,* 178
Mars saccharatus, 466
—— solubilis. } See FERRUM
—— tartarisatus. } AMMONIACALE.
—— sulphuratus, 466
Martial æthiops, 466
Martis limatura, 465
——— lixivium, 468
——— *in spiritu salis tinctura,* 324
Marum Syriacum, 178
D. ℈ss.—ʒss.
Master-wort, 163
Mastich tree, 172
Mastiche, 179
D. ℈ss.—ʒss.
MATERIA MEDICA, 63
——— the arrangement of, 64
*——— by CULLEN, 64
Matricariæ fol. 179
——— *parthenii,* 179
May lily, 174
Meadow saffron, 130
*———, oxymel of, 351
*———, vinegar of, 304
Measures, 39
Mechoacanna, 179
Meconio è syrupus, 346
MEDICINAL COMPOSITIONS, 521
Medicinal crocus of antimony, 501
——— regulus of antimony, 505
——— stone, 516
——— SUBSTANCES, the properties and relations of, 3
Mel, 179
D. ʒi.—℥i.
*—— acetatum, 350
D. ʒi.—ʒij.
—— *Ægyptiacum,* 352
—— *rosaceum,* 351
D. ʒi.—ʒʒ.
Melampodii tinctura, 325
Melanosmegma, 230
Melasses. See SACCHARUM.
Melissa, D. ℈ss.—℈ʒ. 180
——— *officinalis,* 180
——— aqua, 374, 376
——— aq. comp. 381
Melilotus, 180
Mellis despumatio, 273
MELLITA, 350
Meloe vesicatorius, 118
Melonis semen, 181
Melons, 181
Menstruum, what, 42
Mentha cervina, 213
——— piperitis, 181
D. ℈ss.—℈ij.
——— *piperita,* 181
——— pip. ol. essentiale, 363
D. gtt. i.—gtt. ij.
——— *pulegium,* 212
——— sativa, 181
D. ℈ss.—℈iij.
——— *viridis,* 181
——— infusum, 286
——— pip. aq. 374, 377
D. ℥ij.—℥iv.
——— pip. sp. 387
D. ʒi.—ʒij.
——— sativæ aq. 374, 377
D. ℥ij.—℥iv.
——— *conserva,* 339
——— ol. essentiale, 363
D. gtt. i.—gtt. iv.
——— sp. 387
D. ʒi.—℥ss.
——— vulgaris *conserva,* 339, 340
Menyanthes trifoliata, 256
Mercurialis herba, 181
——— *annua,* 181
Mercurial injection, 581
Mercurii corrosivi sublimati solutio, 486
——— panacea, 489
Mercurius, 94

Mercurius alcalisatus, 477
——— *calcinatus*, 482
——— corallinus, 483
——— *corrosivus præcipitatus*, 482
——— *ruber*, 482
——— *sublimatus vel albus*, 483
——— *dulcis sublimatus*, 487
——— *emeticus flavus*, 491
——— *præcipitatus albus*, *490
——— saccharatus, 478
——— vitæ, 511
Mercury, English herb, 111
——— of life, 511
MERCURY, PREPARATIONS OF, 476
METALLIC PREPARATIONS, 462
——— COMPOUND PREPARATIONS, 516
METALS, 24
Meum athamanticum, 182
*Mezerei decoctum, 298
*——— radicis cortex, 182
D. gr. i.—℈ss.
Mezereon, 182
Mica thuris. See OLIBANUM.
Mild antimonial emetic, 503
Milder common caustic, 410
——— crocus of antimony, 501
*——— muriated quicksilver, 488
Millefolii fol. 183
Milfoil, 183
Milii sem. 183
Milk, 168
——— of almonds, 565
——— of ammoniacum, 566
*Millepedarum conserva, 339
——— præparatio, 275
——— vinum, 310
Millipedæ, 183
D. ʒi.—ʒʒ.
Millepedes, wine of, 310
Millet, 183
Mill, mountain flax, 175
Mimosa catechu, 162
——— *Nilotica*, 78—154
MINERAL SUBSTANCES, 21
Minio, trochisci de, 533
Minium, 471
Minium. See PLUMBUM.
Mint, infusion of, 286
Mithridatium, 555
Mithridate mustard, 254
Mixtura antidisenterica, 573
——— cardiaca, 574
——— diaphoretica, 573
——— ad phthisin. 574
——— camphorated, 669
*——— camphorated, with myrrh, 669
——— camphorated, with vinegar, 670
——— with chalk, 670
——— with musk, 570
MIXTURES, 569
Mori syrupus, 346
D. ʒi. ʒij.
Morus, 183
——— *nigra*, 183
Moschata mixtura, 570
D. ℥ss.—℥ij.
Moschus, 184
D. gr. ij.—℈i.
Moschus moschiferus, 184
MUCILAGES. See DECOCTIONS.
Mugwort, 98
Mulberry, 183
Mulberries, syrup of, 346
Mullein, 250
Muriated antimony, 510
——— or corrosive quicksilver, 483
Muriatic acid, 428
Mushroom, *dusty*, 177
Musk, 184
Mustard, 239
Mutton suet, preparation of, 272
Mustard whey, 303
Myristica officinalis, 190
D. gr. v.—℈i.
Myristicæ sps. 387, 388
D. ʒi.—℥ss.
Myrobalani, 185
Myroxylon Peruiferum, 104
Myrrha, D. gr. x.—ʒi. 185
Myrrhâ pulvis compositus e, 525
D. ℈i.—ʒi.
Myrrhæ et aloes tinct. 326
——— *elixir compositum*, 335
——— *extractum gummosum*, 394
——— tinctura, 326
D. ℈i.—ʒi.

Myrtus arborea aromatica. See PIPER JAMAICENSE.
Myrtus pimenta, 207

N.

Naphæ aqua, 101
Nardus Indica, 186
Nasturtium aquaticum, 186
D. ℥ ʒ.—ʒ vi.
Nasturtium hortense. See NASTURT. AQUATIC.
Natron boracicatum, 111
**Natron impurum,* 106
*Natron præparatum, 412
D. gr. x.—ʒ ss.
*Natron tartarisatum, 450
D. ℥ ss.—℥ i.
*Natron vitriolatum, 444
D. ℥ ss.—℥ i.
**Natrum antiquorum,* 106
Negro oil bush, 219
Nepetæ folia, 187
——— *cataria,* 187
Nephritic electary, 560
Nephriticum lignum, 187
Nerium antidysentericum, 132
Neroli essentia, seu oleum, 101
Nep-mint, 187
NEUTRAL SALTS, 434
Nicotianæ folia, 187
D. gr. ss.—gr. v.
——— *tabaci,* 187
——— minor, } See NICOTIANA.
——— rustica. }
*Nicotianæ vinum, 311
Nigell semen, 188
——— *sativæ,* 188
Nightshade, *woody,* 140
Nitrated quicksilver, ointment of, 591
——— silver, 462
Nitrum fixum, 410
Nitri trochisci, 534
Nitrous acid, 427
——— electary, 560
*——— powder, 440, 530
Nitrum, 188
Nitrum purificatum, 440
D. gr. x.—ʒ ss.
——— stibiatum, 504
Nucis moschatæ oleum essent. 363
D. gtt. ij.—v.
Nucleus amygdal. commun. 88
Nutmeg, 190
——— essential oil of, 363
Nux moschata, 190
D. gr. v.—ʒ i.
——— pistachia, 191
Nymphæa alba, 191

O.

Oak, Jerusalem, 111
——— tree bark, 214
Oats, 101
Odoriferous balsam, 554
——— spirit, 383
Œnanthe crocata, 191
OILS, EMPYREUMATIC, 403
——, ESSENTIAL. Directions how to obtain them, 353
——, ESSENTIAL. *A table of the quantity obtained from different vegetables,* 367
——— and bitumens, 21
Oily emulsion, 567
——— simple emulsion, 567
OINTMENTS, 590
*Oleum ammoniatum, 597
——— amygdalæ, 282
D. ℥ ss.—℥ i.
——— oleum animale, 405
D. gtt. x.—gtt. xl.
Olea Europæa, 192
——— lini, 175
D. ℥ ss.—℥ i.
Oleum ovi, 283
——— *olivarum immaturum.* See OLIVÆ.
——— sulphuratum, 459
D. gtt. x.—gtt. xx.
Olibanum, 192
D. gr. x.—ʒ ss.
Olivæ, earumque oleum, 192
D. ℥ ss.—℥ i.
Olive tree, 192
Omphacinum. See OLIVÆ.
Onion, 124
Oniscus asellus, 183
OPERATIONS, PHARMACEUTICAL, 42
Opiated confection, 557

Opiated electary, 557
——— glyster, 579
——— liniment, 422
*Opiatus pulvis, 525
D. gr. v.—ʒj.
*Opii pilulæ, 543
D. gr. ijss.—gr. x.
——- tinctura, 326, 327
D. ʒss.—ʒ2.
*——- tinctura ammoniata, 328
——- tinctura camphorata, 328
D. ʒi.—℥ss.
——- vinum, 311
Opium, 193
D. gr. ss.—gr. ij.
——— opii extractum, 400
——— purificatum, 275
——— wine of, 311
Opobalsamum, 104
Opodeldock, 422
Opopanax, 195
D. gr. x.—ʒss.
Orange peel, spirituous water of, 386
——— syrup of, 344
*——— water, 374
Oranges, Seville, 101
Orchis, 233
Orchis mascula, 233
Origani ol. essentiale, 359, 363
D. gtt. i.—gr. 2.
Origanum, 196
——— *vulgare*, 196
D. gr. v.—ʒi.
Origanum Creticum. See ORIGANUM.
——— *dictamnus*, 139
——— *majorana*, 177
Orpiment, 97
Orris, *Florentine*, 165
Oryzæ, semen, 196
——— *sativæ*, 196
Oxalis acetosella, 176
Oxylapathum, 170
Oxymel pectorale, 351
Oxymel scilliticum, 352
D. ʒss.—ʒi.
Oxymel simplex, 350

P.

Pæoniæ rad. 196
Pæonia officinalis, 196
*Pale roses, syrup of, 347
——— rose water, 374
Palma Christi. See RICINUS.
Palm oil, 196
Palmæ oleum, 196
Palmam referens arbor farinifera. See SAGO.
Panacea lapsorum, 140
Panax quinquefolium, 151
Pan de sangue. See KINO.
Pansies, 260
*Papaver album, 197
——— *somniferum*, 197
——— erraticum, 198
Papaver rhœas, 198
*Papaveris albi extractum, 392
D. gr. i.—gr. v.
——— albi syrupus, 346
D. ʒi.—ʒij.
——— erratici syrupus, 347
D. ʒj.—ʒij.
Paralysis, 198
Paralytic electary, 560
——— infusion, 293
——— ointment, 599
Parsley, *common*, 205
Pareira brava, 198
D. ʒss.—ʒi.
Parietaria, 199
——— *officinalis*, 199
D. ʒss.—ʒi.
Parsneps, 199
Pasque flower, 213
Pastinaca opopanax, 195
Pastinaca sativa, 199
——— sylvestris, 199
Pearl ash, 128
Peach tree, 199
Pectoral bolus, 549
——— electary, 553
——— oxymel, 351
——— pills, 542
——— syrup, 347
Peg-root. See HELLEBORUS NIGER.
Pellitory, *bastard*, 212
——— of Spain, 213
——— of the wall, 199
Penny-royal, 212
——— essential oil of, 359, 363
——— water, 374, 377
Pentaphyllum, 199
D. ʒss.—ʒi.

Pepper, Jamaica, essential oil of, 363
——— *long*. 206
D. gr. v.—ʒi.
——— black, 206
——— mint, 181
——— mint, essential oil of, 359, 363
——— mint, spirit of, 387
——— mint water, 374, 377
——— stone crop, 236
Periclymenum, rectum foliis laurinis, Cortice acri aromatico. See WINTERANI CORTEX.
Persicaria urens, 199
Persicæ mali flores, 199
Peruvian bark, 200
——— *red*, 203
——— *yellow*, 203
——— decoctions of, 298
——— electary, 561
——— extract of, 393, 398
——— resin of, 396
——— *infusion of*, 287
Peruviani corticis tinctura volatilis, D. ʒss.—ʒij. 320
*Peruvianum balsamum, 104
D. ℈i.—ʒi.
Peruvianus cortex, 200
℈i.—ʒij.
*Peruvianus cortex, 203
——— *flavus*, 203
——— *ruber*, 203
Petalorum rosarum pallidarum, 374
Petrolei oleum, 404
D. gtt. v.—gtt. xv.
——— Barbadense, 404
Petroleum, 204
D. gtt. x.—gtt. xxx.
——— Barbadense, 205
——— sulphuratum, 458
D. gr. x.—gr. xx.
Petroselinum vulgare, 205
D. ℈i.—℈2.
Pucedanum, 205
——— *officinale*, 205
Phœnicis dactyliferæ, 138
Phagedænic water, 579
PHARMACEUTICAL PREPARATIONS, 271
PHARMACY, definition and division of, 1
Philonium Londinense, 557
*Phosphorated soda, or mineral fixed alkali, 444
Phthisis, bolus against, 574
———, mixture against, 574
Piceæ pilulæ, 544
Pile liniment, 599
*— ointment, 591
Pilulæ aloeticæ, 536
Pilulæ aromaticæ, 528
——— Æthiopicæ, 540
——— *ecphracticæ*, 528
——— *cocciæ*, 537
——— ecphracticæ purgantes, 538
——— fœtidæ, 538
——— *gummosæ*, 538
——— lunares, 464
*——— *mercuriales*, 539
——— pacificæ Starkey. See PILULÆ OPII.
——— pectorales, 542
——— *Plummeri*, 540
——— roborantes, 544
——— *Rufi*, 542
PILLS, 536
——— of aloes with colocynth, 537
——— aloetic with myrrh, 542
——— of Bacher, 544
——— compound of asafetida, 538
——— compound of calomel, 540
*——— compound of rhubarb, 542
*——— of copper, 537
*——— of elaterium, 543
——— compound of galbanum, 538
——— of gamboge, 539
——— of jalap, 537
——— of mild muriated quicksilver, 540
——— of opium, 543
——— of quicksilver, 539
——— of scammony with aloes, 537
——— of squills, 542, 543
——— of storax, 541
*Pimentæ aqua, 374, 377
D. ℥2.—℥4.
Pimento, 207
D. gr. v.—℈i.
——— vel pimentæ sps. 387, 388
D. ʒi.—ʒss.
Pimpernel, 90
Pimpinella anisum, 92
Pimpinellæ saxifragæ *variæ*, 205

Pinæa ſarcocolla, 231
Pinus abies, 76
—— *picea*, 76
—— *ſylveſtris*, 208
Piony, *male* and *female*, 196
Piper caudatum, 135
—— *cubeba*, 134
—— Jamaicenſe, 207
—— Jamaicenſis ol. eſſen. 363
—— Indicum, 207
D. gr. v.—℈ſs.
—— longum, 206
D. gr. v.—℈i.
—— nigrum, 206
D. gr. v.—℈i.
Piſtachia lentiſcus, 172, 179
—— *terebinthus*, 251
—— *vera*, 191
Piſtachio, 191
Pitch ointment, 594
Pix Burgundica, 208
—— liquida, 208
D. ℈i.—ʒi.
Plantago caulifera. See PSYLLIUM.
—— latifolia, 209
—— *major*, 209
—— *pſyllium*. See PSYLLIUM.
Plantane, *common broad-leaved*, *ſeptinervia*, *quinquinervia*. } See PLANTAGO LATIFOLIA.
PLASTERS, 582
Plumbum, 209
Plumbum uſtum. See PLUMBUM.
Plumbum uſtum, 471
Poiſon tree, 255
—— wood, 255
Polvere albo Romano, 440
Polygala Senega, 237
Polygonum hydropiper, 199
Polygonum biſtorta, 110
Polypodium filix mas, 145
—— *vulgare*, 210
Pomatum, 594
Pomegranate, 153
Pompholyx. See ZINCUM.
*Ponderous earth, 106
Poplar, *black*, 211
Poppies, white, ſyrup of, 346
—— *wild*, ſyrup of, 347
Poppy, *the large garden*, 197
Poppy, *red*, 198
—— *white*, 197
Populus balſamifera, 249
—— nigra, 211
Porrum, 211
Portulaca, 211
—— *oleracea*, 211
Pot-aſh, 128
Potentilla reptans, 199
Poterius's antihectic, 516
Poudre des Chartreux, 508
—— *de Sentinelli*, 440
Powder of aloes with canella, 528
—— of aloes with iron, 528
—— of aloes with guaiacum, 528
—— aromatic, 528
—— againſt the bite of a mad dog, 522
—— cephalic, 527
—— of chalk, 522
—— compound of alum, 527
—— compound of amber, 527
—— compound of arum, 522
—— compound of aſarabacca, 527
—— compound of chalk without opium, 523
—— with opium, 523
—— compound of ceruſs, 523
—— compound of contrayerva, 524
—— compound of crabs' claws, 523
*—— compound of jalap, 525
*—— compound of ipecacuanha, 524
—— compound of myrrh, 525
—— compound of ſcammony, 525
—— compound of ſcammony, with aloes, 525
—— with calomel, 526
—— compound of ſena, 526
—— compound teſtaceous, 523
—— compound of gum tragacanth, 527
—— againſt the king's evil, 530
—— opiated, 525
—— of tin, 474
POWDERS, 521
Precipitated ſulphur, 460
—— ſulphur of antimony, 507

Precipitation, how performed, 51
PREPARATIONS, the more ſimple, 271
——— OF SOME BODIES that will not diſſolve in water, 272
——— of verdegris, 271
——— of antimony, 271
——— of coral, 271
——— of chalk, 271
——— of crabs'claws, 271
——— of calamine ſtone, 271
——— of oyſter ſhells, 271
——— of amber, 271
——— of tutty, 271
Primula veris, 198
Proof ſpirit, 243
Prophylactic vinegar, 305
Pruna Gallica, 211
——— ſylveſtris, 211
——— *ſpinoſa*, 211
Prunella, 211
——— *vulgaris*, 211
Prunes, *common*, or *French*, 211
Pruni ſylveſtris *conſerva*, 341
D. ʒij.—℥i.
Prunus ceraſus, 124
——— *domeſtica*, 211
Pſyllium, 212
Ptarmica, 212
Pterocarpus Santolinus, 229
Puff ball, 177
Pulegii aqua, 374, 377
D. ℥ß.—℥iv.
——— ol. eſſ. 363
D. gtt. i.—gtt. v.
——— ſps. 387, 388
D. ʒi.—ʒiij.
Pulegium, 212
D. gr. x.—℈ß.
——— cervinum, 213
Pulparum extractio, 274
Pulſatilla nigricans, 213
*——— nigricantis extractum, 391
Pulvis Algerothi, 511
——— antilyſſus. See LICHEN CINEREUS TERRESTRIS.
——— arthriticus amarus, 529
——— *canthuſianus*. See KERMES MINERALIS.
Pulvis carminativus, 530
——— cephalicus, 527
*——— digeſtivus, 529
——— diureticus, 530
*——— dyſentericus, 529
*——— fumalis, 529
——— *mercurii cinereus*, 479
*——— nitroſus, 530
——— roborans, 530
——— *ſtemnutatorius*, 527
——— ad ſtrumas, 530
——— *ſtypticus Helvetii*. See ALUMINIS PULVIS COMPOSITUS.
——— vermifugus, 531
Punica granatum, 153
Purging acid electary, 561
——— bitter infuſion, 289
——— deobſtruent pills, 538
——— emulſion, 566
——— glyſter, 580
Purification of zinc, 475
Purified nitre, 440
——— quickſilver, 477
Purſlane, 211
Pyrethrum, 213
D. gr. 3.—gr. x.
Pyrus cydonia, 137

Q.

Quaſſia, D. gr. v.—ʒſs. 214
——— *amara*, 214
——— *ſimarouba*, 238
Querçus cortex, 214
D. gr. x.—ʒſs.
——— *robur*, 214
——— marina, 215
Quick graſs, 153
——— lime, 115
——— ſilver, 94
——— with chalk, 477
*——— ointment, 591
——— milder ointment of, 592
——— plaſter, 587
——— purified, 477
——— with ſulphur, 478
Quince, 137
*——— ſeed, mucilage of, 302
Quinces, ſyrup of, 345

R.

Raphani aq. comp. 388
——— ſps. comp. 388
D. ʒi.—℥ſs.
Raphanus ruſticanus, 215
D. ℈i.—ʒi.
Rhapontic, 218
Raiſins. See VITIS VINIFERA.
——— of the ſun, 263
Raſpberry buſh, 222
Raſpberries, ſyrup of, 346
Rattle-ſnake root, 237
Realgar and *riſigal* of the Arabians, 97
Rectified ſpirit of wine, 242
Red aſtringent gum, 167
——— currant buſh, 218
——— lead, 471
——— lead troches, 533
——— port, 259
——— nitrated quickſilver, 482
——— roſe, 220
——— roſe, conſerve of, 339, 340
——— ſulphurated quickſilver, 480
Regia tinctura ſeu eſſentia, 336
Regulus of antimony, 506
Reſin, yellow ointment of, 591
Rhabarbarum, 216
D. gr. x.—℈ʒ.
Rhabarbari tinct. 328
D. ℥ſs.—℥ij.
*——— tinct. compoſita, 328
D. ℥ſs.—℥ij.
*——— vinum, 310
D. ℥ſs.—℥ʒ.
*Rhæi tinct. amara, 328
Rhamno e cathartico ſyrupus, 348
Rhamnus catharticus, 241
Rhaponticum, 218
*Rhæi cum aloe tinctura, 335
——— infuſum, 291
*——— pilulæ comp. 542
*——— tinctura dulcis, 329
——— vinum, 310
Rheniſh, 259
Rheum palmatum, 216
——— *rhaponticum*, 218
Rheumatic bolus, 550
Rhodii ligni ol. eſſentiale, 363
Rhodium, eſſential oil of, 363
Rhododendron chryſanthemum, 218
Rhubarb, 216
——— tinct. of, 328
*——— with aloes, tinct. of, 335
*——— bitter tincture of, 328
*——— compound tincture of, 328
——— infuſion of, 291
*——— ſweet tincture of, 329
——— wine of, 310
Rhus toxicodendron, 255
Ribes nigrum, 219
Ribes rubrum, 218
Ribeſia, 218
*Ribis nigri ſyr. 346
D. ʒj.—℥ʒ.
Rice, 196
Ricini oleum, ſee MAT. MED.
D. ʒij.—℥i.
Ricinus, 219
——— *communis*, 219
Ripening cataplaſm, 601
Rocket, 143
Rock-oil, 204
——— ſalt, 226
Roman vitriol of the Italian and other foreign writers. See VITRIOLUM VIRIDE.
Roman vitriol. See VITRIOLUM-CŒRULEUM and VIRIDE.
——— wormwood, 77
Roriſmarini ol. eſſentiale, 363
D. gtt. ʒ.—gtt. v.
——— ſpiritus, 382
D. ʒj.—ʒiij.
Roſa Damaſcena, 220
D. ℈i.—ʒi.
——— *centifolia*, 220
——— rubra, 220
D. ℈i.—ʒi.
——— *Gallica*, 220
——— ſylveſtris inodora, 137
Roſaceum acetum, 304
*Roſarum pallidarum ſyrupus, 347
D. ʒi.—ʒʒ.
——— *ſyrupus ſolutivus*, 347
——— *tinctura*, 291
Roſæ Damaſcenæ aqua, 374, 377
D. ℥ʒ.—℥ʒ.
——— infuſum, 291
D. ℥ʒ.—℔ſs.
Roſæ mel, 351
D. ʒ i.—ʒ ij.

Rosæ rubræ *conserva*, 339, 340
D. ʒij.—℥j.
—— syrupus, 347
D. ʒj.—ʒij.
Rosemary, 220
Rosemary, essential oil of, 359, 363
——, spirit of, 382
Rose ointment, 594
—— syrup, 347
—— wood, 173
Roses, honey of, 351
——, infusion of, 291
——, dried syrup of, 348
Rosis de siccis syrupus, 348
Roses, vinegar of, 304
Rosmarinum, 220
—— *officinale*, 220
D. gr. x.—℈ij.
Royal tincture or essence, 336
Rubi Idæi syrupus, 346
D. ʒj.—ʒij.
Rubia, D. ʒss.—ʒj. 221
Rubia tinctorum, 221
Rubus Idæus, 222
—— vulgaris, 222
—— *fruticosus*, 222
Rue, broad-leaved, 222
——, conserve of, 339, 340
——, essent. oil of, 364
—— water, 374, 378
Rumex acutus, 170
—— *aquaticus*, 170
Rupture wort, 158
Ruscus, 222
—— *aculeatus*, 222
Russian pot-ash, 128
Rust of steel prepared, 465
Ruta, D. gr. xv.—℈ij. 222
—— *graveolens*, 222
Rutæ aqua, 374, 378
—— conserva, 339, 340
—— extractum, 391
D. gr. x.—℈j.
Rutæ ol. essent. 360

S.

Sabina, 223
D. gr. x.—ʒss.
Sabinæ aqua, 374, 378
—— extract. 392
D. gr. x.—ʒss.
Sabinæ ol. essent. 364
*—— tinctura composita, 335
D. ℈ss.—ʒj.
Saccharum non purificatum, 223
—— purificatum, 223
—— bis coctum, 223
—— candum, 223
—— *Saturni*, 472
Sacchari syrupus, 342
Sack, 259
Sacred tincture, 307
Saffron, 134
——, extract of, 396
——, syrup of, 345
——, tincture of, 322
Sagapenum, 224
D. gr. x.—ʒss.
Sage, 227
—— *of virtue*, 227
Sago, 224
Saint John's wort, 160
Sal alcalinus fixus vegetabilis purificatus, 411
Sal alcalinus fossilis purificatus, 412
Sal ammoniac, 225
—— purified, 441
Sal ammoniacus, 225
D. ℈ss.—ʒj.
—— purificatus, 441
Sal *antihystericum*, *antihypochondriacum*, *febrifugum*, &c. See AMMONIÆ AQUA.
Sal catharticus amarus, 225
D. ʒij.—℥j.
—— *catharticus Glauberi*, 444
D. ʒij.—℥j.
—— *chalybis*, 468
—— commune, 226
—— digestivum Sylvii. See AMMONIÆ AQUA.
—— *diureticus*, 446
—— essentiale acetosæ, 451
—— gemmæ, 226
—— marinus, 227
—— *Martis*, 468
—— *muriaticus*, 226
—— *polychrestus*, 443
—— stanni, 474
——. See STANNI PULVIS.
Sal sedativus, 454
—— *volatilis salis ammon.* 414

Salep, 227, 233
Saline aromatic ſpirit, 424
Salitron. See SODA PURIFICATA.
Salix, 227
——— *fragilis*, 227
Salvia officinalis, 227
D. gr. xv.—℈ ij.
——- ſalvatrix,
——- naturæ conciliatrix. See SALVIA.
——- *ſclarea*, 159
Sambuci cortex, 228
D. gr. v.--℈ j.
Sambucus, 228
——— *nigra*, 228
——— *ebuli*, 141
Saltpetre, 188
SALTS, and SALINE PREPARATIONS, 407
———, fixed alkaline, 407
SALTS, VOLATILE, ALKALINE, 412
Sandaracha of the Greeks, 97
Sanguis draconis, 229
D. gr. x —℈ ii.
Santalum citrinum, 229
Santalum rubrum, 229
D. ʒ ſs.—ʒ j.
Santolina chamæcypariſſus, 76
Santonicum, 230
D. ʒ ſs.—ʒ j.
Sapa, why ſo called, 279
Saponaceous lohoch. 563
Sapo purificatus, 421
Saponaceous lotion, 422
——— plaſter, 588
Saponaria, 231
Saponaria officinalis, 231
Sapones, 230
D. ʒ ſs.—℥ ſs.
Saponis linimentum compoſitum, 422
Sarcocolla, 231
D. gr. xv.—ʒ ſs.
Sarſaparilla, 231
D. ℈ j.—ʒ j.
*Sarſaparillæ decoctum, 299
D. ℥ iv.—℔ ſs.
*——— compoſitum, 299
D. ℥ iv.—℔ ſs.
Saſſafras, 232
D. ℈ i.—ʒ i.
Saſſafras root, eſſent. oil of, 359, 364
D. gtt. ij.—gtt. x.
Saturnine tincture, 329
Satureia, 233
——— *hortenſis*, 233
Satyrium mas, 233
Sauce alone, 82
Savin, 223
Savin, compound tincture of, 335
——-, eſſential oil of, 364
——— water, 374, 378
Saunders, *yellow*, 229
———, *red*, 229
Savoury, *ſummer*, 233
*Saur kraut, 112
*Scammonii cum aloë, pulv. compoſitus, D. gr. x.—℈ j. 525
*——— cum calomelane, 526
D. gr. x.—℈ j.
——— electarium, 553
D. ℈ j.—ʒ j.
——— reſina, 396
Scammonio è pilulæ cum aloë, 537
——— è pulvis compoſitus, D. gr. x.—℈ j. 525
Scammonium, 233
D. gr. v.—℈ j.
Scammony, reſin of, 396
Scandicis chærefolii fol. 125
*SCHWEDIAUR's table of various preparations of quickſilver, 493
Scilla *recens*, 234
D. gr. v.—gr. xv.
——— *maritima*, 234
Scillâ è trochiſci, 534
Scillæ acetum, 304
D. ʒ ſs.—ʒjſs.
*——— conſerva, 339
D. ℈ j.—ʒ j.
——- exſiccatæ, 273
D. gr. j.—gr. iij.
*——— mel, 352
D. ʒ j—ʒ ij.
——— oxymel, 352
D. ʒ ſs.—ʒ j.
——— pilulæ, 542, 543
D. ℈ ſs.—℈ i.
*——— tinctura, 329
D. ʒ ſs.—ʒ ij.

*—— vinum, 311
Scilliticus ſyrupus, 348
Scorbutic ale, 315
—— whey, 303
—— wine, 312
—— wine of Muntingius, 313
Sclareæ, 159
Scordium, 235
D. ℈j.—ʒi.
Scoria, what, 59
Scorification, what, 60
Scorzonera, 235
—— *Hiſpanica*, 235
Scrophularia vulgaris, 235
Scurvy graſs, *compound juice of*, 278
Scurvy graſs, *garden*, 130
——, ſea, 130
——, golden ſpirit of, 384
——, purging ſpirit of, 384
——, ſpirit of, 383
Sea holly, 143
—— oak, 215
—— onion, 234
—— ſalt, 227
—— ſide beech, 128
—— wormwood, 77
—— wormwood, conſerve of, 339, 340
—— wrack, 215
Sebeſtena, 236
Sedative ſalt, 454
Sedum acre, 236
Self-heal, 211
Seneka, 237
D. ℈j.—℈ii.
Senekæ decoctum, 299
Senna, D. ℈j.—ʒi. 236
*Senna, compound tincture of, 329
——, electary, 553
——, limoniated infuſion of, 290
——, ſimple infuſion of, 290
——, tartariſed infuſion of, 290
*Sennæ extractum, 393
D. gr. x.—ʒ ſs.
Sennæ infuſum ſimplex, 290
D. ℥ ij.—℥ iv.
—— infuſum tartariſatum, 290
D. ℥ ij.—℥ iv.
Senna è pulvis compoſitus, 526
D. ℈j.—ʒj.
Sennæ tinctura, 329
D. ʒ ij.—℥ j.
*Sennæ tinctura compoſita, 329
Septfoil, 255
Sericum, 237
Serpillum, 238
Serpentariæ tinctura, 330
D. ʒ i.—ʒij.
Serpentaria Virginiana, 238
D. gr. x.—ʒ ſs.
Serum ſcorbuticum, 303
—— ſolutivum, 303
Setterwort, } *See Helleborus niger.*
Settlewort, }
Sevi ovilli præparatio, 272
Seville orange peel, conſerve of, 339, 340
Sevum ceti cryſtalliſatum, 240
Shepherd's purſe, 113
Sialagogue troches, 535
Sileſian earth, 110
Silk, 237
*Silk-worms' bags, 237
Silver, 94
SILVER, PREPARATIONS OF, 462
*Simarouba, 238
D. gr. x.—ʒ ſs.
*Simple cerate, 597
*—— liniment, 598
—— ointment, 595
*—— ſolution of quickſilver, 481
—— ſyrup, 342
SIMPLES, GENERAL RULES FOR THE COLLECTION AND PRESERVATION OF: from the vegetable, animal, and mineral kingdoms, 266, 267, 268, 269
Sinapeos ol. 239
D. ℥ ſs.—℥ i.
—— ſerum, 303
Sinapi, 239
D. ʒj.—℥ ſs.
—— *nigrum*, 239
Sinapiſma, 602
Siſonis ammeos, 87
Siſymbrium aquaticum, 186
Sium nodiflorum ſucc. 239
D. ℥ iv.—℥ x.
Slaters, 183
Sloe, conſerve of, 341
Sloes, 211

Smilax china, 126
——— *pseudo-china*, 126
——— *sarsaparilla*, 231
Snake-root, tincture of, 330
Snake-root, Virginian, 238
Snakeweed, 110
Sneezewort, 212
Soap cerate, 599
——, compound liniment of, 422
——, white, 230
——, soft, common, 230
——, black ditto, 230
—— plaster, 588
——, purified, 421
Soaps, 230
Soap-wort, 231
**Soda*, 106
*—— *muriata*, 226
*—— phosphorata, 444
——— *vitriolata*, 444
*—— purificata, 412
Soft unctuous substances, 71
Solanum dulcamara, 140
Solanum lethale, 239
Solidago virga aurea, 261
Solutive lohoch, 564
Solvend, what, 42
Solvent, what, 42
SOLUTION, 42
Solution of muriated quicksilver, 486
Soot, tincture of, 322
Sorrel, common, 78
——, essential salt of, 451
*Sour crout, 112
Southern-wood, 76
Spanish flies, 118
Spartium scoparium, 150
Spear-mint, 181
————, conserve of, 339, 340
————, essential oil of, 359, 363
————, spirit of, 387
———— water, 374, 377
Species aromatica, 528
Specificum adstringens Mætzii, 516
Sperma ceti, 240
D. ℈j.—ʒi.
———— cerate, 597
———— lohoch, 563
———— ointment, 597
Spigelia, 241
Spigelia Marilandica, 241
D. gr. x.—℈ij.
Spignel, 182
Spikenard, 186
Spinæ cervinæ, 241
D. ʒj.—ʒij.
———— syrupus, 348
D. ʒj.—ʒij.
Spirits, distilled, 378
Spirit of salt dulcified, 434
——— nitre dulcified, 433
SPIRITUOUS TINCTURES, 316
———— WATERS DISTILLED.
General directions for obtaining them, from the EDINBURGH PHARMACOPŒIA, 385
Spiritus anisi comp. 385
——— ætheris nitrosi, 433
D. ʒss.—ʒij.
*—— antictericus, 386
——— *Myndereri*, 448
——— *nitri dulcis*, 433
——— *nitri Glauberi*, 427
——— *salinus aromaticus*, 424
——— *salis ammoniaci dulcis*, 423
——— salis dulcis, 433
——— *salis marini Glauberi*, 428
——— vini tartarisati. See ALCOHOL.
Spiritus vinosus camphoratus, 335
———— rectificatus, 242
D. ʒss.—ʒij.
———— tenuior, 243
D. ʒj.—℥ss.
Spiritus vitrioli dulcis, 431
———— *tenuis*, 426
——— *volatilis aromaticus*, 424
——— volatilis aromaticus extemporaneus, 424
——— *volatilis fœtidus*, 424
——— *volatilis oleosus*, 424
——— *volatilis salis ammon.* 415
——— volatilis succinatus, 425
D. ℈ss.—ʒss.
Sponge, *the burning of*, 273
Spongia, 243
Spongia officinalis, 243
——— usta, 273
D. ʒss.—ʒi.
Spunk, 81

Spurge olive, 182
*Spurge olive, decoction of, 298
Squill, 234
—— bolus, 550
*Squills, conserve of, 339
———, *the drying of*, 273
*———, honey of, 352
———, oxymel of, 352
———, syrup of, 348
*———, tincture of, 329
———, vinegar of, 304
*———, wine of, 311
Stag's horn, 133
Stœchas, 245
———, Arabian, 245
———, French, 245
Stannum, 244
Stannum pulveratum, 474
D. ʒj.—ʒvi.
Staphis agria, 245
D. gr. iij.—gr. x.
Starch. See TRITICUM.
——— lohoch, 563
*———, mucilage of, 302
——— glyster, 579
Stavesacre, 245
Steel, 144
—— wine, 308
Stinging nettle, 263
Stinking bear's foot, 156
——— orach or arach, 101
Stomach troches, 535
Stomachic cataplasm, 603
——— elixir, 317
——— julep, No. 2, 571
*Stomachic wine, 311
Storax in the cane, 216
——— in the lump, 216
———, *red*, 216
———, common, 216
———, *liquid*, 247
———, *the purifying of*, 274
Stramonium, 245
Strasburg turpentine, 252
Strawberry bush, 147
Strengthening fomentation, 301
——— plaster, 587
——— pills, 544
——— powder, 530
Stronger common caustic, 410
*Strongest common caustic, 409
Styptic solution. See VITRIOLUM CŒRULEUM.
Styrace è pilulæ, 541
Styracis purificatio, 274
Styrax benzoë, 107
——— calamita, 246
D. ℈ss.—ʒss.
——— *officinalis*, 246
——— liquida, 247
Sublimates, how distinguished in chemical operations from flowers, 55
Sublimation, how performed, 55
SUBSTANCES, ANIMAL AND VEGETABLE, 70
——— EXTRACTED FROM VEGETABLES BY EXPRESSION, &c. 277
Succi scorbutici, 278
D. ℥ii.—℥vi.
Succino è pulvis compositus, 527
Succinated volatile spirit, 425
Succini oleum, } See ANOMALOUS SALTS.
——— rectificatum, } See ANOMALOUS SALTS.
D. gtt. x.—gtt. xxx.
Succini sal et oleum, 455
D. gtt. v.—gtt. xv.
——— sal et oleum purificatum, et rectificatum, 455
——— tinctura, 330
Succinum præparatum, 247
D. ʒss.—ʒi.
Succory, *wild*, 127
*Succus aconiti spissatus, 279
D. gr. i.—gr. iv.
Succus baccæ sambuci spissatus, D. ℥ss.—℥ii. 279
——— cicutæ spissatus, 280
D. gr. ii.—℈i.
——— cochleariæ compositus, 278
D. ℥ii.—℥vi.
Sudorific bolus, 550
——— tincture, 331
Sugar, soft, 223
———, double-refined, 223
——— candy, 223
——— *of lead*. See PLUMBUM.
——— of milk, 452
Sugared mercury, 478

Sugar, *syrup of*, 342
Sulphur, 248
——— *auratum antimonii*, 507
———, flowers of, 458
———, flowers of, washed, 458
———, ointment of, 595
——— præcipitatum, 460
D. ʒi.—ʒii.
———, PREPARATIONS OF, 458
———, sublimed, 248
——— *vivum*. See SULPHUR.
———, volatile tincture of, 461
——— wort, 205
Sulphurated iron, 466
——— kali, 460
——— oil, 459
Sulphuris flores, 248, 458
D. ℈i.—ʒi.
——— flores loti, 458
——— trochisci, 534
Suppurating cataplasm, 602
——— plaster, 589
Swallow-wort, 259
Sweet honey-water, 383
——— scented flag, 114
——— smelling troches, 535
Syrian herb mastich, 178
SYRUPS, and GENERAL RULES FOR PREPARING THEM, 341
Syrupus simplex, 342
*Syrup of quicksilver, 568
——— pectoralis, 347
——— *balsamicus*, 344
Symphytum officinale, 133
Sweets, their power, 72

T.

Tabellæ cardialgicæ, 533
Tacamahaca, 249
Tamarind, 249
*Tamarindorum infusum cum sennâ, 291
Tamarindus, 249
D. ℥ss.—℥ii.
——— *Indica*, 249
Tame poison, 259
Tanacetum, 250
D. ʒss.—ʒi.
Tanacetum vulgare, 250
——— *balsamita*, 103
Tansy, 250
Tar, 208
——— water. See PIX LIQUIDA.
——— pills, 544
*Taraxaci extractum, 394
Taraxacum leontodon, 138
Tartar, 250
———, salt of, 407
———, soap of, 421
Tartareus sapo, 421
Tartari crystalli, 448
D. ʒij.—ʒi.
——— *lixivium*, 408
——— *sal*, 407
Tartarised antimony, 512
——— iron, 467
——— kali, 449
*——— natron, 450
——— spirit of wine. See ALCOHOL.
Tartarum, 250
——— *emeticum*, 512
——— *regeneratum*, 446
——— *solubile*, 449
——— *vitriolatum*, 442
Terebinthina communis, 252
D. ℈i.—ʒi.
——— Argentoratensis, 252
——— Chia, 251
D. ℈i.—ʒi.
——— Veneta, 252
*Terebinthinate electary, 562
Terebinthinæ, 251
D. ℈i.—ʒi.
——— oleum, 364
D. gtt. x.—gtt. xxx.
*——— ol. rectificat. 365
D. gtt. x.—gtt. xxx.
Terminalia benzoin, 107
Terra Lemnia, 110
——— *Silesiaca*, 110
Testaceus pulvis compositus, 523
D. ʒss.—ʒi.
Teucrii chamædrys, 125
——— *chamæpitys*, 126
Teucrium scordium, 235
——— *marum*, 178
**Terra ponderosa*, 106
——— Japonica, 162

Terræ sigillatæ, why so called, 111
Thapsi barbati folia, 250
Thea, 253
——, *bohea*, 253
——, *viridis*, 253
Theobroma cacao, 113
Theriaca Andromachi, 555
Thistle, blessed, 120
Thlapsi, 254
——— *arvense*, 254
——— *bursa*, 113
Thora Valdensis. See GENTIANA.
Thorn apple, 245
Thus, 192
—— *masculinum*, } See OLIBANUM.
—— *femininum*, }
—— *corticosum*. }
—— vulgare, 254
D. gr. x.—ʒss.
Thyme, common, 254
Thymus serpillum, 238
Thymus, 254
——— *vulgaris*, 254
Tiliæ flores, 254
——— *Europeæ*, 254
Tin, 244
—— electary, 560
—— PREPARATIONS OF, 474
Tincar, 111
Tinctura amara, 317
Tinctura aromatica, 317
——— *antiphthisica*, 329
*Tincture of balsam of Peru, 318
——— of castor, 320
———, compound, of castor, 320
——— of cantharis, 318
——— of ammoniated Peruvian bark, 320
Tinctura balsamica, 318
D. ʒss.—ʒij.
*Tincture of cascarilla, 319
——— cinnamon, 320
——— columba, 321
——— *Peruvian bark*, 320
———, compound, of Peruvian bark, 321
——— of galbanum, 323
——— black hellebore, 325
——— jalap, 323
——— Japan earth, 324
——— ipecacuanha, 309
Tincture of iron, 234
——— lac, 324
——— muriated iron, 324
*——— musk, 326
*——— orange peel, 318
Tinctura sacra, 307
——— saturnina, 329
——— *stomachica*, 330
——— sudorifica, 331
——— sulphuris volatilis, 461
——— *thebaica*, 311
——— of balsam of Tolu, 331
Tobacco, 187
*——— ointment, 593
*——— wine, 311
Tolu, syrup of, 344
Tolutani balsami tinct. 331
D. ʒss.—ʒij.
Tolutanum balsamum, 105
D. ℈i.—ʒi.
Tolutanus syrupus, 344
D. ʒi.—ʒij.
Toluifera balsamum, 105
Tormentilla, 255
D. gr. x.—℈ij.
——— *erecta*, 255
Touchwood, 81
*Toxicodendron, 255
Tragacantha gummi, 155
D. ℈ss.—ʒi.
*——— gummi mucilago, 302
——— pulvis compositus, 527
D. ℈i.—ʒi.
Tragoselinum, 205
Treacle. See SACCHARUM.
——— mustard, 254
——— vinegar, 306
*Trailing arbutus, 263
Trichomanes, 256
Trifolium melilot. officinale, 180
——— paludosum, 256
D. ʒss.—ʒi.
Trigonella fœnum-græcum, 147
Triticum, 256
——— *hybernum*, 256
——— *repens*, 153
Trituration, its use, 58
TROCHES, or LOZENGES, 532
——— of catechu, 534
——— of chalk, 533
——— of liquorice, 532

*Troches of magnesia, 533
——— of nitre, 534
*——— of starch, 533
——— of sulphur, 534
*Trochisci glycyrrhizæ c. opio, 534
——— sialagogi, 535
——— stomachici, 535
——— suaveolentes, 535
——— anthelmintici, 535
——— Arabici, 533
——— *bechici albi*, 533
——— *nigri*, 532
——— flavi. See TROCHISCI GLYCYRRHIZÆ.
——— rubri. See TROCHISCI GLYCYRRHIZÆ.
Turbith, 257
Turmeric, 136
Turpentines, 251
Turpentine bolus, 550
——— glyster, 580
———, oil of, 364
———, oil of, rectified, 365
Turpethum, 257
Turpethum minerale, 491
Tussilago, 257
D. ʒ ss.—ʒ i.
Tussilago farfara, 257
Tutia, 257
Tutty, ointment of, 596

U. V.

*Valerian, ammoniated tincture of, 332
———, compound water of, 386
———, *volatile tincture of*, 332
Valerianâ è mixtura, 574
Valeriana sylvestris, 258
D. ℈i.—ʒij.
——— *officinalis*, 258
Valerianæ aq. comp. 386
——— tinct. 331
D. ʒi.—ʒiij.
*——— tinctura ammoniata, 332
D. ʒ ss.—ʒ ij.
Valerianæ tinctura volatilis, 332
VEGETABLES, productions of by fermentation, 4
———, by fire, 6
———, substances contained in them—separable by art without alteration of their native qualities, 9
VEGETABLES, gross oils of, 9
———, gross sebaceous matter, 10
———, essential oils, 10
———, concrete essential oils, 11
———, camphor of, 11
*———, aroma, 12
———, resin, 12
———, gum, 13
———, gum resin, 14
———, saline matter, 14
*———, farina, or flour, 15
*———, colouring matter, 16
———, general observations from these principles, 16
VEGETABLES, RECENT, AND THEIR INFUSIONS, &c: *Conservation of by sugar and honey*, 338
Vegetable substances, 70
Vegeto-mineral water. See PLUMBUM.
Veneris tinctura volatilis, 470
Venice treacle, 555
——— turpentine, 252
Veratri tinctura, 332
Veratrum album, 156
Verbascum thapsus, 250
Verdegris, 80
———, honey of, 352
*——— ointment, 590
Verjuice. See VITIS VINIFERA.
Veronica becabunga, 107
Veronica mas, 258
——— *officinalis*, 258
Vervain mallow, 81
Vessels, chemical, 37
Vinaigre des quatre voleurs. See ACETUM PROPHYLACTICUM.
Vincetoxicum, 259
Vine tree, 261
Vinegar, 78
———, distilled, 429
Vinegar of the four thieves. See ACETUM PROPHYLACTICUM.
*———, syrup of, 343
Vinegars, 304
•Vini oleum, 365
D. gtt. i.—gtt. iv.

Vinum album, 259
—— *Canarinum*, 259
—— *Hispanicum*, 259
—— *Rhenanum*, 259
—— *rubrum*, 259
Vinum, 259
*Vinum aloës, 307
D. ℥ ss.—℥ i.
—— aloëticum, 307
—— amarum, 307
—— antimoniale, 307
D. gtt. xx.—ʒij.
*—— *antimonii tartarisati*, 308
D. gt. xx.—ʒij.
—— antiscorbuticum, 312
—— aromaticum, 312
*—— cephalicum, 310
*—— cephalicum purgans, 310
—— febrifugum, 313
—— scorbuticum, 312
—— scorbuticum Muntingii, 313
*—— ad stomachicos, 311
Viola, D. ℈j.—ʒj. 260
—— *odorata*, 260
Viola Martia major hirsuta inodora. See VIOLA.
Violæ syrupus, 349
D. ʒj.—ʒij.
—— tricoloris folia, 260
Violet, *the single March*, 260
Viper broth, 301
—— grass, 235
—— wine, 309
Vipera, 260
Viperinum jus, 301
—— vinum, 309
Virga aurea, 261
Virgin's bower, *upright*, 146
Vismuthum nativum, 109
Viscus albus, 261
—— quernus, 261
Vitis Corinthiaca. See UVÆ PASSÆ MINORES.
—— vinifera, 261
Vitrification, what, 60
Vitrified antimony, 508
Vitriol, 261
——, acid elixir of, 334
——, *blue*, 262
—— of copper, 262
—— of iron, 262
Vitriol of iron calcined, 467
——, sweet elixir of, 334
——, *white*, 261
—— of zinc, 261
Vitriolated iron, 468
*—— iron calcined, 467
—— kali, 442
—— lixiva, 442
—— natron or soda, 444
*—— ponderous earth, 106
—— quicksilver, 491
—— quicksilver bolus, 549
—— sulphureous lixiva, 443
—— zinc, 476
*—— zinc purified, 441, 476
Vitrioli elixir acidum, 334
—— elixir dulce, 334
—— *spiritus et oleum*, 425
Vitriolic acid, 425
—— acid diluted, 426
*—— æther, 432
Vitriolum, 261
Vitriolum album, 261, 476
—— *album purificatum*, 441
D. gr. ij. – ʒ ss.
—— cœruleum, 262
—— *calcinatum*, 442
—— viride, 262
Vitrum antimonii, 508, 509
Volatile epithem, 423
—— oily spirit, 424
VOLATILE PARTS OF ANIMAL AND VEGETABLE SUBSTANCES, THE SEPARATION AND COLLECTION OF, 353
—— tincture of copper, 470
*Ulmi decoctum, 300
D. ℥iv.—℔ ss.
*Ulmus, 263
D. ℈j.—ʒ j.
**Ulmus campestris*, 263
Unguentum adipis suillæ, 594
—— *album*, 590
*—— anodynum, 590
—— *antipsoricum*, 595
—— *basilicum flavum*, 591
—— basilicum viride, 591
*—— æruginis, 590
—— calcis hydrargyri albi, 593
*—— cantharidis, 596
—— ceræ, 590

Unguentum *cæruleum*, 591
——— *cæruleum fortius*, 592
——— ceruſſæ acetatæ, 594
——— *citrinum*, 591
——— digeſtivum, 599
——— gummi elemi compoſitum, 592
*——— hæmorrhoidale, 591
*——— hellebori albi, 593
*——— hydrargyri, 591
——— hydrargyri fortius, 592
——— hydrargyri mitius, 592
——— hydrargyri nitrati fortius, 591
——— infuſi cantharidum mitius, 596
——— *è mercurio præcipitato*, 593
*——— nicotianæ, 593
——— ophthalmicum, 593
——— paralyticum, 599
——— picis, 594
——— pulveris cantharidum fortius, 596
——— reſinæ flavæ, 591
——— roſaceum, 594
——— ſambuci, 594
——— *Saturninum*, 594
——— *ſimplex*, 594
——— ſpermatis ceti, 597
——— ſulphuris, 595
——— vermifugum, 596
——— *ad veſicatoria*, 596
——— zinci, 596
Urtica, 263
D. ℈j.—ʒj.
——— *dioica*, 263
Urtication. See URTICA.
Uſtion, what, 60
Uvæ paſſæ majores, 263
——— minores, 263
*Uva urſi, 263
D. ℈j.—ʒj.

W.

Wake-robin, 98
Walnut, 165
Wall ſtone-crop, 236
Warm plaſter, 589
Waſhed crocus of antimony, 502
*Water of acetated litharge, 472
——— agrimony, 143
*——— of ammoniated copper, 470
Water of ammoniated verdegris, 470
——— creſſes, 186
———, diſtilled ſpirituous, and ſpirit, 378
——— flag, *yellow*, 152
——— germander, 235
——— hemp, 143
——— lily, white, 191
——— parſnip, 239
——— pepper, 199
——— of vitriolated zinc, 476, 578
——— of vitriolated zinc with camphor, 578
WATERS, SIMPLE DISTILLED, DIRECTIONS FOR OBTAINING THEM, 369
Wax, compound plaſter of, 583
———, oil of, 404
——— ointment, 590
Weights, 38
Weights of different fluids, a table of, 40
Wheat, 256
Wheat flour. See TRITICUM.
Wheys, 303
White calx of quickſilver, 490
——— calx of quickſilver, ointment of, 593
*——— hellebore ointment, 593
——— hellebore, tincture of, 332
——— lead, 471
——— magneſia, 445
——— wax, 124
Wild vine, 112
Willow, *common white*, 227
Wine, 259
Wine of ipecacuan, 309
*Wine, oil of, 365
WINES, MEDICATED, 306
Winterani cortex, 264
Winter's bark, 264
Wolf's-bane, blue, 79
*Wolf's bane, *inſpiſſated juice of*, 279
Wood-lice, 183
——— foot, 148
——— foot, ſpirit, ſalt, and oil of, 416

Wood ſorrel, 176
——— ſorrel, conſerve of, 339, 340
Woods, eſſence of, 337
———, decoction of, 296
Worm bark tree, 151
——— ointment, 596
——— powders, 531
——— ſeed, *ſo called*, 230
——— ſugar cakes, 535
Wormwood, common, 77
———, eſſential oil of, 359

X.

Xylobalſamum, 104

Y.

Yarrow, 183
Yellow caſſidony. See STŒCHAS.
Yellow reſin, cerate of, 597

Z.

Zarnichs, 97
Zedoaria, 264
D. gr. x.—ʒij.
Zibethum, 264
Zinc, 264
Zinc, ointment of, 596
ZINC, PREPARATIONS OF, 475
Zinci flores, 475
—— purificatio, 475
*—— vitriolati aqua, 476, 578
—— vitriolati cum camphorâ aqua, 578
Zincum, 264
Zincum calaminaris, 114
*—— calcinatum, 475
D. gr. iij.—ʒ ſs.
——— *vitriolatum*, 261
*—— vitriolatum purificatum, 441, 476
D. gr. ij.—ʒ ſs.
*—— uſtum, 475
Zinziber, 265
D. gr. v.—ʒ j.
Zinziberis ſyrupus, 349
D. ʒ i.—℥ ii.
*Zinziberis tinctura, 332
D. ʒ j.—ʒ iij.

ERRATA.

Part II. Page 79, Col. 2, Line 20, for *ſix parts* read *one part*.
21, for *one part* read *ſix parts*.
Part IV. Page 523, Col. 1, Line 9, for *bole* read *chalk*.
Part IV. Page 542, Col. 2, at the bottom, PILULÆ EX HYDRARGYRO MURIATO ſhould follow the PILULÆ SCILLITICÆ, after Simple Syrup, in which ſhould be inſerted the remark above, beginning, "Theſe are elegant and commodious," &c.

END.

WZ 260 L685nd 1799

NATIONAL LIBRARY OF MEDICINE
NLM 00988883 7