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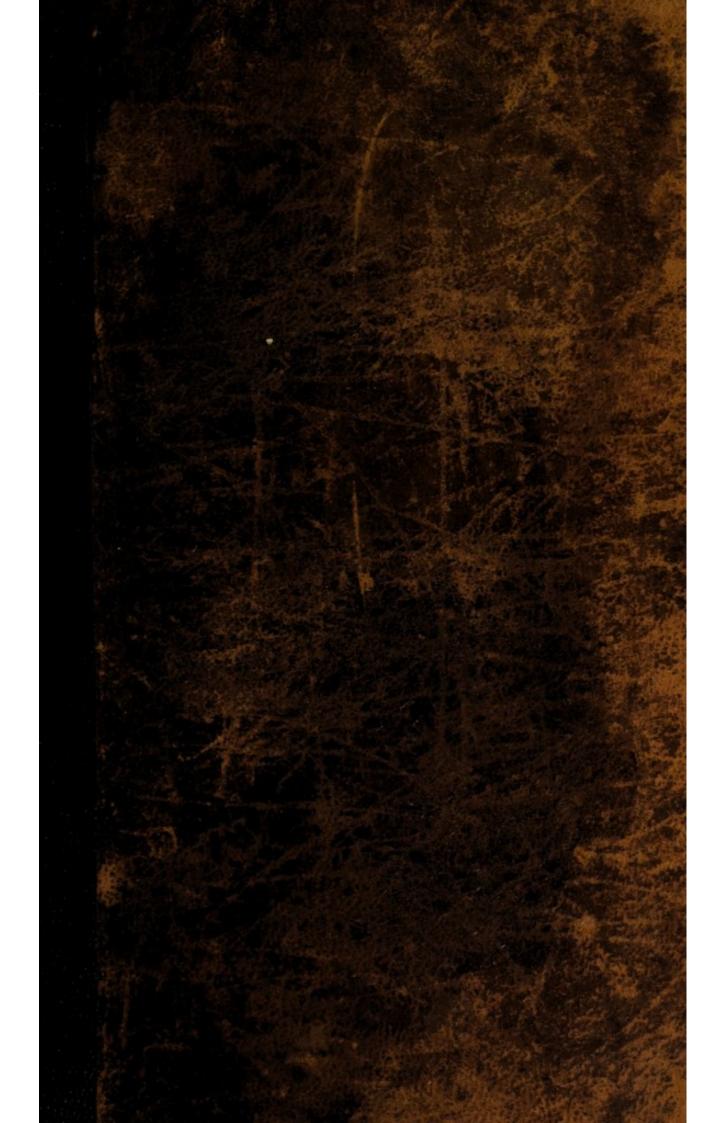
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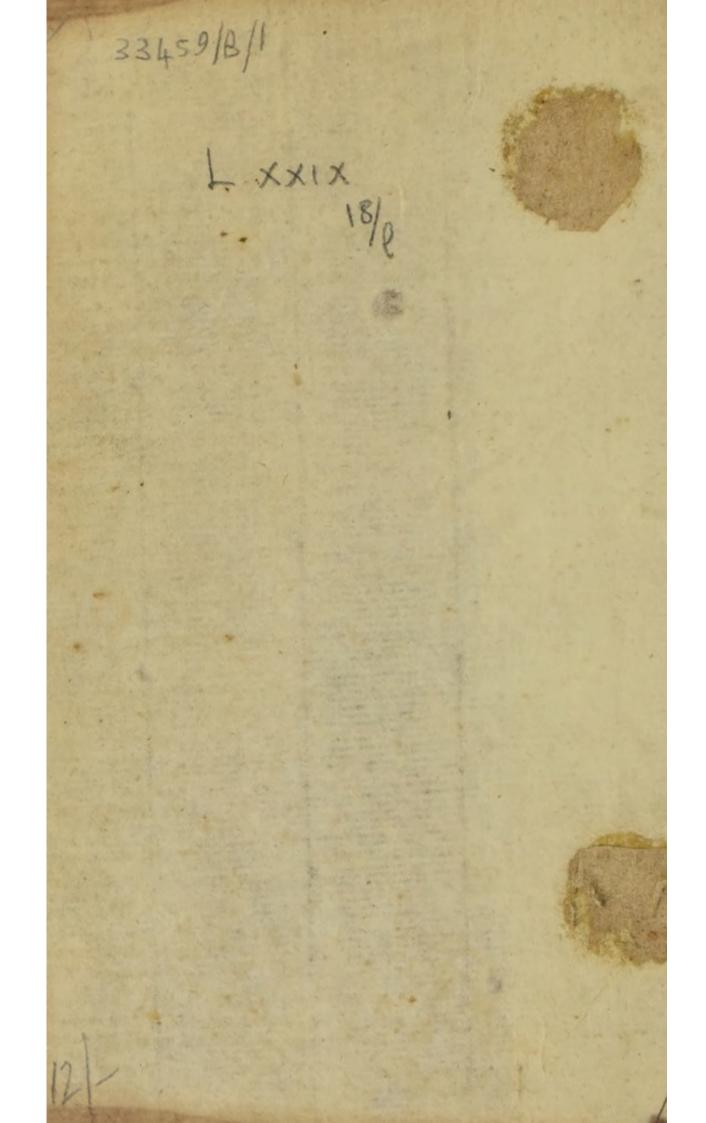
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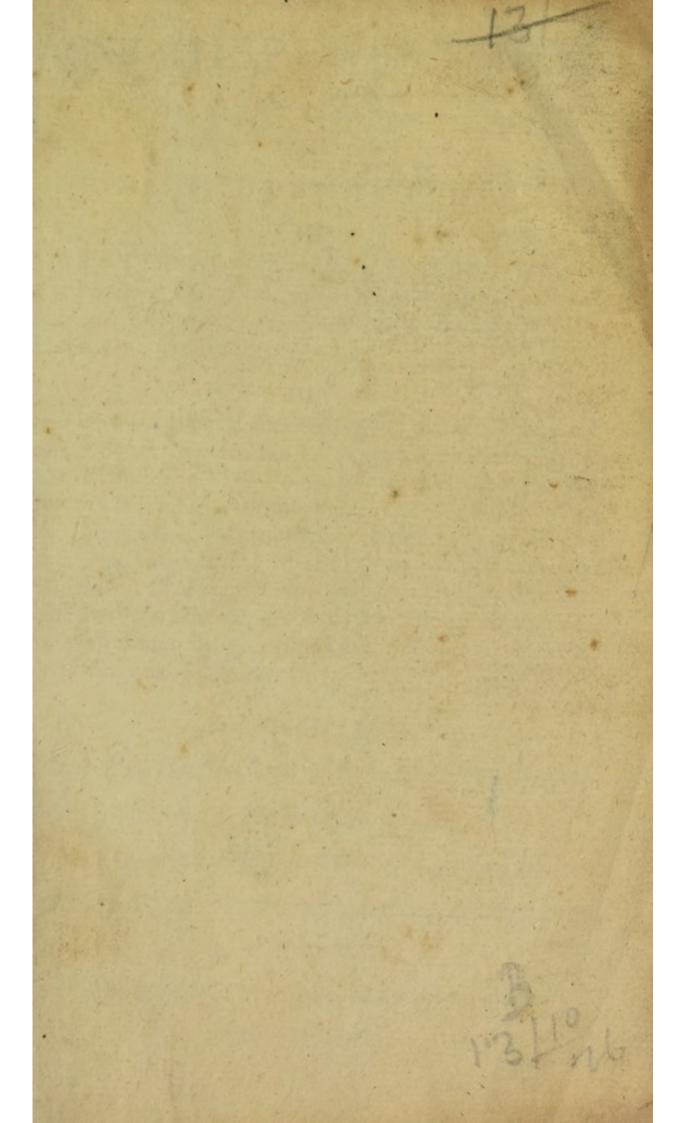
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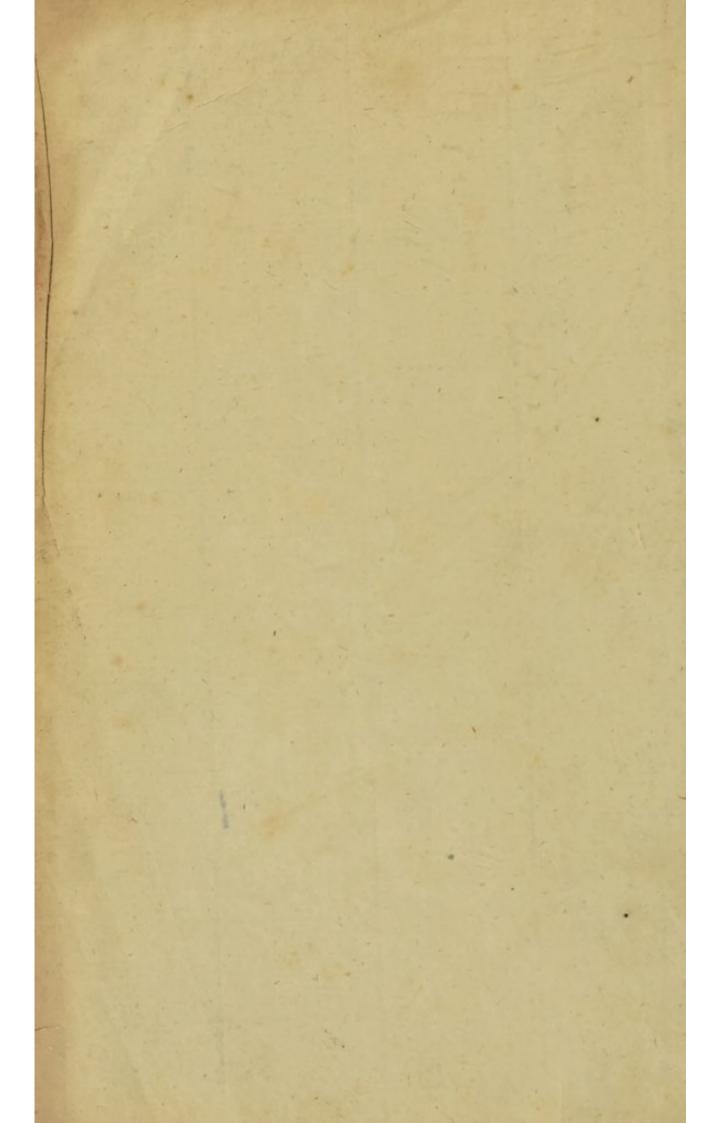


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THE

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, fo far as they are warranted by Experience and Observation.

III.

The Preparations and Compositions of the new LONDON and EDINBURGH PHARMACOPOEIAS; with fuch of the old ones as are kept in the Shops; the most celebrated foreign Medicines; the most useful of those directed in the Hospitals; fundry 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 diftinguishing Adulterations; of performing the more difficult and dangerous Processes with Ease and Safety, &c.

The Whole interfperfed

With Practical Cautions and Observations.

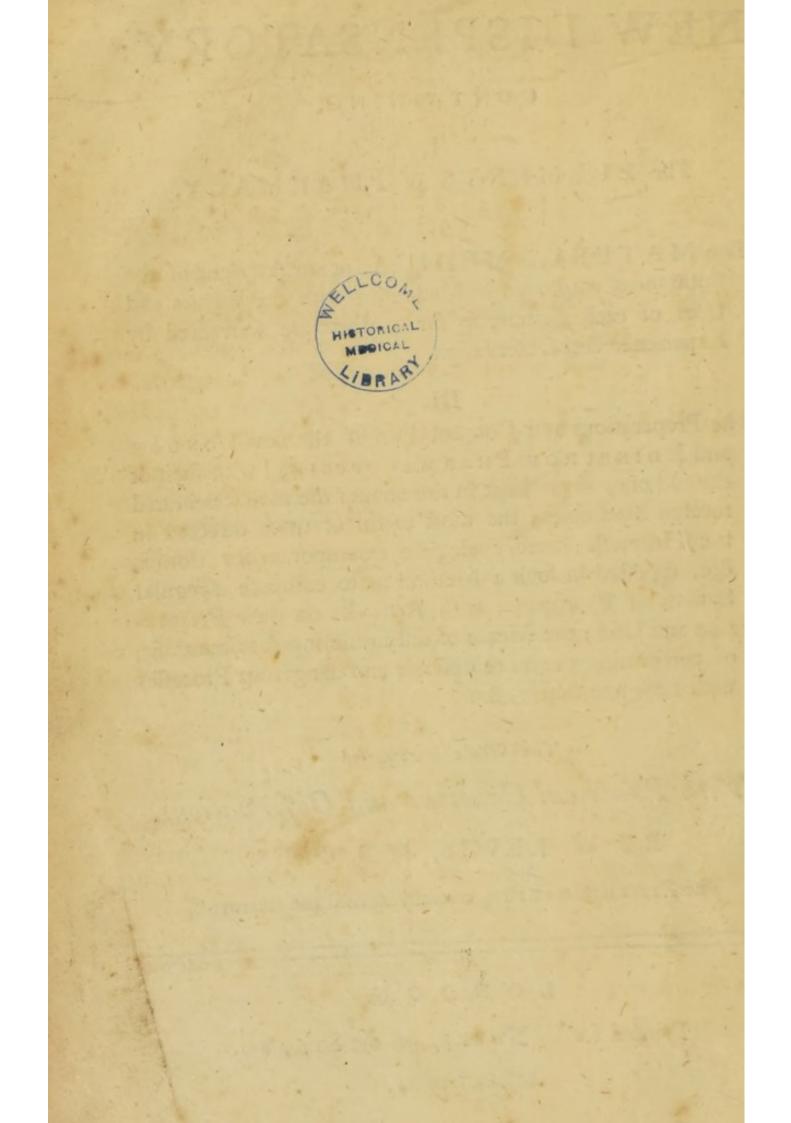
BY W. LEWIS, M.B. F.R.S.

The FIFTH EDITION, carefully Revised and Improved.

LONDON,

Printed for C. NOURSE, in the STRAND.

MDCCLXXXV.



THE

AUTHOR'S PREFACE.

HE New Difpenfatory was intended as a regular book of practical and fcientific 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 affigning 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 fatisfaction of finding that his endeavours have not been in vain; that though the work fell very far fhort of the perfection which he wifhed for, it was diftinguished with approbations even beyond his hopes; with approbations, which have induced the compilers of the other dispensatories to borrow very confiderable 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.

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In this edition, I have made many material corrections and additions; and retrenched fundry 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 Chemiftry. The general neglect of this interefting and ufeful ftudy, as applied to medicinal fubjects, has engaged me to greatly enlarge this part, and to labour it with more care and precifion. I have endeavoured to give a concife and fystematic view of the general properties and relations of vegetable, animal, and mineral bodies; the different medicinal principles they contain; the means of extracting and feparating their native component parts, without making any alteration in their qualities; and the different forms and powers which they affume, from different natural or artificial operations, or from the mixture and coalition of one with another; avoiding every where all hypothetical reafonings, and delivering only the direct refult of experiment and observation. To this hiftory is added a practical account of the inftruments and operations of the art, which, it is hoped, will give the reader a full idea of them. without the tediousness of minute details.

The next part contains the Materia Medica, or medicinal fimples, which, for reafons affigned in the introduction to this part, are all ranged in alphabetic order. Rationales of the operations of medicines, which are at beft but conjectural and unfatisfactory, have no place in this practical work : but fome general obfervations, of the fenfible effects of certain claffes of medicines, in Cartheufer's manner, it has been thought expedient to retain, with fome amendments from the former editions.

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AUTHOR'S PREFACE.

In treating of the feveral fimples themfelves, I have given, where neceffary, a defcription of the fimple, with the marks of its genuineness and goodness; and pointed out the diftinguishing characters of fuch as, from a refemblance 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 preferved 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 fenfible qualities of the fubject, or from its agreement in smell, taste, &c. with others of known virtue. Under each fimple are mentioned all the preparations made from it, and all the compositions in which it is an ingredient, in the London and Edinburgh pharmacopæias. Many of the capital articles I have examined pharmaceutically, and shewn in what separable part of the mixt its virtue refides, by what means the active principle is best extracted or preferved, and in what form the substance itself or its preparations are most commodioufly and advantageoufly exhibited. At the end of this part, the directions for the collection and prefervation of medicinal fubftances are re-confidered.

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 fome 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 fome elegant extemporaneous prescriptions, such as are directed in practice.

V

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In the distribution of these materials, it has been found neceffary to depart from the order hitherto received. 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 firicily extemporaneous, being made only as they are wanted : and many of those, which are called extemporaneous, are very well fitted for keeping : if we fhould appropriate the term officinal to those which have the fanction of public colleges, then this abfurdity would follow, that medicines of as tedious preparation as any in the book, even Baumé's extract of opium, which requires feveral months continual boiling, would be extemporaneous preparations.

To avoid this impropriety, and that of repeating the fame forms, and frequently almost the fame compositions, in different parts of the book; I have ranged medicines of fimilar preparation or compofition in one clafs, without regard to the ineffential circumstances of their being used at London or at Edinburgh, at Paris or at Berlin, in the fhops or in the hofpitals; and have endeavoured to dispose them in fuch a manner, as to form, fo far as could be done with fuch materials, one regular whole, a connected fystem 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, confidering the great multiplicity and diverfity of the fubjects, many of which partake

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AUTHOR'S PREFACE. vii

take of the nature of both, though fome more of one, and others of the other: but this does not at all affect the plan, or produce any diforder in the fystem, which continues the same whether this diftinction is retained or dropt.

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

In translating the feveral prefcriptions, wherever the originals appeared too concife or obfcure, the liberty has been taken of expressing the directions in a more full and clear manner, with care not to vary the fense. The ingredients in the feveral 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 feveral medicines is fubjoined, where it feemed requifite, an account of the principles on which they are built; together with their virtues, ufe, and dofe; and the cautions neceffary to be obferved in the exhibition of them. To the more difficult or dangerous operations is added a full defcription of the method of performing them with advantage and fafety; and to fuch medicines, as are liable to fophiftication, the means of diftinguifhing the genuine from the adulterated. In thefe practical remarks on the particular preparations, and on the general claffes of them at the beginning of the refpective chapters and fections, the author has laboured with diligence. If he has fucceeded in executing his intentions, the directions are fuch, as

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may

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may enable every apothecary to prepare, as it is his duty to do, all his own medicines.

The tables, inferted in a former edition, were fo well received, that the other difpensatories 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 chymica, in which the numbers, by fome accident, have been fo faultily fet down, that no dependence can be had upon them; and few other hydroftatical experiments have been made on medicinal fubstances or their preparations. I have therefore now thrown out that table, but preferved all that was valuable in it, reduced to a more uleful form, in the table of the weights of certain measures of different fluids. I have likewife added feveral new ones, greatly enlarged the others, fo 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 cafes (except only in the above-mentioned table of weights) from my own experience.

The author is fufficiently fenfible, that there are ftill many imperfections in this performance; but hopes it will appear, that he has every where confulted the dignity of the art, the eafe and advantage of the operator, and the health of the patient.

ADVER-

ADVERTISEMENT TO THE FIFTH EDITION.

IT is now some years since Dr. Lewis himself obliged the public with an improved edition of this most elegant and useful work. Since that period great improvement has been made in natural history, by the attention and labour of learned and ingenious men; and the Materia Medica confiderably enriched with many valuable and useful articles. Therefore the editor (a new impression being called for) has thought it necessary to make fuch additions to the work as should render the present edition complete and perfect. Besides these additions, he has added to the vegetable articles of the Materia Medica the Linnæan names, where they were found to differ from those of the other botanic writers which Dr. Lewis chose to use. He has likewise introduced, in their proper places, the new articles which have been lately received into the catalogue of the Edinburgh college; and also corrected the former compositions of the Edinburgh Pharmacopæia by the last edition of that work ; still retaining many compositions, 9

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positions, which it may, perhaps, gratify many readers to see, though they are now expunged by the Edinburgh college.

The new articles are marked with an afterist, that they may be more readily distinguished.—And as there is no other material alteration in the original, the editor hopes these additions, to a work so universally established, and approved for its useful information, will not have been made in vain.

*** In the last edition of the Edinburgh Pharmacopæia (printed in the year 1783) all the medicines, liquids and folids, are adjusted by Troy weight only.

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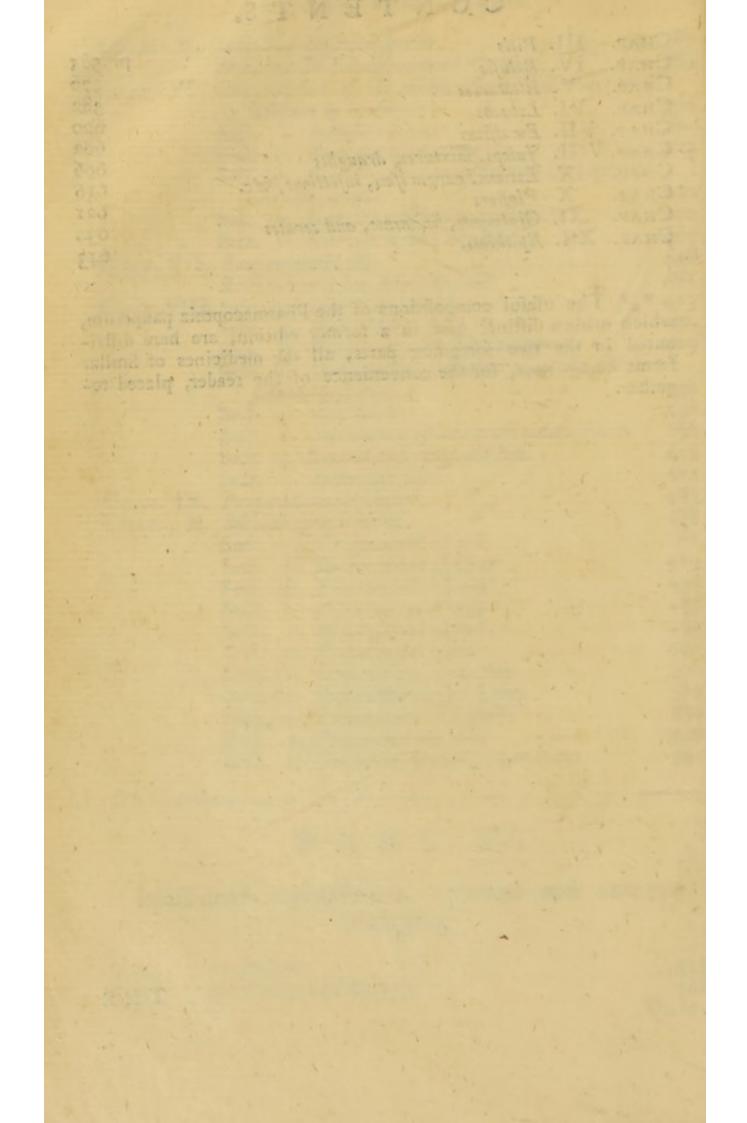
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*** The useful compositions of the Pharmacopœia pauperum, which made a diftine? part in a former edition, are here diftributed in the two foregoing parts, all the medicines of fimilar forms being now, for the convenience of the reader, placed together.



THE

NEW DISPENSATORY.

PARTI.

Elements of Pharmacy.

CHAPTER I.

Definition and division of Pharmacy.

HARMACY is the art of preparing and compounding natural and artificial fubftances for medicinal purposes, in a manner fuitable to their respective properties, and the intentions of cure.

THIS art has been commonly divided into two branches, GA-LENICAL and CHEMICAL: but no rational principle of diffinction between them has as yet been fixed on. If it be a chemical procefs to evaporate juice of plantane over a gentle fire till it becomes thick, it is furely not lefs chemical to evaporate the juice of floes in the fame manner; and yet the former only is ranked among the chemical, and the latter among the galenical preparations. Frequently, alfo, one and the fame preparation is in different pharmacopœias referred to the different branches; thus diffilled waters and diffilled fpirits, which make the firft of the galenical articles in one pharmacopœia, make the firft of the chemical in another.

It is agreed on both fides, that effential oils, extracts, refins, volatile and fixt falts, the artificial neutral falts, metallic preparations, and other like productions, belong to the chemical pharmacy; and pills, bolufes, troches, electaries, draughts, ointments, plasters, poultices, &c. to the galenical; as if the distinction was founded, B

neither

Elements of Pharmacy.

neither on the nature of the operation, nor of the materials, nor of the effect produced, but merely on the form in which the medicine is intended to be taken or applied. Thus, the diffolution of mercury in aquafortis is ranked among the chemical preparations; while the very fame procefs, with the additional circumftance of uniting an unctuous material, which renders it, if any thing, ftill more chemical, is neverthelefs reckoned a galenical one, becaufe the product is ufed as an ointment. It cannot furely be fuppofed, that this is a juft division; or that the fame procefs or preparation can become chemical or not chemical, according to the intention to which it is applied, or to the form in which the product is ufed.

If vitriol of iron (that is, iron united with a certain acid) and any volatile alkaline falt, as that of hartfhorn or fal ammoniac, be put together into water, in due proportions, the pungent fmell of the volatile falt will be immediately fupprefied; this falt uniting with the acid of the vitriol into a new compound, while the iron is feparated and thrown out. This is undoubtedly a chemical effect; and this effect will happen, wherever those two ingredients meet together in a moift state, whatever the form of the medicine be. It is obvious, therefore, that the galenical forms are by no means independent of chemistry; and that this science extends to mixtures of the most fimple kind.

The London college has very judicioufly rejected this division; a division apparently derived from prejudice and superficial knowledge, and which has been continued only in compliance with custom. 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 fubftances themfelves, their various properties, qualities, and relations to one another, and their general effects on the human body: Practical pharmacy, the fkilful performance of the feveral procefies, or operations, by which they are adapted to particular ufes.

What is here called *theory* is not to be underftood as confifting of fpeculative truths, or philofophical inveftigations, calculated for explaining the phenomena, or teaching the rationale of the effects produced. The theory of pharmacy is the direct refult of experiment and obfervation, or rather a general and comprehenfive view of experiments and facts themfelves; it may be termed SCIENTIFIC PHARMACY, in diffinction from mere manual labour.

Scientific pharmacy includes all those facts which relate to-the reduction of medicinal substances into different forms, and the forms

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Chap. 1. Elements of Pharmacy.

forms in which particular fubftances are moft commodioufly or advantageoufly ufed—their relations to one another in regard to mifcibility, and the means by which thofe, that of themfelves are not mifcible, may be made to unite—the feparation of the medicinal from the inactive matter, and of different kinds of medicinal matter from one another when combined together in the fame fubject, on the principle of one being diffoluble in liquors which will not diffolve the other, of one being exhalable by heat while the other remains fixt, &c.—the alterations which the medicinal parts themfelves undergo, in different circumftances, and by different methods of treatment—the production of new properties and medicinal powers from the coalition of diffimilar things—with many other particulars analogous to thefe.

It is obvious, that a perfect acquaintance with pharmacy, confidered in this light, is effentially neceffary to the due exercife of the art of phyfick. Without it, the prefcriber muft 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, feparately, gave room to expect.

It would be inconfiftent with the nature of a difpenfatory, to wholly detach the fcientific part of pharmacy from that which is more directly practical; for the fcience gradually refults in the courfe of the practical details. In this first part of the work it has been thought expedient to premife a fummary view of the general elements of the art, both practical and fcientific, that the reader may be the better prepared for the particular fubjects and proceffes, which follow in the fecond and third parts.

B. 2

CHAP-

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Elements of Pharmacy.

Part I.

CHAPTER II.

A general view of the properties and relations of medicinal substances.

SECT. I.

Vegetables.

VEGETABLES are organized bodies, containing, in certain veffels, different kinds of fubftances, in which their medicinal virtues confift, and which are found to differ greatly, not only in their quantity, but likewife in their quality, according to the age of the plant, the feafon of the year, and the foil in which it is produced.

Thus fome 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 flate, contain an auftere acid juice, which by maturation is changed into a fweet: others, as the orange, are first warm and aromatic, and afterwards, by degrees, become filled with a ftrong acid. The common grain, and fundry other feeds, when beginning to vegetate, are in tafte remarkably fweet ; yet the kernels of certain fruits prove, at the fame period, extremely acrid. The roots of fome of our indigenous plants, whofe juice is, during fummer, thin and watery, if wounded early in the fpring, yield rich balfamic juices, which exposed to a gentle warmth, foon concrete into folid gummy-refins, fuperior to many of those brought from abroad. In open exposures, dry foils, and fair warm feafons, aromatic plants prove ftronger and more fragrant, and fetid ones weaker in fmell, than in the opposite circumstances. To these particulars therefore due regard ought to be had in the collecting of plants for medicinal ules.

It may be proper to obferve alfo, that the different parts of one plant are often very different in quality from one another. Thus the bitter herb wormwood rifes from an aromatic root; and the narcotic poppy-head includes feeds which have no narcotic power. Thefe differences, though very obvious in the common culinary plants, do not feem to have been fufficiently obferved, 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 fepa-

rated,

Vegetables.

rated, by fimple operations, without any alteration being made in their native qualities. They may, likewife, be varioufly altered and transformed, by operations not lefs fimple. By fermentation and the power of fire, vegetables, and all the fubftances that exift in them (the pure watery part excepted) totally change their nature, and are converted or refolved into products of another order. It will be proper to take a view of thefe productions first; fome of them being fubfervient to the feparation of the native principles, and to the better understanding of their properties.

I. Productions from vegetables by fermentation.

THE fweet and acefcent juices of fruits, infufions of malted grain, and almost all vegetable juices or infufions that are either fimply fweet or of a fweetness 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 INFLAM-MABLE SPIRIT.

It is needlefs to obferve, how different thefe productions are, 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 folids, fo as to prove in fome cafes ufeful aperient medicines, and to occafion, when imprudently taken, dangerous fluxes; whereas the vinous and fpirituous liquors, produced from them by fermentation, have the oppofite effects, conftringing the folids, and thickening or coagulating the fluids.

In vinous liquors there are great diverfities, independently of their being more or lefs watery; for fome of the native qualities of vegetable juices and infufions, as colour, flavour, vifcidity, &c. often remain in the wine, not being totally fubduable by that degree of fermentation by which the liquor is rendered vinous : but of thefe diverfities the fpirit is never found to partake : this, feparated from the wine and properly purified, is always one and the fame thing, from whatever kind of vegetable liquor it was produced.

Befides the großs matter thrown off during the fermentation, there feparates from fundry wines, after the fermentation is completed, another kind of fubitance. The fides and bottom of the cafk become gradually incrustated with a faline concrete, called TARTAR, of an acid tafte, and of a reddifh or white colour, according to that of the wine. The colour is adventitious to the falt, for the tartar may be purified from it by folution in water : when thus purified, the tartar of all wines is found to be the fame.

There is feparated alfo, in fermentation, a fubftance 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 is difcharged; which, when copioufly accumulated in close rooms, extinguishes fire, and inftantaneously suffocates animals, without producing any apparent difeafe, or any injury that can be perceived upon diffection. Boerhaave fays he does not remember that fo immediate, mortal, and fubtile a poifon has been hitherto difcovered : that if a large veffel, full of the juice of grapes in high fermentation, fhould difcharge its accumulated vapour through a fmall orifice, and a ftrong healthy man fhould draw in the vapour at his noftrils, he would inftantly fall down dead; or if he received but little thereof, become apoplectic; or, if ftill lefs, 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 fuch 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 feveral fubftances, of themfelves not fufceptible of fermentation, which neverthelefs may be brought into it by the admixture of thofe that are; as by adding to them, along with a proper quantity of water, a portion of the yeaft or head thrown up to the furface of fermenting liquors. To this expedient recourfe is fometimes had for unlocking the texture of certain compact vegetable matters, in order to enable them to give out more readily fome of their medicinal principles. In these cases, the fermentation must be continued but for a little time; left the refolution of the fubject 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 indifpofed to ferment, and this not only in their thick flate, but when diluted again with water; though there appears to be fearcely any other alteration produced in them by the boiling. Hence liquids, prone to fermentation, may thus be preferved. 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 flower and less tumultuary manner than before. The heating inebriating wine becomes by degrees 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

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There are, however, certain qualities of vegetables, which are not completely fubdued even by this fecond ftage of fermentation; fome vinegars being apparently more coloured, and containing more of an oily and vifcid matter than others. By adding to the fermentable liquor fubjects of other kinds, the qualities both of wines and vinegars may be ftill further diversified, fo as to adapt them to particular medicinal ufes.

It is obfervable, that though the acetous fermentation will always fucceed the vinous, unlefs induftrioufly prevented, yet it is not always preceded thereby; for many, perhaps all, fermentable liquors may be made to pafs to the acetous flate, without any intermediate period of true vinofity.

IF the procefs be ftill 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 folid fubftance at the bottom appears to be the fame with common mould.

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

Putrefaction difcovers one difference in vegetables, which, though not taken notice of, fo far as I know, by any writer, feems worthy of being remarked. The generality of vegetables rot and turn to mould, without yielding any very offenfive fmell from the beginning to the end of the refolution : but there are fome which emit, throughout the whole procefs, a ftrong fetor, very nearly of the fame kind with that which accompanies the putrefaction of animal fubftances.

2. Productions from vegetables by fire.

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

VEGETABLE fubftances, burnt in the open air, are reduced partly into ASHES, and partly into FLAME and SMOKE; which laft, condenfed in long canals or otherwife, forms a naufeous bitter black soor. In the burning of most vegetables, an acid vapour accompanies the fmoke; but the foot is never found to partake of it.

Vegetables urged with a red heat in clofe veffels (the veffel containing the fubject being made to communicate with another placed beyond the action of the fire for receiving the matters forced out

by

by the heat) give over a WATERY LIQUOR called phlegm; an ACID LIQUOR called fpirit; an elaftic incoercible vapour, which appears to be AIR, and to which an exit must be occasionally allowed, left it burft the veffels or blow off the receiver ; a thin OIL, and, at length, a very thick dark-coloured oil, both which are of an acrimonious tafte, and a burnt fetid fmell, whence they are called empyreumatic oils. There remains behind a black COAL, not diffoluble in any kind of liquors, not fusceptible of putrefaction, not alterable by the most vehement degree of fire, fo long as the air is excluded, but which, on admitting air to it, burns, without flaming, and with little or no fmoke, and leaves a very fmall quantity of white afhes.

The white ashes of vegetables, infused or boiled in water, impart to it a pungent faline fubstance, called FIXT ALKALINE SALT, which may be feparated in a folid form by evaporating the water. The remaining part of the afhes, which is by far the largest in quantity, is a pure EARTH, differing from that which is the refult of putrefaction, in being readily diffoluble by every acid liquor, while the other is not acted upon by an acid.

Such is the general analyfis of vegetables by fire. But there are fome yegetables, which, as they feem to fhew, during putrefaction, fome analogy in their matter with that which conftitutes animal bodies, difcover alfo a like analogy in the prefent refolution, yielding little or no acid; and, inftead of a fixt alkaline falt which remains in the afhes, affording a VOLATILE ALKALINE SALT which arifes along with the aqueous and oily principles.

ALKALINE falts, and acid or four fubftances, are looked upon as being opposite in their nature to one another. Most of the bodies, which are diffoluble in alkaline liquors, are precipitated or thrown out from the folution on the addition of an acid; and most of those, which are diffoluble in acids, are in like manner precipitated by alkalies. If an acid and an alkali be directly mixed together, there generally enfues an effervescence or tumultuary discharge of air-bubbles; though alkalies, both fixt and volatile, may be fo prepared as to make no effervescence with acids, and in this cafe they are far more pungent than in their common ftate.

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

To these characters, it may be added, that alkaline falts change the colour of blue flowers or their infufions, 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.

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

FIXT alkaline falts, perfectly purified, appear to be one and the fame, from whatever kind of vegetable they were produced; those of fome 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 fomewhat in the degree of acrimony and fetidnefs, and the acid fpirits differ in degree of ftrength, or in the quantity of water with which they are diluted; how far they may differ in any other refpects, is little known, these preparations having been rarely used or examined.

It may be obferved, that the alkaline falts, both of the fixt and of the volatile kind, are entirely creatures of the fire, being never found to exift naturally in any vegetable: the oil, doubtlefs, præexifted in the fubject, but owes its acrimony and fetidnefs to the fire; for the most mild and infipid oils receive the fame qualities on being urged with the fame degree of heat: the acid, which is likewife naturally contained in vegetable fubjects, proves always tainted, in the prefent procefs, with the ill fmell and tafte of the oil that accompanies it; but whether the acid itfelf fuffers 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 conftitution of bodies, it was imagined, that this refolution of vegetables by fire, difcovering to us all their active principles, unclogged and unmixed with one another, would afford the fureft means of judging of their medicinal powers. But, on profecuting these experiments, it was foon found that they were infufficient for that end : that the analyfes of poifonous and efculent 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; infomuch that it was impoffible to know in what form they exifted, and with what qualities they were endowed, before these changes and transpofitions 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 falt; what idea can this analyfis give of the medicinal qualities of gum Arabic?

3. Substances naturally contained in vegetables, and feparable by art without alteration of their native qualities.

I. Grofs oils.

GROSS oils abound chiefly in the kernels of fruits and in certain feeds; from which they are commonly extracted by expreffion, and hence are diffinguished 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.

Thefe oils, in their common flate, are not diffoluble either in vinous fpirits or in water, though, by means of certain intermedia, they may be united both with the one and the other. Thus a fkilful interpolition of fugar renders them mifcible with water into what are called lohochs and oily draughts: by the intervention of gum or mucilage they unite with water into a milky fluid: by alkaline falts they are changed into a foap, which is mifcible both with watery and fpirituous liquors, and is perfectly diffolved by the latter into an uniform transparent fluid. The addition of any acid to the foapy folution abforbs the alkaline falt; and the oil, which of courfe feparates, is found to have undergone this remarkable change, that it now diffolves without any intermedium, in pure fpirit of wine.

Expreffed oils, exposed to the cold, lose greatly their fluidity: fome of them, in a small degree of cold, congeal into a confistent 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 starp 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 fame noxious alteration while contained in the original starpest is hence the rancidity which the oily feeds and kernels, as almonds and those called the cold feeds, are so liable to contract in keeping. Nevertheless on triturating these feeds or kernels with water, the oil, by the intervention of the other matter of the suite which, instead of growing rancid, turns four on standing.

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, thefe oils fuffer little diffipation of their parts. In a greater heat, they emit a pungent vapour, feemingly of the acid kind; and when fuffered to grow cold again, they are found to have acquired a greater degree of confiftence than they had before, together with an acrid tafte. In a heat approaching to ignition, in clofe veffels, the greateft

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greatest part of the oil arises in an empyreumatic state, a black coal remaining behind.

2. Grofs febaceous matter.

FROM the kernels of fome fruits, as that of the chocolate nut, we obtain, inftead of a fluid oil, a fubftance of butyraceous confiftence; and from others, as the nutmeg, a folid matter as firm as tallow. These concretes are most commodiously extracted by boiling the fubject in water; the sebaceous matter, liquested by the heat, separates and arises to the furface, and refumes its proper confistence as the liquor cools.

The fubftances of this clafs have the fame 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 fensibly acid than the fluid oils; and fluid oils, by the admixture of concentrated acids, are reduced to a thick or folid mass.

3. Effential oils.

ESSENTIAL oils are obtained only from those vegetables, or parts of vegetables, that are confiderably 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 effences or effential oils.

Effential oils unite with rectified spirit of wine, and compose with it one homogene transparent fluid; though some of them require for this purpose a much larger proportion of the spirit than others. Water also, though it does not diffolve their whole subftance, may be made to imbibe some portion of their more subtile matter, so as to become confiderably impregnated with their flavour: by the admixture of sugar, gum, the yolk of an egg, or alkaline falts, they are made totally diffoluble in water. Digested with volatile alkalies, they undergo various changes of colour, and some of the lefs odorous acquire confiderable degrees of fragrance; whilst fixt alkalies universally impair their odour.

In the heat of boiling water, thefe oils totally exhale; and on this principle they are commonly extracted from fubjects that contain them; for no other fluid, that naturally exifts in vegetables, is exhalable by that degree of heat, except the aqueous moifture, from which greateft part of the oil is eafily feparated. Some of thefe oils arife with a much lefs heat, a heat little greater than that in which water begins vifibly to evaporate. In their refolution by a burning heat, they differ little from exprefied oils.

Effential oils, exposed for some time to a warm air, suffer an alteration very different from that which the expressed undergo. Instead

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Inftead of growing thin, rancid, and acrimonious, they gradually become thick, and at length harden into a folid brittle concrete; with a remarkable diminution of their volatility, fragrancy, pungency, and warm flimulating quality. In this flate, they are found to confift of two kinds of matter; a fluid oil, volatile in the heat of boiling water, and nearly of the fame quality with the original oil; and of a groffer fubftance which remains behind, not exhalable without a burning heat, or fuch a one as changes its nature, and refolves it into an acid, an empyreumatic oil, and a black coal.

The admixture of a concentrated acid inftantly produces, in effential oils, a change nearly fimilar 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 hereaster) is poured hastily into an effential 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 effential oil.

Some vegetables, as rofes and elecampane roots, inftead of a fluid effential oil, yield a fubftance poffeffing the fame general properties, but of a thick or febaceous confiftence. This fubftance appears to be of as great volatility, and fubtility of parts, as the fluid oils: it equally exhales in the heat of boiling water, and concretes upon the furface of the collected vapour. The total exhalation of this matter, and its concreting again into its original confiftent flate, without any feparation of it into a fluid and a folid part, diffinguishes it from effential oils that have been thickened or indurated by age or by acids.

5. Camphor.

CAMPHOR is a folid concrete, obtained chiefly from the woody parts of certain Indian trees. It is volatile like effential oils, and foluble both in oils and inflammable fpirits: it unites freely with water by the intervention of gum, but very fparingly and imperfeely by the other intermedia that render oils mifcible with watery liquors. It differs from the febaceous as well as fluid effential oils, in fuffering no fenfible 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 fame nature with the original camphor; in its receiving no empyreumatic impreffion, and fuffering no refolution, from any degree of fire to which it can be exposed in close veffels, though readily combustible in the open air; in being diffolved by concentrated acids into a liquid form; and in feveral other properties which it is needlefs to fpecify in this place. 6. Refin.

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6. Refin.

ESSENTIAL oils, indurated by age or acids, are called refins. When the indurated mafs has been exposed to the heat of boiling water, till its more fubtile part, or the pure effential oil that remained in it, has exhaled, the gross matter, left behind, is likewife called refin. We find, in many vegetables, refins analogous both to one and the other of these concretes; fome containing a fubtile oil, separable by the heat of boiling water; others containing nothing that is capable of exhaling in that heat.

Refins in general diffolve in rectified fpirit of wine, though fome of them much more difficultly than others: it is chiefly by means of this diffolvent, that they are extracted from the fubjects in which they are contained. They diffolve alfo in oils both expressed and effential; and may be united with watery liquors by means of the fame 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 flate 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.

7. Gum.

GUM differs from the foregoing fubftances, in being uninflammable : for though it may be burnt to a coal, and thence to afhes, it never yields any flame. It differs remarkably alfo in the proportion of the principles into which it is refolved by fire; the quantity of empyreumatic oil being far lefs, and that of acid far greater. In the heat of boiling water, it fuffers no diffipation : nor does it liquefy like refins; but continues unchanged, till the heat is fo far increafed as to fcorch or turn it to a coal.

By a little quantity of water, it is foftened into a vifcous adhefive mafs, called mucilage: by a larger quantity it is diffolved into a fluid, which proves more or lefs glutinous, according to the proportion of gum. It does not diffolve in vinous fpirits, or in any kind of oil: neverthelefs, when foftened with water into a mucilage, it is eafily mifcible both with the fluid oils and with refins, which, by thefe means, become foluble in watery liquors, along with the gum, and are thus excellently fitted for medicinal purpofes.

This elegant method of uniting oils with aqueous liquors, which has been kept a fecret in few hands, appears to have been known to Dr. Grew. "I took (fays he) oil of annifeeds, and pouring it "upon another body, I fo ordered it, that it was thereby turned into a perfect milk-white balfam or butter; by which means the oil became mingleable with any vinous or watery liquor; eafily and inftantaneoufly diffolving therein, in the form of a milk. And note, this is done without the leaft alteration of the fmell, tafte, "nature " nature or operation of the faid oil. By fomewhat the like means "any other flillatitious oil may be transformed into a milk-white "butter, and in like manner be mingled with water or any other "liquor; which is of various use in medicine, and what I find "oftentimes very convenient and advantageous to be done." (Grew, of mixture, chap. v. inst. i. § 7.) This enquiry has lately been further prosecuted, in the first volume of the Medical Observations published by a society of physicians in London; where a variety of experiments is related, of rendering oils both effential and expressed, and different uncluous and refinous bodies, foluble in water by the mediation of gum.

As oily and refinous fubftances are thus united to water by the means of gum, fo gums may in like manner be united to fpirit of wine by the intervention of refins and effential oils; though the fpirit does not take up near fo much of the gum, as water does of the oil or refin.

Acid liquors, though they thicken pure oils or render them confiftent, do not impede the diffolution of gum, or of oils blended with gum. Alkaline falts, on the contrary, both fixt and volatile, though they render pure oils diffoluble in water, prevent the folution of gum, and of mixtures of gum and oil. If any pure gum be diffolved in water, the addition of any alkali will occafion the gum to feparate, and fall to the bottom in a confiftent form : if any oily or refinous body was previoufly blended with the gum, this alfo feparates, and either finks to the bottom, or rifes to the top, according to its gravity.

8. Gum-refin.

By gum-refin is underftood a mixture of gum and refin. Many vegetables contain mixtures of this kind, in which the component parts are fo intimately united, with the interpolition perhaps of fome other matter, that the compound, in a pharmaceutical view, may be confidered as a diffinct kind of principle; the whole mafs diffolving almost equally in aqueous and in fpirituous liquors; and the folutions being not turbid or milky, like those of the groffer mixtures of gum and refin, but perfectly transparent. Such is the aftringent matter of biffort root, and the bitter matter of gentian. It were to be wished that we had fome particular name for this kind of matter; as the term gum-refin is appropriated to the groffer mixtures, in which the gummy and refinous parts are but loofely joined, and eafily feparable from one another.

9. Saline matter.

Or the faline juices of vegetables there are different kinds, which have bitherto been but little examined : the fweet and acid ones are the most plentiful, and those which are the most known.

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These juices, exposed to a heat equal to that of boiling water, fuffer generally no other change than the evaporation of their watery moifture; the faline matter remaining behind, along with fuch of the other not volatile parts as were blended with it in the juice. From many, after the exhalation of great part of the water, the faline matter gradually separates in keeping, and concretes into little folid masses, leaving the other substances dissolved or in a moift state : from others, no means have yet been found of obtaining a pure concrete falt.

Thefe falts diffolve not only in water like other faline bodies, but many of them, particularly the fweet, in rectified fpirit alfo. The groß oily and gummy matter, with which they are almost always accompanied in the fubject, diffolves freely along with them in water, but is by fpirit in great measure left behind. Such heterogeneous matters, as the fpirit takes up, are almost completely retained by it, while the falt concretes; but of those, which water takes up, a confiderable part always adheres to the falt. Hence effential falts, as they are called, prepared in the common manner from the watery juices of vegetables, are always found to partake largely of the other foluble principles of the fubject; whilft those extracted by spirit of wine prove far more pure. By means of rectified spirit, fome productions of this kind may be excellently freed from their impurities; and perfect faccharine concretions obtained from many of our indigenous fweets.

There is another kind of faline matter, obtained from fome refinous bodies, particularly from benzoine, of a different nature from the foregoing, and fuppofed by fome of the chemifts to be a part of the effential oil of the refin, coagulated by an acid, with the acid more predominant, or more difengaged, than in the other kinds of coagulated or indurated oils. These concretes diffolve both in water and in vinous spirits, though difficultly and sparingly in both: they shew fome marks of acidity, have a considerable share of smell like that of the refin 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.

General observations on the foregoing principles.

I. ESSENTIAL oils, as already obferved, are obtainable only from a few vegetables, and camphor from a much fmaller number: but grofs oil, refin, gum, and faline matter, appear to be common, in greater or lefs proportion, to all; fome abounding more with one, and others with another.

2. The feveral principles are in many cafes intimately combined; fo as to be extracted together from the fubject, by those diffolvents, in which fome of them, feparately, could not be diffolved. Hence watery infusions, and spirituous tinctures of a plant contain, refpectively, more than water or spirit is the proper diffolvent of.

3. After

3. After a plant has been fufficiently infufed in water, all that fpirit extracts from the refiduum may be looked upon as confifting wholly of fuch matter as directly belongs to the action of fpirit. And contrariwife, when fpirit is applied first, all that water extracts afterwards may be looked upon as confisting only of that matter of which water is the direct diffolvent.

4. If a vegetable fubftance, containing all the principles we have been speaking of, be boiled in water, the effential oil, whether fluid or concrete, and the camphor, and volatile effential falt, will gradually exhale with the fteam of the water, and may be collected by receiving the fleam in proper veffels placed beyond the action of the heat. The other principles not being volatile in this degree of heat, remain behind: the grofs oil and febaceous matter float on the top : the gummy and faline fubstance, and a part of the refin, are diffolved by the water, and may be obtained in a folid form by ftraining the liquor, and exposing it to a gentle heat till the water has exhaled. The reft of the refin, ftill retained by the fubject, may be extracted by fpirit of wine, and feparated in its proper form, by exhaling the fpirit. On thefe foundations, most of the fubftances contained in vegetables may be extracted, and obtained in a pure state, however they may be compounded together in the fubject.

5. Sometimes one or more of the principles is found naturally difengaged from the others, lying in diffinct receptacles within the fubject, or extravalated and accumulated on the furface. Thus, in the dried roots of angelica, cut longitudinally, the microfcope difcover veins of refin. In the flower-cups of hypericum, and the leaves of the orange tree, transparent points are diffinguished by the naked eye, which, on the first view, feem to be holes, but, on a clofer examination, are found to be little veficles filled with effential oil. In the bark of the fir, pine, larch, and fome other trees, the oily receptacles are extremely numerous, and fo copioufly fupplied with the oily and refinous fluid, that they frequently burft, efpecially in the warm climates, and difcharge their contents in great quantities. The acacia tree in Egypt, and the plum and cherry among ourfelves, yield almost pure gummy exudations. From a species of afh is fecreted the faline fweet fubftance manna; and the only kind of fugar with which the ancients were acquainted, appears to have been a natural exudation from the cane.

6. The foregoing principles are, fo far as is known, all that naturally exift in vegetables; and all that art can extract from them, without fuch operations as change their nature, and deftroy their original qualities. In one or more of these principles, the colour, fmell, tafte, and medicinal virtues of the fubject, are almost always found concentrated.

7. In fome vegetables, the whole medicinal activity refides in one principle. Thus, in fweet almonds, the only medicinal prin-7 ciple Chap. 2.

ciple is a grofs oil ; in horfe-radifh root, an effential oil ; in jalap root, a refin ; in marshmallow root, a gum ; in the leaves of forrel, a faline acid substance.

8. Others have one kind of virtue refiding in one principle, and another in another. Thus Peruvian bark has an aftringent refin, and a bitter gum; wormwood, a ftrong flavoured effential oil, and a bitter gum-refin.

9. The grofs infipid oils and febaceous matters, the fimple infipidgums, and the fweet and acid faline fubftances, appear to nearly agree, refpectively, among themfelves, in their medicinal qualities, as well as in their pharmaceutic properties.

10. But effential oils, refins, and gum-refins, differ greatly in different subjects. As effential oils are universally the principle of odour in vegetables, it is obvious that they must differ in this respect as much as the fubjects from which they are obtained. Refins frequently partake of the oil, and confequently of the differences depending thereon ; with this further diverfity, that the grofs refinous part often contains other powers than those which refide in oils. Thus from wormwood a refin may be prepared, containing not only the ftrong fmell and flavour, but likewife the whole bitternefs of the herb ; from which last quality the oil is entirely free. The bitter, aftringent, purgative and emetic virtues of vegetables refide generally in different forts of refinous matter, either pure, or blended with gummy and faline parts; of which kind of combinations, there are many fo intimate, that the component parts can fcarcely be separated from one another, the whole compound diffolving almost equally in aqueous and spirituous menstrua.

11. There are fome fubftances alfo, which, from their being totally diffoluble in water, and not at all in fpirit, may be judged to be mere gums; but which, neverthelefs, poffefs virtues never to be found in the fimple gums. Such are the aftringent gum called acacia, and the purgative gum extracted from aloes.

12. It is fuppoled that vegetables contain certain fubtile principles or prefiding fpirits, different in different plants, of too great tenuity to be collected in their pure ftate, and of which oils, gums, and refins are only the matrices or vehicles. This enquiry is foreign to the purpoles of pharmacy, which is concerned only about groffer and more fenfible objects. When we obtain from an odoriferous plant an effential oil, containing in a fmall compafs the whole fragrance of a large quantity of the fubject, our intentions are equally anfwered, whether the fubftance of the oil be the direct odorous matter, or whether it have diffuled through it a fragrant principle more fubtile than itfelf. And, when this oil, in long keeping, lofes its odour, and becomes a refin, it is equal in regard to the prefent confiderations, whether the effect happen from the avolation of a fubtile principle, or from a change produced in the fubftance of the oil itfelf

This

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Animals.

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

Animal oils and fats, like the grofs oils of vegetables, are not, of themfelves, diffoluble either in water or vinous fpirits; but they may be united with water by the intervention of gum or mucilage; and most of them may be changed into foap, and thus rendered mifcible with spirit, as well as water, by fixt alkaline falts.

The odorous matter of fome odoriferous animal fubftances, as mufk, civet, caftor, is, like effential oil, foluble in fpirit of wine, and volatile in the heat of boiling water. Cartheufer relates, that from caftor an actual effential oil has been obtained, in a very fmall quantity, but of an exceedingly ftrong diffusive fmell.

The veficating matter of cantharides, and those parts of fundry animal substances, in which their peculiar tastes refide, are diffolved by rectified spirit, and seem to have some analogy with refins and gummy refins.

The gelatinous principle of animals, like the gum of vegetables, diffolves in water, but not in fpirit or in oils: like gums alfo, it renders oils and fats mifcible with water into a milky liquor.

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

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

THE foft and fluid parts of animals are ftrongly difpofed to rum into putrefraction : they putrefy much fooner than vegetable matters, and, when corrupted, prove more offenfive.

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This procefs takes place, in fome degree, in the bodies of living animals ; as often as the juices flagnate 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 interefting experiments and observations of Dr. Pringle. He observes, that if the corruption be great and fudden, a fever or a flux enfue; but that if the accumulation of corrupted matter be fo flow, that the body becomes habituated to the putrefaction, a fcurvy prevails. Hence the frequency of this last distemper, in long voyages, on board unventilated fhips, from corrupted air and provisions ; in marshy countries, from fimilar causes ; and in a less 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 fuppression of dysenteries by aftringents ; and the weaknefs and laxity of the veffels obfervable in Icurvies, &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 state 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 standing 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 scorbutic urine.

The ferum of blood deposits, in putrefaction, a sediment refembling well-digefted pus, and changes to a faint olive green. A ferum, so 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 diffinguished by the green colour which the flesh 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 supposed to produce a contrary effect. Of all the

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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, most of the diaphoretic drugs, and the acrid plants falfely called alkalefcent, as fcurvygrafs and horferadifh, are alfo found to refift putrefaction; and fome of the abforbent earths, as chalk, to promote it.

It is obfervable, that notwithftanding the ftrong tendency of animal matters to putrefaction, yet broths made from them with the admixture of vegetables, inftead of putrefying, turn four. Dr. Pringle finds, that when animal flefh in fubftance is beaten up with bread, or other farinaceous vegetables, and a proper quantity of water, into the confiftence of a pap, this mixture likewife, kept in a heat equal to that of the human body, grows in a little time four; while the vegetable matters, without the flefh, fuffer no fuch change. (See the appendix to Dr. Pringle's obfervations on the difeafes of the army.)

ANIMAL fubftances, burnt in the open air, are refolved, like vegetables, into foot and afhes, but, with this difference, that no fixt alkaline falt can be obtained from the afhes, and that no acid vapour accompanies the fmoke. They emit, during the burning, a fetid fmell, of a peculiar kind, by which animal fubftances may be diftinguifhed at once from all those of the vegetable kingdom. In close vefiels, they give over, after the watery moifture, a volatile alkaline falt, which either concretes into a folid form, or diffolves in the water, and thus composes what is called fpirit; together with an empyreumatic oil, of a more fetid kind than the oils of vegetables: without the least footftep of acid throughout the whole process. A black coal remains, which, in the open air, burns into white afhes void of faline matter.

It was obferved in the preceding fection, that fome few vegetables, in this refolution of them by fire, difcover fome agreement, in their matter, with bodies of the animal kingdom; yielding a volatile alkaline falt in confiderable quantity, with little or nothing of the acid or fixt alkali, which the generality of vegetables afford. In animal fubftances alfo there are fome exceptions to the general analyfis: from animal fats, inflead of a volatile alkali, an acid liquor is obtained, and their empyreumatic oil wants the peculiar offenfivenefs of the other animal oils. Chap. 2.

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SECT. III.

Minerals.

Oils and Bitumens.

IN the mineral kingdom is found a fluid oil, called naphtha or petroleum, floating on the furface of waters, or iffuing from clefts of rocks, particularly in the eaftern countries, of a ftrong fmell, very different from that of vegetable or animal oils, limpid almost as water, highly inflammable, not foluble in fpirit of wine, and more averfe to union with water than any other oils.

There are different forts 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 confistent; and, in these strages, are called *bitumens*.

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

Earths.

In treating of vegetables and animals, we forbore to fpeak of their earthy matters, that the diffinguishing characters of the feveral classes of earthy bodies might be the more easily apprehended, by having them placed here in one fynoptical view : the little impropriety of joining the vegetable and animal earths to the mineral, must be overlooked for the fake of that advantage. Under the mineral earths are included stores, 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 foluble 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,

I. 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 mi-

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neral kingdom. The fine foft chalk, the coarfer limeftones, the hard marbles, the transparent spars, the earthy matter contained in waters, and which, feparating from them, incrustates the fides of caverns, or hangs in icicles from the top, receiving from its different appearances different appellations; how ftrongly foever fome of these bodies have been recommended for particular medicinal purposes, are at bottom no other than different forms of this calcareous earth, fimple pulverization depriving them of the fuperficial characters by which they were diffinguished in the mass. Moft of them contain generally a greater or lefs admixture of fome of the indiffoluble kinds of earth; which, however, affects their medicinal qualities no otherwife, than by the addition which it makes to their bulk. Chalk appears to be one of the pureft, and is therefore in general preferred. They all burn into a ftrong quicklime : in this flate, a part of them diffolves in water, which thus becomes impregnated with the aftringent and lithontriptic powers that have been erroneously afcribed to fome of the earths in their natural flate.

2. The animal calcareous earth : burning into quicklime, like the mineral. Of this kind are oyfter fhells, and all the marine fhells that have been examined; though with fome variation in the ftrength 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 folution in acids than either of the preceding. It is accompanied in the fubjects with a quantity of gelatinous matter, which may be feparated by long boiling in water, and more perfectly by burning in the open air: the earth may be extracted alfo from the bone or horn, though difficultly, by means of acids; whereas vegetables, and the foft parts of animals, yield their pure earth by burning only.

11. Earths foluble with eafe in the vitriolic as well as other acids; and yielding, in all their combinations therewith, faline concretes foluble in water.

1. Magnefia alba: composing with the vitriolic dcid a bitter purgative liquor. This earth has not yet been found naturally in a pure flate. It is obtained from the purging mineral waters and their falts, from the bitter liquor which remains after the cryftallization of fea falt from fea water, and from the fluid which remains uncryftallized in the putrefaction of fome forts of rough nitre. The afhes of vegetables appear to be nearly the fame 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.

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

1. Argillaceous earth : becoming hard, or acquiring an additional bardnefs in the fire. Of this kind of earth there are feveral varieties, differing in fome particular properties : as the purer clays, which, when moiftened with water, form a very vifcous mafs, difficultly diffufible through a larger quantity of the fluid, and flowly fubfiding from it : boles, lefs vifcous, more readily mifcible with water, and more readily fubfiding : and ochres, which have little or nothing of the vifcofity of the two foregoing, and are commonly impregnated with a yellow or red ferrugineous calx.

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

3. Gypfeous earth : reducible by a gentle-heat into a foft 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 felenitæ; the fibrous ftony masses improperly called English tale; 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 : fcarcely alterable by a vehement fire. The maffes of this earth are generally of a fibrous or leafy texture; more or lefs pellucid, bright or glittering; fmooth and unctuous to the touch; too flexible and elaftic to be eafily pulverized; foft, fo as to be cut with a knife. In thefe refpects fome of the gypfeous earths greatly refemble them, but the difference is readily difcovered by fire; a weak heat reducing the gypfeous to powder, while the ftrongeft makes no other alteration in the talky, than fomewhat diminifhing their flexibility, brightnefs, and unctuofity.

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 fix, and the heaviest upwards of nineteen times heavier than an equal bulk of water.

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 fubjects.

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Gold

water,

Gold and filver, how long foever they are continued in fufion, remain unchanged and undiminished. The other metals, if air be admitted to them, are gradually converted, with different degrees of facility, into a powdery or friable fubftance, called *calx*, deftitute of the metallic afpect, and much lighter in proportion to its bulk, than the metal itself. This change in their obvious properties is generally accompanied with a notable alteration in their medicinal virtues: thus quickfilver, which taken into the body in its crude ftate and undivided, feems inactive, when calcined by fire, proves, even in small doses, a ftrong emetic and cathartic, and, in smaller ones, a powerful alterative in chronical diforders; while regulus of antimony, on the contrary, is changed, by the fame treatment, from a high degree of virulence to a ftate of inactivity.

Calces of mercury and arfenic exhale in a heat below ignition : those of lead and bifmuth, 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 glass recover their metallic form and qualities again, by the skilful addition of any kind of inflammable substance that does not contain a mineral acid.

All metallic bodies diffolve in acids; fome only in particular acids, as filver and lead in the nitrous; fome 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 likewife diffolve in alkaline liquors, as copper; and others, as lead, in expressed oils. Fused with a composition of fulphur and fixt alkaline falt, they are all, except zinc, made foluble in water.

All metallic fubftances, diffolved in faline liquors, have powerful effects in the human body, though many of them appear in their pure flate 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 fenfible effect, when united with a fmall portion of vegetable acid into cerufe, difcovers a low degree of the ftyptic and malignant quality, which it fo ftrongly exerts when blended, with a larger quantity of the fame acid, into what is called *faccharum faturni* : and thus mercury, with a certain quantity of the marine acid, forms the violent corrofive fublimate, which by diminifhing the proportion of acid becomes the mild medicine called *mercurius dulcis*.

Acids.

THE mineral acids are diffinguished by the names of the concretes from which they have been principally extracted; the vitriolic from vitriol, the nitrous from nitre or faltpetre, and the marine from common fea falt. They are all highly corrofive, infornuch as not to be fafely touched, unless largely diluted with

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water, or united with fuch fubftances as obtund or fupprefs their acidity. Mixed haftily with vinous fpirits, they raife a violent ebullition and heat, accompanied with a copious difcharge of noxious fumes: a part of the acid unites intimately with the vinous fpirit into a new compound, void of acidity, called dulcified fpirit. It is obfervable, that the marine acid is much lefs difpofed to this union with fpirit of wine, than either of the other two: neverthelefs, many of the compound falts refulting from the combination of earthy and metallic bodies with this acid, are foluble in that fpirit, while thofe with the other acids are not. All thefe acids effervefce ftrongly with alkaline falts, both fixt and volatile, and form with them neutral falts, that is, fuch as difcover 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 diffufed into an incoercible vapour: the vitriolic ftands in need of fo much lefs water for its condenfation as to affume commonly an oily confiftence (whence it is called *oil* of vitriol), and, in fome circumftances, even a folid one. Alkaline falts, and the foluble earths and metals, abforb from the acid liquors only the pure acid part; fo that the water may now be evaporated by heat, and the compound falt left in a dry form.

We have already taken notice of two forts of alkaline falt, the volatile alkali of animals, and the fixt alkali of vegetables. In the mineral kingdom, another fpecies of fixt alkali, different in feveral refpects from the vegetable, is found fometimes in a detached flate, but more plentifully in combination with the marine acid, with which it composes fea falt. From the coalition of the different acids with these three alkalies, and with the feveral foluble earths and metallic bodies, refult a variety of faline compounds, the principal of which will be particularized in the fequel of this work.

The vitriolic acid, in its concentrated liquid flate, is much more ponderous than the other two, emits no vifible vapours in the heat of the atmosphere, but imbibes moifture therefrom, and increases in its weight: the nitrous and marine emit copious corrosive fume, the nitrous yellowish red, and the marine white vapours. If bottles, containing the three acids, be flopt with cork, the cork is found in a little time tinged black by the vitriolic, corroded into a yellow fubftance by the nitrous, and into a whitish one by the marine.

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 diffinguished from all others. This character ferves not only for the acid in its pure flate, but likewife 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 diffinguished also, in compound falts, by another criterion not less ftrongly marked. If any falt containing it be mixed with powdered charcoal, and the mixture exposed, in a close vessel, to a moderate strong fire, the acid will unite directly with the inflammable part of the charcoal, and compose therewith a genuine support. Common brimstone is no other than a combination of the vitriolic acid with a small proportion of inflammable matter. With any kind of inflammable matter that is not volatile in close vessels, as the coal of vegetables, of animals, or of bitumens, this acid compose always the same identical fulphur.

The nitrous acid alfo, with whatever kind of body it be combined, is both diffinguifhed, and extricated therefrom, by means of any inflammable fubftance brought to a flate of ignition : if the fubject be mixed with a little powdered charcoal, and made redhot, a deflagration or fulmination enfues, that is, a bright flame with a hiffing noife, and the inflammable matter and the acid being thus confumed or diffipated together, there remains only the fubflance that was before combined with the acid, and the fmall quantity of the afhes afforded by the coal.

This property of the nitrous acid, of deflagrating with inflammable fubftances, and that of the vitriolic, of forming fulphur with them, ferve not only as criteria of the refpective acids in the various forms and difguifes, but likewife for difcovering inflammable matter in bodies, when its quantity is too fmall to be fenfible on other trials.

If a fixt alkaline falt be united with a vegetable acid, as that of vinegar, into a neutral falt; on adding to this compound fome marine acid, the acetous acid will be difengaged, fo as to exhale totally in a moderate heat, leaving the marine in poffefion of the alkali: the addition of the nitrous will, in like manner, difpoffefs the marine, which now arifes in its proper white fumes, though, without fuch 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 diffolved in an acid, the addition of any earthy body that is diffoluble in that acid will precipitate the metal : a volatile alkaline falt will, in like manner, precipitate the earth: and a fixt alkali will diflodge the volatile; which laft

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laft being readily exhalable by heat, the remaining falt will be the fame 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 fay 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 forfake 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 process, as we shall see hereafter, are founded on it: several of the preparations turn out very different from what would be expected by a perfon 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 underflood. The fubflance printed in capitals, on the top of each feries, has the greateft affinity with that immediately under it, a lefs affinity with the next, and fo on to the end of the feries; that is, if any of the remote bodies have been combined with the top one, the addition of any of the intermediate bodies will difunite them; the intermediate body uniting with the uppermoft body of the feries, and throwing out the remote one. Thus, in the firft feries of the affinities of water, a fixt alkali being placed between the water and inflammable fpirit, it is to be concluded, that, wherever water and fpirit be mixed together, the addition of any fixt alkaline falt will abforb the water, and occafion the pure fpirit to be feparated. Where feveral fubflances are exprefied in one feries, it is to be underflood, that any one of those bodies, which are neareft to the uppermoft, will in like manner difengage from it any one of those which are more remote.

Table of Affinities.

I. WATER : Fixt alkaline falt : Inflammable fpirit.

2. WATER : Inflammable fpirit : Volatile alkaline falt.

3. WATER. Inflammable fpirit : Sundry compound falts.

4. INFLAMMABLE SPIRIT : Water : Oils and Refins.

5. VITRIOLIC ACID: Inflammable principle: Fixt alkaline falts: Calcareous earths calcined: Volatile alkaline falts: Calcareous earths uncalcined: Zinc and Iron: Copper: Silver.

6. NITROUS ACID: Inflammable principle: Fixt alkaline falts: Calcareous earths calcined: Volatile alkaline falts: Calcareous earths uncalcined: Zinc: Iron: Copper: Lead: Mercury: Silver: Camphor.

7. MARINE ACID: Fixt alkaline falts: Calcareous earths calcined : Volatile alkaline falts : 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: Marine acid: Vinegar: Tartar: Oils and Sulphur.

10. SOLUBLE EARTHS : Vitriolic acid : Nitrous acid : Marine acid.

II. INFLAMMABLE PRINCIPLE: Nitrous acid : Vitriolic acid : Metallic fubftances : Fixt alkaline falts :

12. SULPHUR :

Fixt alkali, and Quicklime: Iron: Copper: Lead:

Silver :

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Silver : Regulus of antimony : Mercury : Arfenic :

13. GOLD: Ethereal spirit: Acids.

14. MERCURY: Marine acid : Vitriolic acid : Nitrous acid.

15. LEAD : Vitriolic acid : Marine acid : Nitrous acid : Vinegar : Oils.

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16. SILVER : Marine acid : Vitriolic acid : Nitrous acid. 29

17. COPPER : Vitriolic acid : Marine acid : Nitrous acid.

18. IRON. Vitriolic acid: Marine acid: Nitrous acid.

19. REGULUS OF ANTI-MONY: Vitriolic acid : Nitrous acid : Marine acid.



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CHAPTER III.

Of the Pharmaceutical Apparatus.

ONE of the principal parts of the pharmaceutic apparatus confifts 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 fimple furnace is the common flove, otherwife called the furnace for OPEN FIRE. This is ufually made of an iron hoop, five or fix inches deep: with a grate or fome iron bars acrofs the bottom, for fupporting the fuel. It either flands upon feet, fo as to be moveable from place to place; or is fixt in brickwork. In this latter cafe, a cavity is left under the grate, for receiving the afhes that drop through it; and an aperture or door, in the forepart of this afh-pit, ferves both for allowing the afhes to be occafionally raked out, and for admitting air to pafs up through the fuel. This furnace is defigned for fuch operations as require only a moderate heat; as infufion, decoction, and the evaporation of liquids. The veffel, containing the fubject, is fupported over the fire by a trevet.

A deeper hoop or body, cylindrical, parallelopipedal, widening upwards, elliptical, or of other figures; formed of, or lined with, fuch materials as are capable of fultaining a ftrong fire; with a grate and afh-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 intenfely will the fire burn; provided the width of the chimney is fufficient to allow a free paffage to all the air that the furnace can receive through the grate : for which purpofe, the area of the aperture of the chimney fhould be nearly equal to the area of the interflices of the grate.

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

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Furnaces.

In furnaces whofe chimney is fixed, the fame advantage may be procured on another principle. As the intenfity of the fire depends wholly upon the quantity of air fucceffively paffing through and animating the burning fuel, it is obvious, that the moft vehement fire may be fuppreffed or reftrained at pleafure, by more or lefs clofing either the afh-pit door by which the air is admitted, or the chimney by which it paffes off; and that the fire may be more or lefs raifed again, by more or lefs opening thofe paffages. A moveable plate, or REGISTER, in any convenient part of the chimney, affords commodious means of varying the width of the paffage, and confequently of regulating the heat.

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 fide, and the mouth clear.

In the former, either the upper part of the furnace is contracted to fuch 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 difposition of the chimney, the infide of the furnace cannot be come at from above; a door is made in the fide, a little above the grate, for fupplying fuel, infpecting the matter in the fire, &c.

For performing FUSIONS in this furnace, the crucible, or melting veffel, is placed immediately among the fuel; with a flip of brick, or fome other like fupport, between it and the grate, to keep the cold air, which enters underneath, from firiking on its bottom.

When defigned as a REVERBERATORY, that is, for diffillation in long necks or coated glafs retorts, two iron bars are placed acrofs, above the fire, for fupporting the vefiel, whole neck comes out at an aperture made for that purpofe in the fide. This aperture fhould be made in the fide oppofite to that in which is the door above-mentioned, or at leaft fo remote from it, that the receiver, fitted on the neck of the diffilling vefiel without the furnace, may not lie in the operator's way when he wants to ftir the fire, or throw in frefh 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 cafe, all other paffages into the chimney must be closed up. Here the mouth of the furnace ferves for a door, which may be occasionally covered with a plate or tile. Of this kind is the furnace most commonly ufed for fusion in a crucible.

This laft conftruction, by leaving the mouth of the furnace clear, affords the convenience of letting into it a boiling or evaporating pan, a copper ftill, an iron pot for diffilling hartfhorn, an iron iron fand pot, or other like veffels, of fuch a fize, that they may be fupported on the furnace by their rims. The mouth being thus occupied by the veffels, a door must be made in the fide for fupplying and flirring the fuel.

When a furnace of this kind is defigned only for a SAND BATH, it is most commodious to have the fand placed on a long iron plate furnished with a ledge of freestone or brickwork at each fide. 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 fide of the canal. In this kind of fand-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 veffels, as STILLS, and iron pots for diffilling hartfhorn and aqua-fortis, are fixed in furnaces, a confiderable part of the bottom of the veffel is commonly made to reft upon folid brickwork.

The large ftill, whofe bottom is narrow in proportion to its height, and whofe weight when charged with liquor requires great part of it to be thus fupported, exposes but a fmall furface to the action of the fire underneath. To make up for this difadvantage, the heat, which rifes at the further end of a long narrow grate, is conveyed all round the fides of the vefiel, by a fpiral canal, which communicates at top with a common chimney.

The pots for diffilling hartfhorn and aqua-fortis in the large way have part of their great weight borne up by three firong pins or trunnions, at equal diffances round the pot towards the middle, reaching into a brickwork; fo that lefs fupport being neceffary underneath, a greater furface 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 fand furnace above-mentioned, be carried to a confiderable height above the part where this canal enters it; and it be filled with fuel to the top, and clofely covered; the fuel will burn no higher than up to the upper fide of the canal through which the air paffes off, and, in proportion as this lower part of the fuel confumes, it will be fupplied by that above, which falls down in its place. Hence in this furnace, called an ATHANOR, a conftant heat may be kept up for a confiderable 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 fo much as that the part on fire at bottom may be too ftrongly preffed. A fmall aperture is made oppofite

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opposite to the canal or flew, or a number of openings according to the fize of the furnace and the degree of heat required, for fupplying air, which is more conveniently admitted in this manner than through the grate, as the interffices of the grate are in time choaked up by the afhes.

This furnace is defigned only for heating bodies exterior to it. Its canal or flew, as in the fand furnace already defcribed, paffes under a fand-bath or water-bath ; at the further end of which, it rifes perpendicularly to fuch a height, as may occasion a sufficient draught of air through the fire.

The flew may be fo wide, as to correspond to the whole height of the fire-place. A register or sliding plate, placed between the flew and the furnace, enables us to increase or diminish this height, and confequently the quantity of fire, at pleafure. If the fpace beneath the flew be inclosed to the ground, the heat in this cavity will be confiderable enough to be applicable to fome ufeful purpofes.

WITH regard to the materials of furnaces, the fixt ones are built of bricks, cemented together by fome 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 flick 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 leffened by an admixture of fand, or rather of the fame kind of clay burnt and grofsly powdered.

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

Very commodious portable furnaces, for a business of moderate extent, may be formed alfo of the larger kind of the common blacklead melting pots; by cutting a door at the bottom of the pot for the afh-pit, another above this for the fire-place, and introducing a circular iron grate, of fuch a fize, that it may reft between the two doors. [A particular account of the method of preparing these furnaces for different ules may be seen in the first part of the Commercium Philosophico-technicum.]

Baths.

WHERE a firong degree of heat is requisite, as in the fusion of metals, &c. the veffel 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 veffel employed is either of glass, or of the more tender kinds of earthen ware, the fand-bath or water-bath is used, to defend the vessel from

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the immediate action of the fire, and to render the heat lefs fluctuating.

Both these baths have their particular advantages and inconveniences. In water, the heat is equal through every part of the fluid; whereas in fand, 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 veffels immerfed in it, above a certain degree of heat, viz. that which is fufficient to make it boil, and hence it fecures 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 fand or other like folid intermedia are neceffarily employed. There is this convenience alfo in the fand-bath, that the heat may be readily diminished or increased about any particular veffel, by raising it higher out of the fand, or finking it deeper; that different fubjects may be exposed to different degrees of heat from one fire; and that it keeps the veffels steady. The fand made choice of should be a large coarfe-grained kind, feparated from the finer parts by washing, and from little stones by the fieve.

Coating of glaffes, and Lutes.

Some proceffes require to be performed with glafs veffels in a naked fire. For these purposes, veffels 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 ftronger.

All glaffes, or other veffels that are apt to crack in the fire, muft be cautioufly nealed, that is, heated by flow degrees : and when the procefs is finished, they should be as flowly cooled, unless where the veffel 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 feces by a blow.

As a defence from the violence of the fire, and to prevent the contact of cold air on fupplying frefh fuel, &c. the glafs is to be coated over, to the thicknefs of about half a crown, with Windfor loam, foftened with water into a proper confiftence, and beaten up with fome horfe-dung, or with the other clayey compositions already mentioned.

These compositions ferve also as a lute, for securing the junctures of the vessels in the diffillation of the volatile falts and spirits of animals: for the diffillation of acid spirits, the matter may be moiftened with a solution of fixt alkaline falt instead of water. For most other purposes, a piece of wet bladder, or a passe of flour and water, or of linsed meal (that is, the cake left after the expression)

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Veffels.

of oil of linseed) are sufficient lutes. The few simple lutes, here defcribed, will be found to answer all the purposes of the more operofe compositions recommended for these intentions by the chemical writers.

Veffels.

IT would be needlefs to enter here into a particular detail of the pharmaceutical inftruments; as we shall have occasion to mention the principal of them in the following chapter, in fpeaking of the feveral 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 veffels defigned for containing the fubject.

Metalline veffels, except those made of gold or filver, are corroded by acids, even by the milder ones of the vegetable kingdom. Copper ones are corroded alfo by alkaline liquors, and by fome neutral ones, as folutions of fal ammoniac : it is observable, that vegetable acids do not act upon this metal by boiling, fo much as by ftanding in the cold; for even lemon-juice may be boiled in a clean copper veffel, without receiving from it any tafte or ill quality; whereas, in the cold, it foon diffolves fo much as to contract a pernicious taint. The tin, with which copper veffels are ufually lined, gives likewife a fenfible impregnation to acid juices; and this impregnation alfo is probably not innocent, more especially as a quantity of lead is commonly mixed with the tin.

The common EARTHEN vefiels are of a loofe porous texture, and hence are apt to imbibe a confiderable quantity of certain liquids, particularly of those of the faline kind; which foon discover their penetrating the vefiel, by fhooting into faline efflorescences on the outfide. Those which are GLAZED have their glazing corroded by acids; by vinegar, and the acid juices of fruits, as well as by the ftronger acids of the mineral kingdom. And as this glazing confifts chiefly of vitrified lead, the impregnation, which it communicates to these liquors, is of a very dangerous kind : if vinegar be boiled for fome time in a glazed earthen veffel, it will yield, on being infpiffated, a true faccharum faturni, that is, a falt composed of lead and the acetous acid, of which hereafter.

The veffels called, from their hardnefs and compactnefs, STONE WARE, are in good measure free from the inconveniences of the coarfer earthen ones. Their glazing, being a part of the clay itfelf superficially vitrified by means of the fumes of common falt, appears to be proof against acids.

GLASS veffels fuffer no corrofion, and give no taint, in any of the pharmaceutic operations. These therefore, in such processes as will admit their use, ought always to be preferred.

Weights.

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Weights.

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

The goldsmiths divide the Troy pound into twelve ounces; the ounce into twenty pennyweights; and the pennyweight into twenty-four grains. The Averdupois pound is divided into fixteen ounces; and the ounce into eight parts, called drams.

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

The pound	c twelve Ounces.	
The Ounce	contains] eight Drams.	
The Dram	three Scruples.	
The Scruple	Ltwenty Grains.	

The grain is equal to the goldfmiths' grain.

The medical or Troy pound is lefs than the Averdupois, but the ounce and the dram greater. The Troy pound contains 5670 grains; the Averdupois 7000 grains. The Troy ounce contains 480 grains; the Averdupois only $437\frac{1}{2}$. The Troy dram 60; the Averdupois dram fomewhat more than 27. Eleven drams Averdupois are equal to five drams Troy; twelve ounces Averdupois to nearly eleven ounces Troy; and nineteen pounds Averdupois to fomewhat more than twenty-three pounds Troy.

Thefe differences in our weights have occafioned great confusion in the practice of pharmacy. As the druggifts and grocers fell by the Averdupois weight, the apothecaries have not in general kept any weights adjusted to the Troy pound greater than two drams, using for all above Averdupois. By this means it is apparent, that in all compositions, where the ingredients are preferibed fome by pounds and others by ounces, they are taken in a wrong proportion to each other; and the fame happens when they are directed in leffer denominations than the ounce, as these fubdivisions, used by the apothecaries, are made to a different ounce. The mercurial plaster of the late Pharmacopœia, and the mercurial cerate of the prefent, if compounded by the Averdupois weight, contain about one-fixth lefs quickfilver than if made, as they ought to be, by the Troy. This error prevailed fo far as to be received in fome former editions of the London Pharmacopœia itfelf; but is now happily removed.

Meafures.

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

A Gallon

Measures.

A Gallon The Pint The Ounce $\begin{cases} \text{contains} \\ \text{fixteen Ounces.} \\ \text{eight Drams.} \end{cases}$

By a fpoonful is underftood, in the London difpenfatory, the measure of half an ounce; in the Edinburgh, half an ounce weight in fyrups, and three drams in diffilled 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 exceeds it by upwards of three ounces; and a pint of oil of vitriol weighs more than two pounds and a quarter.

A table of the weights of certain meafures of different fluids may on many occasions be useful, both for affisting 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 dram 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.

a action of the construct of any cri	em junas.	
	Pint weighs Weig	ure meafure
INFLAMMABLE SPIRITS.	ounces drams grains grains	
Æthereal Spirit of Wine Highly-rectified Spirit of Wine Common-rectified Spirit of Wine	11 1 36 33 12 5 20 38 13 2 40 40	0 471
Proof Spirit Dulcified Spirit of Salt Dulcified Spirit of Nitre	14 I 36 42 14 4 48 43	6 53 8 55
WINES.	15 2 40 460	D 57 ±
Burgundy	14 1 36 426 15 1 36 456	5 57
Expressed Oils.	15 6 40 475	5 59
Oil Olive	14 0 0 420 14 2 8 428	
ESSENTIAL Oils. Oil of Turpentine	12 1 4 364	451
of Orange Peel	408	51 52
D 3	States States	Oil

Table of the weights of different fluids.

Elements of Pharmacy.

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Part I.

	Pint	weighs	Ounce meafure weighs	Dram meafure weighs
	ounces	drams grains	grains	grains
O'L C D C	0		T LAN F	Number 8
Oil of Rofemary	-	-	430	54
of Origanum	-	4 - • [] 1	432	54
of Nutmegs	12	-	432 436	54 54 ¹ / ₂
of Savin	-	-	443	551
of Hyffop	-	-	443	551
of Cummin Seed	-	-	448	56
of Mint	-	-	448	56
of Pennyroy21	-	-	450	564
of Dill Seed	-		457	-57
of Fennel Seed of Cloves	-	-	458	57
of Cioves	-	1717	476	591
of Saffafras	12		476	59 [±] 63
of cultures			202	03
ALKALINE LIQUORS.				
Lixivium faponarium, Pharm. Lond	I	600	480	60
Spirit of Sal ammoniac	I	7 1 10	515	641
Strong Soapboilers' ley	I	7 6 24	534	67
Lixivium tartari	2	400	720	90
A cre traines			151387	
ACID LIQUORS. Wine Vinegar		11	1-161	-0
D VI		5 3 44		58 59 [±]
Glauber's Spirit of Salt		740		
Glauber's Spirit of Nitre		20 2 40		
Strong oil of Vitriol -		28 5 20		1071
			1 2 1 2	1 1 -
ANIMAL FLUIDS.			1	
Urine		15 5 20		
Cows' milk		15 6 40		59 ¹ / ₂
Affes' milk		16 0 0		and the second se
Blood	-	16 I 4	484	601
WATERS.	2		1 De_	C
Diftilled water	-	15 1 50	456	57
Rain water		15 2 40	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Spring water -		15 3 1		
Sea Water		15 5 20		
QUICKSILVER		14 5 20	and the second second second	
in 100 and the second second	-		- orginical	ALCON TO A

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CHAPTER IV.

Of the Pharmaceutical Operations.

SECT. I.

Solution.

SOLUTION is an intimate commixture of folid bodies with fluids into one feemingly homogene liquor. The diffolving fluid is called a MENSTRUUM or SOLVENT.

The principal menstrua made use of in pharmacy, are, water, vinous spirits, 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 fciences of Berlin for the year 1750, from which the following table is extracted.

Table of the folubility of fluids.

Eight ounces by weight of diffilled water diffolved

21 2 4 20			8415	oz.	dr.	gr.	
Of Refined Sugar	-	5. 63 To Shari	-	24	0	0	
Green Vitriol	-	1.00 - 1.00	-	9	4	0	
Blue Vitriol	-	A	-	9	0	0	Ĺ
White Vitriol .		-	-	4	4	0	
Epfom Salt -			-	4	0	ó	Ċ,
Purified Nitre -	(. · · ·	-	- /	4	ò	0	
Soluble Tartar -	1		-	4	0	0	
Common Salt -			-	3	4	0	
Sal gemmæ –	-	-	-	3	T	0	Ê
Sal catharticus Glauber	i		-	3	4	0	
' Seignette's Salt	-	1. 1. 1. 1. 1.	- 1	3	40	0	4
Alum -	-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		2		0	
Sal ammoniac -			1	1 1 1 1 1 1	4	1000	
Vitriolated Tartar	1		9-9-5	2	4	0	
Salt of Hartfhorn	-0.2	174, 773, 747, 747, 747, 74	-	I	4	0	
Sugar of Lead -		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	an interest	I	4		
Cream of Tartar		-	-	I	2	0	
		-	-	I	0	0	
Borax	-		-	0	4	20	
	D4			1	TI	hough	1

Though great care appears to have been taken in making thefe experiments, it is not to be expected, that the proportions of the feveral falts, foluble in a certain quantity of water, will always be found exactly the same with those just set down. Salts differ in their folubility, according to the degree of their purity, perfection, and drynefs : the vitriols, and the artificial compound falts in general, differ remarkably in this refpect, according as they are more or lefs impregnated with the acid ingredient. Thus vitriolated tartar, perfectly neutralized, is extremely difficult of folu-The matter which remains in making Glauber's fpirit of tion. nitre (See Part III. Chap. viii. Sect. 6.) is no other than a vitriolated tartar, and it diffolves fo 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 diffolves with eafe. Hence many have been tempted to use an over-proportion of acid in this preparation, and we frequently find in the fhops, under the name of vitriolated tartar, this acid foluble falt. The degree of heat occafions also a notable difference in the quantity of falt taken up: in very cold weather, eight ounces of water will diffolve only about one ounce of nitre ; whereas, in warm weather, the fame quantity will take up three ounces or more. To these circumftances are probably owing, in great part, the remarkable differences in the proportional folubilities of falts, as determined by different authors. It is observable, that common falt is less affected in its fo-Jubility, by a variation of heat, than any other falt; for water in a temperate flate will diffolve nearly as much of it as very hot water; and accordingly this is the falt in which the different experiments agree the beft. In the experiments of Hoffmann, Neumann, and Petit, the proportion of this falt, on a reduction of the numbers, comes out exactly the fame, viz. three ounces of the falt to eight of water. Dr. Brownrigg makes the quantity of falt a little more; Dr. Grew, a dram and a fcruple more; and Eller, as appears in the above table, four drams more. So, in the trials of fix different perfons, made probably in different circumftances, the greateft difference is only one-fixth of the whole quantity of falt ; whereas in fome other falts there are differences of twice or thrice the quantity of the falt. 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-feventh of the interval between freezing and the human heat.

Some falts omitted by Eller are here subjoined. The first is taken from Dr. Grew, and the other sour from Neumann. Chap. 4.

Solution.

Eight ounces of water diffolved

						gr.	I
Of fixt alkaline Salt	and the - and - and	-	above	8	0	0	ľ
Sal diureticus		- 97		8	0	0	I
Sugar-Candy, both b	rown and white	-		9	0	0	ł
Sugar of Milk	-		-	O	2	40	1
Effential Salt of Sor	rel –	-	-	0	I	20	

Though water takes up only a certain quantity of one kind of falt, yet, when faturated with one, it will ftill diffolve fome portion of another; and, when it can bear no more of either of thefe, it will ftill take up a third, without letting go any of the former. The principal experiments of this kind, that have been made, relative to pharmaceutic fubjects, 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,

			2010	State of the second second second	and the second s
fully faturated with		diffoly	ed a	fterwards	
Nitre -	- 1	Sal ammoniac	10	and the second second	100
Common Salt -	-	Nitre -	IO	Sal ammoniac	2
Nitre -	-	Fixt Alkali	7	Common Salt	2
Common Salt	-	Nitre, near	2	Fixt Alkali	21
	-	Nitre -	4	Sugar -	2
Sal ammoniac	-	Common Salt	21		-
Soluble Tartar	-	Nitre -	2		
Vitriolated Tartar	-	Fixt Alkali	2	in all been line	
	-	Nitre -	TI	Sugar -	T
Epfom Salt -	-	Sugar -	6	5.5	-
Borax	-	Fixt Alkali	2		
	1		- 1		

In regard to the other clafs of bodies for which water is a menftruum, viz. thofe of the gummy and gelatinous kind, there is no determinate point of faturation : the water unites readily with any proportions of them, forming with different quantities, liquors of different confiftences. This fluid takes up likewife, when affifted by trituration, the vegetable gummy refins, as ammoniacum and myrrh ; the folutions of which, though IMPERFECT, that is, not transparent, but turbid, and of a milky hue, are nevertheles applicable to valuable purposes in medicine. It mingles with vinous spirits, with acid and alkaline liquors, not with oils, but imbibes fome of the more fubtile parts of effential oils, fo as to become impregnated with their science and tafte.

Rectified SPIRIT OF WINE is the menftruum of the effential oils, refins and camphor of vegetables; of the pure diffilled oils, and feveral

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Part I.

ALKA-

feveral of the colouring and medicinal parts of animals; of fome mineral bituminous fubftances, as of ambergris; and of foaps, though it does not act upon the expressed oil and fixt alkaline falt, of which foap is composed; whence, if foap contain any fuperfluous quantity of either the oil or falt, it may, by means of this menstruum, be excellently purified therefrom. It disfolves, by the affistance of heat, volatile alkaline falts; and, more readily, the neutral ones, composed either of fixed alkali and the acetous acid, as the fal diureticus, or of volatile alkali and the nitrous acid, as also the falt of amber, &c. It mingles with water and with acids; not with alkaline lixivia.

OILS diffolve vegetable refins and balfams, wax, animal fats, mineral bitumens, fulphur, and certain metallic fubftances, 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 fustaining, without injury, a strong heat, which is, in most cases, necessary to enable them to act. It is faid, that one ounce of fulphur will disfolve in three ounces of expressed oil, particularly that of linsed, but requires fix ounces of effential oil, as that of turpentine.

All ACIDS diffolve alkaline falts, alkaline earths, and metallic fubftances. The different acids differ greatly in their action upon thefe laft; one diffolving only fome particular metals; and another, others.

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

The marine acid diffolves zinc, iron and copper; and though it fcarce acts on any other metallic fubftance in the common way of making folutions, it may neverthelefs be artfully combined with them all except gold: the corrofive fublimate, and antimonial cauftic of the fhops, are combinations of it with mercury and the metallic part of antimony, effected by applying the acid, in the form of fume, to the fubjects, at the fame time alfo ftrongly heated.

The nitrous acid is the common menftruum of all metallic fubflances, except gold and the metallic part of antimony; of which two, the proper folvent is a mixture of the nitrous and marine acids, called aqua regia.

The vitriolic acid, diluted with water, eafily diffolves zinc and iron: in its concentrated flate, and affifted by a boiling heat, it may be made to corrode, or imperfectly diffolve, most of the other metals. ALKALINE *lixivia* diffolve oils, refinous fubftances, and fulphur. Their power is greatly promoted by the addition of *quick-lime*: inftances of which occur in the preparation of foap, and in the common cauftic. Thus acuated, they reduce the flefh, bones, and other folid parts of animals, into a gelatinous matter.

Solutions made in water, and in fpirit of wine, poffefs the virtues of the body diffolved; while oils generally fheathe its activity; and acids and alkalies vary its quality. Hence watery and fpirituous liquors are the proper menftrua of the native virtues of vegetable and animal matters.

Moft of the foregoing folutions are eafily effected, by pouring the menftruum on the body to be diffolved, and fuffering them to ftand together, for fome time, exposed to a fuitable warmth. A ftrong heat is generally requifite to enable oils and alkaline liquors to perform their office: nor will acids act on fome metallic bodies without its affiftance. The action of watery and fpirituous menftrua is likewife expedited by a moderate heat; though the quantity, which they afterwards keep diffolved, is not, as fome fuppofe, 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, fubfide again: this at least is most commonly the case, though there may be fome inftances of the contrary.

The action of acids on the bodies which they diffolve, is generally accompanied with heat, effervescence, and a copious difcharge of fumes. The fumes which arise during the diffolution 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, lett, by the imprudent approach of a candle, the exhaling vapour be set on fire.

There is another species of solution, in which the moisture of the air is the menstruum. Fixt alkaline falts and those of the neutral kind, composed of alkaline falts, and the vegetable acids, or of soluble earths and any acid except the vitriolic, and some metallic falts, on being exposed for some time to a moist air, gradually attract its humidity, and at length become liquid. Some fubstances, not diffoluble by the application of water in its groffer form, as the butter of antimony, are easily liquefied by this flow action of the aereal moisture. This process is termed DELIQUIA-TION.

SECT. II.

Extraction.

THE liquors which diffolve certain fubstances in their pure state, serve likewise to extrast them from admixtures of other matter. Thus rectified spirit of wine, the menstruum of effential oils oils and refins, takes up the virtues of the refinous and oily vegetables; as water does those of the mucilaginous and faline; the inactive earthy parts remaining untouched by both. Water extracts likewise from many plants, substances, upon which by themfelves it has little effect; even effential oils being, as we have formerly observed, rendered soluble in that fluid, by the admixture of gummy and faline matter, of which all vegetables participate in a greater or less degree. Thus many of the aromatic plants, and most of the bitters and aftringents, yield their virtues to this mensftruum.

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.

The term digestion is fometimes used for maceration, and, in this cafe, the process is directed to be performed without heat : where this circumftance is not expressed, digeftion always implies the use 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 disposition of the veffels, condensed and conveyed back upon the fubject. Digeftion is usually performed in a matrass (or bolthead), Florence flask, 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 answer the purpose as effectually; the vapour cooling and condenfing before it can rife to the top. In a veffel of this kind, even fpirit of wine, one of the most volatile liquors we know, may be boiled without any confiderable lofs. The use of this inftrument is likewife free from any inconvenience, which may, in fome cafes, attend the other, of the uppermost vessel being burst or thrown off. As the long-necked matraffes here recommended are difficultly filled or emptied, and likewife very dear, a long glass pipe may be occafionally luted to the fhorter ones.

Heat greatly expedites extraction; but by thefe means proves as injurious to fome fubftances, by occafioning the menftruum to take up their groffer and more ungrateful parts; as it is neceffary for enabling it to extract the virtues of others. Thus guaiacum or logwood impart little to aqueous liquors, without a boiling heat, whilft even a fmall degree of warmth proves greatly prejudicial to the fine bitter of carduus benedictus. This plant, which, infufed in boiling, or digefted in fenfibly hot water, gives a naufeous tafte, fo offenfive to the ftomach as to promote vomiting; yields to the cold element a grateful balfamic bitter, the moft elegant ftomachic of the fnops.

Chap. 4.

Depuration.

As heat promotes the diffolving power of liquids; fo cold, on the other hand, diminishes it. Hence tinctures, or extractions made by a confiderable heat, deposit in cold weather a part of their contents, and thus become proportionably weaker: a circumftance which deferves particular regard.

SECT. III.

Depuration.

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

Thin fluids readily deposit their more ponderous impurities, upon flanding at reft for fome time, in a cool place; and may then be DECANTED, or poured off clear, by inclining the vefiel.

Glutinous, unctuous, or thick fubstances, are to be liquefied by a fuitable heat; when the groffer feculencies will fall to the bottom; the lighter arifing to the furface, to be DESPUMATED or fcummed off.

Where the impurities are neither fo ponderous as to fubfide freely to the bottom, nor fo light as to arife readily to the furface; they may be feparated in great measure by COLATURE through ftrainers of linen, woollen, or other cloth; and more perfectly by FILTRA-TION through a foft bibulous kind of paper made for this use.

The grey paper, which covers pill-boxes as they come from abroad, is one of the beft for this purpole : it does not eafily break when wetted, or tinge the liquor which paffes through it, which the reddifh fort, called *bloffom* paper, frequently does. The paper is fupported by a funnel, or piece of canvas fixed in a frame. When the funnel is ufed, it is convenient to put fome ftraws or fmall fticks between the paper and its fides, to prevent the weight of the liquor from preffing the paper fo clofe to it, as not to allow room for this fluid to tranfude. In fome cafes a funnel made of wire is put betwixt the paper and the glafs funnel. There is alfo a kind of glafs funnel, with ridges down its fides, made on purpofe for this ufe.

Glutinous and unctuous liquors, which do not eafily pais through the pores of a filter or ftrainer, are CLARIFIED, by beating them up with the whites of eggs, which, concreting or growing hard when heated, and entangling the impure matter, arife with it to the furface : the mixture is to be gently boiled, till the fcum begins to break, when the veffel is to be removed from the fire, the cruft taken off, and the liquor paffed through a flannel bag.

Decan-

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Decantation, colature, and filtration, are applicable to most of the medicated liquors that stand in need of purification. Defpumation and clarification very rarely have place; fince 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 fourmed or clarified (as some have been accustomed to do) 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 obferve, that the common forts of filtering paper are apt to communicate a difagreeable flavour : and, hence, in filtering fine bitters, or other liquors, whofe gratefulnefs is of primary confequence, the part, which paffes through first, ought to be kept apart for inferior purposes.

SECT. IV.

Crystallization.

WATER, affifted by heat, diffolves a larger proportion of faline fubftances than it can retain when grown cold: hence, on the abatement of the heat, a part of the falt feparates from the menftruum, and concretes at the fides and bottom of the veffel. The concretions, unlefs too haftily formed by the fudden cooling of the liquor, or diffurbed in their coalefcence by agitation, or other like caufes, prove transparent, and of regular figures, refembling in appearance the natural fprig-CRYSTALS.

Salts, diffolved in a large quantity of water, may, in like manner, be recovered from it in their cryftalline form, by boiling down the folution, till fo much of the fluid has exhaled, as that the remainder will be too little to keep the falt diffolved when grown perfectly cold. It is cuftomary to continue the evaporation, till the falt fhews a difpofition to concrete even from the hot water, by forming a pellicle on that part which is leaft hot, viz. on the furface. If large, beautiful and perfectly-figured cryftals are required, this point of time is fomewhat too late : for if the falt thus begin to coalefce whilft confiderably hot, on being removed into a cold place, its particles will run too haftily and irregularly together ; the pellicle at the fame time falling down through the liquor, and thus proving a further diffurbance to the regularity of the cryftallization.

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

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not

Chap. 4.

Crystallization.

not cold place, and covered with a cloth, to prevent the access of cold air, and confequently the formation of a pellicle.

All the alkaline falts are excluded from this operation; fixt alkalies never affuming a cryftalline form; and the volatile ones efcaping before the menftruum exhales. Some even of the neutral kind, particularly thofe, of which certain metallic bodies are the bafis, are fo ftrongly retained by the aqueous fluid, as not to exhibit any appearance of cryftallization, unlefs fome other fubftance be added, with which the water has a greater affinity. The table of affinity fhews, that fuch a fubftance is fpirit of wine; by the prudent addition of which, thefe kinds of falts feparate freely from the menftruum, and form large and beautiful cryftals, fcarce obtainable by any other means.

The operator must be careful not to add too much of the spirit; left, 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 falts require different quantities of water to keep them diffolved : and, hence, if a mixture of two or more be diffolved in this fluid, they will begin to feparate and cryftallize at different periods of the evaporation. Upon this foundation, falts are freed, not only from fuch impurities, as water is not capable of diffolving and carrying through the pores of a filter, but likewife from admixtures of one another; that which requires moft water to diffolve it, fhooting first into cryftals.

SECT. V.

Precipitation.

BY this operation, bodies are recovered from their folutions, by means of the addition of fome other fubftance, with which either the menftruum, or the body diffolved, have a greater affinity than they have with one another.

Precipitation, therefore, is of two kinds; one, where the fubftance fuperadded unites with the menftruum, and occafions that before diffolved to be thrown down : the other, in which it unites with the diffolved body, and falls along with it to the bottom. Of the first we have an example in the precipitation of fulphur from alkaline lixivia, by the means of acids; of the fecond, in the precipitation of mercury from aqua-fortis by fea falt, or its acid.

The fubjects 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 fimple, as not to stand in need of any particular directions; rections; no more being required, than to add the precipitant by degrees, fo long as it continues to occasion any precipitation. When

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 rufty or greafy matter; otherwife they will not readily, if at all, dissolve, and confequently the precipitation will not fucceed; for the fubstance to be precipitated feparates 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 fufficiently 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 falt is diffolved in water, and fulphur diffolved in this lixivium; the addition of acids feparates and throws down the fulphur, only by virtue of the acid's uniting with, and neutralizing the alkali by which the fulphur was held diffolved : confequently, if the precipitation be made with the vitriolic acid, and the acid gradually dropt in till the alkali be completely fatiated, that is, fo long as it continues to occasion any precipitation or turbidness, the liquor will yield, by proper evaporation and cryftallization, a neutral falt, 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 falt called spiritus falis marini coagulatus; and if with the acid of vinegar, the fal diureticus.

SECT. VI.

Evaporation.

THIS is a third method of recovering folid bodies from their folutions, effected by the means of heat; which evaporating the fluid part, that is, forcing it off in fleam, the matter which was diffolved therein is left behind in its folid form.

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

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Water

Chap. 4.

Distillation.

Water extracts the virtues of fundry fragrant aromatic herbs, almost as perfectly as rectified spirit of wine : but the aqueous infusions are far from being equally fuited to this process, with those made in fpirit ; 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, tafte, and virtues of the herb ; while a tincture drawn with pure fpirit, yields, on the fame treatment, a thick balfamic liquid, or folid gummy refin, 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 ; otherwife the matter, as it grows thick, will burn to the veffel, and contract a difagreeable fmell and tafte : this burnt flavour is called an empyreuma. The liquor ought to be kept ftirring during the evaporation; otherwife a part of the matter concretes on the furface exposed to the air, and forms a pellicle which impedes the further evaporation. (More particular directions, for performing this operation to the greatest advantage, will be given hereafter in the fecond part.)

SECT. VII.

Distillation.

IN the foregoing operation fluids are rarefied by heat into fleam or vapour, which is fuffered to exhale in the air, but which the bufinefs of diffillation is to collect and preferve. For this purpofe the fleam is received in proper veffels, luted to that in which the fubject is contained; and being there cooled, condenfes into a fluid form again.

There are two kinds of diffillation : by the one, the more fubtile and volatile parts of liquors are elevated from the groffer; by the other, liquids, incorporated with folid 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 fuch of the active parts of vegetables as are capable of being extracted by boiling water or fpirit, and at the fame time arifing along with their fleam.

As boiling water extracts or diffolves the effential oils of vegetables, while blended with the other principles of the fubject, without faturation, but imbibes only a determinate, and that a fmall proportion of them in their pure ftate ; as thefe oils are the only fubstances 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, refide; it is evident, that water may be impregnated, by distillation,

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with the more valuable parts of many vegetables: that this impregnation is limited, the oil arifing in this process pure from those parts of the plant which before rendered it foluble 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 finks to the bottom or swims on the surface): and that, confequently, 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 *cohobating*, or re-distilling them from fresh ingredients. See Part II. Chap. v. Sect. 2.

As the oils of many vegetables do not freely diffil with a lefs heat than that in which water boils; as rectified fpirit of wine is not fufceptible of this degree of heat; and as this menftruum totally diffolves these oils in their pure state, it follows, that spirit elevates far less from most vegetables than water; but that nevertheless the diffilled spirit, by keeping all that it does elevate perfectly diffolved, may, in some cases, prove as firong of the subject as the diffilled water.

The apparatus made use of for diffilling spirits, waters, and oils, confift 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 feveral processes to the greatest advantage.

It may be obferved, that as the parts which are preferved in evaporation cannot arife in diffillation, the liquor remaining after the diffillation, properly depurated and infpiffated, will yield the fame extracts as those prepared from the tincture or decoction of the fubject made on purpose for that use; the one of these operations collecting only the volatile parts, and the other the more fixt; fo that where one subject contains medicinal parts of both kinds, they may thus be obtained diffinct, without one's being injured by the process which collects the other.

The fubjects of the fecond kind of diftillation are, the groß oils of vegetables and animals, the mineral acid fpirits, and the metallic fluid quickfilver; which, as they require a much ftronger degree of heat to elevate them than the foregoing liquors can fuftain, fo they likewife condenfe without arifing fo far from the action of the fire. The diftillation of thefe is performed in low glafs veffels, called, from their necks being bent to one fide, *retorts*: to the further end of the neck a *receiver* is luted, which ftanding without the fur-

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nace, the vapours foon condense in it, without the use of a refrigeratory: nevertheles, to promote this effect, some are accustomed, especially in warm weather, to cool the receiver, by occafionally applying wet cloths to it, or keeping it partly immersed in a vessel of cold water.

The vapours of fome fubftances are fo fluggifh, or ftrongly retained by a fixt matter, as fcarce to arife even over the low neck of the retort. Thefe are most commodiously distilled in straightnecked earthen vessels, called *longnecks*, laid on their fides, fo that the vapour passes off laterally with little or no afcent: 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 diffillations, 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 flowly raising the fire; but more effectually, by leaving a small hole in the luting, to be occasionally opened or stopt with a wooden plug; or inferting at the juncture an upright pipe of such a height, that the steam of the distilling liquor may not be able to rife to the top.

SECT. VIII.

Sublimation.

A S all fluids are volatile by heat, and, confequently, capable of being feparated, in most cases, from fixed matters, by the foregoing process; so various folid bodies are subjected to a similar treatment. Fluids are faid to *distil*, and folids to *sublime*; though fometimes 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 fubjects of this operation are, volatile alkaline falts; neutral falts composed of volatile alkalis and acids, as fal ammoniac; the falt of amber, and flowers of benzoine; mercurial preparations; and fulphur. Bodies, of themselves not volatile, are frequently made to fublime by the mixture of volatile ones: thus iron is carried up by fal ammoniac in the preparation of the flores martiales.

The fumes of folid bodies, in clofe veffels, rife but a little way, and adhere to that part of the veffel where they concrete. Hence a receiver or condenfer is lefs neceffary here than in the preceding operation; a fingle veffel, as a matrafs, or tall vial, or the like, being frequently fufficient. The most commodious apparatus for E_2 the the fublimation of particular fubftances, and the moft advantageous method of conducting the feveral proceffes, will be delivered in the fecond part.

SECT. IX.

Expression.

THE press is chiefly made use of for forcing out the juices of fucculent herbs and fruits; and the infipid eils of the unctuous feeds and kernels.

The harder fruits, as quinces, require to be previoufly well beaten or ground; but herbs are to be only moderately bruifed. The fubject is then included in a hair bag, and preffed betwixt wooden plates, in the common forew-prefs, as long as any juice runs from it. See Part III. Chap. ii.

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 infipid oils of all the uncluous feeds 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 fame time impresses an ungrateful flavour, and increases its dispofition to grow rancid.

The oils expressed from aromatic substances generally carry with them a portion of their effential 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 mustand-feed, for instance, is as soft and void of acrimony as that of almonds, the pungency of the mustand remaining entire in the cake left after the expression.

SECT. X.

Exficcation.

THERE are two general methods of exficcating or drying moift bodies : in the one, their humid parts are exhaled by heat ; in the other, they are imbibed or abforbed by fubftances, whofe foft and fpongy texture adapts them to that ufe. Bodies intimately combined with, or diffolved in, a fluid, as recent vegetables and their juices, require the first : fuch as are only fuperficially mixed, as when earthy or indiffoluble powders are ground with water, are commodioully feparated from it by the fecond.

Vegetables

Part I.

Chap. 4.

Vegetables and their parts are ufually exficcated by the natural warmth of the air : the affiftance of a gentle artificial heat may, neverthelefs, in general, be not only fafely, but advantageoufly had recourse to. By a moderate fire, even the more tender flowers may be dried, in a little time, without any confiderable lofs, either of their odour or lively colour ; which would, both, be greatly injured or deftroyed by a more flow exficcation in the air. Some plants indeed, particularly those of the acrid kind, as horse-radifh, fcurvy-grafs, and arum, lofe their virtues by this procefs, however carefully performed : but far the greater number retain them unimpaired, and often improved.

The thicker vegetable juices may be exficcated by the heat of the fun; or, where this is not fufficient, 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 OF EVAPORATION, has been fpoken of already. The juices of fome plants, as arum root, briony root, orris root, wild cucumbers, &c. feparate, upon flanding for some time, into a thick part, which falls to the bottom; and a thin aqueous one, which fwims above it : this latter is to be poured off, and the first exficcated by a gentle warmth : preparations of this kind have been ufually called FÆCULÆ; that of the wild cucumber, to be spoken of in its place, is the only one which practice now retains.

Indiffoluble bodies mixed with water into a thick confiftence, may be eafily freed from the greatest part of it, by dropping them on a chalk-ftone, or fome powdered chalk preffed into a fmooth mafs, which readily imbibes their humidity. Where the quantity of fluid is large, as in the edulcoration of precipitates, it may be feparated by decantation or filtration.

SECT. XI.

Comminution.

OMMINUTION is the bare reduction of folid coherent bodies into fmall particles or powder. The methods of effecting this are various, according to the texture of the fubject.

Dry friable bodies, or fuch as are brittle and not very hard, and mixtures of these with somewhat moilt ones, are eafily PULVERI-ZED in a mortar.

For very light, dry fubstances, refins, and the roots of a tenacious texture, the mortar may in fome cafes be previoufly rubbed with a little fweet oil, or a few drops of oil to be occafionally added : this prevents the finer powder of the first from flying off, and the others from cohering under the peftle. Camphor is most com-E 3

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

The comminution of the harder minerals, as calamine, cryftal, flint, &c. is greatly facilitated by EXTINCTION; that is, by heating them red-hot, and quenching them in water : by repeating this procefs 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; less, instead of an insipid powder, we produce an acrimonious calx or lime.

Some metals, as tin, though ftrongly cohering in their natural ftate, prove extremely brittle when heated, infomuch as to be eafily divided into fmall particles by dextrous agitation. Hence the officinal method of pulverizing tin, by melting it, and, at the inftant of its beginning to return into a ftate of folidity, brifkly fhaking it in a wooden box. The comminution of metals, in this manner, is termed by the metallurgifts GRANULATION.

On a fimilar principle, certain falts, as nitre, may be reduced into powder in large quantity, by diffolving them in boiling water, fetting the folution over a moderate fire, and keeping the falt conftantly flirring during its exficcation, fo as to prevent its particles, disjoined by the fluid, from re-uniting together into larger maffes.

Powders are reduced to a great degree of finenefs by TRITU-RATING, or rubbing them, for a length of time, in a mortar. Such as are not diffoluble in water, or injured by the admixture of that fluid, are moiftened with it into the confiftence of a pafte, and LE-VIGATED, or ground, on a flat fmooth *marble* or *iron plate*; or where a large quantity is to be prepared at a time, in *mills* made for that ufe.

Comminution, though one of the most fimple operations of pharmacy, has, in many cafes, very confiderable effects. The refinous purgatives, when finely triturated, are more easily foluble in the animal fluids, and confequently prove more cathartic, and lefs irritating, than in their groffer flate. Crude antimony, which, when reduced to a tolerable fine powder, difcovers little medicinal virtue, if levigated to a great degree of fubtility, proves a powerful alterative in many chronical diforders.

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.

Chap. 4.

Fusion.

their greater or lefs 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 groffer, distinguished by the name of ELUTRIATION, or washing over. See Part III. Chap. i.

SECT. XII.

Fusion.

FUSION is the reduction of folid bodies into a flate of fluidity by fire. Almoft all natural fubftances, the pure earths and the folid parts of animals and vegetables excepted, melt in proper degrees of fire; fome in a very gentle heat, while others require its utmoft violence.

Turpentine, and other foft refinous fubfrances, LIQUEFY in a gentle warmth; wax, pitch, fulphur, and the mineral bitumens, require a heat too great for the hand to fupport; fixt alkaline falts, common falt, nitre, require a red, or almost white heat to MELT them; and glass, a full white heat.

Among metallic fubstances, tin, bifmuth, and lead, flow long before ignition : antimony likewife melts before it is visibly redhot, but not before the vessel is confiderably fo : the regulus of antimony demands a much stronger fire. Zinc begins to melt in a red heat ; gold and filver require a low white heat ; copper a bright white heat ; and iron, an extreme white heat.

One body, rendered fluid by heat, becomes fometimes a menftruum for another, not fufible of itfelf in the fame degree of fire. Thus red-hot filver melts, upon being thrown into melted lead lefs hot than itfelf: and thus if fteel, heated to whitenefs, be taken out of the furnace, and applied to a roll of fulphur, the fulphur inftantly liquefying, occasions the fteel to melt with it; hence the chalybs cum fulphure of the fhops. This concrete, neverthelefs, remarkably impedes the fusion of fome other metals, as lead, which, when united with a certain quantity of fulphur, is fcarce to be

gravity. If thefe hypothefes were juft, it fhould follow, that the mercurial preparations, by being finely comminuted, would lofe proportionably their efficacy; and foindeed mercurius dulcis, for inftance, 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 fubtility, it passes readily into the habit, and operates, according to its quantity, as an alterative or a fialogogue; while, in a großer form, it is apt to irritate the ftomach and bowels, and run off by the intestines, without being conveyed into the blood.

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perfectly melted by a very flrong fire : hence the method, defcribed in its place, of purifying zinc, a metal upon which fulphur has no effect from the lead fo frequently mixed with it.

Sulphur is the only unmetallic fubftance which mingles in fufion with metals. Earthy, faline, and other matters, even the calces and glaffes prepared from metals themfelves, float diffinct upon the furface, and form what is called scoria or drofs. Where the quantity of this is large in proportion to the metal, it is moft commodioufly feparated by pouring the whole into a conical mould : the pure metal or REGULUS, though fmall in quantity, occupies a confiderable height in the lower narrow part of the *cone*, and when congealed, may be eafily freed from the fcoriæ by a hammer. The mould fhould be previoufly greafed, or rather fmoked, to make the metal come freely out; and thoroughly dried and heated, to prevent the explosion which fometimes happens from the fudden contact of melted metals with moift bodies.

SECT. XIII.

Calcination.

BY calcination is underflood, the reduction of folid bodies, by the means of fire, from a coherent to a powdery flate, accompanied with a change of their quality; in which laft respect, this process differs from comminution.

To this head belong, the burning of vegetable and animal matters, otherwife called USTION, INCINERATION, OF CONCRE-MATION; and the change of metals into a powder, which inthe fire either does not melt, or VITRIFIES, that is, runs into glafs,

The metals which melt before ignition, are calcined by keeping them in fufion for fome time. The free admiffion of air is effentially neceffary to the fuccefs of this operation; and hence, when the furface of the metal appears covered with calx, this muft be taken off, or raked to one fide; otherwife 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 fuffered to fall into the veffel, the effect expected from this operation will not be produced, and part of what is already calcined, will be REVIVED OF 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, a are long exposed to a confiderable fire without defence

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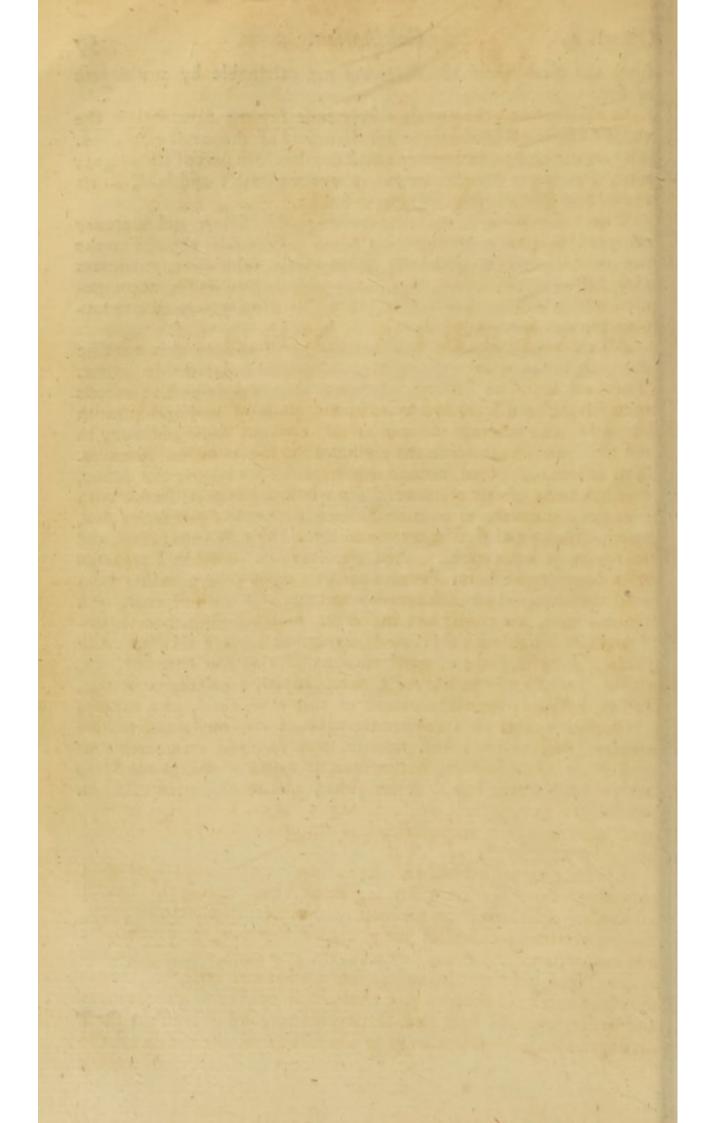
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from the air. Gold and filver are not calcinable by any degree of fire.

In calcination, the metals visibly emit fumes; nevertheles, 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, fometimes one tenth; tin, above one fixth; and lead, in its conversion into minium, often one fourth.

The calcination of metallic bodies (gold, filver, and mercury excepted) is greatly promoted by nitre. This falt, exposed to the fire in conjunction with any inflammable fubstances, extricates their inflammable matter, and burfts with it into flame, accompanied with a hiffing noise : this process is usually termed DEFLA-GRATION OF DETONATION.

All the metallic calces and fcoriæ are revived into this metallic flate, by fusion with any vegetable or animal inflammable matter. They are all more difficult of fusion than the respective metals themfelves; and fcarcely any of them, those of lead and bifmuth excepted, can be made to melt at all, without fome addition, in the ftrongest fire that can be produced in the common furnaces. The additions, called fluxes, employed for promoting the fufion. confift chiefly of fixt alkaline falts : a mixture of alkaline falt with inflammable matter, as powdered charcoal, is called a reducing flux, as contributing at the fame time to bring the calx into fufion, 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, fetting the powders on fire with a bit of coal, or a red-hot iron, then covering the veffel, and fuffering them to deflagrate or burn, till they are changed into a black alkaline coaly mais. This is the common reducing flux of the chemists, and called from its colour the black flux. Metallic calces, or fcoriæ. mingled with twice their weight of this compound, and expofed to a proper fire, in a close covered crucible, melt, and refume their metallic form; but, though they received an increase of weight in the calcination, the revived metal is always found to weigh confiderably lefs than the quantity from which the calx was made.



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PART II.

THE

MATERIA MEDICA.

WRITERS on the materia medica have taken great pains in arranging the various articles, of which it is compofed, into different divisions and fubdivisions, according to their real or reputed medicinal powers.

It has been imagined, that " the whole materia medica is reducible under the three diffinctions of alteratives, evacuants, and *refloratives*: the first comprehending all that has any power to alter the constitution, without fensibly increasing or diminishing any of the natural evacuations; the fecond, 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 fubdivisions; 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 ufeful purpofe, would require a far more extenfive knowledge of the nature and operation of medicines than has yet been attained to. A just and ufeful method of fimples is fcarcely 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 firiking incongruity among the feveral articles of which even the ultimate fubdivisions are composed; fubftances extremely diffimilar being classed together, as cantharides and tea, tobacco and bran, hemlock and cowflips, fcurvygrafs and raifins, arum root and liquorice, wormwood and parsneps, cinnamon and nettles, rafberries and chalk, artichokes and alum, cloves and coffee, mustard feed and black cherries, &c. Nor are these incongruities to be laid always to the charge of the authors; the nature

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In

nature of the fystem itself renders them often unavoidable : for the particular effect, which entitles a medicine to a particular class, may be produced by substances very diffimilar, and even opposite in their general powers: thus the alvine excretions are reftrained by farch, wax, tormentil root, opium : among the capital diuretics are cantharides, nitre, fixt alkaline falts, squills. It should feem, that the method of arrangement cannot be a just one, which requires substances for 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 reftoratives. 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 diminiss dofes, seem to act merely as alteratives. It should seem therefore that " the division of the whole materia me-" dica into alteratives, evacuants, and reftoratives," is a division not founded in nature, even if there were no objection to the vague meaning of the appellations themselves.

Cartheufer has divided the materia medica on a plan which appears more rational. Inflead of the operations of medicines in the human body, which are precarious, complicated, and greatly diverfified, according to the dofe, the preparation, and the circumflances of the patient, he takes for the bafis of his arrangement, their more fimple, obvious, and conftant properties, as bitternefs, fweetnefs, aftringency, acidity, &c. Having confidered the nature of bitternefs, for inflance, in general, he examines what effects medicines poffeffed of this property are capable of producing in the body, and in what circumflances they may be expected to be ferviceable, and then proceeds to an account of the particular bitters.

This method is of real ufe, but its ufe is limited to a fmall part of the materia medica. There are many of the medicinal fimples, in which we can diffinguifh no prevailing qualities of this kind ; there are many, in which different qualities are blended together ; and many, which though fimilar in thefe kinds of qualities, are very diffimilar in their operations in the human body. Thus though gentian and aloes agree in having a bitter tafte, and fugar and manna in being fweet, their medicinal virtues are refpectively very different. Accordingly the author is obliged in fome cafes to depart from his general plan, and found the division on the medicinal effects : he makes one clafs of purgatives and emetics, and another of vapourofe inebriants and narcotics : this laft clafs confifts of tobacco, elderflowers, faffron, opium, and poppy feeds; fubftances certainly very diffeordant in all their qualities that relate to medical intentions.

In this work, instead of attempting a medicinal distribution of the fimples, which I apprehend not to be practicable, to any good purpose, and which, as hitherto executed, feems more likely to miflead the reader than to promote true knowledge, I shall take them in the order of the alphabet; and even in this order we fhall, feldom perhaps find fubftances more disfimilar 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 obfervations on certain classes of medicines, in Cartheuser's manner, and thus to preferve the lefs exceptionable parts of his plan, with fome amendments.

Acids.

ACIDS.

Clafs 1. Vegetable *native*; as forrel, wood-forrel, juice of lemons, oranges, barberries, and other fruits. *produced by fermentation*; as vinegar and tartar

tartar.

Class 2. Mineral: the acids of vitriol, nitre, and common falt.

HE medical effects of acids, duly diluted and given in proper dofes, 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 diforders, they frequently reftrain immoderate hæmorrhages, and promote the natural fecretions; in fome kinds of fevers, they excite a copious diaphorefis, where the warm medicines, called alexipharmic, tend rather to prevent this falutary difcharge.

Vegetable acids, particularly the native juices of certain plants and fruits, have fome degree of a faponaceous quality; by means of which they attenuate or diffolve vifcid phlegm, and deterge the veffels; and thus prove ferviceable in fundry chronical diforders. Inveterate fcurvies have fometimes yielded to their continued use, efpecially when given in conjunction

with medicines of the acrid or pungent kind. Experience has shewn, that the acrid antifcorbutics have much better effects when thus managed, than when exhibited by themfelves; hence in the succi scorbutici of our dispensatory, Seville orange juice is usefully joined to that of the cochlearia and nasturtium.

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

Acids are prejudicial in cold, pale, phlegmatic habits, where the veffels are lax, the circulation languid.

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guid, bile deficient, and the power of digeftion weak. In these cases, an acid is often generated in the ftomach, from milk and moist vegetable food, which, while it con-

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tinues in the first passages, occasions uneafines about the stomach, flatulencies, sometimes griping pains of the bowels, and vomitings.

INSIPID EARTHS capable of ABSORBING ACIDS.

Oyfter fhells, Crabs claws, and eyes fo called, Coral, red and white, Pearls, Bezoar,

HE virtues of these fubstances are, to abforb or deftroy acidities in the first passages, and confequently remove fuch diforders as proceed from that caufe. The cordial, alexipharmic, antifebrile, and other like virtues, attributed to thefe medicines, appear to have little foundation; or, at beft, are only fecondary ones. When united with the acid, they form a neutral faline compound, poffeffing fome degree of an aperient and detergent quality, though too inconfiderable to be in general regarded.

The abforbent earths were all flrangers to medicine in the earlier times; and their use does not feem 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 faline kind; and very liberally exhibited them on almost every occasion.

It is certain that in children, and adults of a weak conflitution, and whofe food is chiefly of the vegetable acefcent kind, fundry diforders are occafioned by acidities; thefe readily difcover themfelves by four eructations, the pale colour of the face, and in children by the four imell and green colour of the Chalk, Some marles, Limeftones, Marbles, Spars.

alvine fæces, which are fometimes fo manifestly acid as to raise a strong effervescence with alkaline falts. 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 ufually lodged there, into hard indifioluble masses; which have fometimes been thrown up by vomit, or found in the flomach upon diffection. Hence indigestion, lofs of appetite, naufea, vomiting, obstructions of the bowels, and other diforders. Sometimes the flomach and inteffines have been found lined with a cruft, as it were, of these earthy bodies, which must not only have prevented the feparation of the gastric liquor, but likewife closed the orifices of the lacteal veffels, fo as to obstruct the passage of the chyle into the mafs of blood.

Some fuppofe the earthy powders capable (without the concurrence of any acid) of paffing the lacteals along with the chyle; and alledge, in fupport 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 whitifh earthy matter. This experiment (allowing the confequence

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Part II. Insipid earthy Substances, &c.

to be juftly drawn from it) is itfelf erroneous: the refiduum proceeds from the earth naturally contained in the water, not from that employed in the experiment; for if pure diffilled water be made ufe of, it will leave no refiduum, though long triturated, or digefted with the earth.

All these bodies, particularly those of the animal kind, contain, befides 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 ftronger fufficiently diluted with water; the earthy part will be diffolved, and the animal glue remain in form of a foft transparent mucilage. The glutinous fubftance increafes their tendency to concrete in the ftomach; and, hence, those which contain least thereof should be preferred to The mineral earths the others. contain the least of this kind of matter, and fome of them are very eafy of folution; chalk for inftance; which may therefore be

given with greater fafety than the animal abiorbents. 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.

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The teeth, bones, hoofs, and horns of animals, confift of the fame principles with the animal abforbents above-mentioned, but combined in different proportions: the quantity of gelatinous matter is fo large, as to defend the earthy part from the action of weak acids; while the earth, in its turn, protects the gluten from being eafily diffolved by watery liquors. Hence these bodies in their crude flate, though recommended as possefing fingular virtues, are not found to have any virtue at all:

Experiments have been made for determining the degree of folubility, or comparative ftrength, of thefe 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.

en grains of	Some kinds of Limeftones Oyfter fhells Chalk Shells of Garden Snails Calcined Cray Fifh Pearl Tooth of the Sea Horfe Volatile Salts Fixt Salts Coral, red and white Crabs eyes Eggfhells Mother of Pearl Crabs claws Jawbone of the Pike-fifh	- deftroyed the acidity of	160 120 100 100 80 80 80 60 60 50 50 50 50 40 30	drops of Spirit of Salt.
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Table

Table of the quantity of absorbent earths soluble in acids.

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576 grains of Spirit of Salt diffolved ofOyfter fhells156 Hartfhorn6 Oriental Bezoar180 Oriental Bezoar180 Oriental Bezoar0 Oriental Bezoar123 Ogick Lime199 Slacked Lime576 grains of Spirit of Nitre diffolved ofCrabs eyes297 Mother of Pearl576 grains of Spirit of Nitre diffolved ofCrabs eyes297 Oyfter fhells576 grains of Spirit of Nitre diffolved ofCrabs eyes297 Oyfter fhells576 grains of Spirit of Nitre diffolved ofOriental Bezoar108		Mother of Pearl	144			
576 grains of Spirit of Salt diffolved ofHartfhorn165 CoralGriental Bezoar180 Oriental Bezoar118 Occidental BezoarOccidental Bezoar123 Quick Lime199 Slacked LimeSlacked Lime193576 grains of Spirit of Nitre diffolved ofCrabs eyes Pearls297 202 PearlsOyfter fhells236 Hartfhørn234 CoralOriental Bezoar108	and here light an	Pearls	128			
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576 grains of Spirit of Nitre diffolved of Mother of Pearl 202 Pearls 219 Oyfter fhells 236 Hartfhørn 234 Coral 233 Oriental Bezoar 108		USlacked Lime	193			
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diffolved of Oriental Bezoar 108			234			
Oriental Bezoar 108						
Occidental Bezoar 144	ferende bave been stade f		108			
			144			
Quick Lime 180						
USlacked Lime 216		CSlacked Lime	216			

These experiments do not fufficiently afcertain the point intended by them. In the first fet, the quantity of acid is too vague and indetermined : in the fecond, we are not told whether the acid was perfectly faturated : and, in both, the acids made use of were fo very different from any that can be supposed ever. to exift in the human body, that little can be concluded from them, with regard to the medical effects of

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these absorbents. Trial should have been made with the mild vegetable acids, as the juices of certain fruits, four fermented liquors; or rather with four milk. Neverthelefs, thefe tables, though not fo perfect as could be wished, have their use in the hands of fuch as can make proper allowances (See the Experimental History of the materia medica, page 557.)

EARTHS NOT DISSOLUELE in acids, or other liquors.

The earths of this kind may be ranged in two claffes :

Clafs I. Hard crystalline earths : as the ruby, garnet, emerald, fapphire, hyacinth, and other precious ftones; cryftal, flint, &c.

HESE kinds of fubftances attributed to them, by the fuperftiwere introduced into medi- tion of the earlier ages. Some of cine, and many fabulous virtues them are still preferved in foreign phar --

pharmacopocias, but they are, at length, very juftly expunged from ours, notwithstanding what fome writers of repute fpeak of their medical virtue. These indisfoluble hard bodies are not capable of producing any other effect than, by their rigid angular particles (which, tho' levigated with the utmost care, the microfcope still difcovers in them), to offend or wound the inteftines. In levigation they wear off to much from the hardest marble inftruments, as will equal or exceed their own weight : from this circumftance we may account for their having fometimes appeared to act as absorbents. Some of these ftones, exposed to a vehement fire, become in some measure friable; but, neverthelefs, remain indiffoluble. Most of the coloured

ones by this treatment lofe their colour; and, in this state, prove nearly of the fame quality with common crystal; fuch are, the fapphire, emerald, amethyft, and cornelian. Others melt into a blackish vitreous matter, from which a portion of iron is obtainable by proper fluxes; as the hyacinth and garnet. Geoffroy concludes hence, that these ftones really poffefs fome medical virtues, depending upon their metallic part; but the quantity of metallic matter, sufficient to give them a confiderable tinct, is for exceedingly fmall, and fo inclofed in a ftony matter not at all foluble by any of the known menstrua, and scarce to admit of any poffibility of its acting in the human body.

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Class 2. Softer earths; the talky, gypfeous, and argillaceous.

The talcs and gypfa have rarely been used as medicines. Some of the former, from their uncluous foftness and filver hue, stand recommended externally as cofmetics; and fome of the latter, on little better foundation, internally, as aftringents. But they have long been defervedly rejected by the judicious practitioners. They feem to pofiefs the ill qualities of the alkaline earths (concreting with the mucus of the ftomach, &c.) without any of their good ones.

Several of the clays, boles, and terræ figillatæ, were highly celebrated by the ancients as aftringents and alexipharmacs, and fome of them ftill continue in efteem; though it is certain they have no great claim to the virtues that have been attributed to them. Their real effects are, to give a greater degree of confiftency to the fluidsin the first passages, and in some measure defend the solids from their acrimony.

Most of these bodies contain, befides the tenacious indifioluble earth, which is their principal characteriffic, (1) a portion of an earth foluble in acids, fimilar to those of the first fection; (2) of acid, feparable by diffillation in a ftrong fire : this acid is always of the fame nature with that obtained from vitriol, fulphur and alum; (3) The coloured ones contain likewife fmall quantities of iron, reducible by inflammable fluxes, into its metallic form. In confequence of the first of these ingredients, these earths may be looked upon in some measure as absorbent: the acid appears to be united with a part of the abforbent earth, into a faline compound, approaching to an alluminous inature; whence they have fome de-F

gree

gree of aftringency. Whether they receive any peculiar virtue from the iron, is greatly to be doubted; fince it is in a very crude flate, and in quantity extremely fmall.

These earths unite with water into a turbid liquor, flippery and fmooth to the touch, and remain for fome time fuspended; the fand, grit, or other groffer matters which are often found naturally mingled with them, fubfiding. They may be freed by means of acids from their alkaline earth; by coction in water, from their faline matter; and the coloured ones, from their iron, by digeftion, in aqua regis; the only menftruum we are acquainted with that will extract the ferrugineous matter of argillaceous and bolar earths. Thus purified, they have all nearly the fame appearance and qualities. Exposed to a firong fire, they lose their foft glutinous quality, and are reduced into hard mafles indiffoluble as at firft.

Part II.

GLUTINOUS, vegetable, and animal fubstances.

Clafs. 1. Vegetable.

Pure gums. Tragacanth, Senica,

The gums of cherry, plum, and other European Trees.

GUMS and mucilages are glu-Gums vegetable productions, of no particular tafte or fmell, foluble in water, but not in vinous fpirits, or in oils : fee p. 13. They differ from one another, only in degree of tenacity : the more tenacious are called gums; those which are lefs fo, mucilages. The former naturally exude from certain trees and fhrubs; the latter are extracted by art. Almost all vegetable fubflances contain fome por-

Clafs. 2.

Most animal fubflances (the fat excepted) contain a vifcous matter, in many respects fimilar 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 Vegetables abounding with mucilage : Orchis roots, Althæa root, Quince feeds, &c.

tion of thefe, which, after the refinous part has been extracted by fpirit, may be feparated 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.

Animal.

into a putrid flate. Confidered as the fubjects of chemistry, the difference betwixt them is very great: those of the animal kind are changed by fire into a volatile alkaline falt and a fessid oil; the vegetable into an acid liquor, and a very small portion of oily matter, confiderably less fetid than the former.

Soft

Unctuous Substances.

Soft uncruous Substances.

Clafs r. Infipid vegetable oils; and Subfrances abounding with them, as almonds, and the kernels of most fruits; linfeed, and the medullary part of fundry other feeds.

Class 2. 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: see p. 10.

Part II.

The medical virtues of these subflances are, to obtund acrimonious humours, and to soften and relax

the folids : hence their use internally, in tickling coughs, heat of urine, pains and inflammations; and, externally, in tenfion and rigidity of particular parts. The milky folutions, commonly called emulfions, though much lefs emollient than the oils themfelves or animal fats, have this advantage, that they may be given in acute or inflammatory diftempers, without danger of the ill confequences which the others might fometimes produce. Fats and oils, kept in a degree of heat no greater than that of the human body, foon become rancid and acrimonious; while emulfions tend rather to grow four.

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ASTRINGENTS.

Galls, Tormentil root, Biftort root,

A Stringent fubftances are diftinguished by a rough auftere tafte: and by changing folutions of iron, especially those made in the vitriolic acid, of a dark purple or black colour.

Aftringents yield their virtues by infufion, both to water and vinous fpirits, generally in greateft perfection to the former. Oils extract nothing from them: nor do they give over any of their virtue in diffillation: neverthelefs, their aftringency is confiderably abated

Balaustines, Terra Japonica, Acacia, &c.

by evaporating decoctions of them to the confiftence of an extract; and totally deftroyed by long keeping.

The medical effects of these kinds of substances are, to confiringe the fibres, and incrassate, or lightly thicken the juices. Their more experienced use is in diforders proceeding from a debility, or flaccid state, of the folids; in hæmorrhages, from a thinness of the blood, laxity or rupture of the vessels; in preternatural F 2 discharges of other kinds, after the offending matter has been duly corrected, or evacuated; and in external relaxations.

In fome cafes, they produce the effects of aperients; the veffels, conftringed and ftrengthened by them, being enabled to protrude the circulating juices with greater force.

A good deal of caution is requifite 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; aftringents 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 fometimes occasions a gangrene of the parts.

SWEETS.

Sugar, Honey,

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

Vegetable fweets are extracted both by water and vinous fpirits; most readily by the former, but in greatest perfection by the latter. Nothing of their taste arises in diftillation with either of these liquors: nevertheles, 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 fweets, as fugar, promote the union of diffilled oils with watery liquors, and prevent the feparation of the butyraceous part from milk : from this quality, they are fuppofed to unite the unchaous part of the food with the animal juices. Hence fome have concluded, that they increase fat: others, that they have a contrary

Raisins, Liquorice, &c.

effect, by preventing the feparation of the uncluous matter, which forms the fat, from the blood: and others, that they render the juices thicker and more fluggifh, retard the circulation and cuticular excretion, and thus bring on a variety of diforders. But sweets have not been found to produce any of these effects, in any remarkable degree : common experience shews, that their moderate, and even liberal use, is at least innocent; that they reconcile, not only to the palate, but the flomach alfo, substances of themselves difgufful to both; and thus render falutary what would otherwife be injurious to the body.

The unctuous and mucilaginous fweets, as the impure fugars, liquorice, &c. have a confiderable degree of emollient and lubricating virtue.—Thofe, accompanied with a manifest acid, as in the juices of most fweet fruits, are remarkably relaxing; and, if taken immoderately, occasion diarrhææ and dyfenteries, which fometimes have proved fatal. Acrids, and Aromatics.

ACRIDS.

Crids are substances of a pene- rate it; chewed, they occasion a coto the fkin, they inflame or exulce- up the nofe, provoke fneezing.

trating pungency. Applied pious discharge of faliva: and snuffed

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

[1. In diffillation with water: as horfe-radifh, mustard, fcurvy-grafs, &c.

yielding their acrimony

Part II.

j z. By infusion only: as the greater celandine, 3. Neither to infusion nor distillation : as arum

and dracunculus.

The general effects of acrid medicines are, to ftimulate the veffels, and diffolve tenacious juices. In cold leucophlegmatic habits, ftagnations of the fluids, and where the contractive power of the folids 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 diltempers, where there is already a degree of irritation, where the juices are too thin and acrimonious, or the vifcera unfound; these ftimulating medicines prove highly prejudicial, and never fail to aggravate the difeafe.

Certain acrid substances have been recommended in dry convulfive althmas : of the efficacy of the fquill in particular, for the cure of

this diforder, feveral inftances are related in the Commercium literarium of Norimberg for the years 1737 and 1739. Cartheufer thinks, that not the aithma itfelf, but a particular effect of it, was removed by this medicine. He observes, that, in all affhmas, the free circulation of the blood through the pulmonary veffels is impeded : and, hence, during every paroxyim, the lungs are in a kind of ædematous state: that if this cedema, becoming habitual, remain after the fit is over, it is either perpetually occasioning fresh ones, or gives rife to a dropfy of the breaft: that acrid medicines, by removing the ædema, remove what was originally an effect of the afthma, and will be, in time, a caufe of its aggravation.

AROMATICS.

Romatics are substances of a I warm pungent tafte, and a more or less fragrant smell. Some of the fpices are purely aromatic, as cubebs, pepper, cloves; some fubstances have a fweetnefs mixed with the aromatic matter, as angelica root, anifeed, fennel feed ;

fome an aftringency, as cinnamon ; fome a ftrong mucilage, as cafialignea; fome a bitternefs, as orange peel. The aromatic matter itfelf, contained in different subjects, differs also not a little in its pharmaceutic properties. It is extracted from all by rectified fpirit of wine; F 3 from

from fome in great part, from others fcarcely at all, by water. The aromatic matter of fome fubjects, as of lemon peel, rifes wholly in diftillation, both with fpirit and water; that of others, as cinnamon, rifes wholly with water, but fcarcely at all with fpirit; while that of others, as pepper, is in part left behind, after the diftillation of water itfelf from the fpice.

With regard to the general vir-

Gentian root, Hops,

B Itters for the most part yield their virtue both to watery and spirituous menstrua; fome more perfectly to one, and others to the other. None of the substances of this class give over any thing confiderable 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 constring the fibres of the stomach and intestines, to warm the habit, attenuate the bile and juices in the sirft passages, and promote the natural evacuations, particularly of sweat and urine. In weakness of the stomach, loss of appetite, in-

tues of aromatics, they warm the ftomach, and by degrees the whole habit, raife the pulfe, and quicken the circulation. In cold languid cafes, phlegmatic habits, and a weak flaccid ftate of the folids, they fupport the vis vitæ, and promote the falutary fecretions. In hot bilious temperaments, plethoric habits, inflammatory indifpolitions, drynefs and ftrictures of the fibres, they are generally hurtful.

BITTERS.

Leffer centaury, Carduus, &c.

digeftion, and the like diforders, proceeding from a laxity of the folids, or cold fluggish indisposition of the juices, thefe kinds of medicines do good fervice. Where the fibres are already too tenfe and rigid, where there is any immoderate heat or inflammation, bitters very fenfibly increase the distemper; and if their use be continued, communicate it to the kidneys: hence the urine becomes high coloured, fmall in quantity, and, at length, fuppreffed ; a dropfy foon fucceeding. If the kidneys were before fo lax, as to remain now uninjured, yet the other vifcera become gradually more and more rigid, and a tabes is at length brought on.

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

EMETICS and CATHARTICS.

Hellebore, Jalap, Ipecacoanha,

HESE fubitances confift of a refinous part, in which the purgative or emetic quality refides; Colocynth, Scammony, Gamboge, &c.

and a gummy faline one, which acts chiefly as a diuretic. The former is extracted or diffolved by vinous

Part II.

vinous fpirits; the latter by water. Nothing arifes in diffillation from either.

Part II.

The acrid refins, exhibited by themfelves, tenacioufly adhere to the coats of the inteffines, by their ftimulating power irritate and inflame them, and thus produce fundry violent diforders. Hoffman relates, that he has fometimes obferved convultions, and a paralyfis of both fides, from their ufe.

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 refinous purgatives, by the addition of acids and aromatic oils. Acids weaken their power, but have no other effect than what a diminution of the dofe would equally answer. The pungent effential oils may ferve to warm the flomach, make the medicine fit easier, and thus prevent the naufea, which fometimes happens; but as foon as the refin begins to exert itself in the intestines, these oils, instead of correcting, increase its virulence; being themfelves apt to occasion the inconveniences which they are here intended to prevent, an irritation and inflammation of the bowels. Alkaline falts or foaps have a better effect; as they difpofe the refin to folution, and promote its operation.

The medicines of this clafs feem to act by liquefying the juices, and ftimulating the coats of the ftomach and inteffines. If the irritation be ftrong and fudden, their action is quick and upwards: if flower, downwards. Cathartics, given in a liquid form, or in very fenfible habits, often prove emetic; and emetics, where mucus abounds, cathartic. They operate more violently in robuft conflitutions than in those of a contrary temperament; the veffels being in the former more tenfe and rigid, and confequently lefs capable of bearing an equal degree of irritation.

The action of these medicines is extended beyond the primæ viæ. This appears evident from the increafe of the pulfe, which always accompanies their operation; and from the common observation of children's being purged by the milk, if the nurfes have taken a carthartic. Some of them, particularly helebore, are faid to purge, if only applied externally in iffues. Purgatives, even of the more powerful kind, exhibited in fuitable fmall dofes, in conjunction with the milder aperients, may be introduced into the habit, fo as to prove notable deobstruents, diuretics, and diaphoretics, without acting fenfibly by ftool.

The foregoing obfervations are inferted, not with any view to a method of fimples, but to give a general idea of the virtues of fuch medicinal fubftances as are poffetted of the qualities which make the objects of the refpective articles. I fhall dwell no longer on general reflections, but proceed to an account of each of the fimples feparately.

ABIETIS lignum, fummitates, coni: Abietis conis furfum spectantibus five

maris C. B. Pini piceæ Lin. vel Abietis tenuiore folio fructu deorfum spec-F 4. tante tante Tourn. Pini abietis Lin. The filver and the red fir; their wood, tops, and cones.

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Thefe are large ever-green trees, frequent in the northern climates. The first is faid to be found wild in fome parts of England, and the fecond on the hills of Scotland. From these trees, in different parts of Germany, the Strafburgh turpentine is extracted, of which hereafter. The wood, and the fruit or cones, gathered about the end of autumn, abound with refinous matter, and yield, in diffillation with water, an effential oil, not greatly different from that obtained by the fame means from turpentine .- The wood and tops of the fir trees, on account of their refinous juice, are sometimes employed in decoctions and diet drinks, for promoting urine and fweat, purifying the blood and juices, and cleanfing and healing internal ulcerations, particularly those of the urinary passages. See the article TEREBINTHINA.

ABROTANI MARIS folia: Abrotani maris angustifolii majoris C. B. Artemisia abrotani Lin. Southernwood; the leaves [E.]

This is a fhrubby plant, clothed with very finely divided leaves, of a greyifh green colour: the flowers, which are very fmall and yellowifh, hang downwards, feveral 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 ftalks abide many years.

Southernwood has a firong, not very difagreeable fmell; and a naufeous, pungent, bitter tafte; which is totally extracted by rectified fpirit, lefs perfectly by watery liquors. It is recommended as an anthelmintic; and in cold leucophleg-

matic habits, as a fimulant, detergent, aperient, and fudorific. The prefent 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.

ABROTANI FEMINÆ folia; Abrotani fæminæ foliis teritibus C. B. Santolinæ chamæcyparisfi Lin. Lavendar-cotton; the leaves [E.]

This plant is all over white and hoary: the leaves are composed of fmall knobs fet in rows along a middle rib; the flowers ftand upright on the tops of the ftalks. It is raifed in gardens, flowers in June and July, and holds its leaves all the winter.

The abrotanum fæmina is fupposed to posses the fame virtues with the mas; but in a lefs degree. For external purposes, the medical difference betwixt them is not very great : hence, in fomentations (which is the principal intention they are usually applied to) the London College allows either to be taken inftead of the other.----The abrotanum fæmina is recommended by fome in hyfteric and other female complaints: it has been cuftomary among the common people to use a decoction of it in milk against worms.

ABSINTHII VULGARIS folia: Abfinthii vulgaris majoris J. B. Artemifiæ abfinthii Lin. Common wormwood; the leaves [L. E.]

The leaves of this fort of wormwood are divided into roundifh fegments, of a dull green colour above, and whitifh underneath. It grows wild in feveral parts of England; about London large quantities tities are cultivated for medicinal ufe : it flowers in June and July; and, after having ripened its feeds, dies down to the ground, except a tuft of the lower leaves, which generally abides the winter.

Part II.

Wormwood is a ftrong bitter : and was formerly much used as fuch, against weakness of the ftomach, and the like, in medicated wines and ales. At prefent it is rarely employed in these intentions, on account of the ill relifh and offenfive fmell with which it is accompanied. From thefe 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 ftrong fire, proves a bitter fufficiently grateful, without any difguftful flavour .- An oil diffilled from this plant [L. E.] and an extract [E.] are kept in the fhops.

ABSINTHII MARITIMI fummitates: Abfinthii marini albi Gerrard. Artemisiæ maritimæ Lin. Sea wormwood, commonly, but falfely, called Roman wormwood; the tops [L.]

The leaves of fea wormwood are much fmaller than those of the common, and hoary on the upper fide, as well as the lower; the ftalks also are hoary all over. It grows wild about our falt marshes, and in feveral 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 fame kind, and to differ only in degree.

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

ABSINTHII ROMANI folia: Abfinthii pontici tenuifolii incani C. B. Artemifiæ ponticæ Lin. Roman wormwood; the leaves and tops [E.]

This fpecies is very different in appearance from the two foregoing: it is in all its parts fmaller than either; the leaves are divided into fine filaments, and hoary on the lower fide; the ftalks, either entirely or in part, of a purplifh hue. It is a native of the warmer countries, and, at prefent, difficultly procurable in this, though as hardy and as eafily raifed as any of the other forts. Sea wormwood has long fupplied its place in the markets, and been in general miftaken for it.

Roman wormwood is lefs ungrateful than either of the others: its fmell is tolerably pleafant: the tafte, though manifeftly bitter, fcarce difagreeable. It appears to be the most eligible of the three as a ftomachic; and is likewife recommended by fome in dropfies.

ACACIA [L. E.]: the infpiffated juice of the unripe fruit of a large prickly tree, called by Cafper Bauhine, Acacia foliis fcorpioidis leguminofæ. Mimofa nilotica Lin.

This juice is brought to us from Egypt, in roundifh maffes, wrapt up in thin bladders. It is outwardly of a deep brown colour, inclining to black; inwardly of a reddifh or yellowifh brown; of a firm confiftence, but not very dry. It foon foftens in the mouth, and difcovers a rough, not difagreeable tafte, which is followed by a fweetifh relifh. This infpiffated juice cntirely entirely diffolves in watery liquors; but is fcarce fenfibly acted on by rectified fpirit.

Acacia is a mild affringent medicine. The Egyptians give it in fpitting of blood, in the quantity of a dram, diffolved in any convenient liquor; and repeat this dofe occafionally : they likewife employ it in collyria for ftrengthening the eyes, and in gargarifms for quinfeys. Among us, it is little otherwife used than as an ingredient in mithridate and theriaca [L.], and is rarely met with in the fhops. What is usually fold for the Egyptian acacia, is the infpiffated juice of unripe floes : this is harder, heavier, of a darker colour, and fomewhat sharper taste, than the true fort.

ACANTHI folia: Acanthi fativi vel mollis Virgilii C. B. Brankurfine; the leaves.

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

ACETOS & vulgaris, five oxalidis, folia & radix: Acetof arvenfis C. B. Oxalidis vulgaris folio longo J, B. Rumicis acetof Lin. Common forrel; the roots and leaves [E.]

Sorrel grows wild in fields and meadows throughout England. The leaves have a reftringent acid tafte, without any fmell or particular flavour. Their medical effects are, to cool, quench thirft, and promote the urinary difcharge:

a decoction of them in whey affords an ufeful and agreeable drink in febrile or inflammatory diforders: and is recommended by Boerhaave to be ufed in the fpring as one of the moft efficacious aperients and detergents. Some kinds of fcurvies have yielded to the continued ufe of this medicine: the Greenlanders, who are very fubject to this diftemper, are faid to employ, with good fuccefs, a mixture of the juices of forrel and fcurvygrafs. The only officinal preparation of this plant, is an effential falt from the juice of the leaves [E.]

The roots of forrel have a bitterifh auftere tafte, without any acidity : they are faid to be deobstruent and diuretic ; and have fometimes had a place in aperient apozems, to which they impart a reddifh colour.

The feeds of this plant were formerly ufed in diarrhœas and dyfenteries, but have long been firangers to the fhops, and are now juftly expunged both from the London and Edinburgh pharmacopœias : they have no remarkable fmell, and fcarcely any tafte.

ACETOSELLA [E.] vide Lu-JULA.

ACETUM [L. E.] Vinegars an acid produced from fermented vinous liquors by a fecond fermentation. See page 6.

Wine vinegar is confiderably purer than that prepared from malt liquors; the latter, however acid and fine, contains a large portion of a vifcous mucilaginous fubflance; as is evident from the ropynefs and flimynefs to which this kind of vinegar is very much fubject; the flronger and more fpirituous the wine, the better and fironger

ftronger vinegar it yields. The French vinegars are faid by Geoffroy to faturate above one-thirtyfifth of their weight of fixt alkaline falt, and fome of them no lefs 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 diforders, either internal or external: in ardent, bilious fevers, pestilential, and other malignant distempers, it is recommended by Boerhaave as one of the most certain fudorifics. (See the fection of acids, page 61.) Weaknefs, fainting, vomiting, hysterical, and hypochondriacal, complaints, have been frequently relieved by vinegar applied to the mouth and nofe, or received into the ftomach.

ACONITUM [E.] Aconitum (Napellus) Lin. Blue Wolffbane. This is a perennial plant, having many stalks arising from one root, alternate petiolated leaves divided into five parts, each portion cut into linear fegments; and terminal bunches of irregular blue flowers with five petals, many stamina, and three pissis, fucceeded by three capfules containing feeds. It is a native of various parts of Europe and Virginia.

Blue wolffbane when firft gathered has a ftrong fmell, but no peculiar tafte; and has long been known to be one of the moft virulent of the vegetable poifons It occafions giddinefs, convulfions, violent purgings both upwards and downwards, faintings, cold fweats, and even death itfelf. Dr. Stærck was the firft who ventured to introduce it into medicine. He found that the extract, given in dofes of ten, twenty, and even thirty grains,

excited a fweat without inconvenience; and by perfifting in the ufe of it, great relief was obtained in fixed rheumatic and arthritic pains, fcirrous tumours, venereal nodes, anchylofes, amaurofis, and other fimilar complaints. Other practitioners have experienced the fame good effects in fome degree, and the Edinburgh college has received the extract as an officinal.

ACORUS, vide CALAMUS AROMATICUS.

ADIANTHI VERI feu capilli Veneris folia: Adianthi folio coriandri C. B. True maidenhair; the leaves.

This is a low evergreen herb, and one of thofe which, from the flendernefs of their ftalk; are called capillary. It is a native of Italy, and the fouthern parts of France; whence the leaves are fometimes brought to us. Thefe have an agreeable, but very weak, fmell; and a mucilaginous fomewhat roughifh tatte, which they readily impart to boiling water.

Maidenhair has been greatly celebrated in diforders of the breaft, proceeding from a thinnefs and acrimony of the juices; and likewife for opening obfructions of the vifcera, 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 fhops; the TRICHO-MANES, or Englifb maidenbair, which is of the fame quality, generally fupplying its place.

AERUGO [L. E.] Verdegris, This is a preparation of copper, made chiefly at Montpellier in France, by firatifying copper plates with grape flalks that have been impregnated with a termerted vegetable getable acid. In a few days, the plates are found covered with a pale green downy matter, which is fcraped off from the copper, and the process again repeated.

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Verdegris, as it comes to us, is generally mingled with stalks of the grape; these may be separated, in pulverization, by difcontinuing the operation, as foon as what remains feems to be almost entirely composed of them.

Verdegris is rarely or never ufed internally. Some writers greatly extol it as an emetic, and fay, that a grain or two being taken, it acts as foon as received into the ftomach : but its use has been too often followed by dangerous confequences. (See the article Cu-PRUM.)-Verdegris applied externally, proves a gentle detergent and escharotic, and serves to take down fungous fielh ariting in wounds. In these intentions, it is an ingredient in the mel ægyptiacum, unguentum basilicum viride [L.] and balfamum viride [E.]

AGALLOCHUM seu lignum aloes. Aloes wood.

There have been different conjectures concerning this wood, but no fatisfactory account of it has hitherto appeared. Authors diftinguish feveral forts of agallochum, moft of which are strangers to Europe. That which comes to us is in little hard ponderous pieces, of a yellowish-brown colour, with feveral black or purplish veins. It has a bitterish aromatic tafte : and a fragrant fmell, especially if reduced to powder, or fet on fire. Distilled with water, it affords a very fragrant effential oil, but in fmall quantity : digested in rectified fpirit, it yields an elegant tinc-

in being avaporated to the confiftence of an extract.

Agallochum is at prefent of very little use in medicine, and rarely to be met with in the fhops. If it could be eafily procured, at leaft the better fort of it bids fair to be a very useful cordial. Hoffman greatly recommends, in this intention, the distilled oil and spirituous tincture ; and efteems a mixture of this latter with tincture of fteel an excellent corroborant.

AGARICUS: Agaricus five fungus laricis C. B. Agaric; a fungus growing on old larch trees [L. E.]

This fungus is an irregular fpongy fubstance, extremely light, and of an uniform fnowy whiteness (except the cortical part, which is ufually taken off before the agaric is brought into the fhops). It cuts freely with a knife, without difcovering any hardness or gritiness, and readily crumbles betwixt the fingers into a powder. It has no remarkable imell; its tafte is at first sweetish, but on chewing for a little while, proves acrid, bitter, and naufeous.

Agaric was formerly in great efteem as a cathartic, but the prefent practice has almost entirely rejected its use. It operates exceeding flowly, infomuch that fome have denied it to have any purgative virtue at all. Given in fubstance, it almost always occasions a nausea, not unfrequently vomiting, and fometimes excellive tormina of the bowels; these effects are attributed to its light farinaceous matter adhering to the coats of the inteffines, and producing a conftant irritation. The best preparation of agaric feems to be an extract made with water, in which ture, which lofes nothing valuable fixt alkaline falt has been diffoly ed ;

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ed; or with vinegar or wine; the first is faid by Boulduc, and the other two by Neumann, to prove effectual and fafe purgatives. Neverthelefs, this is at best a precarious medicine, of which we stand in no manner of need; hence the college have justly rejected it from all the compositions in which it formerly had a place, except the mithridate and theriaca [L.]

AGARICUS pedis equini facie Tourn. Boletus igniarius Lin. Female agaric, or agaric of the oak, called, from its being very eafily inflammable, touchwood, or fpunk.

This fungus is frequently met with, on different kinds of trees, in England; and is faid to have been fometimes brought into the thops mixt with the true agaric of the larch. From this it is eafily diftinguishable by its greater weight, dufky colour, and mucilaginous taste, void of bitterness. The medullary part of this fungus, beaten foft, and applied externally, has been greatly celebrated as a ftyptic, and faid to reftrain not only venal but arterial hæmorrhages, without the use of ligatures. It does not appear, however, to have any real flyptic power, or to act any otherwife than dry lint, fponge, or other foft fungous applications.

AGERATI folia et flores : Agerati foliis ferratis C. B. Patermicæ luteæ fuaveolentis Tourn. Achillææ agerati Lin. Maudlin; the leaves and flowers.

This is a flender plant, clothed all over with narrow ferrated leaves. It is a native of Italy and other warm countries; with us, it is raifed in gardens, and flowers in July and August.

Maudlin has a light agreeable fmell; and a roughish, fomewhat warm and bitterish taste. These qualities point out its use as a mild corroborant; but it has long been a stranger to practice, and is now omitted both by the London and Edinburgh colleges.

AGNI CASTI femen : Agnis folio non ferrato J. B. Viticis Agni Casti Lin. The chaste tree; its feeds.

This is a fmall tree, or rather fhrub, growing fpontaneoufly in Italy, &c. and raifed with us in gardens. Its fruit, which is about the fize of a pepper corn, contains four longifh feeds, which are faid to be of an aromatic fmell, and an acrid bitterifh tafte, but which are found on examination to be almost inodorous and infipid. These feeds have been celebrated as antiphrodifiacs; but experience does not warrant their having any fuch virtues

AGRIMONIÆ folia : Eupatorii veterum seu agrimoniæ C. B. Agrimony; the leaves [E.]

This is a common plant in hedges, and the borders of fields. The leaves have an herbaceous, fomewhat acrid, roughifh tafte, accompanied with an aromatic flavour. Agrimony is faid to be aperient, detergent, and to ftrengthen the tone of the vifcera : hence it is recommended in fcorbutic diforders, in debility and laxity of the inteffines, &c. Digefted in whey, it affords an ufeful dietdrink for the fpring feason, not ungrateful to the palate or ftomach.

ALCANNA, vide Anchusa.

ALCEÆ folia : Alceæ vulgaris majoris C. B. Malvæ verbenacæ Ger. Vervain mallow; the leaves.

This is eafily diffinguishable from the common and marshmallow, low, by its leaves being jagged or cut in about the edges. It grows in hedges, and flowers greateft part of the fummer. Alcea agrees in quality with the ALTHÆA and MALVA VULGARIS; but appears to be lefs mucilaginous than either.

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ALCHIMILLÆ fo'ia : Alchimillæ vulgaris C. B. Ladies mantle; the leaves [E.]

This grows wild in many parts of England, but is rarely met with about London. The leaves feem as if plaited or folded together, fo as to have given occafion to the English name of the plant. The leaves of alchimilla difcover to the tafte a moderate astringency, and were formerly much esteemed in fome female weakness, and in fluxes of the belly. They are now rarely made use of; though both the leaves and roots might, doubtlefs, be of fervice in cafes where mild aftringents are required.

ALCIS UNGULA: Elks hoof. The elk is a large animal of the flag kind, met with in Mufcovy, and other cold countries. The hoof of one of the hinder feet has been celebrated against epilepsies, from a ridiculous opinion, that the elk is himfelf fubject to diforders of this kind, and prevents or removes them by fcratching his ear with his hoof.

ALKEKENGI feu balicacabi fructus: Solani veficarii C. B. Alkekengi Phyfalis Lin. Winter cherry: the fruit [E.]

This is a low, branched fhrub, bearing leaves like those of nightfhade; with white flowers, which fland fingle at the joints. The flower cup changes into a membranous cover, which at length burfts and discovers a fruit of a fine red colour, about the fize of a common cherry. The fruit ripens in October, and continues frequently to the middle of December. This plant grows wild in fome parts of France, Germany, &c. The beauty and lateness of its fruit have gained it a place in our gardens.

Winter cherries are faid by moft writers to be extremely bitter : but. as Haller juftly obferves, the cherry itfelf, if carefully freed from the cover (which is very bitter and pungent), has merely a fubacid tafte. They stand highly recommended as detergent, aperient, diuretic, and for expelling gravel : four, five, or more of the cherries are directed for a dole, or an ounce of the expressed juice. Mr. Ray tells us of a gouty perfon who was cured and kept free from returns of his diforder, by taking eight of these cherries at each change of the moon; these occasioned a copious discharge of extremely foetid urine.

ALLIARIÆ folia: Hesperidisallium redolentis Tourn. Erysimi alliariæ Lin. Sauce alone, or jack by the hedge; the leaves [E.]

This is common in hedges and thady wafte places, flowering in May and June. The leaves have a bitterish acrid taste, and, when rubbed betwixt the fingers, a ftrong imell, approaching to that of garlick. They are recommended internally as fudorifics and deobstruents, fomewhat of the nature of garlick, but much milder; and externally as antifeptics in gangrenes and cancerous ulcers. Hildanus used to gather the herb for these last purposes in the spring, and expole it for a day to the action of a dry air in a fhady place; being then committed to the prefs, it yielded a juice possessing the smell and taste of the alliaria: this, he informs us, with

with a little oil on the furface, keeps in perfection for years; whereas the herb in fubstance foon lofes its vitue in keeping.

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ALLIUM : radix Allii Sativi C. B. Garlick; the roots [L. E.] These roots are of the bulbous kind, of an irregularly roundifh thape, with feveral fibres at the bottom : each root is composed of a number of leffer bulbs, called cloves of garlick, inclosed in one common membranous coat, and eafily feparable from one another. All the parts of this plant, but more especially the roots, have a ftrong offensive smell, and an acrimonious almost caustic taste. The root applied to the fkin inflames, and often exulcerates the part. Its fmell is extremely penetrating and diffusive; when the root is applied to the feet, its fcent is foon difcoverable in the breath; and when taken internally, its fmell is communicated to the urine, or the matter of an iffue, and perspires through the pores of the fkin.

This pungent root warms and ftimulates the folids, 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 fudorific. In humoural afthmas, and catarrhous diforders of the breaft, in fome fcurvies, flatulent colics, hyfterical and other difeafes proceeding from laxity of the folids, and cold fluggish indisposition of the fluids, it has generally good effects : it has likewife been found ferviceable in fome hydropic cafes. Sydenham relates, that he has known the dropfy cured by the ufe of garlick alone; he recommends it chiefly as a warm ftrengthening

medicine in the beginning of the difeafe.

The liberal use of garlick is apt to occasion headachs, 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 unfound; 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 unsit for general use. A syrup and oxymel of it are kept in the shops.

Garlick made into an unguent with oils, &c. and applied externally, is faid to refolve and difcufs cold tumours, and has been by fome greatly effeemed in cutaneous difeafes. It has likewife fometimes been employed as a revellent. Sydenham affures us, that among all the fubstances which occasion a derivation or revullion from the head, none operate more powerfully than garlick applied to the foles 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 fwell; the root cut in pieces, and tied in a linen. cloth, was applied to the foles, and renewed once a day till all danger was over.

ALNI VULGARIS folia & cortex : Alni rotundifoliæ glutinofæ viridis C. B. Betulæ Alni Lin. The leaves and bark of the alder tree. Thefe

These have a bitter flyptic difagreeable taste. The bark is recommended by some in intermittent fevers; and a decoction of it, in gargarisms, for inflammations of the tonfils.

ALNI NIGRÆ feu frangulæ cortex : Alni nigræ bacciferæ J. B. The black or berry-bearing alder; its bark [E.)

This tree is common in moft woods in divers parts of England. The internal bark of the trunk or root of the tree, given to the quantity of a dram, purges violently, occafioning gripes, naufeæ, and vomiting. Thefe may be, in good meafure, prevented by the addition of aromatics; but, as we have plenty of fafer and lefs precarious purgatives, practitioners have defervedly rejected this.

ALOE. Aloe is the infpiffated juice of certain plants of the fame name. The ancients diffinguished two forts of aloes; the one was pure and of a yellowish colour, inclining to a red, refembling the colour of a liver, and, thence, named hepatic; the other was full of impurities, and, hence, fuppoied to be only the drofs of the better kind. At prefent, various forts are met with in the fhops; which are diffinguished either from the places, from the fpecies of the plants, or from fome differences in the juices themfelves. These may be all ranged in three class;

(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 Breyn. & Commelin. Varietas aloes perfoliatæ Lin. -This fort is the purest of the three; it is of a gloffy furface, clear, and in fome degree pellucid; in the lump, of a yellowifh red colour, with a purple caft; when reduced to powder, of a bright golden colour. It is hard and friable in the winter, fomewhat pliable in fummer, and grows foft betwixt the fingers. Its tafte is bitter, accompanied with an aromatic flavour, but infufficient to prevent its being difagreeable; the fmell is not very unpleafant, and fomewhat refembles that of myrrh.

(2) ALOE HEPATICA [E.] Hepatic, Barbadoes, or common aloes; the juice of the Aloe C. B. aloe vera vulgaris Munting .- Hepatic aloes is not fo clear and bright as the foregoing fort: it is also of a darker colour, more compact texture, and for the most part drier. Its smell is much ftronger and more difagreeable: the tafte intenfely bitter and naufeous, 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 fort of it (which is generally foft and clammy) is brought over in cafks.

(3) ALOE CABALLINA. Fetid, caballine, or horfe aloes; the produce of the aloe Guineensis caballina vulgari similis sed tota maculata Commelin .- This fort is eafily diftinguished from both the foregoing, by its ftrong rank fmell; although, in other respects, it agrees pretty much with the hepatic, and is not unfrequently fold in its ftead. Sometimes the caballine aloes is prepared fo pure and bright, as not to be diftinguishable by the eye even from the Socotorine; but its offenfive fmell, of which it cannot be divefted, readily betrays it.

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All the forts of aloes diffolve in pure spirit, proof spirit, and proof fpirit diluted with half its weight of water; the impurities only being left. They diffolve also by the affiftance of heat in water alone; but, as the liquor grows cold, the refinous part fubfides, the gummy remaining united with the water. The hepatic aloes is found to contain more refin, and lefs gum than the Socotorine, and this than the caballine. The refins of all the forts, purified by spirit of wine, have little fmell; that obtained from the Socotorine has fcarce any perceptible tafte ; that from the hepatic, a flight bitterifh relifh, and the refin of the caballine, a little more of the aloetic flavour. The gummy extracts of all the forts are lefs difagreeable than the crude aloes: the extract of Socotorine aloes has very little fmell, and is in tafte not unpleasant; that of the hepatic has a fomewhat ftronger fmell, but is rather more agreeable in tafte than the extract of the Socotorine: the gum of the caballine retains a confiderable fhare of the peculiar rank fmell of this fort of aloes, but its tafte is not much more unpleafant than that of the extracts made from the two other forts.

Aloes is a ftimulating cathartic bitter: if given in fo large a dofe as to purge effectually, it often occalions an irritation about the anus, and fometimes a difcharge of blood. Small doles of it frequently repeated, not only cleanfe the primæ viæ, but likewife attenuate and diffolve vifcid juices in the remoter parts, warm the habit, quicken the circulation, and promote the uterine and hæmorrhoidal fluxes. This medicine is particularly ferviceable to perfons of a phlegmatic temperament and fedentary life, and where the flomach is opprefied

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

The juice is likewife, on account of its bitternefs, fuppofed to kill worms, either taken internally, or applied in plafter to the umbilical region. It is alfo celebrated for reftraining external hæmorrhages, and cleanfing and healing wounds and ulcers.

The ancients gave aloes in much larger dofes than is cuftomary at present. Dioscorides orders half a dram or a dram for gently loofening the belly; and three drams when intended to have the full effect of a cathartic. But modern practice rarely exceeds a fcruple, and limits the greatest dose to two scruples. For the common purpoles of this medicine, ten or twelve grains fuffice : taken in these or less quantities, it acts as a gentle ftimulating eccoprotic, capable of removing, if duly continued, very obstinate obftructions.

Some are of opinion, that the purgative virtue of aloes refides entirely in its refin; but experience has shewn, that the pure refin has little or no purgative quality; and that the gummy part feparated from the refinous, 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 confiderably leffened, not from the feparation of the refin, but from an alteration made in the juice itfelf by the heat. The ftrongeft vegetable cathartics become mild by a like treatment, without any remarkable feparation of their parts.

Socotorine aloes, as already obferved, contains more gummy matter than the hepatic; and hence it is likewife found to purge more, and with greater irritation. The G former former fort, 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 balfamic virtues of this juice reside chiefly in the resin; and hence that the hepatic aloes, which is most refinous, is most ferviceable in external appilcation.

The Edinburgh college directs the hepatic aloes in the balfamum traumaticum and tinctura myrrhæ et aloes, defigned for external ufe; and the Socotorine in those preparations or compositions which are to be taken internally, as the tinctura facra, elixir facrum, pulvis bieræ picræ, pilulæ aloeticæ, pilulæ Russi, pilulæ stomachicæ, pilulæ cocciæ, &c.

The London college uses the Socotorine only. In the vinum aloeticum, tinctura facera, elixir aloes, balfamum traumaticum, pilulæ aromaticæ, and the other pills wherein aloes is an ingredient, the Socotorine kind in fubstance is directed. In the powder of biera picra, only the pure gummy part of the Socotorine aloes is employed, the separation of which from the refinous matter is given in a diffinct procefs.

ALSINES folia: Alfines vulgaris five morfus gallinæ J. B. Alfines mediæ Lin. Chickweed; the leaves [E.]

This plant was employed by the ancients externally against erysipelatous and other inflammatory diforders. Later times have given it internally in hæmoptoes, as a restorative in atrophies and confumptions, 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 *alfine*, 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.

ALTHÆÆ folia, radix: Althææ Dioscoridis & Plinii C. B. 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 ferviceable in a thin acrimonious state of the juices, and where the natural mucus of the inteffines is abraded. It is chiefly recommended in fharp defluxions upon the lungs, hoarfeneffes, dyfenteries, and likewife in nephritic and calculous complaints; not, as fome have supposed, that this medicine has any peculiar power of diffolving or expelling the calculus; but as, by lubricating and relaxing the veffels, it procures a more free and eafy paffage. Althæa root is fometimes employed externally for foftening and maturating hard tumors: chewed, it is faid to give eafe in difficult dentition of children.

This root gives name to an officinal fyrup [L. E.] and ointment [L.] and is likewife an ingredient in the compound powder of gum tragacanth [L. E.] and the oil and plaster of mucilages [L.] though it does not appear to communicate any particular virtue to thefe two, its mucilaginous

laginous matter not being diffoluble in oils.

ALUMEN [L. E.] Alum.

Alum is a falt 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 falt is of a white or pale red colour, of an auftere flyptic tafte, accompanied with a naufeous fweetifhnefs. It diffolves in about twelve times its weight of water; and concretes again, upon duly evaporating the folution, into femitransparent crystals of an octagonal figure. Exposed to the fire, it eafily melts, bubbles up in blifters, emits a copious phlegm, and then turns into a light fpongy white mais, confiderably more acrid than the alum was at first: this urged with a ftronger fire, yields a small quantity of acid fpirit, fimilar to that obtained by the fame means from vitriol; the part which remains, if the heat have been fufficiently intenfe and long continued, is an infipid white earth, readily foluble 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 falts to these folutions, the earth of the alum is precipitated, its acid uniting with the alkali into a neutral faline concrete fimilar to vitriolated tartar.

Alum is a powerful aftringent: it is reckoned particularly ferviceable for reftraining hæmorrhages, and immoderate fecretions from the blood; but lefs proper in inteffinal fluxes. In violent hæmorrhages, it may be given in dofes of fifteen or twenty grains, and repeated every hour or half hour till the bleeding abates: in other cafes, fmaller dofes are more advifeable; large ones being apt to naufeate the ftomach, and occafion violent conflipations of the bowels. It is ufed alfo externally, in aftringent and repellent botions and collyria.

Its officinal prepartions are, for internal ufe, the ferum aluminofum [L.] and pulvis flypticus [E.] for external applications, the aqua aluminofa, coagulum aluminofum, and alumen ufum [L.] which laft is no other than the alum dried by fire, or freed from the watery moifture, which, like other falts, it always retains in its cryftalline form. By this lofs of its water it becomes fharper, fo as to act as a flight efcharotic. It is employed alfo as an ingredient in the lapis medicamentefus, and the aqua vitriolica [L.]

AMARACUS, vide MAJORANA;

AMBRAGRISEA [E.]

Ambergris is a bituminous fubftance, of a greyish or ash colour, intermingled with yellowish and blackish specks or veins : it is usually met with in little opake rugged maffes, very light, of a loofe 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 furface of the fea, or thrown out upon the fhores; the greatest quantities are met with in the Indian ocean; pieces have likewife been now and then discovered in our own and other northern feas.

Pure ambergris foftens betwixt the fingers; melts in a fmall degree of heat into the appearance of oil, and in a ftronger heat proves almost totally volatile. Warmed a little, it emits a peculiar fragrant G_2 fmell ; fmell; fet on fire, it fmells like burning amber. It diffolves, though difficultly, in fpirit of wine, and effential 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 fubstances of this class frequently occasion. It is looked upon as an high cordial, and effeemed of great fervice in all diforders of the head, and in nervous complaints. A folution of it in a spirit distilled from roles, stands recommended by Hoffman as one of the most efficacious corroborants of the nervous fystem. The Orientals entertain an high opinion of the aphrodifiac virtues of this concrete; and likewife fuppole that the frequent use of it conduces to long life.

AMMEOS VERI femen: Ammeos odore origani J. B. Sisonis Ammeos Lin. The feeds of the true ammi or bishopsweed, brought from Egypt [E.]

These are fmall striated feeds, of a reddish brown colour, a warm pungent taste, and a pleasant smell approaching to that of origanum. They are recommended as stomachic, carminative, and diuretic; but have long been strangers to the shops. Their place has been generally supplied by the feeds of a plant common in our own country, though not a native of it, viz.

AMMEOS VULGARIS femen : Ammeos vulgaris majoris, letioribus foliis, femine minus odorato J. B. Common bishopsweed seeds [L.]

The feeds of common bifhopfweed are fomewhat larger and paler coloured than the foregoing: their fmell and tafte is weaker, and without any thing of the origanum flavour of the true ammi. They are ranked among the four leffer hot feeds, but are fcarce otherwife made use of than as an ingredient in the theriaca. The Edinburgh college has dropped them, and retained only the foregoing fort.

AMMONIACUM GUMMI [L. E.] Ammoniacum is a concrete gummy refinous juice, brought from the East-Indies, usually in large maffes, composed of little lumps or tears, of a milky colour, but foon changing, upon being exposed to the air, of a yellowish hue. We have no certain account of the plant which affords this juice. The feeds ufually found among the tears refemble those of the umbelliferous clais. Such tears as are large, dry, free from little stones, seeds, or other impurities, fhould be picked out and preferred for internal use ; the coarfer kind is purified by folution and colature, and then carefully inspissating it; unless this be artfully managed, the gum will loie a confiderable deal of its more volatile parts. There is often vended in the fhops, under the name of strained gum ammoniacum, a compolition of ingredients much inferior in virtue.

Ammoniacum has a naufeous fweet tafte, followed by a bitter one; and a peculiar fmell fomewhat like that of galbanum, but more grateful; it foftens in the mouth, and grows of a whiter colour upon being chewed. Thrown upon live coals, it burns away in flame: it is in fome meafure foluble in water and in vinegar, with which it affumes the appearance of milk; but the refinous part, amounting to about one half, fubfides, on flanding.

Ammoniacum is an ufeful deobftruent; and frequently prefcribed for opening obftructions of the abdominal vifcera, and in hyflerical diforders

diforders occafioned by a deficiency of the menstrual evacuations. It is likewife fuppofed to deterge the pulmonary veffels, and proves of confiderable fervice in fome kinds of aithmas, where the lungs are oppreffed by vifcid phlegm; in this intention, a folution of gum ammoniacum in vinegar of fquills proves a medicine of great efficacy, though not a little unpleafant. In long and ob-Itinate colics proceeding from vifcid matter lodged in the intellines, this gummy refin has produced happy effects, after purges and the common carminatives had been ufed in vain. Ammoniacum is most commodiously taken in the form of pills : about a fcruple may be given every night, or oftener. Externally it foftens and ripens hard tumors: a folution of it in vinegar stands recommended by fome for refolving even fcirrhous fwellings.

In the fhops is prepared a folution of it in pennyroyal water, called, from its milky colour, lac ammoniaci [L.] It is an ingredient alfo in the pectoral oxymel and pills, in the deobstruent and gum pills [E.] and in feveral plasters [L. E.]

AMOMI VERI Semen : Amomi racemost C. B. The feeds of the true amomum brought from the East-Indies [L.]

The true amomum is a round fruit, about the fize of a middling grape ; containing, under a membranous cover, a number of fmall rough, angular feeds, of a blackifh brown colour on the outfide, and whitish within : the feeds are lodged in three diffinct cells; those in each cell are joined clofely together, fo that the fruit, upon being opened, appears to contain only three feeds. Ten or twelve of these fruits grow together in a clufter, and adhere, without any pedicle, to a woody stalk about an inch long;

each fingle fruit is furrounded by fix leaves, in form of a cup; and the part of the falk void of fruit is clothed with leafy fcales.

The hufks, leaves, and ftems, have a light grateful fmell, and a moderately warm aromatic tafte : the feeds freed from the hufks, are in both respects much stronger ; their fmell is quick and penetrating, their tafte pungent, approaching to that of camphor. Notwithitanding amomum is an elegant aromatic, it has long been a stranger to the thops.

It is directed as an ingredient in the theriaca. The college of Edinburgh has expunged that composition, and as the true amomum is not at prefent to be procured in this country, they have dropt its name. That of London allows the feeds of the following plant of our own growth to be fubflituted to those of the oriental amomum.

AMOMI VULGARIS Semen: Silonis quod amomum officinis nostris C. B. Sii aromatici Tourn. The feeds of the common amomum, or baftard ftone pariley [L. E.]

These are very different in their appearance and manner of growth from the foregoing : they ftand in form of umbels, and are joined two together without any common covering : they are fmall, ftriated, of an oval figure and brown colour. Their tafte is warm and aromatic, but confiderably different from that of the amomum verum, and very far weaker. Water extracts little of their flavour by infusion, but elevates the whole in diffillation ; rectified spirit extracts the whole, but elevates very little : hence the watery extract has no tafte or fmell of the feeds; whilft the fpirituous poffess their flavour in great perfection. It is observable that the tincture drawn from them with pure ipirit

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fpirit is of a green colour. Thefe feeds have been recommended as carminative, aperient, diuretic and emmenagogue; but they are at prefent little regarded in practice.

AMYGDALÆ AMARÆ et DULCES. Sweet and bitter almonds [L. E.]

The almond is a flattifh kernel, of a white colour, covered with a thin brownifh fkin; of a foft fweet tafte; or a difagreeable bitter one. The fkins of both forts are unpleafant, and covered with an acrid powdery fubftance: they are very apt to become rancid on keeping, and to be preyed on by a kind of infect, which eats out the internal part, leaving the almond to appearance entire. To thefe circumftances regard ought to be had in the choice of them.

The fruit which affords thefe kernels, is the produce of a tree greatly refembling the peach, called by C. B. amygdalus fativa. The eye diffinguishes no difference betwixt the trees which produce the fweet and bitter, or betwixt the kernels themfelves. It is faid that the fame tree has, by a difference in culture, afforded both.

Both forts 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 furface: 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 médicines; but they are reckoned to afford little nourishment, and, when eaten in substance, are not easy of digestion, unless thoroughly comminuted. They are fuppofed, on account of their foft unctuous quality, to abtund acrimonious juices in the primæ viæ: peeled fweet almonds, eaten fix or eight at a time, fometimes give prefent relief in the heartburn.

Part II.

Bitter almonds have been found poifonous to dogs, and fundry other animals; and a water diffilled from them, when made of a certain degree of ftrength, has had like effects. Neverthelefs, when eaten they appear innocent to men, and have been not unfrequently ufed as medicines. Boerhaave recommends them, in fubftance, as diuretics which heat but moderately, and which may therefore be ventured upon in acute difeafes.

The oils obtained by expression from both forts of almonds are in their fensible qualities the fame. 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.

The milky folutions of almonds in watery liquors, commonly called emulfions, contain the oil of the fubject, 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 diforders, without danger of the ill effects which the oil might fometimes produce; fince emulfions do not turn rancid or acrimonious by heat, as all the oils of this kind, in a little time, do. Several unctuous and refinous fubstances, of themfelves not miscible with water, may by trituration with almonds be eafily mixed with them into the form of

of an emulfion; and are thus excellently fitted for medicinal ufe. In this form, camphor and the refinous purgatives may be commodioufly taken. The only officinal preparations of almonds are the exprefied oil and emulfion.

ANACARDIA. 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.

The medicinal virtues of anacardia have been greatly disputed ; many have attributed to them the faculty of comforting the brain and nerves, fortifying the memory, quickening the intellect : and, hence, a confection made from them has been dignified with the title of confectio sapientum : others think it better deferves the name of confectio stultorum, and mention instances of its continued use having rendered people maniacal. 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, whole acrimony is fo great, that it is faid to be employed by the Indians as a cauftic. This juice is recommended externally for tetters, freckles, and other cutaneous deformities; which it removes only by exulcerating or excoriating the part, fo that a new fkin comes underneath.

ANAGALLIDIS folia: Anagallidis phæniceo flore C. B. et Anagallidis flore cæruleo C. B. Anagallidis

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

Pimpernel is a low plant, in appearance refembling chickweed; but eafily diftinguifhable by its leaves being fpotted underneath, and joined immediately to the ftalk. The male and female pimpernels differ no otherwife than in the colour of their flowers; they are both found wild in the fields, but the male or red-flowered fort is more common.

Both the pimpernels have an herbaceous, roughish tafte, with little or no fmell. Many extraordinary virtues have been attributed to them. Geoffroy efteems them cephalic, fudorific, vulnerary, antimaniacal, antiepileptic, and alexeterial. Tragus, Caipar Hoffman, Michaeli, and others, are alfo very liberal in their praises; one of these gentlemen declares, that he has known numerous inftances of the fingular efficacy of a decoction and tincture of pimpernel, in maniacal and melancholic deliria. But later practitioners have not been fo happy as to meet with the like fuccefs. Pimpernel is not unfrequently taken as food; it makes no unpleafant falad; and in fome parts of this kingdom, is a common pot-herb. A fpirituous tincture of it contains nothing valuable : the only preparation that promifes any utility, is an extract made with water; or the expressed juice depurated and inspiffated.

ANAGALLIS AQUATICA, vide Becabunga.

ANCHUSÆ radix : Buglossi radici rubra Tourn. Anchusæ tinctoriæ Lin. Alkanet root [E.]

Alkanet is a rough hairy plant, much refembling the vipers buglofs: its chief difference from the common bugloffes confifts in the colour G 4 of of its roots; the cortical part of which is of a dufky red, and imparts an elegant deep red to oils, wax, and all unctuous fubitances, but not to watery liquors. This plant is a native of the warmer parts of Europe : it is fometimes cultivated in our gardens; but the greatest quantities are raifed 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 reddifh, the others of a deep purplish red : this has induced fome to fufpect that the foreign roots owe part of their colour to art, but we think without fufficient foundation.

Alkanet root has little or no fmell: when recent, it has a bitterifh aftringent tafte, but, when dried, fcarce any. As to its virtues, the prefent practice expects not any from it. Its chief ufe is for colouring oils, unguents, and plafters. As the colour is confined to the cortical part, the fmall roots are beft, thefe having proportionably more bark than the large.

ANETHI femen : Anethi bortenfis C. B. Anethi graveolentis Lin. Dill feed [L. E.]

Dill is an umbelliferous plant, cultivated in gardens, as well for culinary as medical ufe. The feeds are of a pale yellowifh colour, in fhape nearly oval, convex on one fide, flat on the other. Their tafte is moderately warm and pungent; their fmell aromatic, but not of the most agreeable kind. These feeds are recommended as a carminative, in flatulent colics proceeding from a cold cause or a viscidity of the juices. The most efficacious preparations of them are the distilled oil, and a tincture or

extract made with rectified fpirit. The oil and fimple water diffilled from them are kept in the flops [L.]

ANGELIC Æ radix, folia, semen: Angelicæ sativæ C. B. imperatoriæ sativæ Tourn. Angelicæ Archangelicæ Lin. Garden angelica; the roots, leaves, and seeds [L E.]

This is a large umbelliferous plant, growing fpontaneoufly in the northern climates : for the ufe of the fhops, it is cultivated in gardens, in the different parts of Europe. Bohemia and Spain are faid to produce the beft. The London college direct the roots brought from Spain to be alone made use of. Angelica roots are apt to grow mouldy, and be preyed upon by infects, unlefs thoroughly dried, kept in a dry place, and frequently aired. We apprehend that the roots which are fubject to this inconvenience might be preferved, by dipping them in boiling fpirit, or expofing them to its fleam, after they are dried.

All the parts of angelica, especially the roots, have a fragrant aromatic fmell; and a pleafant bitterifh warm tafte, glowing upon the lips and palate for a long time after they had been chewed. The flavour of the feeds and leaves is very perishable, particularly of the latter, which, on being barely dried, loie greatest part of their taste and fmell. 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, flowly exficcated, proves an elegant gummy-refin, very rich in the virtues of the angelica. On drying the root, this juice concretes into diffinct moleculæ, which, on cutting it longitudinally, appear distributed in little veins; in this flate, they are extracted

tracted by pure spirit, but not by watery liquors.

Part II.

Angelica is one of the moft elegant aromatics of European growth, though little regarded in the prefent practice. The root, which is the moft efficacious part, is rarely met with in prefcription, and does not enter any officinal composition. The leaves are ingredients in the three alexeterial waters [L.]: the feeds, in the compound anifeed water [L.], plague water, aqua mirabilis, and aromatic tincture [E.]The stalks make an agreeable fweetmeat.

ANGUILLÆ HEPAR. The liver of the eel.

The liver and gall of the eel are extremely acrid. They have been held a fpecific in difficult births; and enter the principal compositions for that intention in foreign pharmacopoeias; although it appears, that in most cases of this kind, acrid irritating medicines are really injurious. Boerhaave observes, that no fifh has a more acrid gall than the cel; and fays, that with pills made of the gall of the eel and pike, he has cured pale rickety children with fwelled bellies : the gall powerfully promoting urine, and occasioning the belly to fubfide.

ANIME; [E.] a refin exuding from the trunk of a large American tree, called by Pifo *jetaiba*, by the Indians *courbaril*.

This refin is of a transparent amber colour, a light agreeable fmell, and little or no taite. It diffolves entirely, but not very readily, in rectified spirit of wine; the impurities, which are often in large quantity, remaining behind. The Brazilians are faid to employ anime in fumigations for pains and aches proceeding from a cold caufe:

with us, it is rarely, if ever, made ufe of for any medicinal purpoles.

ANISI semen : Apii anisi dicii semine suaveolente Tourn. Pimpinellæ Anisi Lin. Anise, the seed [L. E.]

Anife is an annual umbelliferous plant, growing naturally in Crete, Syria, and other places of the Eaft. It is cultivated in fome parts of France, Germany, and Spain, and may be raifed alfo in England. The feeds brought from Spain, which are fmaller than the others, are preferred.

Anifeeds have an aromatic fmell, and a pleafant warm tafte, accompanied with a degree of fweetnefs. Water extracts very little of their flavour; rectified fpirit the whole.

Thefe feeds are in the number of the four greater hot feeds : their principal ufe is in cold flatulent diforders, where tenacious phlegm abounds, and in the gripes to which young children are fubject. Frederick Hoffman ftrongly recommends them in weaknefs of the ftomach, diarrhææ, and for ftrengthening the tone of the vifcera in general; and thinks they well deferve the appellation given them by Helmont, intefinorum folamen.

The officinal preparations of these feeds are an *effential oil* [L. E.] and a spirituous compound water [L. E.] They are ingredients in mithridate and theriaca; and the effential oil in the paregoric elixir [L.]

ANONIS, vide ONONIS.

ANSERINA, vide ARGENTINA.

ANTIMONIUM [L. E] flibium. Antimony.

Antimony is a ponderous brittle mineral, composed of long fhining ftreaks like needles, intermingled with with a dark lead-coloured fubflance; of no manifest taste or There are feveral mines fmell. of it in Germany, Hungary, and France : and fome likewife in England. The English fort feems to be, of all the others, the least proper for medicinal use, as frequently containing a portion of lead. The fubstances found mixed with the foreign forts are generally of the unfusible ftony kind, from which the antimony is melted out in veffels, whole bottom is perforated with fmall holes, and received in conical moulds. In thefe, the lighter and more droffy matter arifes to the furface; while the more pure and ponderous fubfides to the bottom, Hence the upper broad part of the loaves is confiderably lefs pure than the lower.

The goodness of Antimony is judged of from its weight; from the loaves not being spongy or blebby; 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 ftaining the eyebrows black. Its internal use does not feem to have been established till towards the end of the fifteenth century; and, even at that time, it was by many looked upon as poifonous. But experience has now fully evinced, that pure antimony, in its crude fate, has no noxious quality; that fome 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 flight alteration or addition, lofe their virulence, and become mild in their operation.

This mineral appears, from chemical experiments, to confift of a metal, united with common fulphur, and feparable in its metallic form by the fame means whereby other metallic bodies are extracted from their ores.

The pure metal operates, in a very minute dofe, with extreme vehemence, as a purgative and emetic; when combined with fulphur, as in the crude mineral, its power is reftrained : divefted of the inflammable principle which it has in common with all perfectly metallic bodies, it becomes an indolent calx. See the preparations of antimony in the third part of this work.

ANTHORÆ sive antithoræ radix: Aconiti salutiferi C. B. Aconiti foliorum laciniis linearibus, ubique ejusdem latitudinis Linnæi. Wholesome wolf's bane; the roots.

This plant may be diffinguished from the poifonous aconites by its leaves being more finely divided, and not at all bright or fhining : it grows wild on the Alps. The root has been supposed useful against poifons, particularly that of the thora (whence its name). Some neverthelefs look upon this pretended antidote itself as unsafe. Fred. Hoffman fays it is cathartic, and has produced dangerous diforders of the ftomach, accompanied with heat, thirst, and anxiety. On the other hand, Geoffroy relates, that he never has observed any purgative quality in this root, or any ill confequence from its ufe; that he has frequently exhibited it, and always with good fuccefs, against worms and in malignant fevers, especially such as were occasioned by viscidities in the ftomach and inteffines; the dofe from a fcruple to a dram. A competency of experiments to fully determine this point, is as yet wanting, the root never having come into general practice. Its tafte is acrid and bitter.

APES. Bees; their bodies, honey, and wax [E.]

Part II.

Bees, dried and pulverized, are faid to cure the alopecia, and, given internally, to promote urine; but they have been for a long time strangers to the shops. The honey and wax shall be treated of under the respective heads.

APII seu eleoselini radix : Apii foliis caulinis cuneiformibus Linnæi. Smallage, the roots [E.]

This plant is larger than the garden apium (parsley), of a darker green colour, and of a ftronger and more unpleafant flavour. The roots are in the number of the five called opening roots, and have been fometimes prefcribed as an ingredient in aperient apozems and dietdrinks ; but are at prefent difregarded. The feeds of the plant are moderately aromatic, and were formerly used as carminatives; in which intention they are, doubtlefs, capable of doing fervice, though the other warm feeds, which the fhops are furnished with, render these unnecessary ; and accordingly the Edinburgh college, which retains the roots, has expunged the feeds.

APIUM HORTENSE, vide PETROSELINUM.

ARANEARUM TELÆ [E.] Cobwebs.

These are never met with in prefcription; but are sometimes applied by the common people to shop the bleeding of slight wounds: this they seem to effect by adhering to the part, so as to close the orisces of the vessels, and prevent the effusion of their contents.

ARESTA BOVIS, vide Ono-NIS.

ARGENTINÆ, potentilla, an-

ferinæ, folia : Pentaphylloidis minoris supini, seu procumbentis, foliis alatis argenteis et serratis, flore luteo Mor. Hist. Ox. Silverweed, or wild tansfey; the leaves [E.]

This plant grows wild about the fides of rivulets and other moift places: it has no ftalk, the leaves lying flat on the ground. The writers on the materia medica in general look upon argentina as a very ftrong aftringent; mifled probably by its agreement in botanic characters with tormentil, which is known to be a powerful flyptic. The fenfible qualities of argentina promife no great virtue of this kind; for to the tafte it discovers only a flight roughishness, whence it may be prefumed to be entitled to a place only among the milder corroborants. As the aftringency of tormentil is confined chiefly to its root, it might be thought that the argentina alfo has an altringent root : the root of this plant, however, is found to have no other than a pleafant fweetish tafte, like that of parinips, but not fo ftrong.

ARGENTUM. Silver [L. E.] Abundance of virtues have been attributed to crude filver by the Arabians, and by fome alfo of later times, but on very little foundation. This metal, taken in its crude state, has no effect in the body; combined with a fmall quantity of the nitrous acid, it proves a powerful, though not always a fafe, hydragogue; with a larger, a strong caustic. The nitrous acid is the only one that perfectly diffolves this metal : on adding to this folution a minute portion of marine acid, or fubftances containing it, the liquor turns milky, and the filver falls to the bottom in form of a white calx : hence we are furnished with a method of discovering marine falt in waters, &c. See the

the preparations of filver in the third part.

ARGENTUM VIVUM: Hydrargyrus; Mercurius. Mercury or qu.ckfilver [L. E.]

Mercury is an opake filver-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; 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 confiderable mines of it in Hungary and Spain; but the greatest quantities come from the East-Indies.

The use of mercury in medicine feems to have been little known before the fifteenth century. The ancients looked upon it as a corrofive poifon, though, of itfelf, perfectly void of acrimony, tafte, and fmell. There are examples of its having been lodged for years in cavities both of bones and flefhy parts, without its having injured or affected them. Taken into the body in its crude flate, and undivided, it paffes through the inteftines unchanged, and has not been found to produce any confiderable effect. It has indeed been recommended in affhmas and diforders of the lungs; but the virtues attributed to it in these cases have not been warranted by experience.

Notwithflanding the mildnefs and inactivity of crude quickfilver undivided; when refolved by fire into the form of fume, or otherwife divided into very minute particles, and prevented from re-uniting by the interpolition of proper fubitances, or combined with mineral acids, it has very powerful effects, affording the most violent poifons, and the most excellent remedies with which we are acquainted.

The mercurial preparations, either given internally or introduced into the habit by external application, feem to liquefy all the juices of the body, even those in the minuteft and most remote veficis; and may be fo managed as to promote excretion through all the emunctories. Hence their common use in inveterate chronic diforders proceeding from a thickness and fluggifhnefs of the humours, and obstinate obstructions of the excretory glands; in fcrophulous and cutaneous difeafes; 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 after having fuled the juices in the remoter parts, occasion a plentiful evacuation of them from the falival glands

The falutary effects of mercurials do not depend on the quantity of fenfible evacuation. This medicine may be gradually introduced into the habit, fo as, without occafioning any remarkable difcharge. to be productive of very happy effects. To answer this purpose, it fhould be given in very fmall dofes, in conjunction with fuch fubftances as determine its action to the kidneys or the pores of the fkin. By this method inveterate cutaneous and venereal diffempers have been cured, without any other fenfible excretion than a gentle increase of perspiration or urine. Where there are ulcers in any part, they difcharge for fome time a very fetid matter, the quantity of which becomes gradually lefs, and at length the ulcer kindly heals. If the mer- . cury should at any time, from cold or the like, affect the mouth (which I have rarely found to happen) it may be reftrained by omitting a dole, and by warmth or fuitable

fuitable medicines promoting the fuppressions of female evacuations. perfpiration. The dose in substance is from a

Part II.

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

(1) ARISTOLOCHIA LONGA [L. E.] Long birthwort. This is a tuberous root, fometimes about the fize of the finger, fometimes as thick as a man's arm, and a foot in length: it is nearly of an equal thicknefs all over, or a little thicker in the middle than at the ends: the outfide is of a brownifh colour; the infide yellowifh.

(2) ARISTOLOCHIA ROTUNDA [E.] Round birthwort. This has fcarce any other visible difference from the foregoing than its roundish shape.

(3) ARISTOLOCHIA TENUIS [L.] Slender birthwort. This is a long and flender root, rarely exceeding the thickness of a goose quill.

Thefe roots are the produce of Spain, Italy, and the fonthern parts of France. Their fmell is fomewhat aromatic; their tafte warm and bitterifh. Authors in general reprefent them as extremely hot and pungent: fome fay they are the hotteft of all the aromatic plants; but, as they are usually met with in the fhops, they have no great pungency. The long and round forts, on being first chewed, scarce difcover any tafte, but in a little time prove naufeouily bitterifh; the long fomewhat the leaft fo. The other fort inftantly fills the mouth with an aromatic bitternefs, which is not ungrateful. Their medical virtues are, to heat, ftimulate, attenuate vifcid phlegm, and promote the fluid fecretions in general; they are principally celebrated in

fupprefions of female evacuations. The dofe in fubitance is from a fcruple to two drams. The long fort is recommended externally for cleanfing and drying wounds and ulcers, and in cutaneous difeafes. —The ariftolochia tenuis, is an ingredient in theriaca; and in want of this fpecies, the longa is allowed to be fubfituted for it by the London college.

ARMORACIA, vide RAPHA-NUS RUSTICANUS.

ARNICA, vide DORONICUM.

ARSENICUM. Arfenic.

Arfenic is contained, in greater or lefs quantity, in moft kinds of ores, particularly in those of tin and bifmuth, in the white pyrites, and the mineral called *cobalt*; from which last, greatest part of the arfenic brought to us is extracted by a kind of sublimation. The arfenic arifes at first in the form of greyish *meal*, which, more carefully resublimed, concretes into transparent masses, the *white* arfenic of the shops.

Arfenic, fublimed with one tenth its weight of fulphur, unites therewith into a bright yellow mais, in iome degree transparent; the common yellow arfenic. On doubling the quantity of fulphur, the compound proves more opake and compact ; of a deep red colour, refembling that of cinnabar, but with this difference, that it lofes fome of its beauty upon being reduced into powder, while that of cinnabar is improved by these means: this is the common red arfenic. By varying the proportions of arfenic and fulphur, fublimates may be obtained of a great variety of fhades of yellow and red.

Natural mixtures of arfenic and fulphur refembling the foregoing preparations,

preparations, are not unfrequently met with in the earth. The foffil red arienic is the fandaracha of the Greeks, the realgar and rifigal of the Arabians. Both the red and yellow, when of a fmooth uniform texture, are named zarnichs; and when composed of fmall fcales or leaves, auripigmenta, or orpiments: the last are the only substances to which the Greeks gave the name apoferizor. That the zarnichs and orpiments really contain arienic (contrary to the opinion of fome writers) is evident from fundry experiments, whereby a perfect arfenic, and in notable quantity, is obtainable from them. The compilers of the preceding edition of the Edinburgh Difpenfatory, therefore, very justly gave Sandaracha Græcorum as a synonymon to red arfenic; and auripegmentum to the yellow.

The pure or white arfenic has a penetrating corrolive talte; and taken into the body proves a most violent poifon. Befides the effects which it has in common with other corrofives, it remarkably attenuates the coats of the flomach, occasions a fwelling and fphacelation of the whole body, and a fudden putrefaction after death particularly, as is faid, of the genitals in men. Where the quantity is fo very fmall as not to prove fatal, tremors, palfies, and lingering hectics fucceed. The remedies recommended against this poifon are, milk and oily liquors immediately and liberally drunk.

The red and yellow arfenics, both native and factitious, have little tafte, and are much lefs virulent in their effects than the foregoing. Sulphur, which reftrains the power of mercury and the antimonial metal, remarkably abates the virulence of this poifonous mineral alfo. Such of thefe fubftances as participate more largely of fulphur, feem to be almost innocent: the factitious red arfenic, and the native orpiments, have been given to dogs in confiderable quantity, without being productive of any apparent ill confequences.

ARTEMISIÆ folia: Artemifiæ vulgaris majoris C. B. Mugwort; the leaves [L. E.]

This plant grows plentifully in fields, hedges, and wafte places, throughout England; and flowers in June. In appearance, it fomewhat refembles 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 fmell, and an herbaceous bitterifh tafte. They are principally celebrated as uterine and antihyfteric: an infufion of them is fometimes drank, either alone, or in conjunction with other fubftances, in fuppreffion of the menftrual evacuations. This medicine is certainly a very mild one, and confiderably lefs hot than moft others to which thefe virtues are attributed: in fome parts of this kingdom, mugwort is of common ufe as a pot-herb.

ARI radix: Ari maculati maculis nigris C. B. Wake-robin the root [L. E.]

This plant grows wild under hedges, and by the fides of banks, in moft parts of England. It fends forth in March, three or four triangular leaves, which are followed by a naked ftalk, bearing a purplifh piftil inclofed in a long fheath: this is fucceeded in July, by a bunch of reddifh berries. In fome plants, the leaves are fpotted with black, in others with white, and in others others not fpotted at all: the black fpotted fort is fuppofed to be the most efficacious, and hence is exprefsly directed by the London college.

Part II.

All the parts of arum, particularly the root, have an extremely pungent, acrimonious taffe. If the root be but lightly chewed, it continues to burn and vellicate the tongue for fome hours, occafioning at the fame time a confiderable thirft : thefe fymptoms are alleviated by butter, milk, or oily liquors. Dried and kept for fome time, it lofes much of its acrimony, and becomes at length an almost infipid farinaceous fubftance.

The root is a powerful ftimulant and attenuant. It is reckoned a medicine of great efficacy in fome chachectic and chlorotic cafes, in weakness of the ftomach occasioned by a load of vifcid phlegm, and in fuch diforders in general as proceed from a cold fluggifh indifposition of the folids and lentor of the fluids. I have experienced great benefit from it in rheumatic pains, particularly those of the fixt kind, and which were feated deep. In thefe cafes I have given from ten grains to a fcruple of the fresh root twice or thrice a day, made into a bolus or emulfion with uncluous and mucilaginous fubstances, which cover its pungency, and prevent its making any painful impression on the tongue. It generally excited a flight tingling fenfation through the whole habit, and, when the patient was kept warm in bed, produced a copious fweat.

The only officinal preparation, in which this root is an ingredient, is 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.

ASAFOETIDA. Afafetida [L.E.] the concrete juice of a large umbelliferous plant growing in Perfia.

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 confiftency. It is brought to us in large irregular maffes, composed of various little fhining lumps or grains, which are partly of a whitish colour, partly reddifh, and partly of a violet hue. Those masses are accounted the best which are clear, of a pale reddifh colour, and variegated with a great number of elegant white tears.

This drug has a ftrong fetid fmell, fomewhat like that of garlick; and a bitter, acrid, biting tafte. It lofes by age fome of its fmell and ftrength, a circumftance to be particularly regarded in its exhibition. It confifts of about one-third part of pure refin, and two-thirds of gummy matter; the former foluble in rectified fpirit, the latter in water. Proof fpirit diffolves almost the whole into a turbid liquor; the tincture in rectified fpirit is transparent.

Afafetida is the firongeft of the fetid gums, and of frequent use in hysteric and different kinds of nervous complaints. It is likewise of confiderable efficacy in flatulent colics; and for promoting all the fluid fecretions in either fex. The ancients attributed to this medicine many other virtues, which are at present not expected from it.

This gummy-refin is an ingredient in the officinal gum pills, compound powder of myrrh, fetid tincture, tincture, tincture of foot, fetid volatile fpirit [L.] and antihyfteric plafter [E.]

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ASARI folia, radix : Afari C. B. Afari Europæi Lin. Afarabacca : the roots and leaves. — The London college directs only the leaves ; the Edinburgh both leaves and root.

Afarum 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 fupposed weaker.

Both the roots and leaves have a nauseous, bitter, acrimonious, hot tafte; their fmell is ftrong and not very difagreeable. Given in fubftance from half a dram to a dram, they evacuate powerfully both upwards and downwards. It is faid, that tinctures made in spirituous menftrua, poffefs both the emetic and cathartic virtues of the plant : that the extract obtained by infpiffating these tinctures, acts only by vomit, and with great mildnefs: 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. Snussed 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 fnuffing up a dole 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 of the shops [L. E.]

ASCLEPIAS, vide VINCE-TOXICUM.

ASELLI, vide MILLEPEDÆ.

ASPALATHUS, vide RHO-DIUM,

ASPARAGI radix : Asparagi fativi C. B. Asparagi officinalis Lin. Asparagus; the root [E.]

This plant is cultivated in gardens for culinary use. The roots have a bitterish mucilaginous tafie, inclining to fweetness, the fruit has much the fame kind of tafte; the young fhoots are more agreeable than either. Afparagus promotes appetite, but affords little nourifhment. It gives a ftrong ill fmell to the urine in a little time after eating it, and, for this reafon, chiefly, is supposed to be diuretic; it is likewife efteemed 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 fhare of the virtues ufually afcribed to them. Afparagus appears from experience to contribute very little either to the excliing citing of urine when fupprefied, or the increasing of its discharge; and, in cases where aperient medicines generally do service, this has little or no effect.

ASPERULÆ flores : Asperulæ aut aspergulæ adoratæ nostratis Lob. Woodroof; the flowers.

This is a low umbelliferous plant, growing wild in woods and copfes, and flowering in May. It has an exceeding pleafant fmell, which is improved by moderate exficcation: the taffe is fubfaline, and fomewhat auftere. It imparts its flavour to vinous liquors. Afperula is fuppofed to attenuate vifcid humours, and ftrengthen the tone of the bowels. It is recommended in obftructions of the liver and biliary ducts, and by fome in epilepfies and palfies. Modern practice has, neverthelefs, rejected it.

ASPHALTUS, vide BITUMEN JUDAICUM.

ASPLENIUM, vide CETERACH.

ATRIPLICIS OLIDÆ folia: Atriplices fætidæ C.B. Chenopodii fætidi Tourn. Chenopodii Vulvariæ Lin. Stinking orach, or arach; the leaves [L.]

This is a low plant, fprinkled all over with a kind of whitish clammy meal: it grows about dunghills, and other wafte places. The leaves have a ftrong fetid fmell, with which the hand, by a light touch, becomes fo impregnated with, as not to be eafily freed from it. Its imell has gained it the character of an excellent antihysteric; and this is the only use to which it is applied. Tournefort recommends a ipirituous tincture, others a decoction in water, and others a conferve of the leaves, as of wonderful efficacy in uterine disorders.

The garden oraches (which are either of a pale greenifh, or purplifh red colour, and hence named *atriplex alba* and *rubra*) are chiefly employed for culinary purpofes. They are cooling, and gently laxative; a decoction of the leaves is recommended in coftivenes, where the patient is of a hot bilious difposition.

AVENA [E] Oats.

This grain is an article rather of food than of medicine. It is fufficiently nutritive and eafy 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 diforders, coughs, hoarseness, roughness, and exulcerations of the fauces.

AURANTIORUM HISPA-LENSIUM fuccus et cortex : Fructûs Mali aurantiæ majoris C. B. Seville oranges; the juice and yellow rind [L. E.] The Edinburgh college uses also the flowers of the tree.

The orange is a beautiful evergreen tree, or rather fhrub, 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 fome time paft, of great efteem as a perfume : their tafte is fomewhat warm, accompanied with a degree of bitternefs. They yield their flavour by infusion to rectified fpirit, and in diftillation both to fpirit and water : the bitter matter is diffolved by water, and, on evaporating the decoction, remains entire in the extract. The diftilled water was for-H merly kept in the fhops, but, on account of the fcarcity of the flowers, is now laid afide: it is called by foreign writers aqua naphæ. An oil diftilled from thefe flowers is brought from Italy under the name of oleum, or effentia neroli.

The outer yellow rind of the fruit is a grateful aromatic bitter, and, in cold phlegmatic conflictutions, proves an excellent ftomachic and carminative, promoting appetite, warming the habit, and ftrengthening the tone of the vifcera. Orange peel appears to be very confiderably warmer than that of lemons, and to abound more with effential oil: to this circumstance therefore due regard ought to be had in the use of these medicines. The flavour of the former is likewife supposed to be lefs perifhable than that of the latter, hence the college employ orange peel in the fpirituous bitter tincture, which is deligned for keeping, whilft, in the bitter watery infusion, lemon peel is preferred. A fyrup and two distilled waters are for the fame reafon prepared from the rind of oranges in preference to that of lemons.

The juice of oranges is a grateful acid liquor, of confiderable ufe in febrile or inflammatory diftempers, for allaying heat, abating exorbitant commotions of the blood, quenching thirft, and promoting the falutary excretions : it is likewife of great ufe in fcurvies, efpecially when given in conjunction with the cochlearia, nafturtium, or other acrid antifcorbutics, as in the fucci fcorbutici of the fhops.

AURANTIA CURASLAVEN-SIA. Curaffao oranges [E.]

Thefe are the fmall young fruit of the Seville orange dried. Their first appearance in a public pharmacopœia was in that of Edin-

burgh, as an ingredient in the flomachic tincture and elixir. They appear very well adapted to that intention, being moderately warm bitterish aromatics, of a flavour sufficiently agreeable.

AURIPIGMENTUM. Orpiment; a mineral composed of fulphur and arfenic. See ARSENI-CUM.

AURUM. Gold.

This metal was introduced into medicine by the Arabians, who efteemed 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 fimple waters are to be diffilled. But no one, it is prefumed, at this time, expects any fingular virtues from it, fince it certainly is not alterable in the human body. Mr. Geoffroy, though unwilling to reject it from the cordial preparations, honeftly acknowledges, that he has no other reafon for retaining it, than complaifance to the Arabian schools. The chemist have endeavoured, by many elaborate procefies, to extract what they call a fulphur or anima of gold : but no method is as yet known of feparating the component parts of this metal : all the tinctures of it and anrum potabiles, which have hitherto appeared, are real folutions of it in aqua regia, diluted with fpirit of wine or other liquors, and prove injurious to the body rather than beneficial.

AXUNGIA. Fat.

A great variety of fats were introduced into medicine by the Arabians, and recommended as poffeffing diffinct virtues. The college of

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of Wirtemberg, in the edition of their difpenfatory, published in 1741, directs no leis than twentyeight different fats to be kept in the fhops: fome of thefe, they inform us, are attenuating and refolvent; fuch as those of the heron, wild cat, ftork, partridge, coney, hare, fox, Alpine moule, the badger, boar, wolf, ferpents, and vipers : others are heating, detergent and feptic; those of the eel, the pike, and the umber : a third clafs is emollient; the fat of the ox, the deer, and the goat : and a fourth, emollient, digerent, and lenient; this last comprehends the fats of the duck, goole, dog, capon, beaver, horfe, hen, and human fat. Experience, however, does not countenance these different virtues afcribed 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 confequences of them, may be expected in a greater or lefs degree from fats of every kind. The London college has therefore retained only three fats, of different confiftences, for different mixtures viz. viper's fat, hog's lard, and mutton fuet; to which the Edinburgh college adds goat's fuet. These are certainly fufficient for anfwering all the intentions for which fubstances of this kind are employed.

Part II.

BALAUSTIA: Flores balaustiæ flore pleno majore C. B. Punicæ Granati Lin. Balaustines: the flowers of the balaustine or double-flowered pomegranate tree [L. E.]

The balauftine is a low tree, or rather fhrub, growing wild in Italy, &c. The flowers are all of an elegant red colour, in appearance refembling a dried red rofe. Their tafte is bitterifh and aftringent. Balauftines are recommended in diarrhœas, dyfenteries, and other cafes, where aftringent medicines are proper. They are rarely directed in extemporaneous prefeription, and enter only one officinal composition, the pulvis e fuccino compositius [L.]

BALSAMITÆ MARIS sive costi hortorum folia: Menthæ bortensis corymbiferæ C. B. Tanaceti Balsamitæ Lin. Costmary; the leaves [E.]

This was formerly a very common garden plant, and frequently ufed both for culinary and medicinal purpofes; but is at prefent very little regarded for either; though it should seem, from its sensible qualities, to be equal or inperior, as a medicine, to fome aromatic herbs, which practice has retained. The leaves have a bitterish, warm, aromatic tafte ; and a very pleafant, fmell, approaching to that of mint, or a mixture of mint and maudlin. Water elevates their flavour in distillation; and rectified spirit ex. tracts it by infusion.

BALSAMUM COPAIBA [L. E.] Baliam of Copaiba: a liquid refinous juice, flowing from incifions made in the trunk of a large tree which grows in the Spanifh Weft-Indies. Called by Lin. Copaifera officinalis.

This juice is clear and transparent, of a whitish or pale yellowish colour, an agreeable smell, and 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 clearnes; but has not been observed to grow dry or folid, as most of the other refinous juices do. We sometimes meet with a thick fort of balfam of Copaiba, which is not at all transparent, or H z much much lefs fo than the foregoing, and generally has a portion of turbid watery liquor at the bottom. This fort is probably either adulterated by the mixture of other fubftances, or has been extracted by soction from the bark and branches of the tree; its fmell and talte are much lefs pleafant than those of the genuine balfam.

Pure balfam of Copaiba diffolves entirely in rectified fpirit, efpecially if the menftruum be previoufly alkalized: the folution has a very fragrant fmell. Diffilled with water, it yields a large quantity of a limpid effential oil; and, in a ftrong heat, without addition, a blue oil.

The balfam of Copaiba is an ufeful corroborating detergent medicine, accompanied with a degree of irritation. It ftrengthens the nervous fystem, tends to loofen 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 balfams. Fuller observes, that it gives the urine an intensely bitter taste, but not a violet set fmell as the turpentines do.

This balfam has been principally celebrated in gleets and the fluor albus, and, externally, as a vulnerary. The author above mentioned recommends it likewife in dyfenteries, in fcorbutic cachexies, in difeafes of the breatt and lungs, and in an acrimonious or putrefcent flate of the juices : he fays, he has known very dangerous coughs, which manifelly threatened a con-fumption, cured by the ule of this balfam alone; and that, notwithstanding its being hot and bitter, it has good effects even in hectic cafes.

The dofe of this medicine rarely exceeds twenty or thirty drops, though fome direct fixty or more. It may be conveniently taken in the form of an elæolaccharum; or in that of an emulfion, 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

The only officinal preparation of this balfam is an empyreumatic oil, diftilled with the addition of gum guaiacum [L.] The balfam itfelf is an ingredient in the balfamic tincture, and tincture of cantharides [E.]

BALSAMUM GILEADENSE, vide Opobalsamum.

BALSAMUM PERUVIANUM [L. E] Balfam of Peru.

The common Peruvian balfam is faid to be extracted by coction in water, from an odoriferous fhrub growing in Peru, and the warmer parts of America. This balfam, as brought to us, is nearly of the confiftence of thin honey, of a reddifh brown colour, inclining to black, an agreeable aromatic fmell, and a very hot biting tafte. Diftilled with water, it yields a fmall quantity of a fragrant effential oil of a reddifh colour; and, in a ftrong fire, without addition, a yellowifh red oil

Balfam of Peru is a very warm aromatic medicine, confiderably hotter, and more acrid than Copaiba. Its principal effects are, to warm the habit, to ftrengthen the nervous fyftem, and attenuate vifcid humours. Hence its use in some kinds of afthmas, gonorrhœas, dyfenteries, suppressions of the uterine discharges, and other disorders proceeding from a debility of the folids, or a fluggishness and inactivity of the juices. It is also employed externally, for cleansing and

Part II.

and healing wounds and ulcers; and fometimes against palfies and rheumatic pains.

Part II.

This balfam does not unite with water, milk, expressed oils, animal fats, or wax : it may be mingled in the cold with this laft, as alfo with the febaceous fubftance called expressed oil of mace ; but if the mixture be afterwards liquefied by heat, the balfam feparates and falls to the bottom. It may be mixed with water into the form of an emulfion after the fame manner as the balfam of Copaiba. Alkaline lixivia diffolve great part of it; and rectified fpirit the whole.

This ballam is an ingredient in the balfamum guaiacinum, pilulæ aromatica L. tinctura balfamica, elixir pectorale, balfamum cepbalicum, and balfamum Locatelli [E.]

There is another fort of balfam of Peru, of a white colour, and confiderably more fragrant than the former. This is very rarely brought to us. It is faid to be the produce of the fame plant which yields the common or black balfam ; and to exude from incitions made in the trunk.

BALSAMUM TOLUTANUM [L. E.] Balfam of Tolu.

This flows from a tree of the pine kind, growing in Tolu, in the Spanish West-Indies, called by Linnæus Toluifera Balfamum ; whence the balfam is brought to us in little gourd shells. It is of a yellowish brown colour, inclining to red ; in confiftence thick and tenacious : by age it grows hard and brittle, without fuffering any great lois of its more valuable parts. The fmell of this balfam is extremely fragrant, fomewhat refembling that of lemons; its take warm and fweetish, with little of the pungency, and nothing of the naufeous relish, which accompany the other

balfams. It has the fame general virtues with the foregoing ; but is much milder, and for fome purpofes, particularly as a corroborant in gleets and feminal weakneffes, is fuppofed to be more efficacious. It is an ingredient in the vulnerary balfam [L] the balfamic tinclure, and the pectoral pills and elixir [E.] A fyrup also is impregnated with it in the fhops.

BARDANÆ MAJORIS seu lappæ majoris, radix et semen : Lappæ majoris, arcii Dioscoridis C. B. Arctii Lappæ Lin. Burdock; the roots and feeds [E.]

This is a common plant about way fides, fufficiently known from its fealy heads, or burs, which flick to the clothes. - The feeds have a bitterish subacrid taste : they are recommended as very efficacious diuretics, given either in the form of emulfion, or in powder, to the quantity of a dram .- The roots tafte fweetish, with a flight aufterity and bitterifhnefs : they are efteemed aperient, diuretic, and fudorific ; and faid to act without irritation, fo as to be fafely ventured upon in acute diforders. Decoctions of them have of late been ufed in rheumatic, gouty, and other diforders; and preferred by fome to those of farfaparilla.

BDELLIUM [L. E.] Bdellium.

Bdellium is a gummy-refinous concrete juice brought from Arabia. and the East-Indies, in glebes of different figures and magnitudes. It is of a dark reddifh brown colour, and in appearance iomewhat refembles myrrh : upon cutting a piece, it looks fomewhat transparent, and as Geoffroy juftly obferves, like glue. It grows foft and tenacious in the mouth, flicks to the teeth, has a bitterish taste, and not a difagreeable fmell. Bdellium is recommended as a fudorific, diuretic,

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applications for maturating tumors, &c. In the prefent practice, it is fcarce otherwife made ule of than as an ingredient in the theriaca.

BECABUNGÆ, Jeu Anagallidis aquaticæ folia: Veronicæ aquaticæ folio Subrotundo Morif. bis. Veronicæ Becabungæ Lin. Brooklime; the leaves [L. E.]

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 fpring. Their prevailing tafte is an herbaceous one, accompanied with a very light bitterifhneis.

Becabunga has been fuppofed to have a faponaceous detergent virtue, and to attenuate vifcid humours without pungency or irritation: hence it has been directed in the species of scurvy called hot, where the cochlearia, and other acrid antifcorbutics, were fuppofed to be less proper. It is now used only in composition, with those plants, as in the Jucci Scorbutici [L, E.] but does not perhaps add much to their efficacy. If any virtue be expected from becabunga, it should be used as food.

BELLIDIS MAJORIS folia: Bellidis majoris sylwestris caule folioso C. B. Chryfanthemi Lucanthemi Lin. Greater or ox-eye daily; the root [E.]

This plant is frequent in fields, and among corn, flowering in May and June. The leaves have a mucilaginous, fubfaline, roughish taite. They are faid to be detergent, refolvent, aperient, and also moderately aftringent. Geoffroy relates, that the herb, gathered before the flowers have come forth, and boiled in water, imparts an acrid tafte, penetrating and fubtile like pep-

tic, and uterine; and in external per; and that this decoction is an excellent vulnerary and diuretic: but this account feems to belong more properly to the following plant.

> BELLIDIS MINORIS five consolidæ minimæ folia : Bellidis minoris sylvestris C. B. Bellidis perennis Lin. Common daify; the leaves [E.]

This is common almost every where, and flowers early in the fpring .- The leaves have a fubtile fubacrid tafte, and are recommended as vulneraries, and in affhmas and hectic fevers, and fuch diforders 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 antifcorbutics, and refolvents of coagulated blood in hypochondriacal diforders.

BENZOINUM [L. E.] Benzoine.

¹ Benzoine is a concrete refinous juice, obtained from a large tree growing naturally in both the Indies, and hard enough to bear the winters of our own climate. The refin is brought from the East-Indies only; in large maffes compofed of white and light brown pieces, or yellowish specks, breaking very eafily betwixt the hands : fuch as is whiteft, and free from impurities, is most effeemed.

This refin has very little taffe, imprefing only a light fweetnefs on the tongue: its fmell is extremely fragrant and agreeable, efpecially when heated. Committed to the fire in proper veffels, it yields a confiderable quantity of a white faline concrete, called flowers, of an acidulous tafte and grateful odour, soluble in rectified spirit, and by the affiftance of heat in water.

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The principal use of benzoine is in perfumes, and as a colmetic : it is rarely met with in extemporaneous prescription, and enters in fubstance only one officinal composition, the balfamum traumaticum, defigned chiefly for external use. It should nevertheless feem applicable to other purpofes, and to have no bad title to the virtues of ftorax and balfam of Tolu, at leaft in a fubordinate degree. The flowers are recommended in diforders of the breaft ; and in this intention they are made an ingredient in the paregoric elixir [L], in the pectoral elixir, electary, and pills, and in the troches of Julphur [E.]

Part II.

BERBERIS, seu oxyacanthæ Galeni, cortex et fructus : Berberis dumetorum C. B. Berberis vulg. Lin. Barberry ; the bark and fruit.

The barberry is a fmall tree, or rather a large bufh, covered with an afh-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 feeds. It grows wild on chalky hills in feveral parts of England; and is frequently planted in hedges and in gardens.

The outward bark of the branches, and the leaves, has an aftringent acid tafte; the inner yellow bark, a bitter one: this latter is faid to be ferviceable in the jaundice; and by fome, to be an ufeful purgative.

The berries, which to the tafte are gratefully acid, and moderately reftringent, have been given with good fuccefs in bilious fluxes, and difeafes proceeding from heat, acrimony, or thinnefs of the juices. Among the Egyptians, barberries are employed in fluxes, and in malignant fevers, for abating heat, quenching thirft,

raifing the ftrength, 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 feed, or the like, to prevent offence to the flomach ; the liquor ftrained off, and iweetened with fugar, or fyrup of citrons, is given the patient liberally to drink. Prosper Alpinus (from whole treatife De medicina Egyptiorum this account is extracted) informs us, that he took this medicine himfelf, with happy fuccels, in a peftilential fever, accompanied with an immoderate bilions diarrhœa. A jelly of the fruit is directed by the Edinburgh college as an officinal.

BETÆ folia, Betæ albæ vel pallescentis quæ sicula et cicla officinarum Mor. et Betæ rubræ vulgaris C. B. et Betæ rubræ radice rapæ C. B. White and red beets; and the turnep-rooted red beet, or beetraye [E.]

These plants are cultivated in gardens, chiefly for culinary ufe. The eye diffinguishes little other difference betwixt them, than that expressed in their titles. Decoctions of beets gently loofen the belly; hence they have been ranked among the emollient herbs: the plants remaining after the boiling are fupposed to have rather a contrary effect. They afford little nourishment, and are faid by fome to be prejudicial to the flomach. The juice expressed from the roots, is a powerful errhine.

BETONICÆ folia: Betonicæ purpureæ C. B. Betonicæ officinalis Lin. Common or wood-betony; the leaves [E.]

Betony is a low plant, growing in woods and fhady places, in H 4 feveral

feveral parts of England; the flowers come forth in June and July; they are of a purplish colour, and ftand in fpikes on the tops of the stalks. The leaves and flowers have an herbaceous, roughish, somewhat bitterish talte, 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 fuch, an infufion or light decoction of it, may be drunk as tea, or a faturated tincture in rectified spirit given in fuitable dofes, in laxity and debility of the vifcera, and diforders proceeding from them. The powder of the leaves, fnuffed up the nofe, provokes fneezing; and hence betony is fometimes made an ingredient in sternutatory powders: this effect does not feem to be owing, as is generally fuppoled, 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 tafte is bitter and very naufeous : taken in a fmall dofe, they vomit and purge violently, and are fuppofed to have fomewhat in common with the roots of hellebore. It is pretty fingular, if true, that betony affects those who gather any considerable quantity of it, with a diforder refembling drunkennefs ; as affirmed by Simon Paulli and Bartholinus.

BETONICA AQUATICA, vide Scrophularia aquatica major.

BETONICA PAULI, vide VE-RONICA MAS. BETULÆ cortex et lachryma : Betulæ C. B. Betulæ albæ Lin. The birch tree; the bark and fap [E.]

This tree grows wild in moift woods: its bark confifts of a thick brittle fubftance of a brownifh red colour; and of feveral very thin, fmooth, white, transparent membranes. These membranes are highly inflammable, and appear to abound with refinous matter, though fearcely of any particular fmell or tafte: the thick brittle part is less refinous, and in tafte roughisth : 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 fpring, a fweetifh juice iffues forth, fometimes, as is faid, in fo 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 fcorbutic diforders, and other foulneffes of the blood; its moft fenfible effect is to promote the urinary difcharge.

BEZOAR lapis. Bezoar ftone. The Bezoar ftone is a calculous concretion found in the ftomach of of certain animals which are faid to be of the goat kind. It is composed of concentrical coats furrounding one another, with a little cavity in the middle, containing a bit of wood, ftraw, hair, or the like fubftances.

The fhops diffinguish two forts of bezoar, one brought from Persia and the East-Indies, the other from the Spanish West-Indies. The former or better fort called oriental bezoar, is of a shining dark green or olive colour, and an even smooth furface; on removing the outward coat, that which lies underneath it appears appears likewife fmooth and fhining. The occidental has a rough furface, and less of a green colour than the foregoing : It is likewife much heavier, more brittle, and of a loofer texture; the coats are thicker, and on breaking exhibit a number of ftriæ curioufly interwoven. The oriental is generally lefs than a walnut; the occidental for the most part larger, and sometimes as big as a goole egg. The former is univerfally more efteemed, and is the only fort now retained by the London College: the Edinburgh, in a former edition of their pharmacopœia directed both ; but they now feem to allow them to be used promiscuoufly, retaining in their catalogue only the name bezoar lapis.

Part II.

Kæmpfer (in whole Amænitates exoticae, a full account of the bezoar animal may be feen) informs us, that this stone is in high esteem among the Perfians, and even of a greater value than in Europe. This, with fundry other circumstances needless to relate here, has given occasion to many to fuspect, that the true bezoar is never brought to us. Some authors relate with great confidence, that all the flones commonly fold under this name are artificial compositions. That some of them are fo, is evident; hence the great differences in the accounts which different perfons have given of their qualities; the ftones examined by Slare as oriental bezoar did not diffolve in acids ; those of which Grew and Boyle made trial, did : those employed by Geoffroy (in iome experiments related in the French memoirs 1710) did not feem to be acted on by rectified spirit; whilft fome of those examined by Neumann at Berlin almost totally diffolved. The common mark of goodness of this ftone, is its ftriking

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a deep green colour on white paper that has been rubbed with chalk.

Bezoar was not known to the ancient Greeks, and is first taken Notice of by the Arabians, who extol it in a great variety of diforders, particularly against poifons. Later writers also bestow extraordinary commendations on it as a fudorific and alexipharmac; virtues to which it certainly has no pretence. It is a morbid concretion. much of the fame nature with the human calculus, of no fmell or tafte, not digeflible in the ftomach of the animal in which it is found. and fcarce capable of being acted on by any of the juices of the human body. It cannot be confidered in any other light than as an abforbent; and is much the weakeft of all the common fubitances of that class. It has been given to half a dram, and fometimes a whole dram, without any fenfible effect ; though the general dose (on account of its great price) is only a few grains.

BISMALVA, vide ALTHEA.

BISMUTHUM. Bifmuth.

Bifmuth is a ponderous brittle metal, refembling in appearance the antimonial regulus and zinc, but greatly differing from them in quality. It diffolves with vehemence in the nitrous acid, which only corrodes the regulus of antimony; and is fcarce at all foluble in the marine acid which acts ftrongly on zinc. A calx and flowers of this femimetal have been recommended as fimilar in virtue to certain antimonial preparations; but are at prefent of no other ufe than as a pigment or cosmetic. See Part III. chap. ix.

BISTORTÆ radix: Bistortæ majoris radice minus intorta C. B. Polygoni Polygoni Bistortæ Lin. Bistort, or substances found in France, Gerfnakeweed; the root [L. E.] many, and Switzerland. Thefe

This plant grows wild in moift meadows, in feveral parts of England : but is not very common about London. The root is about the thicknefs of the little finger, of a blackifh brown colour on the outfide, and reddifh within : it is writhed or bent vermicularly (whence the name of the plant) with a joint at each bending, and full of bufhy fibres; the root of the fpecies here meant has, for the moft part, only one or two bendings; others have three or more.

All the parts of biftort have a rough auftere tafte, particularly the root, which is one of the ftrongeft of the vegetable aftringents. It is employed in all kinds of immoderate hæmorrhages and other fluxes, both internally and externally, where aftringency is the only indication. It is certainly a very powerful flyptic, and is to be looked on fimply as fuch ; to the fudorific, antipestilential, and other like virtues atributed to it, it has no other claim, than in confequence of its aftringency, and of the antifeptic power which it has in common with other vegetable flyptics. The largeft dole of the root in powder is one dram. It enters only one officinal composition, the species e scordio [L.]

BITUMEN JUDAICUM [L.] Afphaltus. Jews pitch.

This is a light, folid bitumen, of a dufky colour on the outfide, and a deep fhining black within; of very little tafte, and fcarcely any fmell, unlefs heated, when it emits a ftrong pitchy one. It is found plentifully in the earth, in feveral parts of Egypt, and on the furface of the Dead Sea; but is very rarely brought to us. In its room, the fhops employ other bituminous

many, and Switzerland. Thefe have a much ftronger pitchy fmell; but in other respects agree pretty much with the true afphaltus. Sometimes pitch itfelf, or the caput mortuum remaining after the distillation of amber, are substitu-Abundance of virtues is atted. tributed to this bitumen, as refolvent, discutient, glutinant, sudorific, emollient, emmenagogue, &c. but it has not for a long time been any otherwife used than as an ingredient in theriaca. The Edinburgh college having now expunged the theriaca, have expunged alfo the bitumen Judaicum.

BOLI. Boles are vifcid earths, lefs coherent, and more friable than clay, more readily uniting with water, and more freely fubfiding from it. They are foft and uncluous to the touch, adhere to the tongue, and by degrees melt in the mouth, impreffing a light fenfe of aftringency. A great variety of thefe kinds of earths has been introduced into medicine; the principal of which are the following.

(1) BOLUS ARMENA. Armenian bole, or bole armenic [L. E.]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 glosfy like the others, but generally of a rough dusty surface. It raises no effervescence with acids.

(2) BOLUS GALLICA. French bole [L. E.] The common French bole is of a pale red colour, variegated with irregular specks or veins of white and yellow. It is much foster than the foregoing; and flightly effervesces with acids.

(3) BOLUS

Part II.

(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 caft 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 ; flightly effervefcing with acids.

(6) TERRA SILESIACA. Silefian earth, is of a brownifh yellow colour : acids have no fenfible effect upon it. Thefe and other earths, made into little maffes, and ftamped with certain imprefions, are called *terræ figillatæ*.

The boles of Armenia and Blois, and the Lemnian earth, are rarely met with genuine in the fhops; the coarfer boles, or white clay coloured with ochre, caput mortuum of vitriol, &c. frequently fupply their place. The genuine may be diffinguished by their fubfiding uniformly from water, without any feparation of their parts; the genuine yellow boles retain their colour, or have it deepended, in the fire; whilft the counterfeit forts burn red.

Thefe earths have been recommended as aftringent, fudorific, and alexipharmac; in diarrhœas, dyfenteries, hæmorrhages, and in malignant and peftilential diftempers. In inteftinal fluxes, and complaints in the firft paffages from thin acrimonious humours, they may, doubtlefs, be of fome ufe; but the virtues afcribed to them in the other cafes appear to have no foundation. In the London pharmacopœia bole is an ingredient in the *pulvis*

e bolo, e scordio, tabellæ cardialgicæ, theriaca, and in one composition for external use, viz. the lapis medicamentosus. No earth of this kind is employed in any of the compositions of the Edinburgh pharmacopœia.

BOMBYX, vide SERICUM.

BONI HENRICI sive lapathi unctuosi folia : Lapathi unctuosi olidi perennis spinachiæ facie Moris. Chenopodii Boni Henrici Lin. English herb mercury; the leaves [E.]

This herb is met with by road fides, 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 flight wounds, cleansing old ulcers, and other purposes of that kind.

BORRAGINIS flores : Boraginis flore cæruleo J. B. Boraginis officinalis Lin. Borage; the flowers [E.]

This is a rough plant, clothed with fmall prickly hairs: it grows wild in wafte places, and upon old walls. An exhibitrating 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 feem to be altogether infignificant.

BORAX [L. E.] Tincar, or Borax.

This is a faline fubftance, brought from the Eaft-Indies in great maffes, composed partly of large cryftals, but chiefly of fmaller ones, partly white and partly green, joined together as it were by a greafy yellow fubftance, intermingled with fand, fmall flones, and other impurities. The purer cryftals, crystals, exposed to the fire, melt into a kind of glass, which is nevertheless dissoluble in water.

This falt diffolved and chrystallized, forms small transparent maffes : the refiners have a method of fhooting it into larger crystals; but these differ in several respects from the genuine falt, infomuch that Cramer calls them not a purified, but adulterated borax. The origin of this falt is as yet unknown, and its composition is known only in part. Thus much experiments have clearly fhewn, that it confifts of a fixt alkaline falt, the fame with the basis of sea falt, in some degree neutralized by a fmaller proportion of another faline fubflance, which has no where, that I know of, been yet discovered but in borax itfelf.

Nor have the medical virtues of borax been fufficiently afcertained by experience. It is supposed to be, in doses of half a dram or two scruples, diuretic, emmenagogue, and a promoter of delivery; the only officinal composition it is employed in is the pulvis ad partum of the Edinburgh pharmacopæia. Mr. Biffet, in an effay on the medical constitution of Great Britain, recommends a folution of this falt in water as the most powerful diffolvent yet known of aphthous crufts in the mouth and fauces of children. There are ftrong reafons to believe, that the virtues of borax are much greater than they are in general supposed to be.

BOTRYOS folia : Chenopodii ambrofioidis folio finuato Tourn. Atriflicis odoræ feu suaveolentis Morif. Chenopodii Botryos Lin. Jerufalem oak; the leaves [E.]

This plant is cultivated in gardens. It has a firong, not difagreeable finell; and a warm fomewhat pungent taffe. It is recommended as a carminative pectoral. Infufions of it may be drunk as tea.

BRASSICA SATIVA : Braffica capitata alba C. B. et Braffica capitata rubra C. B. et Braffica rubra C. B. et Braffica alba capite oblongo non penitus clauso C. B. Braffica subauda Ger. et Park. et Braffica caulistora C. B. White and red cabbages, coleworts, Savoy cabbages, and cauliflower [E.]

Thefe are cultivated in gardens rather for culinary than medicinal ufe. They are all supposed to be hard of digeftion, to afford little nourishment, and to produce flatulencies; though probably on no very good foundation. They tend strongly to putrefaction, and run into this flate fooner than almost any other vegetable; when putrefied, their fmell is likewife the most offenfive, greatly refembling that of putrefied animal substances. A decoction of them is faid to loofen the belly. Of all these plants, cauliflower is reckoned the eafieft of digeftion. The white is the most fetid ; and the red most emollient or laxative : a decoction of the latter is recommended for foftening acrimonious humours in some diforders of the breast, and in hoarfeneis.

BRASSICÆ MARINÆ feu foldanellæ folia : Convolvuli maritimi foldanellæ diæti Raii. Sea coleworts, Scotch fcurvygrafs, or foldanella ; the leaves [E.]

This is a trailing plant, growing on the fea beach in many parts of the north of England. The root, leaves, and flalks, yield a milky juice.

Soldanella is a ftrong cathartic, operating very churlifhly, and hence defervedly rejected from practice. Those who recommend its use differ confiderably with regard gard to the dofe; fome direct half cularly its faliva, and a certain a dram, others three drams, and acrid liquor, fuppofed to be the others a whole handful. urine, which it throws out, when

BRITANNICA, vide LAPA-THUM.

BRUNELLA, vide PRUNELLA.

BRUSCUS, vide Ruscus.

BRYONIÆ ALBÆ radix: Bryoniæ asperæ sive albæ baccis rubris C. B. White bryony, or wild vine; the roots [E.]

This is a rough plant, growing on dry banks under hedges, and climbing upon the bufhes. The roots are large, fometimes as thick as a man's thigh; their fmell, when frefh, is ftrong and difagreeable; the tafte naufeoufly bitter, acrid, and biting: the juice is fo fharp, as in a little time to excoriate the fkin: in drying, they lofe great part of their acrimony, and almost the whole of their fcent.

Bryony root is a ftrong irritating cathartic; and as fuch has fometimes been fuccefsfully exhibited in maniacal cafes, in fome kinds of dropfies, and in feveral chronical diforders, where a quick folution of vifcid juices, and a fudden ftimulus on the folids, were required. An extract prepared by water, acts more mildly, and with greater fafety than the root in fubfiance; given from half a dram to a dram, it is faid to prove a gentle purgative, and likewife to operate powerfully by urine.

Bryony root, applied externally, is faid to be a powerful diffutient : it enters a cataplafm for that intention in the Edinburgh pharmacoperia.

BUFO. The toad.

This animal has been generally looked upon as poifonous, parti-

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acrid liquor, fuppofed to be the urine, which it throws out, when irritated, to a confiderable diftance. It was first introduced into medicine upon occafion of a cure performed on a hydropic person, to whom powdered toads were given in order to dispatch him, but who voided a large quantity of urine after taking them, and foon recovered from his diforder : fince this time, the toad dried by a gentle heat and pulverized, has been greatly effeemed as a diuretic. This preparation is faid likewife, applied externally to the navel, to reitrain hæmorrhages, particularly those from the uterus. The Edinburgh college, in preceding editions of their pharmacopæia, retained the toad in their catalogue of fimples, and gave likewife the process of drying it, but have now wholly rejected this loathfome animal.

BUGLOSSI radix, folia, flores: Buglossi angustifolii majoris C. B. Anchusce officinalis Lin. Garden Bugloss; the roots, leaves, and flowers [E.]

This is a rough, hairy plant, refembling borage, but lefs prickly: a wild fort is commonly met with in hedges and among corn, which differs from the garden fort only in being fmaller. Buglofs has a flimy fweetish taste, accompanied with a kind of coolness: the roots are the most glutinous, and the flowers the leaft fo. These qualities point out its use in hot bilious or inflammatory diffempers, and a thin acrimonious flate 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 foften, without offending the palate or itomach; and thus, in warm climates, or in hot hot difeales, may in some measure refresh the patient.

BUGUL & sive confolidæ mediæ folia; Bugulæ sylvaticæ vulgaris cæruleæ Morrison. Adjugæ reptantis Lin. Bugle or middle consound; the leaves [E.]

This grows wild in woods, hedges, and moift meadows. The leaves have, at first, a fweetish taste, which gradually becomes bitterish and roughish. They are recommended as vulnerary medicines, and in all cases where mild astringents or corroborants are proper.

BUNIAS, vide NAPUS.

BURSÆ PASTORIS folia: Thlaspis fatui, bursæ pastoris disti Raii. Shepherdspurse; the leaves.

This plant is common in wafte places; and is found in flower all the fummer. Shepherdfpurfe has long been celebrated as an aftringent, and ftrongly recommended in diarrhœas, dyfenteries, uterine fluors, and in general in all difeafes where aftringents of any kind can avail. Some have effeemed it fo powerful a flyptic, as fcarce to be fafely 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 fearing the orifices of the veffels. The fenfible qualities of shepherdfpurfe difcover little foundation for either of these opinions; it has no perceptible heat, acrimony, pungency, and fcarcely any attringency: the tafte is almost merely herbaceous, fo as fufficiently to warrant the epithet given this plant by Mr. Ray, Fatuum.

BUXI lignum [L.] et folia [E.]: Buxi arborescentes C. B. Buxi sempervirentis Lin. The box tree; the leaves and wood.

The box is a fmall tree, growing wild in fome parts of Kent and Surry. The wood is of a yellow colour, more folid, compact, and ponderous than any other of the European woods. The leaves have a ftrong nauseous tafte, and when fresh, a fetid smell : they are faid to purge violently, in the dofe of a dram. A decoction of the wood is recommended by fome as powerfully fudorific, preferable even to guaiacum: but the tafte readily difcovers that it wants the qualities of that wood. Neither the wood nor leaves of the box tree are at prefent employed for any other medicinal purpose than for the distillation of an empyreumatic oil [L.]and an oil of nearly the fame quality is obtainable by the fame treatment from almost all woods.

CACAO [E.] Theobroma Cacao Lin. Chocolate nuts.

Thefe are the fruit of an American tree refembling the almond. The principal use of thefe nuts is for the preparation of the dietetic liquor chocolate. This is a mild, unctuous, nutritious fluid, capable of softening acrimonious humours, and of great fervice in confumptive diforders: especially if made with milk, and with only a small proportion of aromatics.

CALAMINARIS LAPIS [L. E.] Calamy or calamine flone. This mineral is found plentifully in England, Germany, and other countries, either in diffinct mines, or intermingled with the ores of different metals. It is ufually of a greyifh, brownifh, yellowifh, or pale reddifh colour; confiderably hard, though not fufficiently fo to ftrike fire with fteel. It has been looked upon

upon by fome as a fimple earth, by others as an iron ore : later experiments have difcovered it to be an ore of zinc. Calamine is generally roafted or calcined before it comes into the fhops, in order to feparate fome fulphureous or arfenical matter which the crude mineral is fupposed to contain, and to render it more eafily reducible into a fine powder. In this fate, it is employed in collyria against defluxions of thin acrid humours upon the eyes; for drying up moift, running ulcers; and healing excoriations. It is the bafis of an officinal epulotic cerate.

CALAMINTHÆ folia: Calaminthæ pulegii odore feu nepetæ C. B. Calaminthæ foliis ovatis, obtufis, caule procumbente Halleri. Meliffæ nepetæ Lin. Field calamint; the leaves [L.]

This is a low plant, growing wild about hedges and highways, and in dry fandy foils. The leaves have a quick warm taffe, and fmell ftrongly of pennyroyal: as medicines, they differ little otherwife from fpearmint, than in being fomewhat hotter, and of a lefs pleafant odour; which latter circumftance has procured calamint the preference in hyfteric cafes.

CALAMINTHÆ MONTANÆ folia: Calaminthæ flore magno vulgaris J. B. Melissæ Calamintbæ Lin. Common calamint; the leaves [E.]

This plant, notwithstanding its name, is, among us, much less common than the former, which has generally supplied its place in the markets: hence the London college have now dropt this montana, and received the other. The calamintha montana is also less efficacious than the foregoing fort: the tafte is weaker; the fmell approaches to that of the wild mints, without any thing of the ftrong pennyroyal flavour of the other.

CALAMI AROMATICI radix: Acori veri five calami aromatici officinarum C. B. Acori Calami Lin. Sweet fcented flag; the roots [L. E.]

This flag refembles, 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 roundifh; the part above this, broad like the other leaves; the flowers are very fmall, whitish, and stand in a kind of head about the fize of a finger. This plant grows plentifully in rivulets and marfhy 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 fuperior to those of our own growth.

The root of acorus is full of joints, crooked, somewhat flatted on the fides, internally of a white colour, and loofe ipongy texture : its imell is ftrong ; the tafte warm. acrid, bitterifh, and aromatic; both the fmell and tafte are improved by exficcation. This root is generally looked upon as a carminative and stomachic medicine, and as fuch is fometimes made use of in practice. It is faid by fome to be fuperior in aromatic flavour to any other vegetable that is produced in these northern climates : but fuch as I have had an opportunity of examining, fell fhort, in this respect, of several of our common plants. It is, neverthelefs, a fufficiently elegant aromatic. It is an ingredient in the mithridate

mithridate and theriaca of the London pharmacopœia, and in the aromatic and flomachic tinctures and compound arum powder, of the Edinburgh. The frefh root, candied after the manner directed in our difpenfatory for candying eryngo root, is faid to be employed at Conftantinople as a prefervative against epidemic difeases. The leaves of this plant have a fweet fragrant smell, more agreeable, though weaker, than that of the roots.

CALENDULÆ flores: Calendulæ fativæ Raii: Calendulæ flore fimplici J. B. Calendulæ officinalis Lin. Garden marigold; the flowers [E.]

This herb is common in gardens, where it is found in flower greateft part of the fummer. Marigold flowers are supposed to be aperient and attenuating; as also cardiae, alexipharmac, and fudorific. They are principally celebrated in uterine obstructions, the jaundice, and for throwing out the fmall-pox. Their fenfible qualities give little foundation for these virtues : they have fcarcely any tafte, and no confiderable fmell. The leaves of the plant difcover a viscid sweetishness, accompanied with a more durable faponaceous pungency and warmth. Thefe feem capable of answering fome useful purposes, as a ftimulating, aperient, antifcorbutic medicine.

CALX VIVA [L. E.] Quicklime. Quicklime is ufually prepared among us, by calcining certain flones of the chalky kind. All chalks and marbles, and, in general, all the mineral earths that diffolve in acids, burn into quicklime; with this difference, that the more compact the flone, generally the ftronger is the lime. In maritime countries, in defect of the proper ftones, fea shells are made use of, which afford a calx agreeing in most respects with the stone limes.

All 'thefe limes are, when frefh burnt, highly acrimonious and corrofive. In this flate they are employed in fome external applications as a depilatory; for rendering fulphur foluble in water [L.]; and for increasing the power of fixt alkaline falts either for the purposes of a caustic [L. E.] or to enable them more readily to diffolve oils for making foap [L.] 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 confiderable portion of it. The folution has a ftrong tafte, somewhat ftyptic, drying the mouth, and accompanied with a kind of fweetifhnefs. 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 fometimes 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 fimple folution of the lime, and the folution impregnated with other materials, are directed as officinal, under the titles of fimple and compound lime waters [L. E.]

Lime water, drunk 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 ferviceable in fcrophulous cafes, and other obfinate chronic diforders. It generally promotes urine, and not unfrequently the cuticular difcharge : for the most part it binds the the belly, and fometimes produces troublesome costiveness, unless this effect be occasionally provided againft, by the interpolition of proper medicines. It does good fervice in debility and laxity of the vifcera in general; in those of the uterine and feminal veffels it is particularly recommended. Care must be had not to use this medicine too liberally in hot bilious conftitutions, 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, moift, fluggish, and corpulent habits.

Part II.

This liquor has lately been found an efficacious diffolvent of the human calculus. The lime water prepared from calcined oyfter fhells proves, for this purpofe, a more powerful menftruum than that made from the ftone limes, the diffolving powers of the former being more than double to that of the latter. See a paper on this fubject in the Edinburgh Effays, vol. v. art. 69. Abridg. vol. i. 471.

CAMPECHENSE LIGNUM, vide LIGNUM CAMPECHENSE.

CAMPHORA [L. E.] Ex Lauro campbora Lin. Camphor is a folid concrete, extracted from the wood and roots of a tree growing in Japan, by a process fimilar to that by which effential oils are obtained. As it first fublimes from the wood, it appears brownish, composed of temipellucid grains mixed with dirt: in this flate it is exported by the Dutch, and purified by a fecond fublimation ; after which, it is reduced into loaves (in which it is brought to us) probably by fusion in close vessels; for it does not affume this form in fublimation.

Pure camphor is very white, pellucid, fomewhat uncluous to the

touch ; of a bitterish, aromatic, 2crid tafte, yet accompanied with a fenfe of coolnefs; of a very fragrant fmell, fomewhat like that of rofemary, but much stronger. It is totally volatile, and inflammable ; foluble in vinous spirits, oils, and the mineral acids; not in water, alkaline liquors, or the acids of the vegetable kingdom. This concrete is effeemed one of the most efficacious diaphoretics; and has long been celebrated in fevers, malignant and epidemical diffempers. In deliria, where opiates fail of procuring fleep, and often aggravate the fymptoms, this medicine frequently fucceeds.

Frederick Hoffman has written an express differtation De Campboræ usu interno securissimo et præstantissi-The fubstance of his observa-1710. tion is, that camphor feems to penetrate very quickly through the whole body, and notably increase perfpiration : that though given to the quantity of half a dram, diffolved in fpirit of wine, and duly diluted, it does not raife the pulfe, or occafion any heat, but rather causes a fense of coolness about the præcordia : that on continuing its ufe for fome time, the blood became fenfibly more fluid, and the quantity of watery ferum, with which the habit before abounded, was notably diminished : that in malignant fevers, and all diforders, whether acute or chronical, proceeding from an acrid or putrefcent 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 fphacelus, where there is previoully any disposition thereto : that, by ftrengthening the veffels, it reflrains hæmorrhages happening in acute fevers, and promotes critical and periodical evacuations : that

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that it expels even the venereal virus; and that he has known examples of the lues being cured by camphor alone, a purgative only being premifed : and that in recent infections he has found no medicine equal to it in efficacy. In inflammatory cafes, where there is a tendency to mortification, intenfe heat, thirft, or where the fkin is dry and parched, whether before or after a delirium has come on, fmall dofes of camphor joined with nitre, produced happy effects, almost immediately relieving the fymptoms, occafioning a calm fleep and plentiful fweat, without fatiguing the patient. He further observes, that this fimple, by its antiphlogistic quality, prevents the ill effects of the more irritating medicines ; that cantharides, and the acrid ftimulating cathartics and diuretics, by the admixture of a fmall proportion of camphor, become much more mild and fafe in operation.

The common dofe of camphor is from one grain to ten. Its officinal preparations are, a julep [L.] and emulfion [E.] for internal ufe; and a folution in rectified fpirit [L. E.]and in expressed oil [E.] for external applications. It is an ingredient also in the paregoric elixir, camphorated vitriolic water [L.], camphorated white ointment, and faponaceous liniment [L. E.]

CANCRORUM CHELÆ [L. E.] Crabs' claws : the black tips of the claws of the common fea crab, or cancer marinus.

CANCRORUM OCULI disti [L. E.] Crabs' eyes fo called : ftony concretions found in the head, or rather ftomach, of the aftacus fluviatilis, or craw fifh.

The only virtue of these simples is to absorb acidities in the primæ viæ. The claws enter an officinal lozenge, and give name to a pow-

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der, for this intention. They are ingredients alfo in fome other officinal compositions, in which they do not feem to be of much advantage : viz. the compound arum powder, contrayerva powder, and cordial confection.

Crabs' eyes are faid by most writers on the materia medica to be frequently counterfeited with tobaccopipe clay, or compositions of chalk with mucilaginous fubftances. This piece of fraud, if really practifed, may be very eafily difcovered; the counterfeits wanting the leafy texture which is observed upon breaking the genuine; more readily imbibing water; adhering to the tongue; and diffolving in vinegar, or the ftronger acids diluted with water, either entirely or not at all, or by piecemeal; whilit the true crabs' eyes, digested in these liquors, become foft and transparent, their original form remaining the fame. This change happens, becaufe the earthy part, on which depended their opacity and hardnefs, is diffolved by the gentle action of the acid, which leaves the conglutinating matter unhurt.

CANELLA ALBA: Cinnamomum five canella tubis minoribus alba C. B. Cortex Winteranus falso dictus Park. Canella alba.

This is a bark rolled up into long quills, thicker than cinnamon, and both outwardly and inwardly of a whitifh 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 fir Hans Sloane arbor baccifera laurifolia aromatica, fructu viridi calyculato racemofo. The canella is the interior bark, freed from an outward thin rough one, and dried in the shade. The shops distinguish two forts of canella, differing from one

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one another in the length and thicknefs of the quills; they are both the bark of the fame tree, the thicker being taken from the trunk, and the thinner from the branches. This bark is a warm pungent aromatic, not of the most agreeable kind : nor are any of the preparations of it very grateful. It is lately fometimes met with in extemporaneous prefcription, and is an ingredient in officinal biera picra and tinctura sacra [L.] and in the aqua raphani and pulvis ari compositus [E.]

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CANNABIS Semen : Cannabis fativæ C. B. Hemp; the feed [E.] This plant, when fresh, has a rank narcotic fmell: the water in which the stalks are foaked, in order to facilitate the feparation of the tough rind for mechanic uses, is faid to be violently poifonous, and to produce its effects almost as foon as drank. The feeds also have fome fmell of the herb; their tafte is unctuous and fweetifh ; on expreffion they yield a confiderable quantity of infipid oil: hence they are recommended (boiled in milk, or triturated with water into an emulfion) against coughs, heat of urine, and the like. They are also faid 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.] Spanish flies. These infects are of a fhining green colour, intermingled with more or lefs 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 efteemed come from Italy.

Cantharides are extremely acrimonious : applied to the fkin, they first inflame, and afterwards exco-

riate the part, taifing a more perfect blifter than any of the vegetable acrids, and occasioning a more plentiful discharge of serum. All the bliftering compositions have cantharides for the bafis. See Part IV. chap. x. The external application of cantharides is often followed by a strangury, accompanied with thirst and feverish heat : this inconvenience may be remedied by foft unctuous or mucilaginous liquors liberally drank.

Cantharides taken internally, often occasion a discharge of blood by urine, with exquisite pain : if the dole is confiderable, they feem to inflame and exulcerate the whole inteffinal canal; the ftools 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 confequences have fometimes 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, neverthelefs, cafes in which this ftimulating fly, given in larger doses, proves not only fafe, but of fingular efficacy for the cure of difeafes that yield. little to medicine of a milder class. In cold phlegmatic fluggish habits, where the vifcera are overloaded, and the kidneys and ureters obftructed with thick viscid mucous matter, cantharides have excellent effects; here the abounding mucus defends the folids from the acrimony of the fly, till it is itfelf expelled; when the medicine ought to be discontinued. Groenvelt employed cantharides with great fuccels in dropfies, obstinate suppresfions of urine, and ulcerations of the bladder; giving very confiderable dofes made into bolufes with I 2 camphor;

camphor; and interposing large draughts of emultions, milk, or other emollient liquors; by thefe means the exceflive irritation, which they would otherwife have occafioned, was in great measure prevented. The camphor did not perhaps contribute fo much to this effect as is generally imagined; fince it has no fenfible quality that promifes any confiderable abatement of the acrimony of cantharides : nitre would answer all that the camphor is fuppofed to perform : this, with milk, or emollient mucilaginous liquors, drunk in large quantity, are the best correctors. Cantharides, in very fmall dofes; may be given with fafety alfo in other cafes. Dr. Mead obferves, that the obfinate gleetings which frequently remain after the cure of venereal maladies, and which rarely yield to balfamic medicines, are effectually remedied by cantharides; and that no one remedy is more efficacious in leprous diforders; in which laft, proper purgatives are to be occasionally taken during the use of the cantharides. The best and fafest preparation of cantharides for these purpofes, is a spirituous tincture [L.E.] and indeed in all cafes, the tincture is far preferable, for internal ufe, to the fly in fubftance.

The virtues of cantharides are extracted by rectified spirit of wine, proof spirit, and water; but do not arise in distillation. The watery and spirituous extracts blister as freely as the fly in substance; whils 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.

CAPILLIS VENERIS, vide ADI-ANTHUM.

CAPPARIS radicis cortex, et florum gemmæ: Capparis spinosæ fructu minere, folio rotundo C. B. Caper bush; the bark of the root, and buds of the flowers.

This is a low prickly bufh, found wild in Italy, and other countries; it is raifed with us by fowing the feeds 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 afh colour, with feveral transverse wrinkles on the furface; cut in flices 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 fupposed 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 faline matter introduced into them, than on the caper buds.

CAPSICUM, vide PIPER INDI+ CUM.

CARABE, vide Succinum.

* CARDAMINES FLORES : Nafturtii pratenfis magno flore C. B. Cardamines pratenfis Lin. Ladiesfmock, or cuckow flower. This is a plant in tafte refembling crefs. It has an erect flalk ; and leaves fet in pairs on a middle rib, with an odd one at the end. Its flower is white or purplifh, and is fucceeded by a bivalvular pod. It grows in plenty in moift low meadows, and flowers early in the fpring.

The virtue of the flowers of ladiesfmock,

Part II. fmock, in hysteric and epileptic cafes, was first noticed by Ray; and their use has been revived by Sir George Baker, who has published fome cafes of their efficacy in the The flowers Med. Tranf. vol. i. are to be finely powdered, after having been properly dried, and given in dofes of from one fcruple, to one dram and an half.

CARDAMOMI MAJORIS Jemen. Amomi cardamomi Lin. Greater cardamom feed.

The greater cardamom is a dried fruit or pod, about an inch long, containing under a thick fkin two rows of fmall triangular feeds of a warm aromatic flavour.

CARDAMOMI MINORIS Jemen. Leffer cardamom. [L. E.]

This fruit is fcarce half the length of the foregoing; the feeds are confiderably ftronger both in fmell and tafte. Hence this fort has long fupplied the place of the other in the shops, and is the only one now directed.

Cardamom feeds are a very warm, grateful, pungent aromatic, and frequently employed as fuch in practice : they are faid 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 diffillation; with this difference, that the tincture and diffilled fpirit are confiderably more grateful than the infusion and diffilled water : the watery infusion appears turbid and mucilaginous; the tincture made in spirit, limpid and transparent. The hufks of the feeds, which have very little fmell or tafte, may be commodioufly feparated, by committing the whole to the mortar, when the feed will readily pulverize, fo as to be freed

from the shell by the seve: this fhould not be done till just before using them; for if kept without the hufks, they foon lofe much of their flavour.-The officinal preparations of these feeds are a spirituous water and tincture : they are employed allo as a fpicy ingredient in feveral of the officinal compositions.

CARDIACÆ folia: Marubii cardiacæ dicti, forte primi Theophrafti C. B. Leonuri Cardiacæ Lin. Motherwort; the leaves.

This plant is common in wafte places, and found in flower during the greatest part of the summer. The leaves have a bitter tafte, and a pretty ftrong fmell; they are fuppoled to be useful in hysteric diforders, to ftrengthen the ftomach, to promote urine ; and indeed it may be judged from their fmell and tafte, that their medicinal virtues are confiderable, though they are now rejected both from the London and Edinburgh pharmacopœias.

CARDUI BENEDICTI folia Jemen : Cnici Sylvestris bir futioris five cardui benedicti C. B. Cardui lutei procumbentis, Judorifici et amari Morison. Centaureæ benedictæ Lin. Bleffed thiftle; the leaves [L. E.] and feed [E.]

This is an annual plant, cultivated in gardens : it flowers in June and July, and perfects its feeds in the autumn. The herb fhould 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 tafte, not very ftrong, or very durable; accompanied with an ungrateful flavour, from which they are in great meafure freed by keeping. Water extracts, in a little time, even without heat, the lighter and more grateful

grateful parts of this plant; if the digeftion be continued for fome hours, the difagreeable parts are taken up; a firong decoction is very naufeous and offenfive to the flomach. Rectified fpirit gains a very pleafant bitter tafte, which remains uninjured in the extract.

The virtues of this plant feem to be little known in the prefent practice. The naufeous decoction is fometimes used to provoke vomiting; and a ftrong infusion to promote the operation of other emetics. But this elegant bitter, when freed from the offenfive parts of the herb, may be advantageoufly applied to other purpofes. I have frequently experienced excellent effects from a light infusion of carduus in loss of appetite, where the flomach was injured by irregularities. A stronger infusion made in cold or warm water, if drunk freely, and the patient kept warm, occasions a plentiful iweat, and promotes all the fecretions in general.

The feeds of this plant are alfo confiderably bitter, and have been fometimes used in the fame intention as the leaves. The Edinburgh college makes them an ingredient in the flomachic tincture.

CARICÆ [L.E.] Figs; the dried fruit of the ficus communis C. B.

The principal use of these is as a soft emollient sweet. In this intention they enter the pectoral decoction and lenitive electary of the shops. They are also esteemed by some as suppuratives, and hence have a place in the maturating cataplasm.

CARPOBALSAMUM: Fructus balfami Syriaci rutæ folio. C. B. Carpobalfam [L.]

This is the fruit of the tree that yields the opobalfam or balm of Gilead. It is about the fize of a

pea, of a whitifh colour, inclofed in a dark brown wrinkled bark. This fruit, when in perfection, has a pleafant warm glowing tafte, and a fragant fmell, refembling that of the opobalfam itfelf. It is very rarely found in the fhops; and fuch as we now and then do meet with, has almost entirely loss its fmell and tafte. It is of no other use in this country than as an ingredient in the mithridate and theriaca, in both which the college direct cubebs as a fubstitute to it.

CARTHAMI Jemen : Cartami officinarum flore croceo Tourn. Carthami tinctorii Lin. Bastard saffron, or safflower; the seeds.

The baftard faffron is a foft kind of thiftle, with only a few prickles about the edges of the leaves. It is cultivated in large quantity in fome places of Germany; whence the other parts of Europe are fupplied with the flowers as a colouring drug, and the feeds as a medicinal one. The flowers, well cured, are not eafily diffinguishable by the eye from faffron; but their want of fmell readily difcovers them. The feeds are white, fmooth, of an oblong roundish shape, yet with four sensible corners, about a quayer of an inch in length, fo heavy as to fink in water; of a viscid sweetish tafte, which in a little time becomes acrid and naufeous. Thefe feeds have been celebrated as a cathartic : they operate very flowly, and for the most part diforder the bowels, especially when given in fubstance; triturated with aromatic diffilled waters, they form an emulfion lefs offenfive, yet inferior in efficacy to more common purgatives.

CARUI, carwi, seu cari, semen: Cumini

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Cumini pratensis carui officinarum C. B. Caraway; the feeds [L. E.]

Caraway is an umbelliferous plant, cultivated with us in gardens, both for culinary and medicinal use. The feeds have an aromatic fmell, and a warm pungent tafte. These are in the number of the four greater hot feeds; and frequently employed as a ftomachic and carminative in flatulent colics, and the like. Their officinal preparations are an effential oil [L, E]and a spirituous water [L.] they are ingredients also in the compound juniper water, tincture of fena, ftomachic tincture, oxymel of garlic, electary of bayberries and of fcammony, philonium, and the cummin feed plaster [L.]

CARYOPHYLLA AROMA-TICA [L. E.] Cloves.

Cloves are the flower-cups (not, as is generally fuppofed, the fruit) of a bay-like tree, growing in the Eaft-Indies. In fhape, they fomewhat refemble a fhort thick nail: in the infide of each clove are found a flylus and flamina with their apices, as in other flower-cups: at the larger end fhoot out from the four angles four little points like a flar, in the middle of which is a round ball, compofed of four little leaves, which are the unexpanded petals of the flower.

Cloves have a very firong agreeable aromatic fmell, and a bitterifh pungent tafte, almost burning the mouth and fauces. The Dutch, from whom we have this fpice, frequently mix it with cloves which have been robbed of their oil : thefe, though in time they regain from the others a confiderable share both of taste and smell, are easily diftinguishable by their weaker flavour and lighter colour. Cloves, confidered as medicines, are very hot flimulating aromatics, and posfefs, in an eminent degree, the general virtues of fubftances of this clafs. An extract made from them with rectified fpirit is exceffively hot and pungent; the diffilled oil has no great pungency; an extract made with water is naufeous and fomewhat flyptic. The only officinal preparation of them is the effential oil [L. E.] Both the cloves themfelves and their oil are ingredients in many officinal compofitions.

CARYOPHYLLA RUBRA: Flores Caryophylli altilis majoris C. B. 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 crimfon colour, and a pleafant aromatic fmell, fomewhat like that of cloves: many forts have fcarce any fmell at all. The caryophylla rubra are faid to be cardiac and alexipharmac. Simon Paulli relates, that he has cured many malignant fevers by the ufe of a decoction of them; which he fays powerfully promotes fweat and urine, without greatly irritating nature, and alfo raifes the fpirits, and quenches thirft. At prefent the flowers are chiefly valued for their pleafant flavour, which is entirely loft even by light coction; hence the college direct the fyrup, which is the only officinal preparation of them, to be made by infusion.

CARYOPHYLLATÆ radix : Caryophyllatæ vulgari flore parvo luteo J. B. 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, bitterifh, aftringent tafte, and a pleafant fmell, fomewhat of the clove kind, efpecially I 4 in

in the fpring, and when produced lars, or moiftened, in order to inin dry warm foils. Parkinfon ob- creafe it's weight, it is very fubject ferves, that in the growth of moift to be. Greateft part of the pulp foils it has nothing of this flavour. diffolves both in water and in rec-This root has been employed as a tified fpirit; and may be extracted ftomachic, and for strengthening from the cane by either. the tone of the vifcera in general: fhops employ water, boiling the it is still in some esteem in foreign bruised pod therein, and afterwards countries, though not taken notice evaporating the folution to a due of among us. It yields, on distil- confistence. lation, an elegant odoriferous effential oil, which concretes into a laxative medicine, and frequently flaky form.

CASCARILIA, vide ELEU-THERIA.

CASIA FISTULARIS Caffia fistula Alexandrina Lin. [L. E.] the fruit of an oriental tree, refembling the walnut.

This fruit is a cylindrical pod, fcarce an inch in diameter, a foot or more in length : the outfide is a hard brown bark; the infide is divided by thin transverse woody plates, covered with a foft black pulp of a fweetish tafte, with some degree of acrimony. There are two forts of this drug in the fhops; one brought from the East-Indies, the other from the Weft : the canes or pods of the latter are generally large, rough, thick-rinded, and the pulp naufeous; those of the former are lefs, fmoother, the pulp blacker, and of a fweeter tafte; this fort is preferred to the other. Such pods thould be chosen as are weighty, new, and do not make a rattling noife (from the feeds being loofe within them) when shaken. The pulp should be of a bright shining black colour, and a fweet tafte, not harfh (which happens from the fruit being gathered before it is grown fully ripe) or fourish (which it is apt to turn upon keeping). It moift, nor at all mouldy, which, an Indian tree, called by Breynius

The

The pulp of cafia is a gentle given, in a dofe of fome drams, in coffive habits. Some direct a dofe of two ounces or more as a cathartic, in inflammatory cafes, where the more acrid purgatives have no place: but in these large quantities it generally naufeates the ftomach, produces flatulencies, and fometimes gripings of the bowels, especially if the cafia 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 fays, it does excellent fervice in the painful tenfion of the belly, which fometimes follows the imprudent use of antimonials; and that it may be advantageoufly acuated with the more acrid purgatives, or antimonial emetics, or employed to abate their force. Vallifnieri relates, that the purgative virtue of this medicine is remarkably promoted by manna; that a mixture of four drams of cafia, and two of manna, purges as much as twelve drams of cafia, or thirty-two of manna alone. Sennertus observes, that the urine is apt to be turned of a green colour by the use of cafia: and fometimes, where a large quantity has been taken, blackish. This drug gives name to an officinal electary, and is an ingredient also in another.

should neither be too dry, nor too - CASIA LIGNEA : the bark of from its being kept in damp cel- arbor canellifera Indica, cortice acerrimo

rimo viscido seu mucilaginoso, qui cassia lignea officinarum. Laurus Cassia Lin.

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This bark, in appearance and aromatic flavour, approaches to cinnamon ; from which it is eafily diftinguishable by its remarkable vifcidity : chewed, it feems to diffolve in the mouth into a flimy fubstance; boiled in water, it gives a ftrong mucilage, the aromatic part exhaling ; the water obtained by diftillation, unlefs drawn with great care, has an unpleafant fmell, fomewhat of the empyreumatic kind : neverthelefs the diffilled oil proves nearly of the fame quality with that of cinnamon. Caffia possesses the aromatic virtues of cinnamon ; but in an inferior degree; and its effects are less durable. Its glutinous quality renders it uleful in fome cafes where fimple aromatics are less proper.

CASTOREUM [L. E.] Caftor. Caftor is the inguinal glands of the beaver; a four-footed amphibious animal, frequent in feveral parts of Europe and America. The beft comes from Ruffia : this is in large round hard cods, which appear, when cut, full of a brittle red liver-coloured fubftance, interfperfed with membranes and fibres exquifitely interwoven. An inferior fort is brought from Dantzick ; this is generally fat and moift. The worft of all is that of New England, which is in longifh thin cods.

Ruffia caftor has a ftrong difagreeable fmell, and an acrid, biting, bitterifh naufeous tafte. Water extracts the naufeous part, with little of the finer bitter; rectified fpirit extracts this laft, without much of the naufeous; proof fpirit both; water elevates the whole of its flavour in diftillation; rectified fpirit brings over nothing.

Caftor is looked upon as one of the capital nervine and antihysteric medicines : fome celebrated practitioners have neverthelefs doubted its virtues; and Neumann and Stahl declare it infignificant. Experience, however, has fhown, that the virtues of caftor are confiderable, though they are certainly far lefs than they have been generally fupposed to be. Its officinal preparations are a fimple water [L.] a fpirituous tincture [L. E.] and a tincture in the volatile oily fpirit [E.] It is an ingredient in many other compositions, as the compound elixir and powder of myrrh [L.] the fetid pills, gum-pills, and powder for promoting delivery [E.]

CASUMUNAR [L. E.]

This is a tuberous root, an inch or more in thicknefs, marked on the furface 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 flices: what kind of plant it produces, is not known.

Cafumunar has a warm bitterifh tafte, and an aromatic fmell, fomewhat refembling that of ginger. It has been celebrated in hyfteric cafes, epilepfies, palfies, lofs of memory, and other diforders. The prefent practice fometimes employs it as a ftomachic and carminative, but it is not fo much ufed or known as it deferves to be.

CAUDA EQUINA, seu Equisetum : Equisetum palustre longioribus setis C. B. Hippuris vulg. Lin. Horsetail; the herb [E.]

This plant is common in watery places. It is faid to be a very flrong aftringent: it has indeed a manifest aftringency, but in a very low degree.

CENTAU-

CENTAURII MAJORIS, seu Rhapontici vulgaris radix: Centaurii majoris folio in lacinias plures diviso C. B. Centaureæ Centaurei Lin. Greater centaury; the root.

The greater centaury is a large plant, cultivated in gardens. The root has a rough fomewhat acrid tafte, and abounds with a red vifcid juice; its rough tafte has gained it fome effeem as an aftringent; its acrimony as an aperient; and its glutinous quality as a vulnerary: the prefent practice takes little notice of it.

CENTAURII MINORIS fummitates : Centaurii minoris flore purpureo J. B. Gentianæ Centaurei Lin. Leffer centaury; the tops [L. E.]

This grows wild in many parts of England, in dry pafture 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.

CEPA [L. E.]: Cepa wulgaris C. B. Onions.

Onions differ from other bulbous rooted plants, in having fingle roots, or fuch as cannot be parted fo as to increase the plant. These roots are confidered rather as articles of food than of medicine: they are fuppofed to afford little or no nourishment, and when eaten liberally produce flatulencies, occafion thirst, headachs and turbulent dreams : in cold phlegmatic habits, where vifcid mucus abounds, they doubtless have their use; as by their ftimulating quality they 'tend to excite appetite, attenuate thick juices, and promote their expulfion ; by fome they are strongly recommended in suppressions of urine

and in dropfies. The chief medicinal use of onions in the present practice is in external applications, as a cataplasm for suppurating tumours, &c. They are an ingredient in the cataplasma suppurans [E.]

CERA FLAVA [L. E.] Yellow bees wax.

This is a folid concrete, obtained from the honeycombs after the honey is taken, by heating and prefsing them betwixt iron plates. The beft fort is of a lively yellow colour, and an agreeable fmell, fomewhat like that of honey; when new it is toughifh, yet eafy to break; by age it becomes harder and more brittle, it lofes its fine colour, and in great meafure its fmell.

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 fufficiently bleached, it is melted, and cast into cakes. The best fort is of a clear and almost transparent whitenes, and of a light agreeable smell like that of the yellow wax, but much weaker.

The chief medical ufe of wax is in cerates, plasters, unguents, &c. as an emollient for promoting fuppuration, &c. It readily unites with oils and animal fats, but not with watery or fpirituous liquors. It is given alfo internally in diarrhœas, dyfenteries, &c. either mixed with oily fubstances, as in the balfamum Locatelli [L. E.] or divided by earthy powders, as in the pulvis testaceus ceratus [E.]

CERASA : Fructus Cerafi majoris et sylvestris, fructu subdulci, nigro colore inficiente C. B. et Cerafi sativæ, fructu rotundo rubro et acido Tourn. et Cerasa acidissima sanguineo succo C. B. The sweet cherry with a black juice; the pleasantly fourish

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ish cherry, with a colourles juice; and the very four cherry, with a blood red juice; commonly called black, red, and morello cherries.

These fruits, especially the acid forts, are very useful and agreeable coolers and quenchers of thirst; and are fometimes directed in this intention, in hot bilious, or febrile distempers. Boerhaave was extremely fond of these and the other fruits called *borai*, as aperients in fome 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.

CERUSSA [L. E.] Ceruffe, or white lead.

This is prepared by exposing lead to the fleam of vegetable acids till it is corroded into a white powdery fubftance. It is fometimes adulterated with a mixture of common whiting; this, if in any confiderable quantity, may be eafily difcovered by the fpecific lightness of the compound : the fort called flake lead is not fubject to abuse. See the article PLUMBUM; and Cerussa in the third part.

CETERACH : Ceterach officinarum C. B. Afplenium Ceterach Lin. Spleenwort, or miltwaste.

This is a fmall bufhy plant, growing upon rocks and old walls. It has an herbaceous, fomewhat mucilaginous, roughifh tafte: it is recommended as a pectoral and for promoting urine in nephritic cafes. The virtue for which it has been most celebrated, is that to which it has the least title, diminishing the fpleen.

CHÆREFOLII folia : Chærophylli sativi C. B. Scandicis Chære-

This is a low annual plant fomewhat like parfley, commonly cultivated in gardens for culinary purpofes. This plant is grateful both to the palate and ftomach, gently aperient, and diuretic. Geoffroy affures us, that he has found it from experience to be of excellent fervice in dropfies : that, in this diforder, it promotes the difcharge 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 fo far as to fay, that dropfies which do not yield to this medicine, are fcarce capable of being cured by any other. He directs the juice to be given in a dole of three or four ounces every fourth hour, and continued for fome time, either alone, or in conjunction with nitre and fyrup of the five opening roots.

CHALYBS, vide FERRUM.

CHAMÆCYPARISSUS, vide Abrotanum formina.

CHAMÆDRYOS, seu Trissaginis folia et summitates cum semine : Chamædryos minoris repentis C. B. Tucrii Chamædryos Lin. Germander; the leaves [E.] and tops with the seed [L.]

This is a low fhrubby plant, cultivated in gardens. The leaves, tops, and feeds have a bitter tafte, with fome degree of aftringency and aromatic flavour. They are recommended as fudorific, diuretic, and emmenagogue, and for ftrengthening the ftomach and vifcera in general. With fome they have been in great effeem in intermittent fevers; as also in fcrophulous and other chronic diforders.

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CHAMÆLEON ALBUS, vide CARLINA.

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CHAMÆMELI folia, flores: Chamæmeli nobilis feu leucanthemi odoratioris C. B. Anthemis nobilis Lin. Single-flowered chamomile (the trailing fort with larger leaves and flowers, and the 'difk of the flower not very convex) the leaves and flowers [L. E.]

These have a strong not ungrateful aromatic fmell, and a very bitter naufeous tafte. They are accounted carminative, aperient, e-. mollient, and in fome measure anodyne : and ftand recommended in flatulent colics, for promoting the uterine purgations, in fpafmodic pains, and the pains of child-bed women : fometimes 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 glyfters : they enter the fotus communis, decoctum commune pro clystere and oleum viride of our dispensatory : an effential oil [L.] fimple water, and extract [E.] are likewife prepared from them in the fhops.

CHAMÆMELUM flore multiplici C. B. Double-flowered chamomile; the flowers.

Thefe differ from the foregoing in having feveral rows of the white petala fet thick together about the middle difk, which is much fmaller. In this difk the medicinal qualities of the flower chiefly refide; and hence the double or fmall difked fort is inferior in efficacy to the fingle.

CHAMÆPITYOS five Ivæ arthriticæ folia : Chamæpityos luteæ vulgaris five folio trifido C. B. Tucrii Chamæpityos Lin. Ground pine; the leaves. This is a low hairy plant, clammy to the touch, and of a ftrong aromatic refinous fmell, and a bitter roughifh tafte. It is recommended as an aperient and vulnerary, as alfo in gouty and rheumatic pains.

CHELIDONII MAJORIS folia, radix: Chelidonii majoris vulgaris C. B. Celandine; the leaves and root [E.]

This plant grows upon old walls, among rubbish, and in waste shady places. The herb is of a blueifh green colour; the root of a deep red; both contain a gold-coloured juice ; their fmell is difagreeable ; the tafte fomewhat bitterifh, very acrid, biting and burning the mouth ; the root is the most acrid. Juice of celandine has long been celebrated in diforders of the eyes; but it is greatly too fharp, unlefs plentifully diluted, to be applied with fafety to that tender organ. It has been fometimes used, and it is faid with good fuccefs, for extirpating warts, cleanfing 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 flimulating aperient, diuretic, and fudorific : it is particularly recommended in the flow kind of jaundice, where there are no symptoms of inflammation, and in dropfies; fome fuppofe the root to have been Helmont's specific in the hydrops afcites. Half a dram or a dram of the dry root is directed for a dole; or an infusion in wine of an ounce of the fresh root. The root and leaves are an ingredient in the icterial decoction of the Edinburgh pharmacopœia.

CHELIDONII MINORIS folia, radix : Chelidonæ rotundifoliæ minoris C. B. Ranunculi Fiçariæ Lin. Pilewort; the leaves and root [E.]

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This is a very fmall plant, found in moift meadows and by hedgefides : the roots confift of flender fibres, with fome little tubercles among them, which are fuppofed to refemble the hæmorrhoids ; whence it has been concluded, that this root muft needs be of wonderful efficacy for the cure of that diftemper : to the tafte, it is little other than mucilaginous.

CHERMES, vide KERMES.

CHINÆ radix. China root [E.] There are two forts of this root in the fhops, one brought from the East Indies, (Smilax China Lin.) the other from the Welt, (Smilax Pfeudo-China Lin.) They are both longish, full of joints, of a pale reddifh colour, of no fmell, and very little tafte : the oriental, which is the more effeemed, is confiderably 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 difregarded by the ancient phyficians. It was first introduced into Europe about the year 1535, with the character of a fpecific against venereal and cutaneous diforders, and as fuch was made ufe of for fome time, but at length gave place to medicines of a more powerful kind. It is generally fuppofed to promote infenfible perfpiration and the urinary difcharge ; and by its unctuous quality to obtund acrimonious juices.

CHINA CHINÆ, vide PERU-VIANUS CORTEX,

CHICHOREI folia, radix : Cichorei fylvestris five officinarum C. B. Cichorii Intybi Lin. Wild fuccory; the roots and leaves [E.]

The root has a moderately bitter tafte, with fome degree of rough125

nefs ; the leaves are fomewhat lefs bitter: the roots, stalks, and leaves yield, on being wounded, a milky faponaceous juice. By culture this plant loses its green colour and its bitternefs, and in this state is employed in falads : the darker coloured, and more deeply jagged the leaves, the bitterer is their tafte. Wild fuccory is an useful detergent, aperient, and attenuating medicine, acting without much irritation, tending rather to cool than to heat the body, and, at the fame time, corroborating the tone of the intestines. The juice taken in large quantities, fo as to keep up a gentle diarrhœa, and continued for fome weeks, has been found to produce excellent effects in fcorbutic and other chronical diforders.

CICUT Æ folia : Cicutæ majoris C. B. Conii maculati Lin. Hemlock; the leaves [E.]

This is a large umbelliferous plant, common about the fides of fields, under hedges, and in moift shady places : the leaves are winged, divided into a great number of small fern-like fections, of a dark or blackish green colour, and appearing as it were rough : the flalk is hollow (as is likewife great part of the root after the flalk has arifen) and fpotted with feveral blackish, red, or purple fpots. Hemlock is fometimes applied externally as a difcutient, and in this intention is an ingredient in one of the plasters of the Edinburgh pharmacopœia. With regard to its virtue when taken internally, it has been generally accounted poifonous, which it doubtless is, in a high degree, when ufed in any confiderable quantity. But Dr. Storck has found, that in certain fmall dofes it may be taken with great fafety, and that, without at all difordering the conflitution, or even producing any fenfible. operation.

operation, it fometimes proves a powerful refolvent in many obfinate diforders. See Extractum cicutæ in the third part of this work.

* CINCHONÆ CORTEX : CinchonæCarribææ L. CinchonæJamaicenfis D^{tis} Wright, Phil. Tranf. Vol. LXXVII. Part 2.

This is a species of the jefuit's bark, the product of Jamaica and This tree, the Carribee islands. called by the natives the fea-fide beech, grows to the height of from twenty to forty feet. The outer bark of thefe 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 fweet, with a mixture of the tafte of horferadifh and of the eastern aromatics ; but when swallowed, it has that very bitternefs and aftringency which characterize 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 confumption of a pint, proved as ftrong 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.

CINERES RUSSICI. Ruffian potafh [L.]

Potafh is an impure alkaline falt, produced from vegetable matters by burning. The ftrongeft is brought from Ruffia, in dark coloured very hard maffes, which do not foon deliquiate in the air, like the purer alkaline falts. This fort is faid to be prepared by burning wood with a clofe fmothering heat, and making the afhes, with a ley drawn from the coarfer part of them, into a pafte,

which is afterwards ftratified with fome of the more inflammable kinds of wood, and burnt a fecond time : by these means the falt melts, and concretes with the earthy matter of the ashes into hard cakes : but it appears from experiment, that this kind of potash contains, befides the vegetable earth, a large proportion of quicklime. A purer and whiter falt is brought to us from Germany, under the name of pearl ashes: this is extracted from wood afhes by means of water, and afterwards reduced into a dry form by evaporation. These falts are liable to great abuses from fundry admixtures, and therefore fhould never be employed for medicinal purposes, without due purification : this may be effected by folution in cold water, filtration, and exficcation. See Part III. chap viii.

CINABARIS NATIVA. Native cinnabar [E.]

This is a ponderous mineral of a red colour, found in Spain, Hungary, and feveral other parts of the world. The fineft fort is in pretty large maffes, both externally and internally of an elegant deep red colour, which greatly improves upon grinding the mafs into fine powder; this is imported by the Dutch from the Eaft-Indies. There is another fort of a good colour, in roundifh drops, fmooth without, and ftriated within.

This mineral appears from chemical experiments to be composed of mercury and fulphur, in fuch a manner, that the quantity of the former is commonly above fix 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.

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preference. The native has fometimes been obferved to occafion naufeæ, vomiting, and anxiety: thefe probably proceeded from an admixture of fome arfenical particles from which it could not be freed by repeated ablution. When pure, it has no quality or medical virtue diflinct from those of the artificial cinnabar, like which it is not diffolable in the animal fluids, and is commonly found of little activity. See part III. chap. iv. fect. 7.

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CINNAMOMUM : Cinnamomum five cannella Zeylanica C. B. Laurus Cinnamomum Lin. Cinnamon [E.]

This is a light thin bark of a reddifh colour, rolled up in long quills or canes ; of a fragrant, delightful fmell, and an aromatic, fweet, pungent tafte, with fome degree of aftringency. It is generally mixed with the cafia bark : this latter is eafily diffinguishable by its breaking over fmooth, whilft cinnamon fplinters; and by its flimy mucilaginous tafte, without any thing of the roughness of the true cinnamon. Cinnamon is a very elegant and ufeful aromatic, more grateful both to the palate and ftomach, than most other fubstances of this clafs : by its aftringent quality it likewife corroborates the vifcera, and proves of great fervice in feveral kinds of alvine fluxes, and immoderate discharges from the ute-An effential oil, a fimple rus. and spirituous distilled water, and a tincture of it, are kept in the shops : it is likewife employed as a fpicy ingredient in a great number of compositions.

CITREORUM cortex et succus: Frushus mali medicæ C. B. Citreorum medicæ Lin. Citrons; the yellow rind and juice [E.]

The citron is an evergreen tree or furub, of the fame genus with the orange and lemon: it was first brought from Affyria and Media (whence the fruit is called mala Affyria, mala Medica) into Greece, and thence into the fouthern parts of Europe, where it is now cultivated. Citrons are rarely made use of among us: they are of the fame quality with lemons, except that their juice is fomewhat lefs acid.

CITRULLI semen : Anguriæ Citrulli dietæ C. B. Cucurbitæ Citrulli Lin. Citruls: the feed [E.]

This plant is rarely met with among us, unlefs in botanic gardens. The feeds are in the number of the four greater cold feeds, and agree in quality with the others of that clafs.

CNICUS, vide CARTHAMUS.

COCCINELLA, seu Cochinilla: Cochineal [L. E.]

This is a fmall irregular roundifh body, of a dark red colour on the outfide, and deep bright red within: it is brought from Mexico and New Spain. This fubstance has long been fuppofed to be the feed of a plant : but it appears, from chemical experiments, to be an animal, and from the accounts of the more celebrated naturalists, an infect, which breeds on the American prickly pear-tree, and adheres to it without changing its place. Cochineal has been ftrongly recommended as a fudorific, cardiac, and alexipharmac ; but practitioners have never obferved any confiderable effects from it. Its greatest confumption is among the fcarlet dyers; and in medicine its principal use is as a colouring drug : both watry and fpirituous. liquors extract its colour. In the London pharmacopœia three tinctures, in the Edinburgh eight, with two decoctions, an infusion and a confection,

tion, receive from this drug a fine tural fecretions, and prevent or rered colour.

COCHLEÆ TERRESTRES, vide LIMACES TERRESTRES.

COCHLEARIÆ HORTENSIS folia: Cochleariæ folio Jubrotundo C. B. Cochleariæ officinalis Lin. Garden fcurvy-grafs; the leaves [L. E.]

COCHLEARIÆ MARINÆ folia: Cochleariæ folio sinuato C. B. Cochleariæ anglicæ Lin. Sea scurvygrafs; the leaves.

These plants have little other difference, as to their external appearance, than that expressed in their titles : in tafte and medical virtue, the former is confiderably the ftronger; and hence is alone retained both by the London and Edinburgh colleges.

Scurvygrafs is a pungent ftimulating medicine; capable of diffolving vifcid juices, opening obftructions of the vifcera and the more diftant glands, and promoting the fluid fecretions: it is particularly celebrated in fourvies, and is the principal herb employed in these kinds of diforders in the northern countries. Its officinal preparations are a conferve [L. E.] and fpirit [E.]: it is an ingredient also in the fcorbutic juices and compound horfe-radifh-water [L. E.], and its fpirit is used for drawing a tincture from gum lac [E.]

COFFEA [E.] Coffee : the fruit of an oriental fhrub called by Juffieu jasminum Arabicum lauri folio, cujus semen apud nos caffé dicitur.

This fruit is employed rather as food than as a medicine. The medical effects expected from it, are to affift digeftion, promote the na-

move a disposition to sleepinefs.

* COLCHICUM : Colchicum autumnale Stærck. & Lin. Colchicum commune C. B. Meadow Saffron : a plant growing in rich moift meadow grounds in the fouthern and western parts of England. It has a bulbous root, producing from the lower part a smaller bulb; from this last arifes, in autumn, along a furrow in the fide of the old root, a flender hollow transparent pedicle, widening at top into a flower like those of crocufes, of a purplish or whitish colour : from the fame root, next fpring, come forth three or four upright leaves, like those of the lily; in the middle of which appear. on fhort pedicles, three triangular pods, about the fize of fmall walnuts, divided into three cells full of roundifh dark-coloured feeds. The roots, freed from the outer blackifh coat and the fibres at bottom, are, while fresh, of a white colour, and full of a milky juice.

This is one of those plants, whole violent and fingular effects engaged the attention of Dr. Stærck. He observes, that on cutting the fresh root into flices, the acrid particles emitted from it irritate the noftrils. fauces, and breaft, 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 fenfation for fix hours : that lefs than a grain, wrapped up in crumb of bread and taken internally, produced alarming fymptoms, a burning heat and pain in the ftomach and bowels, strangury, tenefmus, thirst, total lois of appetite, &c. which were greatly relieved by an acidulated mixture with fyrup of poppies, and which on the fourth day went

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went entirely off: that an infusion of three grains of the root in four ounces of wine, flowly fwallowed, occasioned a tickling in the larynx, and fhort dry cough, foon after a heat in the urihary passages and a copious discharge of pale urine : that an ounce of the fliced juicy root, being digested with a gentle heat in a pound of vinegar for fortyeight hours, and the bottle frequently shaken, the root became almost infipid, and the strained liquor proved acrid in tafte, irritated and confiringed the fauces, and raifed a fhort cough : that this vinegar, mixed with twice its quantity of honey, and gently boiled down to the confiftence of honey, proved a fufficiently 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 hofpital at Vienna, in desperate hydropic and other ferous diforders, in which it was found to act as a most potent diuretic. He begins with giving a dram twice a day in any fuitable 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 fyrup of colchicum, made with the fame infusion of the root in vinegar as above described, in which are diffolved twenty-fix ounces of fine fugar.

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 fize of an

orange; its medullary part, freed from the rind and feeds, is alone made use of in medicine : this is very light, white, spongy, composed of membranous leaves; of an extremely bitter, naufeous, acrimonious tafte. Colocynth is one of the most powerful and most violent cathartics. Many eminent phyficians condemn it as dangerous, and even deleterious : others recommend it not only as an efficacious purgative, but likewife as an alterative in obftinate chronical diforders. Thus much is certain, that colocynth in the dofe of a few grains, acts with great vehemence, diforders the body, and fometimes occafions a discharge of blood. Many attempts have been made to correct its virulence by the addition of acids, aftringents, and the like ; these may lessen the force of the colocynth, but no otherwife than might be equally done by a reduction of the dofe. The best method of abating its virulence, without diminishing its purgative virtue, feems to be by triturating it with gummy farinaceous substances, or the oily feeds, which without making any alteration in the colocynth itfelf, prevent its refinous particles from cohering, and flicking 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 fhops.

* COLUMB & radix Pb. Edinb. Columbæ Redi Exp. nat. 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.

The columbo root has long been a medicine in great repute among the natives of the countries which K produce

produce it, in diforders of the flomach and bowels: It was, however, little known or regarded in this country, till Dr. Percival, in his Effays Medical and Experimental, Vol. II. published his obfervations and experiments on this root, with cafes of its efficacy in various difeafes depending on the state of the bile; as the bilious colic, bilious fevers, diarrhœas, habitual vomitings, &c. Other practitioners have confirmed its utility in these cases. The dose of the powder ufually given, is from one fcruple to two.

CONSOLIDÆ MAJORIS, feu Symphyti majoris radix: Symphyti confolidæ majoris C. B. Symphyti officinalis Lin. Comfry; the root [E.]

This is a rough hairy plant, growing wild by river-fides and in watery places. The roots are very large, black on the outfide, white within, full of a vifcid glutinous juice, of no particular tafte. They agree in quality with the roots of althæa; with this difference, that the mucilage of confolida is fomewhat ftronger bodied. Many ridiculous hiftories of the confolidating virtues of this plant are related by authors. It is an ingredient in the compound white decoction of the Edinburgh pharmacopeia.

CONSOLIDA MEDIA, vide BUGULA.

CONSOLIDA MINIMA, vide Bellis MINOR.

CONTRAYERVA [L. E.] Dorfienia Contrayerva Lin.

This is a knotty root, an inch or two in length, about half an inch thick, of a reddifh brown colour externally, and pale within : long, tough, flender fibres floot out from all fides of it, which are generally loaded with fmall round knots. This root is of a peculiar kind of

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aromatic finell, and a fomewhat aftringent, warm, bitterifh tafte, with a light and fweetish kind of acrimony when long chewed : the fibres have little tafte or fmell; the tuberous part therefore should be alone choien. Contrayerva is one of the mildeft of those substances called alexipharmacs : it is indifputably a good and useful diaphoretic, and may be fafely given in much larger dofes than the common practice is accustomed to exhibit it. Its virtues are extracted both by water and rectified fpirit, and do not arile in evaporation with either: the fpirituous tincture and extract taite ftronger of the root than the aqueous ones. It gives name to an officinal powder, and is an ingredient in the Edinburgh theriaca.

CORALLINA : Muscus maritimus sive corallina officinarum C. B. Coralline, or sea mois [E.]

This is a branched ftony fubftance of a white colour, growing on rocks, and fometimes on the fhells of fifthes. It is celebrated as a vermifuge, on what foundation I know not. To the tafte it is entirely infipid.

CORALLIUM RUBRUM. Red coral [L. E.]

This is alfo a marine production, of the fame nature with the foregoing. It cannot reafonably be looked upon in any other light than as a mere abforbent; as fuch it enters the officinal crabs' claw.powder, and is fometimes in practice directed alone.

CORIANDRI semen : Coriandri majoris C. B. Coriandri sativi Lin. Coriander ; the feed [L. E.]

Coriander is an umbelliferous plant, differing from all the others of that clafs in producing *fpherical* feeds. Thefe, when fresh, have a ftrong difagreeable fmell, which improves

improves by drying, and becomes fufficiently grateful; they are recommended as carminative and ftomachic. They are an ingredient in the officinal compound lime water and electary of bayberries [L.]

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CORNU CERVI [L. E.] The ftag or harts horns.

Many extraordinary virtues have been attributed to thefe horns, and to all the parts of the animal in general; but experience gives no countenance to them; nor do they feem to have any other foundation than the great timidity of the hart, the annual renewal of his horns, and an opinion of his extraordinary longævity; from thefe circumftances 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 gelly [E.]Burnt to whitenefs, they yield an abforbent earth, purer from gelatinous matter than the natural teltaceous abforbents, but which appears to be weaker in its abforbent power. This earth is employed in the officinal white decoction [L. E.]

COSTUS [L. E.] Coftus : a root brought from the East Indies.

Authors mention two forts of coftus, fweet and bitter: in the fhops we feldom meet with more than one, the coftus dulcis officinarum C. B. Coftus arabicus Lin. The root is about the fize of the finger; and confifts of a yellowifh woody part inclofed within a whitifh bark: the former is very tough, of no fmell, and very little tafte; the cortical part brittle, of a warm, bitterifh, aromatic tafte, and an agreeable fmell, fomewhat refembling that of violets or Florentine orris. Coftus is faid to attenuate vifcid humours, to promote expectoration, perfpiration, and urine. At prefent it is rarely met with in prefeription, and not often in the fhops; in mithridate, theriaca, and the confectio paulina, the only officinal compositions it is directed in, zedoary fupplies its place.

COSTUS HORTORUM, vide BALSAMITA MAS.

CRASSULÆ sive Telephii folia: Telephii vulgaris C. B. Sedi Telephii Lin. Orpine; the leaves [E.]

This is a very thick-leaved juicy plant, not unlike the houseleeks. It has a mucilaginous roughish taste, and hence is recommended, as emollient and astringent, but has never been regarded in practice.

CREPITUS LUPI, vide Lyco. PERDON.

CRETA [L. E.] White chalk. This is a pure alkaline earth, totally foluble in vinegar, and the lighter acids, fo as to deftroy every fenfible mark of their acidity. This earth is one of the most useful of the abforbents, and is to be looked upon fimply as fuch ; the aftringent virtues which fome attribute to it have no foundation, unless fo far as the earth is fatiated with acid, with, which it compofes a faline concrete manifeltly fubaltringent. It gives name to an officinal julep [L.] and decoction [E.] and is an ingredient in the cardialgic troches. It is employed also for extricating the volatile falt of fal ammoniac [L.]

CRITHMI folia : Crithmi five fæniculi maritimi minoris C. B. Sampire ; the leaves [E.]

This plant grows wild on rocks, and in maritime places: the leaves are fomewhat like those of fennel, K z but but the fegments much thicker and fhorter: their fmell refembles that of fmallage; the tafte is warm, bitterifh, not agreeable. They are faid to be ftomachic, aperient, and diuretic.

CROCUS: Crocus fativus C. B. Saffron; the chives or flefhy capillaments growing at the end of the piftil of the flower, carefully picked and prefied together into cakes [L. E.]

There are three forts of faffron 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 diffinguished 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 moift, tough and firm in tearing, of the fame colour within as without, and of a ftrong, acrid, diffusive smell.

Saffron is a very elegant and ufeful aromatic: befides the virtues which it has in common with all the bodies of that clafs, it remarkably exhilarates, raifes the fpirits, and is defervedly accounted one of the higheft cordials; taken in large doles, it is faid to occasion immoderate mirth, involuntary laughter, and the ill effects which follow from the abufe of fpirituous liquors. This medicine is particularly ferviceable in hyfteric depreffions proceeding from a cold caufe or obftruction of the uterine fecretions, 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, lofes greatly

of its colour in keeping : the watery and vinous tinctures are apt to grow four, and then lofe their colour alfo : that made in pure fpirit keeps in perfection for many years. Its officinal preparations are, a fpirituous tincture [E.] a vinous tincture, and fyrup [L.] It is an ingredient in the cordial confection [L.] the *fudorific* tincture, the *pectoral* and *paregoric* elixirs, the powder for promoting *delivery* [E.] and feveral of the aloetic compositions.

CUBEBÆ [L. E.] Cubebs.

Cubebs are a fruit brought from the East Indies. This fruit has a great refemblance to pepper. The principal difference diffinguiscable by the eye, is, that each cubeb is furniscable with a long sender stalk (whence they are called by some piper caudatum). In aromatic warmth and pungency, cubebs are far inferior to pepper. They are an ingredient in mithridate and theriaca, [L.] and in the compound spirit of lavender [E].

CUCUMERIS HORTENSIS femen Garden cucumbers; the feeds [E.]

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.

CUCUMERIS AGRESTIS fructus: Cucumeris sylvestris asinini disti C. B. Memordicæ 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 fmallnefs of its fruit, which is no bigger than a Spanish olive : when ripe, it bursts on a light touch, and sheds its feeds with violence, and hence was named by the Greeks elaterium. This name was applied likewife

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likewife to the infpiffated juice of the fruit, the only preparation of the plant made use of in medicine. Elaterium is a ftrong cathartic, and very often operates also upwards. Two or three grains are accounted in most cases a sufficient dose. Simon Paulli relates fome inftances of the good effects of this purgative in dropfies ; but cautions practitioners not to have recourse to it till after milder medicines have proved ineffectual; to which caution we heartily fubscribe. Medicines, indeed, in general, which act with violence in a fmall dofe, require the utmost skill to manage them with any tolerable degree of fafety : to which may be added, that the various manners of making thefe kinds of preparations, as practifed by different hands, must needs vary their power.

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CUCURBIT & femen : Cucurbitæ oblongæ, flore albo, folio molli C. B. Cucurbitæ lagenariæ Lin. The gourd; its feeds [E.]

These are in the number of the four greater cold feeds. They unite with water by trituration into an emulfion, and yield to the press a fost infipid oil, and posses the general virtues of unctuous substances.

CUMINUM, vide CYMINUM.

CUPRESSI fructus. Cupressi sempervirentis Lin. The cypress tree; its fruit.

This is a tall tree growing wild in the warmer climates. The fruit is a ftrong aftringent; and in fome places frequently ufed as fuch : among us it is very rarely employed, and not often met with in the fhops.

CUPRUM [L. E.] Copper.

The preparations of copper are violently emetic, and therefore very

133 rarely exhibited internally. Some have ventured upon a folution of a grain or two of the metal in vegetable acids, and observe, that it acts almost as foon as received into the stomach, fo as to be of good ule for occationing poifonous fubftances that have been fwallowed, to be immediately thrown up again. Boerhaave recommends a faturated folution of this metal in volatile alkaline spirits, as a medicine of great fervice in diforders proceeding from an acid, weak, cold, phlegmatic caufe : if three drops of this tincture be taken every morning with a glais of mead, and the dole doubled every day to

twenty-four drops, it proves, (he fays) aperient, attenuating, warming, and diuretic : he affures us, that by thefe means he cured a confirmed afcites, and that the urine run out as from an open pipe : but at the fame time acknowledges, that upon trying the fame medicine on others, it failed. He likewife recommends other preparations of copper, as of wonderful efficacy in certain kinds of ill habits, weakneis of the ftomach, &c. but we cannot think the internal use of this metal commendable, or even fafe. Phyficians in general feem to be agreed, that it has really a virulent quality; and too many examples are met with of fatal confequences enfuing upon eating food that had been dreit in copper veffels not well cleaned from the ruft which they had contracted by lying in the air.

Great care ought to be taken that acid liquors, or even water defigned for internal ufe, be not fuffered to ftand long in veffels made of copper; otherwife they will diffolve fo much of the metal as will give them difagreeable qualities. Hence in the diftillation of fimple waters with copper ftills, the laft K 3 runnings, runnings, which are manifeftly acid, have frequently proved emetic. It is remarkable, that whilft weak acid liquors are kept boiling in copper veffels, they do not feem to diffolve any of the metal; but if fuffered to remain in them for the fame length of time without boiling, they become notably impregnated with the copper. Hence the confectioners, by fkilful management, prepare the moft acid fyrups in copper veffels without giving them any ill tafte from the metal.

CURCUMA [E.] Curcuma longa Lin. Turmeric.

Turmeric is a root brought from the Eaft Indies. It is internally of a deep lively yellow, or faffron-colour, which it readily imparts to watery liquors. It has an agreeable, weak imell, and a bitterifh fomewhat warm tafte. Turmeric is effeemed aperient and emmenagogue, and of fingular efficacy in the jaundice. It is an ingredient in the ifteric decoftion of the Edinburgh pharmacopæia. It tinges the urine of a faffron colour.

* CURSUTÆ radix Ph. Edinb.

This is a foreign root, which has been used by some practitioners at Edinburgh for more than forty years. It is a ftrong bitter, and has very much the appearance and tafte of gentian. Dr. Home, in his lift of the materia medica, files it Gentiana lutea sylvestris; while he terms the common gentian, Gentiana lutea sativa. No botanic author, however, makes this diffinction ; nor can the name of curfuta be met with in any writer the editor has confulted. The Edinburgh college received it on Dr. Home's recommendation ; but it is little ufed there, and is not in general kept in the fhops.

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CUSCUTA. Dodder.

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This is of the class of plants called parafitical, or which grow out from the body of others. It has no leaves, but confifts only of a number of juicy filaments matted together. There are two forts of it, culcuta major C. B. which grows commonly in heaths on furzes, nettles, &c. and likewife in fields on flax, and other manured plants; and the cufcuta minor, or epithymum of the fame author, fo called from its being found only upon thyme. This latter is preferred for medicinal ufe, and is usually brought from Leghorn and Turkey, with tops and stalks of thyme among it. Epithymum has a pretty ftrong fmell, and roughish somewhat pungent fubtile tafte. Its virtues remain as yet to be determined; the ancients ranked it among cathartics ; but those who have given it in that intention have been generally difappointed.

CYANI flores Cyani segetum C. B. Centaureæ Cyani Lin. Bluebottle; the flowers.

This is a common weed among corn. The flowers are of an elegant blue colour, which, if carefully and haftily dried, they retain for a confiderable time. As to their virtues, the prefent practice expects not any from them; notwithftanding they have been formerly celebrated against the bites of poisonous animals, contagious difeases, palpitations of the heart, and many other diffempers.

CYCLAMEN, vide Artha-NITA.

CYDONIA MALA, eorumque femina: Fructus Cotoneæ mali J. B. Pyrus Cydonea Lin. The quincetree; the fruit and its feeds [L. E.] Quinces

Quinces have a very auftere acid tafte : taken in fmall quantity, they are fuppofed to reftrain vomiting, and alvine fluxes ; and more liberally, to loofen the belly. The feeds abound with a mucilaginous fubftance, of no particular tafte, which they readily impart to watery liquors : an ounce will render three pints of water thick and ropy like the white of an egg. A fyrup [L.] and gelly [E.] of the fruit, and mucilage of the feeds [L.] are kept in the fhops.

CYMINI femen : Cymini femine longiore C. B. Cumini Cymini Lin. Fæniculi orientalis cumini dicti Tourn. Cummin ; the feeds [L. E.]

This is an umbelliferous plant, in appearance refembling fennel, but much fmaller; the feeds are brought chiefly from Sicily and Malta. Cummin feeds have a bitterifh warm tafte, accompanied with an aromatic flavour, not of the moft agreeable kind. They are accounted good carminatives, but not very often made use of. An effential oil of them is kept in the fhops, and they give name to a plafter and cataplasm [L.]

CYNOBASTI fructus: Rofæ fylvestris vulgaris flore odorato incarnato C. B. Rosæ caninæ Lin. The wild briar, dog rose, or hip tree; its fruit [L. E.]

This bufh grows wild in hedges throughout England. The flowers have a pleafant fmell; but fo weak, that Parkinfon and others have named the plant rofa fylweftris inodora: a water diffilled from them fmells agreeably. The fruit or hips contain a fourifh fweetifh pulp; with a rough prickly matter inclofing the feeds, from which the pulp ought to be carefully feparated 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 conferve of it to excite violent vomiting. The conferve is the only officinal preparation of this fruit.

CYPERI LONGI radix : Cyperi odorati radice longa, five cyperi officinarum C. B. Long cyperus; the root.

This is a plant of the graminifolious kind; it is fometimes found wild, in marfhy places in England; the roots have been generally brought to us from Italy. This root is long, flender, crooked, and full of knots: outwardly of a dark brown, or blackifh colour, inwardly whitifh; of an aromatic fmell, and an agreeable warm tafle: both the tafte and fmell are improved by moderate exficcation. Cyperus is accounted a good flomachic and carminative, but at prefent very little regarded.

DACTYLI: Fructus Palmæ majoris C. B. Phænicis dactyliferæ Lin. Dates [E.]: a half dried fruit, about the fhape of an acorn, but generally larger, confifting of a fweet pulpy part and a hard ftone: the beft are brought from Tunis. They were formerly ufed in pectoral decoctions, and fuppofed, befides their emollient and incraffating virtue, to have a flight aftringency.

DAUCI CRETICI femen : Dauci foliis fæniculi tenuisfimis C. B. Athamantæ Cretensis Lin. Candy carrot, or carrot of Crete; the feeds [L. E.]

This is an umbelliferous plant, growing wild in the Levant, and the warmer parts of Europe. The feeds, which are brought from Crete, have a warm biting talle, K 4 and and rather an aromatic fmell. They are carminative, and faid to be diuretic, but at prefent little otherwife used than as ingredients in the mithridate and theriaca.

DAUCI SYLVESTRIS femen: Paplinacæ fylvestris tenuifoliæ Diofcoridis, vel dauci officinarum C. B. Dauci carotæ Lin. Wild carrot; the feed [E.]

This is common in pafture grounds and fallow fields throughout England. The feeds poffefs the virtues of those of the daucus Creticus, in an inferior degree: and have often supplied their place in the shops; and been themsfelves supplied by the feeds of the garden carrot; these last are, in warmth and slavour, the weakest of the three: the seeds of the Candy carrot are much the strongest.

DENTIS LEONIS five Tarazaci, radix et folia : Dentis leonis latiore folio, et angustiore folio C. B. Leontodonis Taraxaci Lin. Dandelion; the root and herb [E.]

This plant is common in fields, and uncultivated places; it has feveral narrow dentated leaves lying on the ground, with a flender naked falk fuffaining a yellow flower. The root, leaves, and stalk, contain a bitter milky juice : they promife to be of use as aperient and detergent medicines; and have fometimes been directed in this intention with good fuccefs. Boerhaave efteems them capable, if duly continued, of refolving almoit all kinds of coagulations, and opening very obstinate obstructions of the vifcera.

DIAPENSIA, vide SANJCULA.

DICTAMNUS ALBUS, vide FRAXINELLA. DICTAMNI CRETICI folia: Origani Cretici latifolii tomentofi Tourn. Dittany of Crete [L. E.]

This is a kind of origanum, faid 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 chimate. The leaves, which are the only part in use with us, come from Italy. The best fort are well covered over with a thick white down, and now and then intermixt with purplish flowers. In imell and taile, they fomewhat refemble lemon thyme; but have more of an aromatic flavour, as well as a greater degree of pungency; when fresh, they yield a confiderable quantity of an excellent effential oil. They are ingredients in the pulvis e myrrha, species e scordio, mithridate, and theriaca [L.]

DIGITALIS folia : Digitalis purpureæ folia aspero C. B. Foxglove; the leaves.

This grows wild in woods, and on uncultivated heaths: the elegant appearance of its purple flowers (which hang in spikes along one fide of the stalk) has gained it a place in fome of our gardens. The leaves have been ftrongly recommended, externally against fcrophulous tumours; and likewife internally, in epileptic diforders: what fervice 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, hypercatharfes, and difordering the whole conflitution ; infomuch that Boerhaave accounts them poilonous. Their tafte is bitter and very naufeous.

* DOLICHOS Ph. Edinb. Dolichos

lichos pruriens Lin. Couhage, or Cow-Itch. Cadjust, Bengalis.

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This is an herbaceous plant, of the papilionaceous tribe, growing in the Eaft and Weft Indies. It bears pods, denfely covered with fharp hairs, which have the property of penetrating the fkin, and caufing a most troublefome itching. In the Weft 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 Hift. of Guinea, and it is confirmed by a letter in the Medical Comment. vol. II.

The manner in which it is employed, is to mix the hairy matter fcraped off from the pods, with fyrup or melaffes, into a thin electary, of which a tea-fpoonful is given to a child two or three years old, and double the quantity to an adult. The dofe is exhibited in the morning, fafting, for three fucceffive days, after which a dofe of rhubarb is given. Its effects are reprefented as remarkably powerful and certain, without the leaft dangerous confequence.

Mr. Kerr has given a botanical defcription of the plant in the Medical Comment. vol. II.

DORONICI GERMANICI, feu Arnicæ, folia et radix : Doronici plantaginis folio alterius C. B. Arnicæ montanæ Lin. German leopardíbane; the leaves and root [E.]

This plant is a native of Germany. It has been effeemed a specific for refolving coagulated blood, but operates so violently, that it is rarely used. The dose is said to be one or two pugils of the leaves, and, in some cases, of the roots.

DRACONTIUM : Dracunculis polyphyllus C. B. Arum polyphyllum

Rivini, Arum Dracunculus Lin. Dragons, or the many-leaved arum.

This is cultivated in gardens. It has fcarce any other medical difference from the common arum, than being in all its parts fomewhat more pungent and acrimonious.

DRAKENA, vide Contra-YERVA.

DULCAMARÆ, feu Amaradulcis, folani lignofi, herba, radix : Solani fcandentis feu dulcamaræ C. B. Bittersweet, or woody nightshade ; the herb and roots. [E.]

This plant grows wild in moift hedges, and climbs on the bufhes with woody brittle ftalks. The tafte 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 faid to occasion generally fome-confiderable evacuation by sweat, urine, or stool, particularly the last.

EBULI folia, cortex, radix: Sambuci humilis five ebuli C. B. Dwarf elder, or danewort; the root, bark, and leaves [E.]

This plant grows wild in fome counties of England; but about London is rarely met with, unleis in gardens: the eye diffinguishes little difference betwixt it and the elder tree, except in the fize; 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 fmell : they are all ftrong cathartics, and as fuch are recommended in dropfies, and other cafes where medicines of that kind are indicated. The bark of the root is faid to be ftrongeft;

firongest; the leaves the weakest. But they are all too churlish medicines for general use; they fometimes evacuate violently upwards, almost always nauseate the stomach. and occasion great uncafinels of the bowels. By boiling they become (like the other draffics) milder, and more fafe in operation. Fernelius relates, that by long coction they entirely lofe their purgative virtue. The berries of this plant are likewife 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 ones as an aperient and deobstruent in chronic diforders : in this last intention, it is faid by Haller to be frequently ufed in Swifferland, in the dole of a dram.

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ELATINES folia: Linariæ fegetum nummulariæ folio non villoso Tourn. Antirrhini Elatines Lin. Fluellin, or female speedwell; the leaves.

This is a low creeping plant, growing wild in corn fields. The leaves have a very bitter, roughish tafte. They were formerly confidered as excellent vulneraries, and of great use for cleansing and healing old ulcers and fpreading cancerous fores : fome have recommended them internally in leprous and scrophulous diforders; as also in hydropic cases. It gives name to one of the officinal honeys [L.]; but the plant itself is never used in the prefent practice, and this preparation of it is in no great efteem.

ELEMI [L. E.] Gum elemi.

This is a refin brought from the Spanish West Indies, and sometimes from the East Indies, in long roundish cakes, generally wrapped up in stag leaves. The best fort is foftish, somewhat transparent, of a pale whitish yellow colour, inclining a little to greenifh, of a ftrong not unpleasant smell. It almost totally diffolves in pure fpirit, and fends over fome part of its fragrance along with this menftruum in diffillation : diffilled with water, it yields a confiderable quantity of a pale coloured, thin, fragrant, effential oil. This refin gives name to one of the officinal unguents, and is at prefent fcarce any otherwife made use of; though it is certainly preferable, for internal purposes, to some others which are held in greater efteem.

ELEOSELINUM, vide APIUM.

ELEUTHERIÆ, feu Cafcarillæ cortex [L. E.] Crotonis Cafcarillæ Lin. Cafcarilla; a bark faid to be imported into Europe from one of the Bahama iflands called Elatheria, in curled pieces, or rolled up into fhort quills, about an inch in width, pretty much refembling in appearance the Peruvianus cortex, but of a paler brown colour on the infide, lefs compact, and more friable.

Its taffe is more bitter, yet lefs difagreeable, and lefs rough than that of the Peruvian bark; with a confiderably greater fhare of aromatic pungency and heat: the thin outward fkin, which is of a whitifh colour, has no taffe. It is eafily flammable, and yields, while burning, a very fragrant imell: this peculiar property diffinguifhes the *eleutheria* from all other known barks.

Stifferus feems to have been the first that employed the cortex eleutheriæ as a medicine, in Europe; he relates (in his Az. laborat. chym. published in the year 1693) that he received this aromatic bark from England; and that, some time af-

ter,

ter, it was fold at Brunfwick for Peruvian bark : that a tincture of it in alkalized vinous fpirits, or dulcified alkaline ones, proved carminative and diaretic, and did confiderable fervice in arthritic, fcorbutic, and calculous cafes ; and that if taken immediately after meals, it affected the head a little. Eleutheria was foon after employed by Apinus in an epidemic fever which raged in some parts of Norway in 1694 and 1695 : this difease, which at first had the appearance of an ordinary intermittent, at length was accompanied with petechial The common alexipharfpots. macs and fudorifics were found ineffectual : but the powder or extract of this bark, joined with them, proved successful, even after petechiæ had come forth : dyfenteries fucceeding the fever were removed by the fame medicine: During the use of the eleutheria, the patient generally fweated plentifully, without lois of ftrength, or other inconvenience : the belly was likewife kept open; those who did not fweat, had three or four fools a day : where the menftrual or hæmorrhoidal fluxes were juppreffed, at the beginning of the diforder, they generally, upon the use of this medicine, re-appeared. Among the Germans, the eleutheria is at prefent in very great efteem, and frequently employed against common intermittents, in. preference to the Peruvian bark, as being lefs fubject to fome inconveniences which the latter, on account of its greater aftringency, is apt to occasion ; it is also given, with good fuccefs, in flatulent colics, internal hæmorrhages, dyfenteries, the diarrhϾ of acute fevers, and other fimilar diforders. The gentlemen of the French academy found this bark of excellent fervice in an epidemic dysentery

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in the year 1719; in which ipecacuanha proved ineffectual. M. Boulduc obferved, that this latter left a lownefs and weaknefs of ftomach, which continued for a long time, whilft eleutheria foon raifed the ftrength, and promoted appetite. Among us the ufe of this bark is not yet fo general as it feems to deferve: infufions of it are fometimes directed for promoting expectoration.

ENDIVIÆ radix, folia : Intybi fativæ latifoliæ C. B. Cichorii endiviæ Lin. Endive ; the roots and leaves [E.]

Endive is raifed in gardens for culinary ufe. It is a gentle cooler and aperient, nearly of the fame quality with the *cichorium*. The feeds are ranked among the four leffer cold feeds.

ENULÆ CAMPANÆ feu Helenii radix : Afteris omnium maximi Tourn. Elecampane ; the root [L. E.]

This is a very large downy plant, sometimes found wild in moift rich foils. The root, efpecially when dry, has an agreeable aromatic smell : its taste, on first chewing, is glutinous, and as it were fomewhat rancid; in a little time it discovers an aromatic bitterness, which by degrees becomes confiderably acrid and pungent. Elecampane root possesses the general virtues of alexipharmacs : it is principally recommended for promoting expectoration in humoural affhmas and coughs, in which intention it enters the pectoral oxymel of the Edinburgh pharmacopœia : liberally taken, it is faid to excite urine, and loofen the belly. In fome parts of Germany, large quantities of this root are candied, and used as a stomachic, for ftrengthening the tone of the

the vifcera in general, and for attenuating tenacious juices. Spirituous liquors extract its virtues in greater perfection than watery ones: the former fcarce elevate any thing in diffillation : with the latter an effential oil arifes, which concretes into white flakes : this poffeffes at first the flavour of the elecampane, but is very apt to lose it in keeping. An extract made with water (a preparation pow kept in the thops) poffeffes the bitterness and pungency of the root, but in a less degree than one made with spirit.

EQUISETUM, vide CAUDA EQUINA.

ERIGERI, seu Senecionis folia: Senecionis minoris vulgaris C. B. Groundfel; the leaves [E.]

This is a common weed, which, notwithftanding its being annual, is met with at all times of the year. The juice, or an infufion of it in ale, is generally faid to be a mild and fafe emetic; but unlefs taken in very large quantity, it has no effect this way. The frefh herb, beaten into a very coarfe pulp, and applied externally, cold, to the pit of the ftomach, is faid to have occafioned ftrong vomiting : but, as Haller juftly fufpects, there was probably fome fallacy in the obfervation.

ERUCÆ femen: Erucæ latifoliæ albæ, fativæ Diofcoridis C. B. Brafficæ Erucæ Lin. Rocket; the feeds [E.]

This was formerly much cultivated in gardens for medicinal ufe, and for falads: but is at prefent lefs common. In appearance, it refembles muftard, but is eafily diftinguifhable by the fmoothnefs of its leaves, and its difagreeable fmell. The feeds have a pungent tafte, of the muftard kind, but weaker: they have long been celebrated as aphrodifiacs, and may, probably, have in fome cafes a title, to this virtue, in common with other acrid plants.

ERVUM, vide OROBUS.

ERYNGII radix : Eryngii maritimi C. B. Eryngo, or fea holly; the root [L. E.]

This plant grows plentifully on fome of our fandy and gravelly fhores; the roots are flender, and very long; of a pleafant fweetift tafte, which, on chewing them for fome time, is followed by a light degree of aromatic warmth and acrimony. They are confidered as aperient and diuretic, and have alfo been celebrated as aphrodifiac; their virtues however are too weak to admit them under the head of medicines. The candied root is ordered to be kept in the floops.

ERYSIMI folia : Eryfimi vulgaris C. B. Eryfimi officinalis Lin. Hedge mustard ; the leaves [E.]

This is a low hairy plant, common in wafte places, and by wayfides. The leaves are faid to promote expectoration, excite urine, and the other fluid fecretions, attenuate and diffolve vifcid juices, &c. This they are fuppofed to perform by an acrimonious ftimulating quality; but the tafte difcovers in them only an herbaceous foftnefs void of acrimony : the feeds indeed are confiderably pungent, and the roots in fome fmall degree.

ESULA MAJOR et MINOR, vide TITHYMALUS.

EUPATORII CANNABINI folia: Eupatorii cannabini C. B. Hemp agrimony, water agrimony, or water hemp; the leaves.

This plant is found wild by the fides of rivers and ditches. It has

Part II. an acrid fmell, and a very bitter tafte, with a confiderable fhare of pungency. The leaves are greatly recommended for ftrengthening the tone of the vifcera, and as an aperient; and faid to have excellent effects in the dropfy, jaundice, cachexies, and fcorbutic diforders. Boerhaave informs us, that this is the common medicine of the turfdiggers in Holland, against fcurvies, foul ulcers, and fwellings in the feet, to which they are fubject. The root of this plant is faid to operate as a ftrong cathartic.

EUPATORIUM MESUES, vide Ageratum.

EUPATORIUM GRÆCO-RUM, vide AGRIMONIA.

EUPHORBIUM [E.] Ex Euphorbia officinarum Lin. a gummy refin exuding from a large oriental fhrub. 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, fmall 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, fomewhat white withinfide: they eafily break betwixt the fingers. Lightly applied to the tongue, they affect it with a very fharp biting tafte; and, upon being held for fome time in the mouth, prove vehemently acrimonious, inflaming, and exulcerating the fauces, &c. Euphorbium is extremely troublefome to pulverize; the finer part of the powder, which flies off, affecting the head in a violent manner. The acrimony is fo great as to render it abfolutely unfit for any internal use : feveral correctors have been contrived to

abate its virulence; but the beft of them are not to be truffed to; and as there feems to be no real occafion for it, unlefs for fome external purposes, we think, with Hoffman and others, that it ought to be expunged from the catalogue of internal medicines.

FARFARA, vide TUSSILACO.

FERRUM et CHALYBS [L.E.] Iron and steel [L.E.]

Steel is accounted lefs proper for medicinal use than the foster iron, as being acted upon with more difficulty by the animal juices and the common menstrua: iron diffolves readily in all acids, and rusts freely in the air, especially if occasionally moistened with water; steel requires a longer time for its folution, and does not rust fo eafily.

The general virtues of these metals, and the feveral preparations of them, are, to confiringe the fibres, to quicken the circulation. to promote the deficient fecretions in the remoter parts, and at the fame time repress inordinate difcharges into the inteffinal tube. After the use of them, if they take effect, the pulfe is very fenfibly raifed; 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 ufually attributed to fome of the preparations of iron, and an aftringent to others; but in reality, they all produce the effects both of aperients and aftringents, and feem to differ only in degree. Those diffinguished by the name of aftringent fometimes occafion a very copious discharge of urine. urine, or a diarrhœa; whilft those called aperient frequently stop these evacuations.

Where either a præternatural difcharge, or fupprefion of natural fecretions, proceed from a languor and fluggifhnefs of the fluids, and weaknefs of the folids; this metal, by increasing the motion of the former, and the firength of the latter, will fupprefs the flux, or remove the fupprefion: but where the circulation is already too quick, the folids too tenfe and rigid, where there is any firicture or fpafmodic contraction of the veffels; iron, and all the preparations of it, will aggravate equally both diftempers.

Though the different preparations of iron act all in the fame manner, yet they are not equally proper in all conftitutions. Where acidities abound in the first passages, the crude filings, reduced into a fine powder, prove more ferviceable 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 faline menstrua : hence a folution of iron in acid liquors has in many cafes 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 flomach, this metal, though given in a liquid form, proves at least ufelefs ; for here the acid folvent is abforbed by the alkaline matters which it meets with in the body, fo as to leave the iron reduced to an inactive calx.

Chalybeate medicines are likewife fuppofed to differ, independent of differences in the conflitution, according to the nature of the acid united with the metal : vegetable acids fuperadd a detergency and aperient virtue: combined with the vitriolic, the metal acts in the first passages powerfully as an aperient; whils the nitrous renders it extremely styptic; and the marine still more fo. For the different preparations of iron, fee the third part of this work.

FILIPENDULÆ radix: Filipendulæ vulgaris, an Moli Plinii C. B. Dropwort; the root.

This plant grows wild in fields and chalky grounds : the root confifts of a number of tubercles, faftened together by flender ftrings; its tafte is rough and bitterifh, with a flight degree of pungency! These qualities point out its use in a flaccid flate of the veffels; and a fluggishness of the juices : the natural evacuations are, in fome meafure, reftrained or promoted by it, where the excess or deficiency proceed from this caufe. Hence some have recommended it as an affringent in dyfenteries, immoderate uterine fluors, &c. others as a diuretic ; and others as an aperient and deobstruent in fcrophulous habits. At prefent it is wholly difregarded.

FILICIS MARIS radix : Filicis non ramofæ, dentatæ C. B. Folypodit Filicis Maris Lin. Common male fern ; the root [E.]

FILICIS FOEMINÆ radix : Filicii ramofæ majoris pinnulis obtufis non dentatis C. B. Polypodii Filicis faminæ Lin. Female fern; or brakes; the root [E.]

FILICIS FLORIDÆ, feu Ofmundæ regalis radix : Filicis ramofæ non dentatæ floridæ C. B. Olmund royal, or the flowering fern ; the root [E.]

The roots of these plants (which are the only part directed for medicinal use) have, when first chewed,

ed, fomewhat of a fweetifh glutinous tafte, which foon becomes bitterifh, fubaftringent, and naufeous. They are faid to be aperient and anthelmintic. Simon Paulli tells us, that they have been the grand fecret of fome empirics against the broad kind of worms called tenia : and that the dole is one, two, or three drams of the powder. The third fort is fuppofed to be the weakest, and the second the strongeft; this therefore has been generally made choice of; practice has, however, at length expunged them all, though the college of Edinburgh fill retains them in their cazalogue of fimples.

• FLAMMULA JOVIS Stærck. Pb. Edinb. Flammala recta C. B. Clematis recta Lin Upright Virgin's Bower: This fpecies of clematis, diffinguished by its pinnated oval leaves, and erect stalk, 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. Stærck. 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 difeases proceeding from peculiar acrimony. It was used internally, in infusion of the flowers or leaves, and extract of the plant ; and the powder was sprinkled on the ulcers externally, where it was found to act as a most excellent efcharotic and detergent. The medicine is faid to have proved diuretic to fome, and fudorific to others, but rarely to have moved the belly. Small dofes, 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.

FœNICULI DULCIS, femen Fæniculi dulcis C. B. Sweet feanel; the feeds [L. E.]

FŒNICULI VULGARIS folia, radix, femen : Fæniculi vulgaris germanici C. B. Anethi Fæniculi Lin. Common fennel; the feeds, roots, and leaves [E.]

The fweet fennel is smaller in all its parts than the common, except the feeds, which are confiderably larger. The feeds of the two forts differ likewife in fhape and colour: those of the common are roundish, oblong, flattish on one fide, and protuberant on the other, of a dark, almost blackish colour ; those of the fweet are longer, narrower, not fo flat, generally crooked, and of a whitish or pale yellowish colour. Both forts are cultivated in our gardens : the common is a perennial plant : the fweet perifhes after it has given feed; nor do its feeds come to fuch perfection in this climate as those which we receive from Germany.

The feeds of both the fennels have an aromatic fmell, and a moderately warm, pungent tafte : those of the fæniculum dulce are in flavour most agreeable, and have alio a confiderable degree of fweetifhnefs : hence our college have directed the use of these only. They are ranked among the four greater hot feeds; and not undefervedly looked upon as good ftomachics and carminatives. An effential oil [E.] and fimple water [L.] are prepared from them in the fhops ; they are ingredients also in the compound juniper water, garlic-oxymel, mithridate, theriaca, and decoction for glyfters [L.]

The root is far lefs warm, but has more of a fweetifh tafte, than the feeds; it is one of the five roots called openers; and has fometimes' been directed in aperient apozems. Boerhaave fays, that this root agrees in tafte, fmell, and medical qualities, with the celebrated genfeng of the Chinefe; from which, however, it appears to be very confiderably different.

The leaves of fennel are weaker than either the roots or feeds, and have very rarely been employed for any medicinal ufe. A fimple water is directed to be prepared from them in the Edinburgh pharmacopœia.

FŒNI GRÆCI *femen* : Fæni græci fativi C. B. Trigonellæ fænigræci Lin. Fænugreek ; the feeds [L. E.]

This plant is cultivated chiefly in the fouthern parts of France, Germany, and in Italy; whence the feeds are brought to us. They are of a yellow colour, a rhomboidal figure; a difagreable ftrong fmell, and a mucilaginous tafte. Their principal ufe is in cataplafms, fomentations, and the like, and in emollient glyfters. They enter the *oleum e mucilaginibus* of the fhops; to which they communicate a confiderable fhare of their fmell.

FOLIUM INDUM, vide MA-LABATHRUM.

FORMICÆ. Ants; their bodies and eggs.

These infects are at present of no use with us in medicine, though formerly much celebrated for aphrodifiac virtues, and still employed in the aquae magnanimitatis, and other like compositions of foreign dispensatories. It is remarkable, that these animals contain a truly acid juice, which they fhed in fmall drops upon being irritated: by infufing a quantity of live and vigorous ants in water, an acid liquor is obtained nearly as ftrong as good vinegar. Neumann obferves, that on diffilling them either with water or pure fpirit, a clear limpid oil arifes, which has fcarce any tafte, or at leaft is not hot or pungent like the effential oils of vegetables.

FRAGARIÆ folia, fruëtus e Fragariæ ferentis fragra rubra J. B. The ftrawberry bush; its leaves and fruit [E.]

The leaves are fomewhat ftyptic, and bitterifh ; and, hence, may be of fome fervice in debility and laxity of the viscera; and immoderate lecretions, or a suppresfion of the natural evacuations, depending thereon : they are recommended in hæmorrhages and fluxes; and likewife as aperients, in fuppressions of urine, obstructions of the viscera, in the jaundice, &c. The fruit is in general very grateful both to the palate and ftomach : like other fruits of the dulco-acid kind, they abate heat, quench thirft, loofen the belly, and promote urine ; but do not afford much nourifhment. Geoffroy obferves, that the urine of those who eat liberally of this fruit, becomes impregnated with its fragrant fmell.

FRANGULA, vide Alnus NI-GRA.

FRAXINELLÆ, feu Distamni albi, radix : Distamni vulgo five fraxinellæ C. B. White or bastard dittany; the root [E.]

This plant grows wild in the mountanous parts of France, Italy, and Germany; whence the cortical part of the root, dried and rolled,

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rolled up into quills, is fometimes brought to us. This is of a white colour; a weak, not very agreeable fmell; and a durable bitter, lightly pungent tafte. It is recommended as an alexipharmac; but not regarded by common practice, nor often kept in the fhops.

Part II.

FRAXINI cortex et semen: Fraxini excelsioris C. B. Fraxini vulgatioris J. B. The ash tree; its bark and feeds [E.]

The bark of this tree is moderately aftringent, and as fuch has fometimes been made use of: the feeds, which are fomewhat acrid, have been employed as aperients. There are fo many other medicines more agreeable, and more efficacious for these intentions, that all the parts of the ash tree have long been neglected.

FULIGO lignorum combustorum. Wood foot [L. E.]

This concrete is of a fhining black colour, a disagreeable smell, and an acrid, bitter, naufeous tafte. Its chief use is in hysteric cases, in which it is fometimes given in conjunction with the fetid gums : it gives name to a tincture of this kind in the fhops. Its virtues are extracted both by watery and fpirituous liquors, each of which, if the foot be of a good kind, diffolve about one-fixth. Soot is faid to differ greatly in quality, according to the wood from which it was produced : the more refinous the wood, the more the foot abounds with oily matter.

FUMARIÆ folia : Fumariæ officinarum et Diascoridis C. B. Fumitory; the leaves [E.]

This is a common weed in fhady cultivated grounds, producing fpikes of purplish flowers, in May and June. It is very juicy, of a

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bitter tafte, without any remarkable fmell. The medical effects of this herb are, to ftrengthen the tone of the bowels, gently loofen the belly, and promote the urinary and other natural fecretions. It is principally recommended in melancholic, fcorbutic, and cutaneous diforders ; for opening obstructions of the vifcera, attenuating and promoting the evacuation of vifcid juices. Frederick Hoffman had a very great opinion of it as a purifier of the blood ; and affures us, that in this intention fcarce any plant exceeds it. Both watery and spirituous menstrua extract its virtues.

GALANGÆ MINORIS radix [E.] Kempferiæ Galangæ Lin. Galangal; a root brought from China.

This root comes to us in pieces fcarce an inch long, and not half fo thick, full of joints, with feveral circular rings on the outfide; of an aromatic fmell, and a bitterifh, hot, biting tafte. Galangal is a warm ftomachic bitter : it has been frequently prefcribed in bitter infufions, but the flavour it gives is not agreeable. The London college has rejected it from the officinal fimples.

GALBANUM [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 ftrong, and to fome unpleafant imell; and a bitterifh warm tafte: the better fort is in pale coloured maffes, which, on being opened, appear composed of clear white tears. Geoffroy relates, that a dark greenish oil is to be obtained from this fimple by diffillation, which, upon repeated rectifications, becomes of an elegant fky blue colour. The purer forts of L galbanum

galbanum are faid by fome to diffolve entirely in wine, vinegar, or water; but these liquors are only partial menftrua with regard to this drug; nor do spirit of wine, or oils, prove more effectual in this respect: the best diffolvent is a mixture of two parts of spirit of wine, and one of water. Galbanum agrees in virtue with gum ammoniacum; but is generally confidered lefs efficacious in afthmas, and more fo in hysterical complaints. It is an ingredient in the gum pills, species e scordio, mitbridate, theriaca, confectio Paulina, maturating cataplasm [L] and antihysteric plaster [E.]

GALLÆ [L.E.] Galls.

Thefe are excreicences, found, in the warmer countries, upon the oak tree : they are produced by a kind of infect (which wounds the young buds or branches) and afterwards they ferve as a lodgement for its eggs : the animal within the gall eats its way through ; those which have no hole are found to have the infect remaining in them. The best galls come from Aleppo: these are not quite round and fmooth, like the other forts, and have feveral tubercles on the furface. Galls have a very auftere ftyptic tafte, without any imell : they are very ftrong aftringents, and as fuch have been fometimes used both internally and externally, but are not much taken notice of by the prefent practice.

GALLII folia : Gallii lutei C. B. Gallii veri Lin. Ladies bedftraw, or cheefe-rennet; the herb [E.]

This herb has a fubacid tafte, with a very faint, not difagreeable fmell. The juice changes blue vegetable infusions of a red colour, and coagulates milk, and thus difcovers marks of acidity. It stands

recommended as a mild flyptic; but has never been much in use.

GAMBOGIA [L. E] Gamboge; a solid concrete juice, brought from the East-Indies, in large cakes or rolls. The best fort is of a deep yellow or orange colour, and breaks fhining and free from drofs. It has no fmell, and very little tafte, unless kept in the mouth for fome time; when it impresses a flight fense of acrimony. It immediately communicates to fpirit of wine a bright golden colour, and almost entirely diffolves. in it; Geoffroy fays, except the fixth part : alkaline falts enable water to act upon this fubitance powerfully as a menftruum : the folution made by their means is fomewhat transparent, of a deep blood-red colour, and paffes the filtre: the dulcified spirit of fal ammoniac readily and entirely diffolves it, and takes up a confiderable quantity; and, what is remarkable, this folution mixes either with water or fpirit, without growing turbid.

Gamboge evacuates powerfully both upwards and downwards. Hoffman and fome others condemn it as acting with too great violence, and occasioning dangerous hypercatharfes; whilft others are of a contrary opinion. Geoffroy feems 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 foon over; and that if given in a liquid form, and fufficiently diluted, it flands 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

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joined with mercurius dulcis. He neverthelefs cautions against its use where the patient cannot easily bear vomiting. It gives name to a pill in the Edinburgh pharmacopœia, but is not used in any composition of the London.

Part II.

GENIST Æ folia, flores, semen : Cytiso genistæ scopariæ vulgaris flore lúteo Tourn. Spartii scoparii Lin. Broom; the leaves, flowers, and seeds [E.]

The leaves of this fhrub have a naufeous bitter tafte : decoctions of them loofen the belly, promote urine, and ftand recommended in hydropic cafes.

The flowers are faid to prove cathartic in decoction, and emetic in fubitance, though in fome places, as Lobel informs us, they are commonly ufed, and in large quantity, in falads, without producing any effect of this kind. The qualities of the feeds are little better determined : fome report, that they purge almost as ftrongly as hellebore, in the dose of a dram and half; whilft Lobel relates, that he has given a decoction of two ounces of them as a gentle emetic.

GENTIANÆ radix : Gentianæ majoris luteæ C. B. Gentian ; the root [L. E.]

This plant is found wild in fome 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. It is the capital ingredient in the bitter wine, tincture, and infusion of the shops. An extract made from it is likewise an officinal preparation.

A poifonous root was fome years ago difcovered among fome of the gentian brought to London ; the use of which occasioned violent diforders, and in fome inftances death. This is eafily diltinguishable by its being internally of a white colour, and void of bitterneis. This poifonous fimple feems to be the root of the thora valdensis of Ray, the anconitum primum pardalianches of Gefner; a plant with which, Lobel informs us, the inhabitants of fome parts of the Alps used formerly to empoifon darts.

* GEOFFRÆÆ cortex : Geoffrææ Jamaicensis inermis D^{tis} Wright. Geoffrææ Pharm. Eding. Cabbage Bark, or Worm-Bark tree.

This is a tree growing abundantly in the low favannahs of Jamaica, of a confiderable height, but no great thicknefs. It has a ftraight fmooth trunk, and fends off its branches near the top. Its leaves are of a dark green, its flowers are rofe-coloured and of the papilionaceous kind, fet in purple flower-cups. Thefe are fucceeded by a green hard fruit, of the fize of a plum, having a fkin the thicknefs of a crown piece, and a nut within.

The bark of this tree is externally of a grey colour, black and furrowed on the infide. Its tafte is mucilaginous and fweetifh; its fmell difagreeable. It has long been celebrated as an anthelmintic in the Weft-Indies, and has lately been introduced into European practice.

This bark is used in decoction, fyrup, powder and extract. For L 2 making 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. Anderfon, who has written a paper concerning this bark, in the Medical Commentaries, recommends its exhibition in gradually augmented dofes of the decoction, for eight or nine mornings fucceffively, and then a dofe of jalap and calomel, which feldom fails to bring away the worms.

GINSENG [E.] Panacis quinquefolii Lin. A fmall root brought from North America, and fometimes from China; an inch or two in length, taper, finely firiated, of a whitifh or yellowifh colour. It has a very fweet tafte, accompanied with a flight bitterifhnefs and warmth.

The Chinese are faid to have a very extraordinary opinion of the virtues of this root, and to look upon it as an universal reftorative, in all decays from age, intemperance, or difease. The great value, there fet upon it, has prevented its being exported into other countries, and its difcovery in North America is but of late date, fo that among us it has hitherto been very rarely made use of; although, from what can be judged of it by the tafte, it feems to deferve fome regard, especially as it is now procurable in plenty.

GITH, vide NIGELLA.

GLADIOLI LUTEI radix: Iridis palustris, lutea, sive acori adulterini J. B. Acori vulgaris pharm. August. et Wirt, Iridis Pseudo Acori

Lin. Yellow water-flag, baftard acorus, or water flower de luce; the roots [L.]

This grows common by the brinks of rivers and in other watery places. The root has a very acrid tafte, and proves, when fresh, a ftrong cathartic : its expressed juice, given to the quantity of eighty drops every hour or two, and occafionally increafed, has occafioned a plentiful evacuation, after jalap, gamboge, &c. had proved ineffectual (see the Edinburgh Eslays, vol. v. art. 8. Abridg. vol. i. page 202.) By drying, it loses its acrimony and purgative virtue. The pulvis ari of our difpensatory contains about one-fifth of the dry root; the Edinburgh difpensatory uses in its place the acorus verus, or calamus aromaticus.

GLYCYRRHIZÆ radix: Glycyrrbizæ filiquofæ vel Germanicæ C. B. Glycyrrbizæ 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 fuch as comes from abroad; the latter being generally mouldy, which this root is very apt to become, unlefs kept in a dry place. The powder of liquorice, ufually fold, is often mingled with flour, and I fear too often with fubitances not quite fo wholefome : the best fort is of a brownish yellow colour (the fine pale yellow being generally fophisticated) and of a very rich fweet tafte, much more agreeable than that of the fresh root. Liquorice is almost the only fweet that quenches thirft; whence it was called by the Greeks adipson. Galen takes notice, that it was employed in this intention in hydropic cafes, to prevent the neceffity of drinking. Mr. Fuller, in his Medicina gymnastica, recommends

mends this root as a very ufeful pectoral, and fays it excellently foftens acrimonious humours, at the fame time that it proves gently detergent: and this account is warranted by experience. It is an ingredient in the pectoral fyrup, pectoral troches, the compound lime waters, decoction of the woods, compound powder of gum tragacanth, lenitive electary, and theriaca. An extract is directed to be made from it in the fhops, but this preparation is brought chiefly from abroad, though the foreign extract is not equal to fuch as is made with proper care among ourfelves.

GRAMINIS CANINI radix : Graminis canini arvenfis, five graminis Diofcoridis C. B. Tritici repentis Lin. Quick-grafs: the roots.

Grafs roots have a fweet roughifh tafte. They are principally recommended in aperient fpring drinks, for what is called purifying and fweetening the blood.

GRANA PARADISI: Cardamomum majus femini piperato Geoffroii. Amomum Grana Paradifi Lin. Grains of paradife : a fruit brought from the East Indies [E.]

This fruit is about the fize of a fig, divided internally into three cells, in each of which are contained two rows of fmall feeds like cardamoms. Thefe feeds are fomewhat more grateful, and confiderably more pungent, than the common cardamoms, approaching in this refpect to pepper, with which they agree alfo in their pharmaceutical properties : their pungency refiding, not in the diftilled oil, as that of cardamom feeds does, but in the refin extracted by fpirit of wine.

GRANATI cortex : Fructús Mali punica sativa C. B. The rind of the pomegranate, called malicorium [L. E.]

The pomegranate tree is fometimes met with in our gardens, but the fruit, for which it is chiefly valued, rarely comes to fuch perfection as in warmer climates. The fruit has the general qualities of the other fweet fummer fruits, allaying heat, quenching thirft, and gently loofening the belly. This rind is a firong aftringent, and as fuch is occafionally made use of.

GRATIOLÆ folia : Graticlæ centaurioidis C. B. Graticlæ officinalis Lin. Hedge hyffop; the leaves [E.]

This is a fmall plant, met with, among us, only in gardens. The leaves have a very bitter, difagreeable tafte : an infufion of a handful of them when frefh, or a dram when dried, is faid to operate ftrongly as a cathartic. Kramer reports (Tentam. botanic. p. 18.) that he has found the root of this plant a medicine fimilar in virtue to ipecacuanha.

GUAIACI lignum, cortex, gummi: Guaiaci Americani primi fructu aceris, five legitimi Breyn. prodr. Guaiaci officinalis Lin. Guaiacum, a tree growing in the warmer parts of the Spanish West-Indies; its wood, bark, and refin 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, fmooth, externally of a dark greyifh hue: both have a lightly aromatic, bitterifh, pungent tafte; the bark is fomewhat the weaker. The refin (which exudes from incisions made in the trunk of the tree) is brought to us in irregular maffes, ufually friable, of a dufky greenish, and fometimes of a reddifh caft, with 1 3 pieces

pieces of the wood among them : its take is more acrid and pungent than that of the wood or bark.

Their general virtues are those of a warm ftimulating medicine : they strengthen the stomach and other vifcera; and remarkably promote the urinary and cuticular difcharge : hence in cutaneous defedations, and other diforders proceeding from obstructions of the excretory glands, and where fluggifh ferous humours abound, they are eminently ufeful; rheumatic and other pains have often been relieved by them. The refin is the most active of these drugs; and the efficacy of the others depends upon the quantity of this part contained in them : the refin is extracted from the wood in part by watery liquors, but much more perfectly by fpirituous ones; the watery extract of this wood, kept in the fhops, proves not only lefs in quantity, but confiderably weaker than one made with fpirit. This latter extract is of the fame quality with the native refin, and differs from that brought to us only in being purer. The gum or extracts, are given from a few grains to a fcruple or half a dram : which latter dofe proves for the moft part confiderably purgative. The officinal preparations of guaiacum are an extract of the wood [L.] a folution of the gum in rectified fpirit of wine [L.] and a folution in volatile spirit [L. E.] as also an empyreumatic oil diffilled from the wood. The wood is an ingredient in the compound lime water [L. E.] and in the compound tinctures of jalap and fena [E.] of which it increafes the purgative virtue; the gum, in the aromatic pills [L.] ecphractic pills [L. E.] mercurial and ethiopic pills, Edinburgh theriaca [E] and the compound oil of balfam of Copaiba [L.]

GUMMI AMMONIACUM, vide Ammoniacum.

GUMMI ARABICUM [L. E.] Ex Mimofa nilotica Lin. Gum Arabic; a concrete gum, exuding from the Egyptian acacia tree. This is brought to us from Turkey, in fmall irregular maffes or ftrings, 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 coaft of Guinea, being ufually fold for it: this greatly refembles the other, and perhaps, as Dale conjectures, exudes from a tree of the fame kind: it is generally in large pieces, rough on the outfide; and in these circumftances poffibly confifts 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 fironger, more fubftantial and cheaper, and confequently more employed for mechanic uses. The virtues of this gum are the fame with those of gummy and mucilaginous fubftances 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. It is an ingredient in the white decoction, chalk julep, the compound powders of bole, fcordium, amber, gum tragacanth, the common emulfion, mithridate, theriaca, and fome of the troches.

GUMMICERASORUM, Cherry-tree gum.

There is not any medical difference betwixt this and the preceding. Some have fuppofed that all the gum brought to us from the East, under the name of Arabic, is no other than the gum of cherry, plum,

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plum, and other trees common among ourfelves. This opinion is neverthelefs erroneous; for thefe trees, as Geoffroy obferves, do not grow in the countries whence gum Arabic is brought; whilft the acaciae are very common there.

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GUMMI ELEMI, vide ELEMI.

GUMMI TRAGACANTHÆ [L. E.] Ex Aftragolo Tragacantha Lin. The gum of the tragacanth, a thorny bush growing in Crete, Afia, and Greece. This gum is of a much ftronger body than either of the foregoing, and does not fo perfectly diffolve in water. A dram will give a pint of water the confiftence of a fyrup, which a whole ounce of gum Arabic is fcarce fufficient to do. Hence its use for forming troches, and the like purpofes, in preference to the other gums. It gives name to an officinal powder, and is an ingredient in the compound powders of cerufs and amber.

GUTTA GAMBA, vide GAM-BOGIA.

HÆMATITES lapis [L. E.] Hematites, or bloodstone.

This is an elegant iron ore, extremely hard, of a dark reddifh or yellowifh colour : it is found either along with the other ores of iron, or in diffinct mines by itfelf. With regard to its medical virtues, we conceive they do not vary from those experienced from ruft, and the common croci of iron, notwithflanding the extraordinary opinion which many have entertained of it ; as of its curing ulcers of the langs, which Geoffroy fays hæmatites dries and heals.

HALICACABUM, vide Alke-KENGI. HEDERÆ ARBOREÆ folia, Baccæ, et gummi seu resina : Hederæ communis majoris Raii. Hederæ Helicis Lin. Ivy ; the leaves, berries, and resin called gum hederæ [E.]

This is a climbing fhrubby 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. obf. 120.) against the atrophy of children : their tafte is nauseous, acrid, and bitter. Externally they have fometimes been employed for drying and healing ichorous fores, and likewife for keeping iffues open. The berries were supposed by the ancients to have a purgative and emetic quality : later writers have recommended them in fmall dofes, as diaphoretics and alexipharmacs; and Mr. Boyle tells us, that in the London plague the powder of them was given with vinegar, with good fucceis, as sudorific. It is probable the virtue of the composition was rather owing to the vinegar than to the powder. The refin was ranked by the ancients, (if their a TE x1003 was the fame with our gummi hederæ) among the depilatories ; from this clafs, to which it certainly had no title, it has fince been removed to that of conglutinaters of wounds, to which it has no very just one.

HEDER Æ TERRESTRIS folia: Heder & terrestris vulgaris C. B. Glecomæ hederaceæ Lin. Groundivy; the leaves [E.]

Ground-ivy is a low plant, frequent in hedges and fhady places. It has an aromatic, though not very agreeable fmell; and a quick, bitterifh, warm tafte. This herb is an ufeful corroborant, aperient, and detergent; and hence ftands recommended againft laxity, debility, and obstructions of the vifcera : L 4.

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fome have had a great opinion of it for cleanfing and healing ulcers of the internal parts, even of the lungs; and for purifying the blood. It is cuftomary to infule the dried leaves in malt liquors; a practice not to be commended, though it readily communicates its virtue, and likewife helps to fine them down: fcarce any other herb has this effect more remarkably than ground ivy.

HELENIUM, vide ENULACAM-PANA.

HELLEBORI ALBI radix : Hellebori albi flore fubvoiridi C. B. Veratri albi Lin. White hellebore; the root [L. E.]

This plant grows fpontaneoufly in Swifferland, 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 faid to prove yery dangerous: the powder of the dry root, applied to an iffue, occasions violent purging : inufied up the noie, it proves a ftrong, and not always a fafe sternutatory. This root, taken internally, acts with extreme violence as an emetic, and has been observed, even in a small dofe, to occafion convultions, and other terrible diforders. The ancients fometimes employed it in very obstinate cafes, and always made this their last resource. Modern practice seems to have almost entirely rejected its internal use, though I am informed that fome have lately ventured upon fo large a dofe as a fcruple, in maniacal cafes, and found good effects from it, after the ftronger antimonial preparation had been given in vain. A tincture and honey of it are kept in the flops [L.]

HELLEBORI NIGRI radix ; Hellebori nigri flore roseo, C. B. Black hellebore; the roots [L. E.]

This plant grows wild in the mountainous parts of Swifferland, Auftria, and Stiria: the earlinefs of its flowers, which fometimes ap₂ pear in December, has gained it a place in our gardens.

In some parts of Germany, a fpecies of black hellebore has been made use of, which not unfrequently produces violent, and fometimes deleterious effects : this the Wirtemberg college particularly caution against, though without mentioning any marks by which it may be diftinguished, 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, fetterwort, fettlewort, or bastard hellebore. The roots of this may be diffinguished from the officinal fort by their being lefs black. The roots of the poilonous aconites refemble in appearance those of the black hellebore; and in the Breflaw collections we find fome instances of fatal effects occasioned by mistaking the former for the latter : these alfo are happily difcoverable by their colour; the aconitum being lighter coloured than even the paleft 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 fome measure deprived the shops of the benefit of this criterion: but the London college have directed the darkeft coloured of all the roots of this clafs. Since therefore the two noxious roots which the buyer is most apt to mistake for this, are diftinguishable from it by their colour, but have no other external mark by which they may be with certainty

certainty known, particular regard ought to be had to this circumftance; only the deepeft black being chosen, and all the paler roots rejected.

The taite of hellebore is acrid and bitter. Its acrimony, as Dr. Grew observes, is first felt on the tip of the tongue, and then fpreads immediately to the middle, without being much perceived on the intermediate part : on chewing it for a few minutes, the tongue feems 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 iffue. Black hellebore root, taken from lifteen grains to half a dram, proves a firong cathartic; and as fuch has been celebrated for the cure of maniacal, and other diforders, proceeding from what the ancients called atra bilis : in which cafes, medicines of this kind are doubtless occasionally of use, though they are by no means poffeffed of any specific power. It does not however appear, that our black hellebore acts with fo much violence as that of the ancients: whence many have supposed it to be a different plant: and indeed the defcriptions which the ancients have left us of their hellebore, do not agree with any of the forts usually taken notice of by modern botanists. Another species has been discovered in the eastern countries, which, Tournefort diftinguishes by the name of helleborus niger orientalis, amplisimo 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 fcruple of this

fort, given for a dose, occasioned convultions.

Our hellebore is at prefent looked upon principally as an alterative, and in this light is frequently employed, in fmall dofes, for attenuating vifcid humours, promoting the uterine and urinary difcharges, and opening inveterate obstructions of the remoter glands : it often proves a very powerful emmenagogue in plethoric habits, where fteel is ineffectual or improper. An extract made from this root with water, is one of the mildeft, and for the purposes of a cathartic, the molt effectual preparation of it; this operates fufficiently, without occasioning the irritation with which the pure refin is accompanied. A tincture drawn with proof fpirit, contains the whole virtue of the hellebore, and feems to be one of the best preparations of it when defigned for an alterative : this tincture, and the extract, are kept in the fhops. The college of Edinburgh makes this root an ingredient in the purging cephalic tincture, and compound tincture of jalap; and its extract in the purging deobstruent pills, gamboge pills, the laxative mercurial pills, and Rudius pills, or the compound cathartic extract.

HELXINE, vide PARIETARIA.

HEPATICÆ NOBILIS folia: Ranunculi tridentati verni, flore fimplici cæruleo Tourn. Marchantiæ polymorphæ Lin. Noble liver-wort; the leaves [E.]

This herb has a place in our gardens on account of the beauty and early appearance of its flowers. It is a cooling, gently reftringent herb; and hence recommended in a lax flate of the fibres as a corroborant.

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HEPATICA TERRESTRIS, vide LICHEN.

HERBÆ PARIS folia & fruæus: Solani quadrifolii bacciferi C. B. Herb Paris, true-love, or one berry; the leaves and fruit.

This is a low plant, growing wild in fhady woods. It is faid, but not truly, to be alexipharmac: Gefner relates, that its juice has killed poultry: and its fmell and tafte manifefily agree with those of the narcotic herbs.

HERMODACTYLUS. Hermodactil; a root brought from Turkey. It is of the fhape of a heart flatted, of a white colour, compact, yet eafy to cut or powder; of a vifcous fweetifh tafte, 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.

HERNIARIÆ folia: Polygoni minoris fivemillegranæ majoris glabræ C. B. Rupture-wort; the leaves.

This is a low herb, growing wild in fandy and gravelly grounds. It is a very mild reftringent, and may, in fome degree, be ferviceable in diforders proceeding from a weak flaccid ftate of the vifcera: to the virtue for which it has been most celebrated, it has little title; that of curing hernias.

• HIPPOCASTANUM. Pb. Edinb. Æfculus Hippocastanum Lin. Horse-chesnut. The fruit of this tree, which is a trilocular capfule, containing two feeds in each cell, has been given as food to sheep; and and steeped in water, fo as to extract its bitterness, is faid to fatten poultry. It falls fpontaneoufly into a faponaceous gluten, which has been used instead of foap for washing linen. No writer mentions its medical application ; but the Edinburgh college have admitted it on the recommendation of Dr. Gardiner, who fays, that three or four grains of the powder fnutfed up the nostrils in the evening, operates next morning as an excellent fternutatory, and thereby proves very beneficial in obstinate inflammations of the eyes.

The bark of the horfe-chefnut 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 (*).

HIPPOSELINI feu Smyrnii, folia, radix, femen : Hippofelini Theophrafti, wel Smyrnii Diofcoridis, C.B. Alexanders; the leaves, root, and feeds [E.]

This is an umbelliferous plant, differing from the others of that clafs, in bearing a large tumid black feed : it grows by the fea fide, upon rocks. In medical qualities it agrees with *apium* (fmallage) except that the *bippojelinum* is fomewhat ftronger.

HIRUNDINARIA, vide VIN-CETOXICUM.

HORDEI semen: Hordei distichi, quod spica binas ordines habeat Plinio C. B. Common barley [L. E.]

HORDEUM GALLICUM five MUNDATUM. French barley, or the common barley freed from the fhell.

HORDEUM PERLATUM dictum [L.] Pearl barley; prepared in

(*) Stirp. Helvet, L. 442.

Germany and Holland, by grinding the shelled barley into little round granules, which appear of a kind of pearly whiteness.

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Barley, in its feveral flates, is more cooling, lefs glutinous, and lefs nutritious than wheat or oats; among the ancients, decoctions of it were the principal aliment, and medicine, in acute difeafes. The London college directs a decoction of pearl barley, and both the London and Edinburgh make common barley an ingredient in the pectoral decoction.

HORMINI SATIVI, seu Sclareæ, folia, semen: Hormini sclareæ disti C. B. Salviæ sclareæ Lin. Garden clary; the leaves and seeds [E.]

These have a warm, bitterifh, pungent taste; and a strong, not very agreeable smell: the touch difcovers in the leaves a large quantity of glutinous or refinous matter. They are principally recommended in the fluor albus, and other semale weakness, in hysteric diforders, and in flatulent colics.

HYBERNICUS LAPIS : Tegula vel ardefia Hybernica [E.] Irifh flate.

This is a blackifh foffile frome brought from Ireland. It feems to confift of an argillaceous or bolar earth, flightly impregnated with fulphur and iron; and may be prefumed to poffers in a low degree the virtues of the other ferrugineous minerals.

HYDRARGYRUS, vide Ar-GENTUM VIVUM.

HYDROLAPATHUM, vide LAPATHUM.

HYOSCYAMI folia : Hyofcyami albi majoris vel tertii Diofcorialis et quarti Plinii C. B. White henbane; the leaves [E.]

This is met with only in botanic gardens.

HYOSCYAMI NIGRI folia: Hyofcyami vulgaris vel nigri C. B. The common wild, or black henbane: the leaves.

These plants stand recommended for many external purpofes, and by fome likewife internally against dyfenteries and hæmorrhages : but there are fo many examples of their pernicious effects, that common practice has very defervedly rejected them. They are ftrong and virulent narcotics, greatly diforder the fenfes, occasioning deliria and madnefs, either deadly, or of long duration. Haller tells us of one who eat of all the poifons of the physic garden, the napelli, apocyna, bello donna, without injury, but was mastered by this; that after its common effects as a narcotic had abated, a paralyfis of one of the legs remained; and that Boerhaave had his fenfes difordered by only making a plaster from this plant. There are other examples alfo, though from lefs unexceptionable authorities, of henbane's proving narcotic, though none of it was received into the body.

HYPERICI folia, flores, femen: Hyperici vulgaris, C. B. St. John's wort; the leaves, flowers [L. E.] and feeds [E.]

This plant grows wild in woods and uncultivated places throughout England. Its tafte is rough and bitterifh; the fmell difagreeable. Hypericum has long been celebrated as a corroborant, diuretic, and vulnerary; but more particularly in hyfterical and maniacal diforders: it has been reckoned of fuch efficacy in the latter, as to have thence received the name of *fuga daemonum*. It is obfervable, that the flowery flowery tops tinge expressed oils of a red colour (which very few vegetable substances will do) and communicate a blood-red to rectified spirit. The oil tinged by them is kept in the shops [L.]

HYPOCISTIDIS fuccus infpiffatus: Hypociftidis fub cifto C. B. Afari Hypociftidis Lin. Juice of hypociftis [L. E.]

Hypociftis is a flefhy production, growing in the warmer climates from the roots of different kinds of cifti. Its infpiffated juice is an aftringent, fimilar to acacia, but fomewhat ftronger. At prefent it is fcarce otherwife made use of than as an ingredient in some of the old compositions, viz. mithridate, theriaca, and the compound powder of amber [L.]

HYSSOPI folia: Hyffopi officinarum cæruleæ sive spicatæ C. B. Hyffop; the leaves [L. E.]

The leaves of hyflop have an aromatic fmell, and a warm pungent tafte. Befides the general virtues of aromatics, they are particularly recommended in humoral afthmas, coughs, and other diforders of the breaft and lungs; and faid to promote expectoration. A fimple water is prepared from them in the Edinburgh pharmacopœia.

JACOBÆÆ folia: Jacobææ vulgaris laciniatæ C. B. Senecionis Jacobææ Lin. Ragwort, or feggrum; the leaves.

This ragged-leaved plant grows wild by road fides, and uncultivated places. Its tafte is roughifh, bitter, pungent, and extremely unpleafant: it flands ftrongly recommended by Simon Paulli againft dyfenteries; but its forbidding tafte has prevented its coming into practice.

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JALAPIUM [L. E.] Convolvuli Jalapæ Lin. Jalap.

Jalap is the root of an American convolvulus, brought to us in thin transverse flices, from Xalapa, a province of New Spain. Such pieces should be chosen as are most compact, hard, weighty, dark coloured, and abound moft with black circular striæ. Slices of briony root are faid to be fometimes mixed with those of jalap: these may be eafily diftinguished by their whiter colour, and lefs compact texture. This root has no fmell, and very little tafte upon the tongue; but when fwallowed, it affects the throat with a fense of heat, and occasions a plentiful discharge of faliva.

Jalap in substance, taken in a doie of about half a dram (lefs or more, according to the circumflances of the patient) in plethoric, or cold phlegmatic habits, proves an effectual, and in general a fafe purgative, performing its office mildly, feldom occafioning naufea or gripes, which too frequently accompany the other flrong cathartics. In hypochondriacal diforders, 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 fame time, has a confiderable effect by urine ; the root remaining after this procefs, gripes violently. The pure refin, prepared by fpirit of wine, occafions most violent gripings, and other terrible fymptoms, but fcarce proves at all cathartic : triturated with fugar, or with almonds into the form of an emulfion, or diffolved in fpirit and mixed with fyrups, it purges plentifully in a small dofe, without occasioning much diforder: the part of the jalap remaining after the leparation of the rein,

refin, yields to water an extract, which has no effect as a cathartic, but operates powerfully by urine. Its officinal preparations are an extract made with water and fpirit [L. E.] a refin [E.] a fimple tincture [L. E.] and a compound tincture [E.] The extract is the bafis of one of the purgative pills [E.]

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Frederick Hoffman particularly cautions against giving this medicine to children, and affures 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 the food soft and lubricating, bear these kinds of medicines, as Geoffroy observes, better than adults.

JAPONICA TERRA five catechu [L.E.] Japan earth, improperly fo called ; being neither an earth, nor the produce of Japan; but 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 reddifh colour, inwardly of a thining dark brown, almost black, with fome caft of red. When pure, it diffolves totally in water, and almost totally in rectified fpirit. As we usually meet with it, a confiderable quantity of fandy matter is left by both these menstrua. This medicine is a mild aftringent, and frequently employed as fuch in alvine fluxes, uterine profluvia, in laxity and debility of the vifcera in general, and in coughs proceeding from thin acrid defluxions. Its tafte is more agreeable than that of most other fubstances of this clais; chewed for fome time, it leaves a kind of fweetifhnefs in the mouth. The troches and tincture, kept in the shops, are very elegant preparations of it. It gives name to an

officinal confection [E.] and is an ingredient in the compound powder of amber, mithridate, and theriaca [L.]

JASMINI flore: Jasmini vulgatioris flore albo C. B. Jasmine; the flowers.

This is a fmall tree, commonly planted in our gardens. The flowers have a ftrong fmell, which is liked by most people; expressed oils extract their fragrance by infusion; and water elevates fomewhat of it in diffillation, but no effential oil has hitherto been obtained from them : the diffilled water, kept for a little time, lofes its odour. As to their medical virtues, the prefent practice expects not any from them, notwithstanding they have been recommended for promoting delivery, curing ulcerations of the uterus, &c.

IBERIDIS folia: Lepidii gramineo folio five iberidis Tourn. Sciatica creffes; the herb.

This is met with in botanic gardens: in tafte, fmell, and medical virtues, it agrees with the nafturtium. It has been particularly recommended in external applications against the fciatica, whence the English name of the plant.

ICHTHYOCOLLA [E.] Fiftglue, or ifing-glafs.

This is a folid glutinous fubflance, obtained from a large kind of fifh, caught in the feas of Mufcovy. The fkin, and fome other parts of the animal, are boiled in water, the decoction infpiffated to a proper confiftence, and then poured out fo as to form thin cakes; thefe are either further exficcated till perfectly dry, or cut whilft foft into flices, which are afterwards bent, or rolled up into fpiral, horfefhoe, and other fhapes. This glue is more employed employed for mechanic purpofes than in medicine. It may be given in a thin acrimonious flate of the juices, after the fame manner as the vegetable gums and mucilages; regard being had to their different difpofition to putrefcence.

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IMPERATORIÆ seu Magistrantiæradix: Imperatoriæ majoris C. B. Imperatoræ Astrutii Lin. Masterwort; the root [E.]

This is a native of the Alps and Pyrenean mountains, and fome parts of Germany, whence we are fupplied with roots fuperior in aromatic flavour to those railed in our gardens. The smell of this root is very fragrant; its tafte bitterifh, warm, and pungent, glowing in the mouth for a long time after it has been chewed. This fimple, though undoubtedly an elegant aromatic, is not regarded in the prefent practice: it is fcarcely 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 fimilar to that of angelica, but stronger.

IPECACUANHA [L. E.] Radix Pfycotriæ emetica Lin. A root brought from the Spanish West-Indies.

It is divided into two forts, Peravian and Brazilian: but the eye diffinguishes three, ash-coloured or grey, brown, and white. The ashcoloured, 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 fiftures, 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 refinous upon breaking: it has very little

fmell; the tafte is bitterifh and fubacrid, covering the tongue, as it were, with a kind of mucilage. The brown is fmall, and fomewhat more wrinkled than the foregoing, of a brown or blackifh colour without, and white within; this is brought from Brazil. The white fort is woody, has no wrinkles, and no perceptible bitternefs in tafte. The first fort (the ash-coloured or grey ipecacuanha) is that ufually preferred for medicinal ufe. The brown has been fometimes obferved, even in a fmall dofe, to produce violent effects. The white, though taken in a large one, has scarce any effect at all : Mr. Geoffroy calls this fort baftard ipecacuanha, and complains that is 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 initead of it : and inftances are given of ill confequences following from the use of these roots. If the marks above laid down, particularly the afh colour, bitternefs, deep wrinkles, and bitterish taste, be carefully attended to, all mistakes of this kind may be prevented.

Ipecacuanha was firft brought into Europe about the middle of the laft century, and an account of it published about the fame time by Pifo; 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 mildeft and fafeft emetics we are acquainted with; and has this peculiar advantage, that if it fhould not operate by vomit, it passes off by the other emunctories. It was first introduced among us with the character

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character of an almost infallible remedy in dyfenteries, and other inveterate fluxes; as also in diforders proceeding from obstructions of long flanding: nor has it loft much of its reputation by time. In dyfenteries, it almost always produces happy effects, and often performs a cure in a very fhort space of time. In other fluxes of the belly, in beginning dyfenteries, and fuch as are of a malignant kind, or where the patient breathes a tainted air, it has not been found equally fuccefsful. In these cases, it is neceffary to continue the use of this medicine for feveral days, and to join with it opiates, diaphoretics, and the like. This root, given in fubstance, is as effectual, if not more fo than any of the preparations of it: the pure refin acts as a ftrong irritating emetic, but is of little fervice in dysenteries; whilst an extract prepared with water is almost of equal fervice in these cafes with the root itfelf, though it has little effect as an emetic. Geoffroy concludes hence, that the chief virtue of ipecacuanha in dyfenteries depends upon its gummy fubstance, which lining the inteffines with a foft 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 refinous part, in which the emetic quality refides, is required, where the morbific matter is lodged in the glands of the ftomach and inteffines. 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, affisted by a boiling heat, takes up from all vegetables a confiderable portion of refinous along with the gummy matter. If the ipecacuanha re-

maining after the action of water be digested with pure spirit, it will not yield half fo much refin as at first : fo that the aqueous extract differs from the crude root only in degree, being proportionably lefs refinous, and having lefs effect, both as an emetic, and in the cure of dyfenteries. The virtues of ipecacuanha, in this diforder, depend upon its promoting perspiration, the freedom of which is here of the utmost importance, and an increase of which, even in an healthful perfon, is generally observed to supprefs the evacuation by ftool. In dyfenteries, the fkin is for the most part dry and tenfe, and perspiration obstructed : the common diaphoretics pafs off without effect through the inteffinal canal: 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 use of the medicine for fome time longer, in order to prevent a relapfe. For this purpose, 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 eftablished. And indeed fmall doses 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 observed 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 smaller doses prove fufficiently emetic. The only officinal preparation of this root is a tincture made in wine [L. E].

IRIDIS FLORENTINÆ radix : Iridis Florentinæ albæ C. B. Florentine orris ; the root.

IRIDIS PURPUREÆ NOS-TRATIS radix : Iridis vulgaris Germanicæ five fylvestris C. B. Flower-de-luce; the root [E.]

Both these appear to be the same species of plant: several varieties of it are cultivated in our gardens on account of the elegance of their flowers. The roots, when recent, have a bitter, acrid, nauseous taste, and taken into the body prove firongly cathartic ; and hence the juice is recommended in dropfies, in a dofe of three or four scruples. By drying they lofe this quality, vet still retain a fomewhat pungent, bitterish taste : their smell in this ftate is of the aromatic kind; those produced in the warmer climates have a very grateful flavour, approaching to that of March violets : hence the use of the Florentine iris in perfumes, and for flavouring liquors : the fhops employ it in the white pectoral troches [L. E.] and as an ingredient in the theriaca [L.] pectoral decoction, and pectoral oxymel [E.]

IVA ARTHRITICA, vide CHAMÆPITYS.

JUJUBÆ, Fructus Rhamni Zizyphi Lin. Jujubes ; a half-dried fruit brought from France.

Jujubes have a pleafant fweet tafte.' They are recommended in an acrimonious flate of the juices; in coughs from thin fharp defluxions; and in heat of urine: but they are at prefent, among us, flrangers to medicinal practice, and to the fhops.

JUNCUS ODORATUS: Juncus odoratus five aromaticus C. B. Andropogon Schænanthus Lin. Sweet rush, or camels hay [L.]

This is a dry fmooth stalk, brought to us along with the leaves, and fometimes the flowers, from Turkey and Arabia, tied up in bundles about a foot long. The stalk, in shape and colour, fómewhat refembles a barley ftraw : it is full of a fungous pith, like those of our common rushes : the leaves are like those of wheat, and furround the stalk with feveral coats, as in the reed: the flowers are of a carnation colour, striped with a lighter purple. The whole plant, when in perfection, has a hot bitterish, not unpleasant, aromatic tafte; and a very fragrant fmell; by long keeping, it lofes much of its aromatic flavour. Diftilled with water, it yields a confiderable quantity of effential oil. It was formerly often ufed as an aromatic, and in obstructions of the viscera, &c. but at present is scarce otherwife employed than as an ingredient in mithridate and theriaca.

JUNIPERI baccæ, lignum, gummi : Juniperi vulgaris fruticofæ C. B. Juniperi communis Lin. Juniper; the berries [L. E.] wood, and the refin (improperly called gum) which exudes from it in the warmer climates [E.]

This is an evergreen fhrub, growing upon heaths and hilly grounds in all the parts of Europe: the wood and refin are not at prefent made use of for medicinal purposes: the berries are brought from Holland, where this shrub is very plentiful.

Juniper berries have a ftrong, not difagreeable fmell; and a warm, pungent, fweet tafte, which if they be long chewed, or previoufly well bruifed, is followed by a bitterifh one. The pungency feems to refide in the bark; the fweet in the juice; the aromatic flavour

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flavour in oily veficles, fpread through the fubftance of the pulp, and diftinguifhable even by the eye; and the bitter in the feeds: the fresh berries yield, on expreffion, a rich, fweet, honey-like, aromatic juice; if previously pounded fo as to break the feeds, the juice proves tart and bitter.

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These berries are useful carminatives and ftomachics : for thefe purpofes, a spirituous water [L.] and effential oil diftilled from them [L. E.] are kept in the fhops: they are ingredients also in the compound horferadish water, tincture of jalap, tincture of fena [E.] mithridate and theriaca [L.] The liquor remaining after the diftillation of the oil, paffed through a firainer, and gently exhaled to the confiftence of a rob, proves likewife a medicine of great utility, and in many cafes is perhaps preterable to the oil, or berry itself. Hoffman is expreisly of this opinion, and ftrongly recommends it in debility of the flomach and intestines, and fays it is particularly of fervice to old people who are fubject to these diforders, or labour under a difficulty with regard to the urinary excretion : this rob is of a dark, brownish yellow colour, a balfamic fweet tafte, with a little of the bitter, according as the feeds in the berry have been more or lefs bruifed.

KALI folia: Kali majoris cochleato femine C. B. Salfolæ Sodæ Lin. Glaffwort; its leaves, and the alkaline falt called cineres clavellati, or potafh [E.] which ufed formerly to be prepared from this plant only, but now from fundry forts of woods, and other vegetable matters indifferently (fee the article CINE-RES RUSSICI.) Several forts of thefe falts, differing in degree of purity and ftrength, are to be met with in the fhops of the dryfalter : they are rarely to be found under this denomination in those of the apothecary or druggist.

KERMES [L. E.] a round grain about the bulk of a pea, found (in Spain, Italy, and in the fouthern parts of France) adhering to the branches of the *ilex aculeata* cocciglandifera C. B.

Thefe grains appear, when frefh, full of small, reddish ovula, or animalcules, of which they are the nidus. On expression, they yield a red juice, of a bitterifh, fomewhat rough and pungent tafte, and a not unpleafant fmell : this is brought to us from the fouth of France. The grains themfelves are cured by fprinkling with vinegar before exficcation : this prevents the exclusion of the ova, and kills fuch of the animals as are already hatched; otherwife, they change into a winged infect, leaving the grain an empty hulk.

Kermes, confidered as a medicine, is a grateful, very mild reftringent, and corroborant. In this light it was looked upon by the Greeks. The Arabians added a cordial virtue. European writers alfo have in general recommended it for exhilarating the fpirits, and against palpitations of the heart ; but more particularly for promoting birth, and preventing abortion. I have known, fays Geoffroy, many women, who had never reached the end of pregnancy, made joyful mothers by the ufe of pills composed of kermes, germin. ovor. exficcat. and confectio de byacintho (a composition, containing. fome vegetable affringents and aromatics, together with gold and filver leaf, four precious stones, and other ingredients of lefs value) : three of these pills must be taken for the first dose, and this repeated M three

three times, at the interval of drawn lightly over the fhrub, fo twice three hours; after which as to take up the uncluous juice, three pills more are to be taken which is afterwards fcraped off every morning on the three laft with knives. It is rarely met with days of the moon in every month pure, even in the places which till delivery. Notwithstanding this produce it ; the dust, blown upon affertion, we conceive our readers the plant by the wind, mingling will with us believe, that neither with the tenacious juice. The inthe kermes, or its auxiliaries, are habitants are alfo faid to mix with to be much depended on. The it a certain black fand. In the kermes gives name to an officinal fhops two forts are met with : the confection, which appears to be better (which is very rare) is in dark greatly fuperior to the above com- coloured, almost black masses, of pofition.

* KINO. Gummi-rubrum astringens Dris Fothergill in med. obf. Kino Pb. Edinb. Red aftringent taffe : the other fort is harder, not gum from Gambia : fuppofed to fo dark coloured, in long rolls coiled exude from incifions made in the trunks of certain trees called pan de sangue, growing in the inland parts of Africa.

crumbled in pieces by the hands; of an opake dark reddifh colour inclining to black, when reduced to powder, of a deep brick red.

It is foluble in aqueous and fpirituous menstrua. The Edinburgh college have now received this gum as an officinal, and have directed a tincture, in which two ounces of it are diffolved in a pound and an half of proof fpirit.

It is recommended in diforders from laxity and acrimony, habitual diarrhœas, fluor albus, immoderate menstrual discharges, and seminal weakneffes.

LABDANUM [L. E.]

This is a refinous fubftance exuding upon the leaves of the ciftus ladanifera Cretica flore purpureo Tourn. This refin is faid to have been formerly collected from the of the milk of different animals. beards of goats, who brouzed the leaves of the ciftus : at prefent, a common water, the mineral chalykind of rake, with feveral straps or thongs of fkins fixed to it, is quors that are not acid, weak vi-

the confiftence of a foft plaster, which grows ftill fofter upon being handled; of a very agreeable fmell, and of a light pungent bitterifh up : this is of a much weaker fmell than the former, and has a large admixture of a fine fand, which in the labdanum examined by the It is very friable, fo as to be French academy, made up threefourths of the mass. Rectified spirit of wine almost entirely diffolves pure labdanum, leaving only a fmall portion of gummy matter which has no tafte or fmell : and hence this refin may be thus excellently purified for internal purpofes. It is an uleful ingredient in the ftomachic and cephalic plasters of the ihops.

LAC (E.] Milk.

Milk appears to be a vegetable juice, with little or nothing of an animal nature. The quality and uses of this foft nutritious liquor are in general well known: we shall therefore, in this place, only give an account of fome experiments, pointing out the alterations it undergoes from different admixtures, and the difference in quality

New milk mixes uniformly with beate waters, wines, and malt linous

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nous fpirits, fol foaps, and neutra with oils expre Acids both miner coagulate it; as volatile alkalies, tified fpirit of v made by acids is again by alkaling made by alkalies tral falts, nitre in ferve it from coa	al falts; but not fied or diftilled. ral and vegetable alfo do fixt and and highly rec- wine: the curd in part refolved is by acids. Neu- particular, pre- agulating fponta- twife render it lefs	The human milk is the fwee of thefe liquors, and that of a next to it. This latter is the n dilute of them all; on fufferin to coagulate fpontaneoufly, curd fcarce amounted to two dra from twelve ounces, whilf that cows' milk was five times as mu the coagulum of affes' milk, e when made by acids, forms of into fine light flakes which fwin the ferum; that of goats' milk of cretes into more compact may which fink.	the most the ms, t of ch: ven only n in con-
Upon evapo- rating twelve ounces of	There remained of dry matter drams,	From which water extracted a fu faline fubftance, amounting, w exficcated, to drams,	
Cows' milk Goats' milk	13 $12\frac{I}{2}$		1999

The faline fubflance obtained from affes' milk was white, and fweet as fugar; that of the others brown or yellow, and confiderably lefs fweet; that of cows' milk, the leaft fweet of all. It appears, therefore, that affes' milk contains more ferum, and much more of a faccharine faline matter, than that of cows and goats; and that thefe two abound moft with unctuous grofs matter: hence thefe are found to be moft nutritious, whilft the firft proves moft effectual as an aperient and detergent.

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Human milk

Affes' milk

The infpiffated refiduum of milk, digefted with about as much water as was wafted in the evaporation, yields an elegant kind of whey, more agreeable in tafte, and which keeps better than that made in the common manner. This liquor promotes the natural fecretions in general, and if its ufe be duly continued, does good fervice in fcorbutic, and other diforders, proceeding from thick phlegm and obstructions of the vifcera.

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There are confiderable differences in the milk of the fame animal, according to its different aliment. Diofcorides relates, that the milk of goats, who feed on the fcammony plant and ipurges proved cathartic : and examples are given in the Acta Haffnienfia of bitter milk from the animal's having eaten wormwood. It is a common obfervation, that cathartics and fpirituous liquors given to a nurfe, 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 fo far, as to direct the animal to be dieted according to the difeafe for which its milk is to be drunk.

LACCA, gummi-refina [E.] Lac, improperly called gum lac. M 2. This

This is a fort of wax, of a red colour, collected in the East-Indies, by certain infects, and deposited on flicks fastened for that purpose in It is brought over, the earth. either adhering to the flicks, or in fmall transparent grains, or in femi-transparent flat cakes : the first is called flick lack, the fecond feed lac, and the third fhell lac. On breaking a piece of flick lac, it appears composed of regular cells like the honeycomb, with fmall corpufcles of a deep red colour lodged in them. These are the young infects, and to thefe the lac owes its tincture, for when freed from them its colour is very dilute. The shell and feed lacs, which do not exhibit any infects or cellular appearance upon breaking, are fuppofed to be artificial preparations of the other : the feed fort is faid to be the flick lac bruifed and robbed of its more foluble parts; and the shell to be the feed lac, melted and formed into cakes. The flick lac therefore is the genuine fort, and ought alone to be employed for medicinal purpofes. This concrete is of great effeem in Germany, and other countries, for laxity and sponginess of the gums, proceeding from cold, or a fcorbutic habit. For this use the lac is boiled in water, with the addition of a little alum, which promotes its folution : or a tincture is made from it with rectified fpirit. This tincture is recommended alfo internally in the fluor albus, and in rheumatic and fcorbutic diforders: it has a grateful fmell, and a not unplea. fant, bitterish, aftringent taste : in the Edinburgh Pharmacopœia, a tincture is directed to be made with fpirit of fcurvy-grafs. The principal ule of lac among us is in certain mechanic arts as a colouring drug, and for making fealing wax.

LAMII ALBI folia, flores : Lamii albi non fætentis folio oblongo C. B. White archangel, or dead nettle; the leaves [E.] and flowers [L. E.]

This grows wild in hedges; and flowers in April and May. The flowers have been particularly celebrated in uterine fluors, and other female weakneffes, as alfo in diforders 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 : Lapathum folio acuto plano C. B. Rumex acutus Lin. The dock with long, narrow, fharp-pointed leaves, not curled up about the edges [E.]

HYDROLAPATHUM, five Herba Britannica : Lapathum aquaticum folio cubitali C. B. Rumex aquaticus Lin. The great water dock [E.]

The leaves of the docks gently loofen the belly, and have fometimes been made ingredients in decoctions for removing a coffive habit. The roots are celebrated for the cure of fcorbutic and cutaneous diforders, both exhibited internally, and applied externally in ointments, cataplasms, and fomentations. Muntingius published a treatife 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 defcription which Diofcorides gives of the latter, does not ill agree to the former. This author

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author therefore attributes to the by drolapathum all the virtues afcribed of old to the Britannica, particularly recommending it in the fcurvy and all its fymptoms. Where this diforder is of very long ftanding, fo as not to yield to the bydrolapathum alone, he directs a compofition, by the use of which, he fays, even the venereal lues will, in a fhort time, be effectually cured. Six ounces of the roots of the water dock, with two of faffron ; and of mace, cinnamon, gentian root, liquorice root, and black pepper, each three ounces (or, where the pepper is improper, fix ounces of liquorice), are to be reduced into coarfe powder, and put into a mixture of two gallons of wine, with half a gallon of ftrong 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 fix ounces of this liquor are to be taken every morning on an empty ftomach, for fourteen or twenty days, or longer.

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LAPATHUM UNCTUOSUM, vide Bonus HENRICUS.

LAPIS BEZOAR, CALAMI-NARIS, HÆMATITES, LA-ZULI; vide Bezoar, Calami-NARIS, &c.

LAPPA MAJOR, vide Bar-DANA MAJOR.

LAVENDULÆ flores : Lavendulæ angustifoliæ C. B. Common, or narrow - leaved lavender, or fpike; the flowers [L.]

LAVENDULÆ flores : Lavendulæ latifoliæ C. B. Lavendulæ spicæ Lin. Greater, or broad-leaved lavender; the flowers [E.] These plants have a fragrant fmell, and a warm, pungent, bitterish taste: the broad-leaved fort is the stronger in both respects, and yields in distillation thrice as much effential 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 fort commonly met with in our gardens, and therefore alone directed by the London college.

Lavender is a warm ftimulating aromatic. It is principally recommended in vertigoes, palfies, tremors, suppression of the menstrual evacuations; and in general in all diforders of the head, nerves, and uterus, proceeding from a weaknefs of the folids, and lentor or fluggishness of the juices. It is fometimes alfo used externally in fomentations for paralytic limbs. The diffilled oil is particularly celebrated for destroying the pediculi inguinales, and other cutaneous infects. If foft spongy paper, dipt in this oil, either alone, or mixed with that of almonds, be applied at night to the parts infefted by infects, they will certainly, fays Geoffroy, be all found dead in the morning. The officinal preparations of lavender, are, the effential oil, a spirit [L. E.] and a conferve [L.] the flowers in fubstance are an ingredient in the fternutatory powder [L.] and the oil in the cephalic balfam and cephalic plafter [E.]

LAUREOL Æ folia, baccæ: Laureolæ semper virentis store viridi, quibusdam laureolæ maris C. B. Daphnes laureolæ Lin. Spurge-laurel; the leaves and berries.

This is a fmall fhrub, growing wild in fome of our woods. The M 3 leaves, leaves, berries, and bark, both of the flaks and roots, have an extremely acrid, hot tafte, which laft for a long time, burning and inflaming the mouth and fauces. Taken internally they operate with great violence by flool, and fometimes by vomit; fo as fcarce to be exhibited with any tolerable degree of fafety, unlefs their virulence be previoufly abated by boiling.

LAURI folia, baccæ : Lauri vulgaris C. B. The bay tree; its leaves and berries [L. E.]

These are generally brought from the Streights, though the tree bears the colds of our own climate. They have a moderately ftrong aromatic fmell, and a warm, bitterifh, pungent talle : the berries are ftronger in both respects than the leaves, and afford in diffillation a larger quantity of aromatic effential oil; they yield alfo an almost infipid oil to the prefs, in confequence of which they prove unctuous in the mouth. These fimples are warm carminative medicines, and fometimes exhibited in this intention against flatulent colics; and likewife in hysterical diforders.

Their principal use in the prefent practice is in glysters, and some external applications. The leaves enter our common somentation: and the berries, the plaster and cataplasm of cummin; they also give name to an electary, which is little otherwise used than in glysters.

LAZULI lapis; [E.] a compact ponderous foffil, of an opake blue colour, met with in the eastern countries, and in fome parts of Germany. It is a strong emetic, rarely or never used in the present practice.

LENTIS VULGARIS femen :

leaves, berries, and bark, both of Lentis vulgaris femine fubrufo C. B. the falks and roots, have an ex- Lentile; the feed.

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This is a strong, flatulent food, very hard of digestion : it is never, at least with us, used for any medicinal purpose.

LENTISCUS : Lentifcus verus ex infula Chio, cortice et foliis fuscis Commelin. Pistachia Lentiscus Lin. The lentisc, or massich tree; the wood [E.]

This tree, or fhrub, 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 afh coloured bark, and white within, of a rough, fomewhat pungent tafte, and an agreeable, though faint fmell; the fmaller tough fprigs are both in tafte and fmell the ftronger. This wood is accounted a mild balfamic reftringent ; a decoction of it is in the German ephemerides dignified with the title of vegetable aurum potabile, and ftrongly recommended in catarrhs, nauseæ, and weakness of the stomach; for ftrengthening the tone of the vifcera in general, and promoting the urinary fecretion.

This is the tree which in the island Chio affords the refin, called mastich. See MASTICHE.

LEPIDII folia : Lepidii latifolii C. B. Common broad ditander, pepperwort, or poor man's pepper; the leaves [E.]

This plant is fometimes found wild by the fides of rivers, and in other moift places. The leaves have an aromatic, pungent, biting tafte, fomewhat approaching to that of pepper, but going off fooner than that of most other fubstances of this class. They are very rarely employed in medicine, though ftrongly recommended as antifcorbutics, butics, and for promoting the urinary and cuticular fecretions; virtues to which they have undoubtedly a good title.

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LEUCOIUM LUTEUM, vide CHEIRI.

LEVISTICI, seu Ligustici radix semen [E.] Angelicæ montanæ perennis, paludapii solio Tourn. Lovage; the root and seed [E.]

This is a large umbelliferous plant, cultivated with usin gardens. The root nearly agrees in quality with that of angelica : the principal difference is, that the lovage root has a ftronger fmell, and a fomewhat lefs pungent taffe, accompanied with a more durable fweetnefs : the feeds are rather warmer than the root. These fimples, though certainly capable of being applied to useful purposes, are not at present regarded : neither of them is directed in extemporaneous prefeription, and the root enters no officinal composition. The feeds are an ingredient in the compound valerian water and troches of myrrh of the Edinburgh pharmacopœia; in both which they excellently coincide with the other ingredients.

LICHEN : Lichen petræus cauliculo pileolum sustinente C. B. Liverwort ; the herb.

This grows wild in moift fhady places, and by the fides of rivers. It has a faint not difagreeable fmell; and an herbaceous, roughifh, and fomewhat bitterifh tafte. Great virtues have been attributed to this fimple in obftructions of the liver, jaundice, &c. which practitioners do not now expect from it.

LICHEN CINEREUS TER-RESTRIS: Lichen terrestris cinereus Raii. Lichen caninus Lin. Ashcoloured ground liverwort [L. E.]

This confifts of pretty thick digitated leaves, flat above, of a reticular texture underneath, and faftened to the earth by fmall fibres : the leaves when in perfection are of an afh colour ; by age they become darker coloured or reddifh. It is met with on commons and open heaths, where it quickly fpreads 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 fresheit vigour.

This fimple is faid to be a warm diuretic ; but the tafte discovers in it little or no warmth. It is chiefly celebrated for its virtue in the cure of the diforders 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 Phil. Tranf. No. 237. This powder was afterwards inferted (in the year 1721) into the London pharmacopœia, under the title of pulvis antily fus, at the defire of an eminent phyfician, 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 inftances conftantly found fuccefsful. 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 fafting, for " four mornings fucceflively, 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 fpring or river, M 4

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" every morning fafting, for a " month ; he must be dipt all se over, but not ftay 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 poifons, in which we find the fame method of cure again recommended, as having, in a course of thirty years experience, never failed of fuccess; where it had been followed before the hydrophobia begun. It is greatly to be wifhed, that the efficacy of this medicine in preventing these terrible diforders, was abfolutely certain, and proved by incontestible facts. Inftances have been produced of its proving unfuccessful; and the many examples of the fatality of the difcafe which continually occur, feem arguments either of the inefficacy of the medicine, or of a strange negligence in applying it. We thall only further observe, that Boerhaave, who is in general fufficiently liberal in the commendation of remedies, ranks this among those infignificant trifles, upon which whoever shall depend will find himself deceived.

LIGNUM ALOES, vide AGAL-LOCHUM.

LIGNUM RHODIUM [L. E.] et ASPALATHUS [E.] Rofewood, a wood or root, brought from the Canary iflands : and afpalathus, a fimple of confiderable effeem among the ancients, but which has not come to our kowledge.

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 likewife in their accounts of the drug itfelf, and have defcribed, under this name, fimples manifeftly different. This confufion feems to have arifen from an opinion, that the rhodium and afpalathus are the fame; whence different woods brought into Europe for the afpalathus were fold again by the name of rhodium.

As to afpalathus, the ancients themfelves difagree; Diofcorides requiring by this appellation the wood of a certain fhrub freed from the bark, and Galen the bark of a root. At prefent, we have nothing under this name in the fhops. What was fold among us as afpalathus, was a pale-coloured wood brought from the Eaft Indies, and more commonly called calamback.

The lignum rhodium of the fhops is ufually in long crooked pieces, full of knots, which, when cut, appear of a yellow colour like box, with a reddifh caft: the largest, fmoothest, most compact, and deepeft coloured pieces, should be chofen; and the fmall, thin, or pale ones rejected. The tafte of this wood is lightly bitterifh, and fomewhat pungent; its fmell very fragrant, refembling that of rofes: long kept, it feems to lofe its fmell; but, on cutting, or rubbing one piece against the other, it fmells as well as at firft. Diffilled with water, it yields an odoriferous effential oil, in very fmall quantity. Rhodium is at prefent in effeem 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 fimple might be advantageoully applied to nobler purpofes: a tincture of it in rectified spirit of wine, which contains in a fmall volume the virtue of a confiderable deal

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deal of the wood, bids fair to prove a cordial, not inferior perhaps to any thing of this kind.

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LIGNUM TINCTILE CAM-PECHENSE [L.E.]: Lignum Brafilio fimile, cæruleo tingens J. B. Hæmatoxylum Campechianum Lin. Campeachy or logwood; a wood brought from Campeachy in the bay of Honduras.

This is ufually in large logs, very compact and hard, of a red colour, and an aftringent fweet tafte. It was for a long time ufed only by the dyers. A decoction of it, and the extract, are now in ufe in our hofpitals, and are faid to have proved very ferviceable in diarrhœas. The extract is now received into the fhops. See Part III. chap. vi.

LILII ALBI radix, flores : Lilii albi flore erecto et vulgaris C. B. White lily; the roots and flowers [E.]

This is cultivated in gardens, more for the beauty of its flowers, than medicinal ufe.

LILII CONVALLIUM radix, flores: Lilii convallium albi C. B. Convallariæ majalis Lin. Lily of the valley, or May lily; the roots and flowers [E.] This grows wild in woods and fhady places, flowering in May.

The flowers of these plants are faid 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 effential oil has been hitherto obtained from them. Etmuller fays, that the distilled spirit is more fragrant than the water. The roots of the garden lily abound with a fost mucilage, and hence they have been used externally in emollient and maturating cataplass. They

are an ingredient in the fuppurating cataplafms of the Edinburgh pharmacopœia. Thofe of the wild lily are very bitter: dried, they are faid to prove a gentle errhine; as alfo the flowers.

LIMONUM fuccus, cortex: Fractus mali limoniæ acidæ C. B. Citri Limonis Lin. Lemons; their juice, yellow rind [L. E.] and its effential oil, called effence of lemons [L.]

The juice of lemons is fimilar in quality to that of oranges, from which it differs little otherwife than in being more acid. The yellow peel is an elegant aromatic, and is frequently employed in ftomachic tinctures and infufions : it is confiderably lefs hot than orange peel, and yields in diffillation with water less quantity of effential oil. Its flavour is neverthelefs more perifhable, yet does not arife fo readily with fpirit of wine ; for a fpirituous extract made from lemon peel poffeffes the aromatic tafte and fmell of the fubject in much greater perfection than an extract prepared in the fame manner from the peels of oranges. In the fhops, a fyrup is prepared from the juice, and the peel is candied ; the peel is an ingredient in the bitter infufions, bitter wine, and both the peel and juice in one of the infufions of fena; the effential oil in the volatile aromatic spirit, faponaceous pills, and ointment of fulphur [L.]

LINGUÆ CERVINÆ, feu Scolopendrii folia: Linguæ cervinæ officinarum C. B. Afplenii Scolopendrii Lin. Harts tongue: the leaves [E.]

This plant confifts of a number of long narrow leaves, without any ftalk : it grows upon rocks and old walls, and remains green all the year. The leaves have a roughifh, fomewhat mucilaginous tafte, like that that of the maiden hairs, but more difagreeable. They are recommended in obftructions of the vifcera, and for ftrengthening their tone; and have fometimes been made use of for these intentions, either alone, or in conjunction with maiden-hair, or the other plants called capillary.

LINI CATHARTICI folia: Lini pratenfis flofculis exiguis C. B. Purging flax, or mill-mountain; the leaves [E.]

This is a very fmall plant, not above four or five inches high, found wild upon chalky hills, and in dry pafture 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 fubstance when dried, are faid to purge without inconvenience.

LINI VULGARIS femen: Lini fativi C. B. Common flax; the feed, called linfeed [L. E.]

Linfeed yields to the prefs a confiderable quantity of oil; and boiled in water, a strong mucilage. These are occafionally made use of for the fame purposes as other fubftances of that class; and sometimes the feeds themfelves in emollient and maturating cataplasms. They have also been employed in Asia, and, in times of fcarcity, in Europe, as food, but are not agreeable, or in general wholefome. Tragus relates, that those who fed on these feeds, in Zealand, had the hypochondres much diffended, and the face and other parts swelled, in a fhort time; and that not a few died of these complaints. The expressed oil is an officinal preparation [L. E.]: the cake, remaining after the oil, is an ingredient in the fuppurating cataplaim, and the feeds in the nephritic decoction [E.]

LITHARGYRUS [L. E.] Litharge : a preparation of lead, ufually in form of foft flakes, of a yellowish reddish colour. If calcined lead be urged with a hafty fire, it melts into the appearance of oil, and on cooling concretes into litharge. Greatest part of the litharge met with in the fhops, is produced in the purification of filver from lead, and the refining of gold and filver by means of this metal. According to the degree of fire and other circumstances, it proves of a pale or deep colour ; the former has been commonly called litharge of filver, the other of gold. See PLUMBUM.

* LOBELIÆ radix : Lobeliæ [E.] Rapunculi galeati virginiani flore violaceo Morison. Lobeliæ siphiliticæ Lin. Blue Cardinal-Flower.

An herbaceous perennial plant, with an erect fialk, three or four feet high, and ovate-lanceolate fubferrated leaves, bearing long fpikes of labiated, irregular, blue flowers, each with five ftamina having connate antheræ, fucceeded by a bilocular capfule, containing many fmall feeds. The whole plant has a milky juice, and fomething of a rank fmell. It grows in moift places in Virginia, and bears the winters of our climate.

The root of this plant confifts of white fibres, a line in thicknefs, and about two inches in length. It refembles tobacco in tafte, which dwells on the tongue, and is apt to excite vomiting. It was long a famous fecret among the North American Indians for the cure of the venereal difeafe. The fecret was purchafed by Sir William Johnfon, 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.

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water. Half a measure is taken in the morning fafting, and repeated in the evening ; and the dole is gradually increased till its purgative effects become too violent, when the medicine is for a time to be intermitted, and then renewed, till a perfect cure be effected. One dofe daily is fufficient during the latter part of the treatment; and the regimen, during the whole procefs, is to be equally firiet with that obferved in a course of mercurial falivation. From the third day, the ulcers are to be well washed twice daily with the decoction ; and it is faid that, when they are very deep and foul, the Indians fprinkle them with powder of the internal bark of the fpruce-tree. The Edinburgh college have received it into their lateft catalogue of fimples.

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· LOPEZIANA Indica Radix Pb. Edinb. 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; fofter, more fpongy, and whiter next the bark, including a denfer, fomewhat reddifh medullary part.

The bark is rough, wrinkled, brown, foft, and as it were woolly, pretty thick, covered with a thin paler cuticle.

It has no remarkable fmell or tafte. 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 fpirit is tinged by this root of a brown colour, but acquires no particular tafte.

It is regarded in the East Indies as a medicine of extraordinary ef-

Gaubius in his Adverfaria has published an account of some experiments made with it, which in fome degree confirm its reputation.

LUJULÆ folia: Oxyos albæ Gerard. Oxalis Acetofellæ Lin. Wood forrel; the leaves [L. E.]

This is a fmall plant, growing wild in woods. In tafte and medical qualities, it is fimilar to the common forrel (fee ACETOSA), but confiderably more grateful, and hence is preferred by the London college. Boiled with milk, it forms an agreeable whey; and beaten with fugar, a very elegant conferve, which has been for fome time in the fhops, and is now received in the difpenfatory.

LUMBRICI et LIMACES TERRESTRES. Earthworms and fnails [E.]

Both these are supposed to cool and cleanfe the vifcera. The latter, from their abounding with a viscid glutinous juice, are recommended as a reftorative in confumptions. For this purpofe, they are directed to be boiled in milk ; and thus managed, they may poffibly be of fome fervice. They give over nothing in diffillation either with water or fpirit; and hence the diffilled waters of them, though formerly in great effeem, are not found to have any of the virtues which the animals themfelves are fupposed to posses.

LUPINI, Semen : Lupini vulgaris, semine et flore albo, sativi J. B. White lupins ; the feeds.

Thefe have a leguminous tafte, accompanied with a difagreeable bitter one. They are faid to be anthelmintic, both internally taken, and applied externally.

LUPULUS: Convolvulus ficacy in diarrhœas; and the learned perennis, beteroclitus, floribus berbaceis, capfulis foliaceis strobili instar Morif. Humulus Lupulus Lin. Hops; the loofe leafy heads on the tops of the stalks.

Thefe form one of the most agreeable of the strong bitters, though rarely employed for any medicinal purposes. Their principal confumption is in malt liquors, which they render less glutinous and dispose to pass off more freely by urine.

LYCOPERDON: Fungus rotundus orbicularis C. B. Licoperdon Bowista Lin. Puff-ball, or dusty Mushroom [E.]

This fungus is found in dry pafture grounds. It feems to be nearly of the fame quality with the agaric of the oak (fee p. 76.) and has, like it, been employed for reftraining external hæmorrhages and other fluxions. The fine duft, with which it becomes filled by age, has been applied alfo in the fame intentions.

MACIS [L. E.] Mace; one of the coverings of the nutmeg (fee Nux moschata). This fpice, confidered as the fubject both of medicine and of pharmacy, agrees nearly with the nutmeg. The principal difference is, that mace is fomewhat lefs aftringent, yields to the prefs a more fluid oil, and in distillation a more volatile one. What is called in the fhops expreffed oil of mace, is prepared not from this fpice, but from the nutmeg. Mace is an ingredient in the officinal fteel wine [L.] and aqua mirabilis [E.]; and the expressed oil in the ftomachic and cephalic plasters [L.]

MAGISTRANTIA, vide Im-PERATORIA.

MAJORANÆ folia : Majoranæ

vulgaris C. B. Origani Majoranæ Lin. Sweet marjoram; the leaves [L. E.]

Marjoram is raifed annually in our gardens for culinary as well as medicinal uses; the feeds are commonly procured from the jouthern parts of France, where the plant grows wild. It is a moderately warm aromatic, yielding its virtues both to aqueous and fpirituous liquors by infusion, and to water in diffillation. It is principally celebrated in diforders of the head and nerves, and in the humoural affhmas and catairhs of old people. An effential oil of the herb is kept in the shops. The powder of the leaves proves an agreeable errhine, and enters the officinal flernutatory powder.

MALABATHRUM folium: Folium cinnamoni sive canellæ Malavaricæ et Javanensis C. B. Laurus Cassia Lin. Indian leaf [L.]

This leaf is of a green colour, firm texture, very fmooth on one fide, leis fo on the other, on which run three remarkable ribs through its whole length. Lemery and Pomet affirm, that these leaves have no perceptible fmell or tafte; Herman and others, that they have a very great thare of both : those met with in our fhops have little or no fmell, till well rubbed, when they emit an agreeable spicy odour: on chewing, they are found extremely mucilaginous. This drug is of no further use in medicine, than as an ingredient in the mithridate and theriaca; and is, when in its greatest perfection, much inferior to the mace, which our college direct as a fuccedaneum to it.

MALVÆ folia, flores : Malvæ fylvestris folio sinuato C. B. Mallow; the leaves and flowers [L. E.] These have a somewhat mucilaginous

ginous fweetish tafte. The leaves are ranked the first of the four emollient herbs : they were formerly of fome efteem, in food, for loofening the belly; at prefent, decoctions of them are fometimes employed in dyfenteries, heat and fharpnefs of urine, and in general for obtunding acrimonious hu-Their principal ule is in mours. emollient glysters, cataplasms, and fomentations. The leaves enter the officinal decoction for glyfters, and a conferve is prepared from the flowers [L.]

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MALA: Fructus mali sativæ Raii. Apples [E.]

All the forts of apples have the common quality of cooling and abating thirst : the more acid kinds loofen the belly; the austere have rather a contrary effect.

MALA SYLVESTRIA: Fructus mali fylvestris acido fructu Tourn. Crab apples, or wildings [E.]

These are fo acid as not to be eatable: their juice, called verjuice, has fometimes supplied the place of vinegar, and has been made an ingredient in cooling and restringent gargarisms. At present, they are fcarce ever employed for any medicinal use.

MANNA [L. E.] Ex Fraxino Orno Lin. The juice of certain trees of the afh kind (growing in Italy and Sicily) either naturally concreted on the plants; or exficcated and purified by art. There are feveral forts of manna in the fhops. The larger pieces, called flake manna, are ufually preferred; though the fmaller grains are equally as good, provided they be white, or of a pale yellow colour, very light, of a fweet not unpleafant talte, and free from any visible

impurities. Some people injudicioully prefer the fat honey-like manna to the foregoing : this has either been exposed to a moift air, or damaged by fea or other water. This kind of manna is faid to be fometimes counterfeited by a compolition of fugar and honey, mixed with a little fcammony: there is alfo a factitious manna, which is white and dry, faid to be composed of fugar, manna, and fome purgative ingredient, boiled to a proper confistence; this may be diffinguished by its weight, folidity, untransparent whiteness, and by its tafte, which is different from that of manna.

Manna is a mild, agreeable laxative, and may be given with fafety to children and pregnant women : nevertheleis, in iome particular conflitutions, it acts very unkindly, producing flatulencies and diftension of the viscera ; these inconveniencies may be prevented by the addition of any grateful warm aromatic. Manna operates fo weakly, as not to produce the full effect of a cathartic, unless taken in large dofes, and hence it is rarely given in this intention by itfelf. It may be commodioully diffolved in the purging mineral waters, or joined to the cathartic falts, fena, rhubarb, or the like. Geoffroy recommends acuating it with a few grains of emetic tartar; the mixture is to be divided into feveral dofes, each containing one grain of the emetic tartar: by this management, he fays, bilious ferum will be plentifully evacuated, without any naufea, gripes, or other inconvenience. It is remarkable, that the efficacy of this drug is greatly promoted (if the account of Vallifnieri deferve credit) by a fubftance which is itfelf very flow of operation, cafia. (See CASIA.) Manna is an ingredient in the electary of cafia [L. E.] and

and gives name to an officinal lohoch [E.]

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MARGARITÆ [L. E] Pearls; fmall concretions of a transparent whitenefs, found on the infide of the shell of the concha margaritifera or mother-of-pearl fifh, as alfo of certain oysters, mussels, and other shell fishes. The pearls most efteemed are brought from the Eaft and West-Indies, and diffinguished by the names of oriental and occidental : the oriental, which are valued most, have a more shining filver hue than the occidental; thefe latter are fomewhat milky: a fort inferior to both these is fometimes met with in our own feas, particularly on the coafts of Scotland. The coarfe, rough pearls, and the very fmall ones which are unfit for other uses, are those generally employed in medicine. They have been greatly celebrated as cordial, alexipharmac, and comforting the nerves: but the only virtue that can be reasonably expected from them is, that of abforbing acidities in the primæ viæ, in which intention they enter three of the officinal powders. Their comparative ftrength, with regard to the other abforbents, may be feen among the tables at the beginning of this work: ice p. 63.

MARRUBII folia: Marrubii albi vulgaris C. B. White horehound; the leaves [L. E.]

Thefe have a very firong, not difagreeable fmell, and a roughifh very bitter tafte. Befides the virtues which they pofiefs in common with other firong bitters, they are fuppofed to be peculiarly ferviceable in humoural afthmas and coughs, the yellow jaundice proceeding from a vifcidity of the bile, and other chronical diforders. They are doubtlefs an ufeful aperient and deobfruent, promote the fluid fecretions in general, and, liberally taken, loofen the belly. They are an ingredient only in the theriaca [L.]

MARI SYRIACI folia : Mari cortufi J. B. Chamædryos maritimæ incanæ fruteJcentis foliis lanceolatis Tourn. Origani Syriaci Lin. Syrian herb mastich; the leaves [L. E.]

This is a fmall fhrubby plant, growing spontaneously in Syria, Candy, and other warm climates, and cultivated with us in gardens. The leaves have an aromatic bitterish tafte; and, when rubbed betwixt the fingers, a quick pungent fmell, which foon affects the head, and occasions fneezing: distilled with water, they yield a very acrid, penetrating effential oil, refembling one obtained by the fame means from fcurvy-grafs. These qualities point out the uses to which this plant might be applied; at prefent, it is little otherwife employed than in cephalic fnuffs. It is an ingredient in the pulvis sternutatorius of the London pharmacopœia.

MARI VULGARIS folia: Sampfuci five mari mastichen redolentis C. B. Thymbræ Hispanicæ majoranæ folio Tourn. Thymi mastichinæ Lin. Herb mastich; the leaves [L. E.]

This pungent aromatic plant is become almost a stranger to practice.

MASTICHE [L. E.] Mastich; a refin exuding from the lentifc tree (fee LENTISCUS) and brought from Chio, in fmall, yellowish transparent grains or tears, of an agreeable fmell, especially when heated or set on fire. This refin is recommended in old coughs, dyfenteries, hæmoptoes, weakness of the Part II.

the ftomach, and in general in all debilities and laxity of the fibres. Geoffroy directs an aqueous decoction of it to be used for these purpofes: but water extracts little or nothing from this refin ; rectified fpirit almost entirely diffolves it. The folution talkes very warm and pungent.

MATRICARIÆ folia, flores : Matricariæ vulgaris Jeu Jativæ C. B. Matricariæ Parthenii Lin. Common wild featherfew or feverfew ; the leaves [L. E.] and flowers [E.]

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 feen, fays he, from the ufe of a decoction of matricaria and chamomile flowers with a little mugwort, hysteric complaints instantly relieved, the difcharge fucceed plentifully, and the patient from a lethargic ftate, return as it were into life again. Matricaria is likewife recommended in many other diforders, as a warm ftimulating bitter : all that bitters and carminatives can do, fays Geoffroy, may be expected from this. It is undoubtedly a medicine of fome use in these cases, though not perhaps equal to chamomile flowers alone, with which the matricaria agrees in fenfible qualities, except in being weaker.

MECHOACANNÆ radix [E.] Convolvuli Mechoacannæ Lin. The root of an American convolvulus, brought chiefly from Mechoacan, a province of Mexico, in thin flices like jalap, but larger, and of a whitish colour. It was first introduced among us (about the year 1524) as a purgative univerfally fafe, and capable of evacuating all morbific humours from the molt remote parts of the body. As foon

trieve. It is neverthelefs by fome ftill deemed an useful cathartic. It has very little fmell or tafte, and is not apt to offend the flomach; its operation is flow, but effectual and fafe. Geoffroy affirms, that there is fcarce any purgative accompanied with fewer inconveniencies. It feems to differ from jalap only in being weaker; the refins obtained from both have nearly the fame qualities, but jalap yields five or fix times as much as Mechoacan. Hence it is found necessary to exhibit the latter in fix times the dofe of the former, to produce the fame effects.

MEL [L. E.] Honey.-Honey is a vegetable juice, obtained from the honey-comb, either by feparating the combs, and laying them flat upon a fieve, through which the honey spontaneously percolates; or by including the comb in canvas bags, and forcing the honey out by a prefs. The former fort 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 fort still inferior to the two foregoing, obtained by heating the combs before they are put into the prefs. The best fort is thick, of a whitish colour, an agreeable smell, and a very pleafant tafte : both the colour and flavour differ according to the plants from which the bees collect it: that of Narbonne in France, where rolemary abounds, is faid to have a very manifest flavour of that plant, and to be imitable by adding to other honey an infusion of rosemary flowers. Honey, confidered as a medicine, is a very ufeful detergent and aperient, powerfully diffolving vifcid juices. juices, and promoting the expectoration of tough phlegm: in fome particular conflitutions it has an inconvenience of griping or proving purgative; this is faid to be in fome measure prevented, by previoufly boiling the honey.

MELAMPODIUM, vide Hel-LEBORUS NIGER.

MELILOTI folia, flores : Trifolii odorati seu meliloti vulgaris J. B. Trifolii Meliloti officinalis Lin. Melilot; the leaves and flowers [E.]

This grows wild in hedges and among corn; and has likewife, for medicinal uses, been cultivated in gardens. The green herb has no remarkable fmell; when dry, a pretty ftrong one: the tafte is roughish, bitter, and if long chewed, naufeous. 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 otherwife than in emollient and carminative glyfters, 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.

MELISSÆ folia: Melissæ bortensis C. B. Melissa officinalis Lin. Balm; the leaves [L. E.]

This plant, when in perfection, has a pleafant fmell, fomewhat of the lemon kind: and a weak roughish aromatic tafte. The young fhoots have the ftrongeft flavour: the flowers, the herb itfelf when old, or produced in very moift rich foils or rainy feasons, are much weaker both in fmell and tafte. Balm is appropriated, by the writers on the Materia Medica, to the head, flomach, and uterus; and in

all diforders of these parts is fupposed to do extraordinary fervice. So high an opinion have fome of the chemists entertained of balm, that they have expected to find in it a medicine which fhould prolong life beyond the usual period. The prefent practice however holds it in no great effeem, and ranks it (where it certainly deferves to be) among the weaker corroborants. In distillation, it yields an elegant effential oil, but in exceeding fmall quantity; the remaining decoction taites roughish. Strong infusions of the herb, drunk as tea, and continued for fome time, have done fervice in a weak lax flate of the vifcera: thefe liquors, lightly acidulated with juice of lemons, turn of a fine reddifh colour, and prove an uleful, and to many a very grateful drink, in dry parching fevers. A fimple water of the plant is directed in the Edinburgh pharmacopœia, as an officinal.

MELONUM Semen. Melons: the feeds. These stand among the four greater cold feeds. They have been fometimes ufed, with the others of that clafs, as cooling and emollient; but are at prefent little taken notice of.

MENTHA CATARIA, vide NEPETA.

MENTHÆ VULGARIS folia: Menthæ angustifoliæ spicatæ C. B. Garden or spearmint; the leaves L. E.

The leaves of mint have a warm, roughish, somewhat bitterish taste; and a strong, not unpleasant, aromatic fmell. Their virtues are those of a warm stomachic and carminative: in lofs of appetite, naufeæ, continual reachings to vomit, and (as Boerhaave expressies it) almost all paralytic weaknesses of the ftomach,

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ftomach, there are few fimples perhaps of equal efficacy. In colicky pains, the gripes to which children are fubject, lienteries, and other kinds of immoderate fluxes, this plant frequently does good fervice. It likewife proves beneficial in many hysteric cafes, and affords an useful cordial in languors and other weakneffes confequent upon delivery. The best preparations for these purposes are, a strong infufion made from the dry leaves in water (which is much fuperior to one from the green herb) or rather a tincture. or extract prepared with rectified spirit. These posses the whole virtues of the mint. The effential oil and diftilled water contain only the aromatic part; the expressed juice only the astringency and bitterishness, together with the mucilaginous fubstance common to all vegetables. The effential oil, a fimple and fpirituous water, and a conferve, are kept in the fhops: the Edinburgh college directs an infufion of the leaves in the diffilled water. This herb is an ingredient alfo in the three alexeterial waters; and its effential oil in the flomach plaster [L.] and pills [E.]

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MENTASTRI folia: Mentastri spicati folio longiore candicante J. B. Horfe mint; the leaves. This and feveral other forts of mint are found wild in moist meadows, marshes, and on the brinks of rivers. They are much less agreeable in smell than spearmint, and have more of a hot unpleasant bitternes.

MENTHÆ PIPERITIDIS folia: Mentbæ spicis brevioribus & babitioribus, foliis mentbæ susce, sapore servido piperis Raii Synops. Mentbæ piperitæ Lin. Peppermint; the leaves [L. E.]

This fpecies has been lately in-

troduced into practice, and received for the first time in our prefent pharmacopœia; very few of the botanical or medical writers make mention of it. It grows wild in fome parts of England, in moift watery places, but is much lefs common than the other forts. The leaves have a more penetrating fmell than any of the other mints. and a much warmer, pungent, glowing tafte like pepper, finking as it were into the tongue. The principal ufe of this herb is in flatulent colics, languors, and fimilar diforders: it feems to act as foon as taken, and extend its effects through the whole fystem, instantly communicating a glowing warmth. Water extracts the whole of the pungency of this herb by infufion, and elevates it in distillation. Its officinal preparations are an effential oil, and a fimple and fpirituous water [L.] The Edinburgh college employ it alfo in the aqua mirabilis and elixir of vitriol.

MERCURIALIS maris & feminæ folia: Mercurialis testiculatæ sive maris, & spicatæ sive sæminæ Dioscoridis & Plinii C. B. Mercurialis annuæ Lin. Male and semale French mercury; the leaves [E.]

These ftand among the five emollient herbs; and in this intention are fometimes made use of in glyfters. A fyrup made from the leaves, given in a dose of two ounces, is faid to prove a mild and useful laxative.

There is another fort of mercurialis growing in woods and hedges, which though recommended by fome botanic writers, as having the fame virtues with the foregoing, and as more palatable, has been found possefield of noxious qualities. (See Raii Synopf. edit. 3. page 138. Phil. Tranf. abr. Lowtherp. ii. 640.) This may be distinguished from the N foregoing,

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foregoing, by its being a perennial plant, larger, having its leaves rough, and the stalk not at all branched. The officinal fort is named by Linnæus mercurialis caule brachiato, foliis glabris; the poifonous mercurialis caule simplicifimo, foliis scabris; and is commonly called with us dogs mercury.

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MERCURIUS, vide Argen-TUM VIVUM.

MEI ATHAMANTICI radix : Mei foliis anethi C.B. Æthufæ Mei Lin. Spignel; the root [L. E.]

Spignel is an umbelliferous plant, found wild in Italy, and the warmer parts of Europe, and fometimes alfo in England. The roots have a pleafant aromatic fmell, and a warm, pungent, bitterifh tafte : in virtue they are fimilar to the *levifticum*, from which this root feems to differ only in being weaker, and fomewhat more agreeable. It is an ufeful aromatic and carminative, though at prefent little regarded.

MEZEREI radix, cortex, baccæ: Laureolæ folio deciduo, flore purpureo, officinis, laureolæ fæminæ G. B. Daphnes Mezerei Lin. Mezereon, or fpurge-olive; the root, bark, and berries.

The bark and berries are ftrong purgatives, fimilar to the *laureola*, or fpurge laurel. The root is fometimes used in diet-drinks,

MILII semen : Milii semen luteo C. B. Panici miliacei Lin. Millet; the feed.

These feeds are frequently employed in food, but hardly ever as medicines: they are fufficiently nutritious, and not difficult of digestion.

MILIUM SOLIS, vide LITHO-SPERMUM. MILLEFOLII folia : Millefolii vulgaris albi, et Millefolii purpurei C. B. Achillææ Millefolii Lin. Milfoil, or yarrow ; the leaves [E.]

This grows plentifully about the fides of fields, and on dry commons, flowering during the greatest part of the fummer. The leaves have a rough bitterish taste, and a faint aromatic fmell. Their virtues are those of a very mild aftringent, and as fuch they fland recommended in hæmorrhages both internal and external, diarrhœas, debility and laxity of the fibres; and in spaimodic 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 aftringent, and in his language, one of the most certain tonics and fedatives. Its virtues are extracted in great perfection by proof fpirit; water takes up its aftringency and bitternefs, but little of its aromatic flavour; tinctures made in rectified fpirit contain both, though rather weaker than those in proof spirit.

The flowers of milfoil are confiderably ftronger in aromatic flavour than the leaves; in diffillation, they yield a fmall quantity of effential oil, of an elegant blue colour.

The roots, taken up in the fpring, have an agreeable warm, pungent taffe. Dr. Grew refembles them to contrayer wa, and imagines they might in fome meafure fupply its place. This, however, is greatly to be doubted, fince there is fuch a remarkable difference betwixt the two, that whilft one retains its taffe for a length of time after it has been brought to us from America, the taffe of the other is in great meafure lost by drying.

MILLEPEDÆ [L.E.] Woodlice, hoglice, flaters.

Thefe

Thefe infects are found in cellars, under ftones, and in cold moift places : in the warmer countries they are rarely met with. Millepedes have a faint difagreeable fmell, and a fomewhat pungent, sweetish, nauseous taste. They have been highly celebrated in fuppreflions of erine, in all kinds of obstructions of the bowels, in the jaundice, weakness of fight, and a variety of other diforders. Whether they have any just title to thefe virtues, is greatly to be doubted : thus much is certain, that their real effects come far fhort of the character ufually given of them. Their officinal preparations are, the millepedes dried and powdered [L. E.] and an infusion of the live infect in wine [E.] They are an ingredient also in the icteric decoction of the Edinburgh pharmacopœia.

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MINIUM [L.E.] Red lead; lead calcined to rednefs. See the article PLUMBUM.

MORI fructus, et cortex radicis: Mori fructu nigro C. B. The mulberry tree; its fruit [L. E.] and the bark of the roots [E.]

This tree is commonly cultivated on account of its fruit, which is rather eaten for pleafure than ufed as a medicine; it has the common qualities of the other fweet fruits, abating heat, quenching thirft, and promoting the groffer fecretions. An agreeable fyrup made from the juice, is kept in the fhops. The bark of the roots has been in confiderable efteem as a vermifuge; its tafte is bitter, and fomewhat aftringent.

MOSCHUS [L. E.] Mufk.

Mufk is a grumous fubftance like clotted blood, found in a little bag, fituated 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 fort from Agria and Bengal, and a still worfe from Russia.

Fine mufk comes to us in round, thin bladders; which are generally about the fize of a pigcon's egg, covered with fhort 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 reddift brown, or rufty blackifh colour, in fmall round grains, with very few hard black clots, and perfectly free from any fandy or other vinble foreign matter. If chewed, and rubbed with a knife on paper, it looks fmooth, bright, yellowith, and free from grittinefs. Laid on a red-hot iron, it catches flame, and burns almost entirely away, leaving only an exceeding fmall quantity of light greyish ashes. If any earthy fubftances have been mixed with the mulk, the quantity of the refiduum will readily difcover them.

Musk has a bitterish subacrid tafte; a fragrant smell, agreeable at a diffance, but when fmelt near, fo ftrong as to be difagreeable, unlefs weakened by the admixture of other fubstances. If a imall quantity be infufed in fpirit 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 mulk, is nevertheless ftrongly impregnated with its virtues ; a fingle drop of it communicates to a' whole quart of wine a rich musky flavour. The degree of flavour which a tinclure drawn from a known quantity of mult, communicates to vinous liquors, is perhaps one of the belt criteria for judging of the goodness of this commodity. Neumann informs us, that N-2

that fpirit of wine diffolves ten parts out of thirty of musk, and that water takes up twelve; that water elevates its smell in diffillation, whilst pure spirit brings over nothing.

Mulk is a medicine of great efteem in the eastern countries : among us, it has been for fome time pretty much out of use, even as a perfume, on a supposition of its occasioning vapours, &c. in weak females, and perfons of a fedentary life. It appears, however, from late experience, to be, when properly managed, a remedy of good fervice even against those diforders which it has been fuppofed to produce. Dr. Wall has communicated (in the Philosophical Transactions, Nº 474) an account of fome extraordinary effects of musk in convulsive and other difeafes, which have too often baffled the force of medicine. The doctor obferves, that the fmell of perfumes is often of differvice, where the fubstance taken inwardly, and in confiderable quantity, produces the happiest effects : that two perfons, labouring under a fubfultus tendinum, extreme anxiety, and want of fleep, from the bite of a mad dog, by taking two doles of mulk, each of which were fixteen grains, were perfectly relieved from their complaints. He likewife obferves, that convulfive hiccups, attended with the worft fymptoms, were removed by a dole or two, of ten grains: and that in fome cafes, where this medicine could not, on account of ftrong convultions, be administered to the patient by the mouth, it proved of fervice when injected as a glyfter. He likewife adds, that under the quantity of fix grains, he never found much effect from it; but that, taken to ten grains and upwards, it never fails to pro-

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Part II.

duce a mild diaphorefis, without at all heating or giving any uncafinefs; that, on the contrary, it eales pain, raffes the spirits, and after the fweat breaks out, the patient ufually falls into a refreshing fleep; that he never met with any hyflerical perfon, how averfe foever to perfumes, but could take it, in the form of a bolus, without inconvenience. To this paper is annexed an account of fome further extraordinary effects of mulk, observed by another gentleman. Repeated experience has fince confirmed its efficacy in these diforders. I have myfelf frequently given it with remarkable fuccels; and fometimes increased the dole as far as twenty grains every four hours, with two or three spoonfuls of the musk julep between. The julep is the only officinal preparation of it.

MYROBALANI. Myrobalans, dried fruits brought from the Eaft-Indies; their outward part, freed from the flone.

Five kinds of myrobalans were formerly directed as officinals; (1) The yellow, myrobalani teretes citrini C. B. (2) The chebule, myrobalani maximæ oblongæ angulofæ C. B. (3) The Indian or black, myrobalani nigræ octangularis C. B. (4) The belliric, myrobalani rotundæ belliricæ C. B. (5) The emblic, myrobalani emblicæ in fegmentis nucleum habentes, angulofæ 7. B.

cleum babentes, angulofæ J. B. All the myrobalans have a low degree of purgative virtue. They have alfo an aftringent quality, difcoverable by the tafte, from their ufe among the Indians for tanning leather, and from their ftriking a black colour with chalybeate folutions. In confequence of this, they are supposed to strengthen the bowels after their operation as a cathartic

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cathartic is over. Neverthelefs their purgative virtue is fo inconfiderable, that practitioners have for a long time laid them entirely afide in that intention; and the college of Edinburgh, as well as that of London, has now rejected them from the catalogue of officinal fimples.

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MYRRHA [L.E.] Myrrh.

Myrrh is a concrete gummy-refinous juice brought from the East-Indies, in glebes or drops, of various colours and magnitudes. The best fort is of a brown or reddish yellow colour, fomewhat transparent; of a lightly pungent, bitter tafte, with an aromatic flavour, though not fufficient to prevent its proving naufeous to the palate; and a ftrong not difagreeable fmell. The medical effects of this aromatic bitter are, to warm and strengthen the vifcera, and diffolve thick, tenacious juices; it frequently occasions a mild diaphorefis, and promotes the fluid fecretions in general.

Hence it proves ferviceable, in languid cafes, difeafes arifing from a fimple inactivity, those female diforders which proceed from a cold, mucous, fluggifh indifpofition of the humours, suppressions of the uterine discharges, cachectic diforders, and where the lungs and thorax are opprefied by vifcid phlegm. Myrrh is likewife fuppofed in a peculiar manner to refift putrefaction in all parts of the body; and in this light flands recommended in malignant, putrid, and pestilential fevers, and in the imall-pox, in which laft it is faid to accelerate the eruption.

Rectified fpirit extracts the fine aromatic flavour and bitternefs of this drug, and does not elevate any thing of either in evaporation.

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The gummy fubftance left by this menstruum has a disagreeable taste, with fcarce any thing of the peculiar flavour of the myrrh: this part difiolves in water, except fome impurities which remain. In diffillation with water, a confiderable quantity of a ponderous effential oil arifes, refembling in flavour the original drug. Myrrh is the bafis of an officinal tincture [L. E.] and gives name to a compound tincture [E:] elixir, powder [L.] and troches [E]. It is an ingredient in the aloetic wine or elixir proprietatis, the gum pills, Rufus's pills [L.E.] ftomachic pills [B.] mithridate, theriaca [L.] and theriaca Edinenfis [E.]

MYRTI baccæ: Myrti communis Italicæ C. B. Myrtle; the berries [E.]

This is an evergreen fhrub, growing in Italy, and cultivated in our botanic gardens. The leaves and berries have been fometimes made use of as aftringents, but are not at prefent regarded.

NAP! femen : Napi dulcis officinarum : Napi fativæ C.B. Sweet navew or navew gentle; the feeds [L.]

This is a fort of turnep, fown in fome of our gardens for culinary use. The roots are warmer than the common turnep. The feeds have a bitterish taste, accompanied with a faint aromatic flavour: abundance of virtues has been ascribed to them, as attenuating, detergent, alexipharmac, and others; at present, they are of no further use in medicine, than as an ingredient in the theriaca.

NAPI 'SYLVESTRIS femen: Napi fylvestris C. B. Rape; the feeds.

This has little other external N 3 difference difference from the foregoing than being fmaller: it grows wild upon dry banks and among corn. The feeds of this are warmer and more pungent than those of the garden fort: the only use, however, they are applied to, is the preparation of the oil called rape oil, which is obtained by bruising and pressing the feeds: large quantities of the plant are cultivated for this purpose in the isle of Ely.

NARDUS CELTICA: Radix na: di Celticæ Dioscoridis C. B. Valerianæ Celticæ Tourn. Celtic nard [L. E.] the root, brought from the Alps, &c.

This root confifts of a number of fibres, with the lower part of the stalks adhering; the latter are covered with thin yellowish scales, the remains of the withered leaves.

NARDUS INDICA [L. E.] Nardus Indica, quæ spica, spica nardi, et spica Indica officinarum C. B. Indian nard, or spikenard, brought from the East-Indies.

This is a congeries of fmall fibres iffuing from one head, and matted clofe together, fo as to form a bunch about the fize of the finger, with fome fmall ftrings at the oppofite end of the head. The matted fibres (which are the part chosen for medicinal purpofes) are fuppofed by fome to be the head or fpike of the plant, by others the root : they feem 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 likewife now and then meet with a number of these bunches iffuing from one root.

Both the nards have a warm, pungent, bitterish taste; and a ftrong, not very agreeable smell. They are flomachic and carminative ; and faid to be alexipharmac, diuretic, and emmenagogue. Their only use at prefent is as ingredients in the mithridate and theriaca,

NASTURTII AQUATICI folia: Nafturtii aquatici fupini C. B. Sifymbrii Nafturtii aquatici Lin. Water-creffes: the leaves [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 fpring. They have a quick pungent finell (when rubbed betwixt the fingers) and an acrid tafte, fimilar 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 fingular efficacy for accelerating the circulation, ftrengthening the vifc ra, opening obstructions of the glands, promoting the fluid fecretions, and purifying the blood and humours: for these purposes, the expressed juice, which contains the peculiar tafte and pungency of the herb, may be taken in doles of an ounce or two, and continued for a confiderable time. The juice is an ingredient in the Succi Scorbutici of the thops.

NASTURTII HORTENSIS folia, semen: Nasturtii vulgaris sem hortensis tenuiter divist Morison. Lepidii sativi Lin. Garden cress; the leaves and seeds [E.]

The leaves of garden creffes make an ufeful falad in fcorbutic habits. In tafle and medical virtues, they are fimilar to the foregoing, but much weaker. The feeds also are confiderably more pungent than the leaves.

NEPETÆ folia: Menthæ catariæ vulgaris et majoris C. B. Nepetæ Petæ Catariæ Lin. Nep, or catmint; the leaves [L. E.]

This plant is commonly cultivated in our gardens, and is fometimes alfo found growing wild in hedges and on dry banks. It is a moderately aromatic plant, of a ftrong fmell, refembling a mixture of mint and pennyroyal; of the virtues of which it likewife participates.

NEPHRITICUM LIGNUM: Lignum peregrinum, aquam cæruleam reddens C. B. 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 outfide, and dark coloured or reddifh within : the bark is ufually 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 fituations blue. Pieces of another wood are fometimes mixed with it, which give only a yellow colour to water. The nephritic wood has fcarce any fmell, and very little tafte. It ftands recommended in difficulty of urine, nephritic complaints, and all diforders of the kidneys and urinary paffages; and is faid to have this peculiar advantage, that it does not, like the warmer diuretics, heat or offend the parts. Practitioners however have not found theie virtues warranted by experience,

NICOTIANÆ folia: Nicotianæ latifoliæ majoris C. B. Nicotianæ Tabaci Lin. Tobacco; the leaves [L. E.]

This plant was first brought into Europe, about the year 1560, from the island 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 whilft fresh, and when carefully dried, of a lively yellowifh. They have a strong, difagreeable fmell, like that of the narcotic plants; and a very acrid burning tafte. Taken internally, they prove virulently cathartic and emetic, orcafioning almost intolerable cardialgic anxieties. By boiling in water, their virulence is abated, and at length deftroyed : an extract made by long coction is recommended by Stahl and other German phyficians, as a fafe and most effectual aperient, expectorant, detergent, &c. but this medicine, which is extremely precarious and uncertain in strength, has never come into effeem among us. Tobacco is fometimes used externally in unguents, for deftroying cutaneous infects, cleanfing old ulcers, &c. Beaten into a math with vinegar or brandy, it has fometimes proved ferviceable for removing hard tumours of the hypochondres; an account is given in the Edinburgh effays of two cafes of this kind cured by it.

There is another fort of tobacco found wild on dunghills, in feveral parts of England. This is called by C. Bauhine nicotiana minor, by Gerard byofcyamus luteus. Nicotiana ruftica Lin. It feems to agree in quality with the hyofcyamus formerly mentioned, though (as Dale informs us) often fubttituted in our markets for the true tobacco: from which it may be diffinguished by the leaves being much smaller, and the flowers not reddith as those of the officinal fort, but of a yellowish green colour.

NIGELLÆ femen : Nigellæ flore minore fimplici candido C. B. Fennelflower; the feeds.

This plant is fown annually in fome of our gardens; the feeds N 4 most most effeemed are brought from Italy. They have a firong, not unpleafant imell; and a fubacrid, fomewhat unctuous difagreeable taste. They stand recommended as aperient, diuretic, &c. but have long been strangers to practice, and are by fome suspected to have noxious qualities.

NITRUM [L. E.] Nitre, or faltpetre; a falt, extracted in Perfia and the Eaft-Indies, from certain earths that lie on the fides of hills; and artificially produced in fome parts of Europe, from animal and vegetable matters rotted together (with the addition of lime and afhes) and exposed for a length of time to the air, without the accefs of which, nitre is never generated. The falt extracted from the earths, &c. by means of water, is purified by colature and cryftallization.

Pure nitre diffolves in about fix times its weight of water, and concretes again into colourless transparent crystals; their figure is that of an hexagonal prifm, terminated by a pyramid of an equal number of fides. It readily melts in the fire; and in contact with fuel deflagrates, with a bright flame and confiderable noife ; after the detonation is over, a large quantity of alkaline falt is found remaining. The tafte of nitre is fharp, penetrating, and bitterifh, accompanied with a fenfation of coldnefs.

Nitre is a medicine of celebrated ufe in many diforders. Befides the aperient quality of neutral falts in general, it has a manifeftly cooling one, by which it quenches thirft, 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 preferved from coagulation. It nevertheless fomewhat thickens the thin, ferous, acrimonious humours, and occafions an uniform mixture of them with fuch as are more thick and vifcid ; by thefe means preventing the ill confequences which would otherwife enfue from the former, though it has not, as Junckner fuppoies, any property of really obtunding acrimony. This medicine for the molt part promotes urine ; fometimes gently loofens the belly; but in cold phlegmatic habits, very rarely has this effect, though given in large dofes : alvine fluxes, proceeding from too great acrimony of the bile or inflammation of the inteffines, are suppreffed by it : in choleric and febrile diforders, it generally excites fweat; but in malignant cafes, where the pulfe is low, and the firength loft, it retards this falutary evacuation and the eruption of the exanthemata.

Dr. Stahl has written an express treatife upon the medical virtues of nitre; in which he informs us, from his own experience, that this falt added to gargarifms employed in inflammations of the fauces in acute fevers, thickens the falival moisture upon the palate and fauces into the confistence of a mucus, which keeps them moift for a confiderable time; whereas, if nitre be not added, a fudden drynefs of the mouth immediately enfues; that in nephritic complaints, the prudent use of nitre is of more fervice than any of the numerous medicines ufually recommended in that disease : that nitre gives great relief in suppression and heat of urine, whether fimple or occafioned

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fioned by a venereal taint; that it is of great fervice in acute and inflammatory pains of the head, eyes, ears, teeth, &c. in all eryfipelatous affections, whether particular or universal, and likewife in chronic deliria; that in diarrhææ happening in petechial fevers, nitre mixed with abforbents and diaphoretics, had the best effects, always putting a ftop to the flux, or rendering the evacuation falutary; that in diarrhϾ happening in the fmall-pox, it had been employed with the like fuccels, two doles, or three at molt (confifting 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 flop to the flux, after the bezoardic powders, both with and without opium, had been given without fuccefs. The fame author recommends this falt likewife as a medicine of fingular fervice in choleras attended with great anxieties and heat of the blood; in the flatulent spasmodic heartbarns familiar to hypochondriacal people; and the lofs of appetite, nausea, vomiting, &c. which gouty perfons are fometimes feized with when the pains of the feet, &c. fuddenly remit. In cafes of this laft kind, the use of nitre furely requires great caution, although the author affures us, that no bad confequences are to be feared from it. Neverthelefs he obferves, that in a phthifis and ulcerous affections, it has been found to be of no fervice; and that therefore its ufe may be fuperfeded in these complaints. Indeed in diforders of the lungs in general, it is commonly reckoned to be rather hurtful than beneficial.

The usual dose of this medicine among us, is from two or three grains to a fcruple; though it may

be given with great fafety, and generally to better advantage, in larger quantities : the only inconvenience is its being apt to fit uneafy on the flomach. Some have affirmed, that this falt lofes half its weight of aqueous moifture by fution, and confequently that one part of melted nitre is equivalent to two of the crystals; but it did not appear, upon feveral careful trials, to lofe fo much as one twentieth of its weight. The officinal preparations of nitre are a decoction or folution in water [E.] and troches [L.] A corrofive acid fpirit is also extracted from it; fee Part II. chap. viii. fect. 3. It is employed likewife in operations on metallic bodies, for promoting their calcination, or burning out their inflammable matter.

NUX MOSCHATA [L. E.] Nux moschata fructu rotundo C. B. Myristica officinalis Lin. Nutmegs; the kernel of a roundifh nut which grows in the East-Indies. The outfide covering of this fruit is foft and flefhy, like that of a walnut, and fpontaneoully opens when the nut grows ripe; immediately under this lies the mace (fee MACIS) which forms a kind of reticular covering ; through the fiffores whereof appears a hard woody shell that includes the nutmeg. Thefe kernels have long been made use of both for medicinal and culinary purposes, and defervedly looked upon as a warm agreeable aromatic. They are fupposed likewise to have an aftringent virtue; and are employed in that intention in diarrhee and dyfenteries. Their aftringency is faid to be increased by torrefaction. but this does not appear to the tafte : this treatment certainly deprives the fpice of fome of its finer oil, and therefore renders it lefs efficacious

efficacious to any good purpofe ; and if we may reason from analogy, probably abates its aftringency. Nutmegs diffilled with water, af ford a large quantity of effential oil, refembling in flavour the fpice itself; after the distillation, an infipid febaceous matter is found fwimming on the water; the decoction, inspissated, gives an extract of an unctuous, very lightly bitterish taste, and with little or no aftringency. Rectified spirit extracts the whole virtue of nutmegs by infufion, and elevates very little of it in distillation : hence the fpirituous extract posses the flavour of the fpice in an eminent degree.

Nutmegs yield to the prefs (heated) a confiderable quantity of limpid yellow oil, which in cooling concretes into a febaceous confistence. In the shops we meet with three forts of uncluous fubftances, called oil of mace, though really expressed from the nutmeg. The best is brought from the East-Indies, in ftone jars; this is of a thick confiftence, of the colour of mace, and an agreeable fragrant fmell; the fecond fort, which is paler coloured and much inferior in quality, comes from Holland in folid maffes, generally flat and of a fquare figure: the third, which is the worft of all, and ufually called common oil of mace, is an artificial composition of fevum, 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 refides, in distillation to water, and to pure fpirit by infusion : the diffilled liquor and fpirituous tincture nearly refemble in quality those prepared immediately from the nutmeg. The officinal preparations of nutmegs are, a spirituous water, effential oil, and the nutmegs in fubfiance roafted [L.] The nutmeg itfelf is ufed in the compound horferadifh water, compound fpirit of lavendar, cordial confection, cardialgic troches, and fyrup of buckthorn [L.]; its effential oil, in the volatile aromatic fpirit [L.] and the expressed oil in mithridate and theriaca, stomachic and cephalic plasters [L.] and cephalic balfam [E.]

NUX PISTACHIA: Nucleus e fruciu Pistaciae Raii. Pistachia wera Lin. Pistachio [E.]

This is a moderately large nut, containing a kernel of a pale greenish colour, covered with a reddifh fkin. The tree which produces it, grows spontaneously in Persia, Arabia, and several islands of the Archipelago : it bears likewife the colds of our own climate, fo as to have produced fruit not inferior to that which we receive from abroad. Piftachio nuts have a pleafant, fweet, unctuous tafte, refembling that of almonds. They are ranked amongst the analeptics, and are by fome much effeemed in certain weakneffes, and in emaciated habits.

NYMPHÆÆ ALBÆ radin, flores : Nymphæ albæ majoris B. C. White water lily; the root and flowers [E.]

This grows in rivers and large lakes, flowering ufually in June. The roots and flowers have a rough, bitterifh, glutinous taffe (the flowers are the leaft rough) ; and when frefh, a difagreeable fmell, which is in great meafure loft by drying : they are recommended in alvine fluxes, gleets, and the like. The roots are fuppofed by fome to be in an eminent degree narcotic, but on no very good foundation. Lindeftolpe informs forms us, that in fome parts of Sweden, they were in times of fcarcity used as food, and did not prove unwholfome.

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OCHRA. Yellow ochre: a foft friable ore of iron, of a yellow colour, dug in feveral parts of England. It possefies the virtues of the calces of iron and hæmatites; but in fo low a degree, that the shops have defervedly rejected it; its principal use is as a pigment.

* CENANTHE : this is the botanical name of a genus of plants of the umbelliferous class, of which there are three fpecies, natives of Great Britain. One of these only is known by its effects. on the human body, the Oenanthe Crocata Lin. Hemlock dropwort. This is a large umbelliferous plant, growing in ditches and other moift places; with pinnated leaves, refembling those of celery or chervil, and ribbed stalks. Its roots afford the eafieft mark of diffinction, which are white, thick, and fhort, and grow feveral together, forming a kind of bunch.

The hemlock dropwort has long been known as a most dangerous poifon; the most virulent, perhaps, Its that this country produces. roots or leaves eaten by miftake, have frequently proved fatal, occationing violent fickness and vomiting, rigours, convultions, delirium, and other terrible affections of the nervous fystem. Dr. Pulrency has published a cafe in the Philof. Transact. vol. LXII. in which this plant, used by miltake initead of the water parinep, proved remarkably efficacious in removing an inveterate fcorbutic complaint, which had refifted a variety of other remedies. The dole first given was a common

fpoonful of the juice of the root, which at the first exhibition produced very alarming effects. This was afterwards reduced to three tea-fpoonfuls; which quantity was perfisted in a confiderable 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 ficknefs.

If this experiment be imitated, it is obvious, the greatest degree of caution will be necessary.

OLIV Æ earumque oleum : Fructus oleæ fativæ C. B. The olive tree; the fruit [E.] and its oil [L. E.]

This tree grows in the fouthern parts of France, in Spain, Italy, and other warm countries : with us it is usually preferved 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 difagreeable tafte : pickled (as we receive them from abroad) they prove lefs difagreeable; the Lucca olives, which are fmaller than the others, have the weakest taste; the Spanish, or larger, the ftrongeft ; the Provence, which are of a middling fize, are generally the most effeemed.

The oil obtained from this fruit has no particular tafte or fmell₂ and does not greatly differ in quality from oil of almonds. Authors make mention of two forts 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 *aleum immaturum*, and *omphacinum*. Nothing is met with in the shops under this name; and and Lemery affirms, that there is no fuch oil; unripe olives yielding only a vifcid juice to the prefs. From the ripe fruit, two or three forts are obtained, differing in degree of purity : the pureft runs by light preffure : the remaining magma, heated and preffed more ftrongly, yields an inferior fort, with fome dregs at the bottom, called amurca. All thefe oils contain a confiderable portion of aqueous moisture, and a mucilaginous fubstance; which fubject them to run into a putrid flate; to prevent this, the preparers add fome fea falt, which imbibing the aqueous and mucilaginous parts, finks with them to the bottom ; by these means, the oil becomes more homogene, and confequently lefs fusceptible of alteration. In its paffage to us, some of the falt, thrown up from the bottom by the fhaking of the veffel, is fometimes mixed with and detained in the oil, which, in our colder climate, becomes too thick to fuffer it freely to fublide ; and hence the oil is fometimes met with of a manifestly faline taste. Oil olive is used in the fimple balfam of fulphur, Locatelli's balfam, and feveral ointments. It is oftener employed in this laft intention than the other expressed oils, but more rarely for internal medicinal purpoles.

OLIBANUM [L.E.] Ex JuniperolyciaLin. A gummy-refin, brought from Turkey and the Faft-Indies, ufually in drops or tears, like thofe of maftich, but larger, of a pale yellowifh, and fometimes reddifh colour; a moderately warm pungent tafte, and a ftrong, not very agreeable fmell. This drug has received many different appellations, according to its different appearances: the fingle tears are

called fimply olibanum, of thus: when two are joined together, they have been called thus majculum, and when two were very large, thus fæmininum. Sometimes four or five, about the bignels of filberds, are found adhering to a piece of the bark of the tree from which they exuded; these have been named thus corticofum; 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 flates what is now called thus or frankincenfe in the fhops (fee THUS).

Olibanum confifts of about cqual parts of a gummy and refinous fubstance, the first foluble in water, the other in rectified ipirit. With regard to its virtues, many have been attributed to it, particularly in diforders of the head and breaft, in hæmoptoes, and in alvine and uterine fluxes: but its real effects in these cases are far from aniwering the promifes of the recommenders. Riverius is faid to have had large experience of the good effects of this drug in pleurifies, especially epidemic ones : he directs a fcooped apple to be filled with a dram of olibanum, then covered and roafted under the afhes; this is to be taken for a dofe, three ounces of carduus water drank after it, and the patient covered up warm in bed : in a fhort time, he fays, either a plentiful fweat, or a gentle diarrhœa will enfue, which carry off the difease. Geoffroy informs us, that he has frequently made use of this medicine, after venæsection, with good fucces; but acknowledges that it has fometimes failed. Olibanum is an ingredient in the pulvis e succino, theriaca [L.] confestio japonica, pilulæ ex olibano, and emplastrum defenfivum [E.]

ONONIDIS.

ONONIDIS, Anonidis, five Areflæ bovis radix: Anonidis spinosæ flore purpureo C. B. Rettharrow, cammock, or petty-whin; the root [E.]

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This plant grows wild in wafte grounds, and dry fields. The root has a difagreeable finell, and a naufeous fweetifh tafte : it ftands recommended as an aperient and diuretic ; but has never been much regarded among us.

OPHIOGLOSSI folium: Ophioglossi vulgati C. B. Adders tongue; the leaf.

This plant has only one leaf, with a flender ftalk arifing from the bottom of it, dented about the edges, and fuppofed to refemble the tongue of a ferpent : it grows wild in moift meadows. Scarce any other virtues are attributed to it than those of a vulnerary.

OPIUM [L. E.] Opium; the concrete milky juice of the poppy (fee PAPAVER.)

This juice has not yet been collected in quantity in Europe. Egypt, Perfia, and fome other provinces of Afia, have hitherto fupplied us with this commodity: in those countries, large quantities of poppies are cultivated for this ufe. The opium prepared about Thebes in Egypt, hence named Thebaic opium, has been ufually effeemed the best; but this is not now diftinguished 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 flicking together : it is of a folid confiftence, yet fomewhat foftish and tenacious, of a dark reddifh brown colour in the mafs, and when reduced into powder, yellow; of a faint difagreeable fmell, and a bitterish taffe, accompanied with a pungent heat and acrimony.

The general effects of this medicine are, to relax the folids, and render them lefs fentible of irritation, to cheer the fpirits, eafe pain, procure fleep, promote perfpiration and fweat, but reftrain all other evacuations. When its operation is over, the pain, and other fymptoms which it had for a time abated, return; and generally with greater violence than before, unlefs the caufe has been removed by the diaphorefis, or relaxation which it occafioned.

The operation of opium is generally attended with a flow, but firong and full pulfe, a drynefs of the mouth, a rednefs and light itching of the fkin : and followed by a degree of naufea, a difficulty of refpiration, lownefs of the fpirits, and a weak languid pulfe.

The principal indications of opium are, great watchfulnefs, 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 phyfician, and inftead of producing reft, occasions great anxiety, vomiting, &c. Taken on a full ftomach, it often ' proves emetic; where the patient is exhausted by excellive evacuations, it occafions generally great lownefs. It has been observed to operate more powerfully in perfons of a lax habit, than in the opposite circumftances; whilit it utefully reftrains preternatural difcharges proceeding from irritation, it proves injurious in those that arise from a contrarycontrary caufe, as in the colliquative diarrhϾ attending hectic fevers. By relaxing, taking off firictures, and occafioning a paralyfis of particular parts, it often promotes fuch evacuation as those parts are concerned in. Boerhaave obferves, that it fometimes enables the ureters to allow an easy passage even to the calculus : but this effect is by no means constant.

With regard to the dole of opium, one grain is generally a fufficient, and often too large a one; maniacal perfons, and those who have been long accuftomed to take it, require three or more grains to have the due effect. Among the eastern nations, who are habituated to opium, a dram is but a moderate dofe : Garcias relates, that he knew one who every day took ten drams. Those who have been long accustomed to its ule, upon leaving it off, are feized with great lownefs, languor, and anxiety; which are relieved by having again recourse to opium, and, in fome measure, by wine or spirituous liquors.

Opium is partially foluble in water, and rectified spirit : proof fpirit, wine, and vinegar, totally difiolve it; the impurities only being left. The folutions in proof fpirit and wine, have the fame effects with the juice in substance; with this difference, that they exert themfelves fooner in the body, and are less apt to leave a nausea on the flomach. A tincture made in rectified spirit is supposed to operate, in an equal dole, more powerfully than the foregoing liquors : Geoffroy informs us, from his own experience, that whilft the watery and vinous folutions occafioned pleafant quiet fleep, a tincture drawn with pure spirit brought on a phrenfy for a time. Alkaline fales 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 fome imaginary ill qualities of this drug, by toasting it, by fermentation, by long conti-nued digestions, by repeated diffolutions and distillations. These proceffes, though recommended by many writers, do not promife any fingular advantage : they may indeed weaken the opium; but by thefe very means become prejudicial, rendering the medicine more uncertain in its operation, and the dose more undetermined.

Opium applied externally, gives eafe in many pains, but does not, as fome have fuppofed, flupify the part, or render it infemfible of pain; ufed immoderately, it is faid to produce the fame ill effects, as when taken to excefs internally.

The officinal preparations of opium are, the Thebaic extract, or flained opium, and a vinous [L.]and fpirituous [E.] tincture. It is a capital ingredient in many compofitions, as the paregoric elixir [L. E.] fudorific tincture [E.] faponaceous and florax pills [L.] olibanum and pacific pills [E.] the compound powder of bole, fcordium and amber, electary of fcordium, confectio Paulina, philonium, mithridate, theriaca [L.] theriaca Edinenfis, confectio japonica, and anodyne balfam [E.]

OPOBALSAMUM [L. E.] Balfamum Judaicum, Syriacum, e Mecha. Ex Balfamo Syriaco rutæ folio Lin. Opobalfam, or balm of Gilead; a refinous juice, obtained from an evergreen tree, or fhrub, growing fpontaneoufly in Arabia The beft fort, which naturally exudes from the plant, is fcarce known in Europe;

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rope ; and the inferior kinds, faid to be extracted by lightly boiling the leaves and branches in water, are very rarely feen among us. The true opobalfam, according to Alpinus, is at first turbid and white, of a very ftrong pungent fmell, like that of Turpentine, but much fweeter, and of a bitter, acrid, aftringent tafte : upon being kept for some time, it becomes thin, limpid, light, of a greenish hue; then of a gold yellow; and at length of the colour of honey : after this it grows thick like turpentine, and loses much of its fragrance. This balfam is of great esteem in the castern countries, both as a medicine, and as an odoriferous unguent, and cofmetic. Its great fcarcity has prevented its coming into use among us. In the mithridate and theriaca, in which it is directed as an ingredient, the London college allows the expreffed oil of nutmegs as a succedaneum to it.

OPOPANAX[L.E.]Opopanax; a concrete gummy refinous juice, obtained from the roots of an umbelliferous plant, panax pastinacæ folio C. B. which grows spontaneoully 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 reddifh yellow colour on the outfide, 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 hypocondriacal diforders, obstructions of the abdominal vifcera, and suppressions of the menftrual evacuations from the fluggifhnefs of mucous humours, and a want of due elasticity of the folids : in thefe intentions it is an ufeful ingredient in the *pilulæ* gummo/æ and compound powder of myrrh of the London pharmacopœia, but is not employed in any composition of the Edinburgh. It may be given by itfelf in the dofe of a fcruple, or half a dram : a whole dram proves, in many conftitutions, gently purgative.

ORCHIS, vide SATYRION.

ORIGANI folia: Origani fylvestris, cunilæ bubulæ Pluni C. B. Origani vulg. Lin. Wild marjoram; the leaves [L. E.]

This is met with upon dry chalky hills; and in gravelly foils, in feveral parts of England. It has an agreeable fmell, and a pungent tafte, warmer than that of the garden marjoram, and much refembling thyme, with which it feems to agree in virtue. An effential oil diftilled from it, is kept in the fhops.

There is another fort of origanum called *Creticum*, whole flowers, or rather flowery tops, are fometimes brought to us from Candy. These have an agreeable aromatic flavour, fomewhat ftronger than the common fort.

ORYZÆ femen [E.] Rice; the feeds freed from the outward fkin; thefe are brought chiefly from Garolina, where the plant is cultivated in large quantities. They are fufficiently nutritious, and afford an ufeful food in diarrhææ, dyfenteries, and other diforders from a thin acrimonious flate of the juices,

OSTEOCOLLA [E.]

This is a foffil fubstance, found in many parts of Germany, as also in in England, and other countries. It is generally met with in loofe fandy grounds, spreading, from near the furface to a confiderable depth, into a number of branches, like the roots of a tree : it has a whitish colour, rough on the furface, and for the most part either hollow within, or filled with folid wood, or a powdery woody matter. Sometimes the roots of living trees are found changed into this kind of fubstance (See Neumann's chemical works, pag. 11, and the Berlin Memoirs for the year 1748).

Powdered offeocolla separates, on ablution with water, into two diffinct substances; the finer matter washed over, burns into quicklime, and agrees on all trials with powdered limeftone : the groffer part which remains is mere fand ; the fand and calcareous earth are for the moft part nearly in an equal proportion. From this analyfis we may eafily judge of the virtue for which this follil is celebrated, that of bringing on a callus in fractured bones.

OXALIS, vide ACETOSA.

GALENI, OXYACANTHA vide BERBERIS.

OXYACANTHA VULGA-RIS, vide SPINA ALEA.

OXYLAPATHUM, vide LA-PATHUM.

PÆONIÆ radix, flores, semen: Pæoniæ folio nigricante splendido, quæ mas C. B. vel Pæonia fæminæ flore pleno rubro majore C. B. Pæoniæ officinalis Lin. Male and female peony ; the roots, flowers, and feeds L. E.

These plants are cultivated in our gardens on account of the beauty of their flowers; the fe-

male, which is the larger and more elegant, and for this reason the more common, is the only one with which the fhops are fupplied. In quality they are fcarce fenfibly different; and hence the college allows them to be taken promifcuoufly. The roots and feeds of peony have, when recent, an unpleafant fcent, approaching to that of the narcotic plants; and a fomewhat glutinous fubacrid taile, with a light degree of bitternefs and aftringency : the leaves also difcover an aftringent quality both to the taffe, and by changing chaly-

beate folutions of a purple colour : the flowers have little tafte, and a very faint, not agreeable fmell. The parts which have chiefly been ufed for medicinal purpofes, are the roots and feeds. Thefe are looked upon as emollient, corroborant, and lightly anodyne : and fuppofed to be of fervice in fome kinds of obstructions, erolions of the vifcera, heat of urine, pains in the kidneys, and the like. The virtue for which they are chiefly celebrated, is that of curing fpafmodic and epileptic complaints; which many have been abfurd enough to believe that the root of this plant would do, by being only worn about the neck. The root is an ingredient in the pulvis ad epilepticos of the Edinburgh pharmacopœia.

PALMÆ oleum: Palmæ foliorum pediculis spinosis, fructu pruniformi, luteo, oleofo Sloan. Phænicis dastylifera 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 coaft of Guinea and Cape Verd illands. From these places it has been transplanted into Jamaica and Barbadoes. The oil as brought to us, is about the confistence of an ointment, and of an orange colour ; a ftrong,

a ftrong, not difagreeable fmell, but very little tafte. By long keeping, it lofes its high colour, and becomes white, when it ought to be rejected, as no longer fit for ufe. The inhabitants of the Guinea coaft are faid to make this oil part of their food, and to employ it for the fame purpofes 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, fprains, and the like. The common people apply it to the cure of chilblains, and when early made use of, not without fuccefs. It is an ingredient in the emollient ointment and flomach plaster of the Edinburgh pharmacopœia.

PAPAVERIS ALBI capita: Papaveris hortensis semine alto C. B. Papaveris somniferi Lin. The large garden poppy, with white flowers and feeds; or the white poppy; its heads [L.]

PAPAVER NIGRUM: Papaver bortenfe nigro femine C. B. The fmaller garden poppy, with purple flowers and black feeds; or the black poppy. The college of Edinburgh feems to allow this fpecies to be ufed promifcuoufly with the foregoing; having dropt the diftinction of white and black, and retained in the catalogue only the title of papaver bortenfe; of which they direct the heads, feeds, and leaves, for medicinal ufe.

The heads and ftalks of these plants contain a milky juice; which may be collected in confiderable quantity, by lightly 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 OPI-UM). The juices of both the pop-

pies appear to be fimilar to one another; the only difference is in the quantity afforded, which is generally in proportion to the fize of the plants. The larger, or white poppy, is the fort 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, fuffered to fettle, clarified with whites of eggs, and evaporated to a due confistence, yields about onefifth, or one-fixth the weight of the heads, of extract. This posses the virtues of opium ; but requires to be given in double its dole to anfwer the fame intention, which it is faid to perform without occafioning a naulea and giddinefs, the ufual confequences of the other. (See the Edinburgh effays abridg. vol. i. pag. 158 and 132.) A ftrong decoction of the heads, mixed with as much fugar as is fufficient to reduce it into the confistence of a fyrup, becomes fit for keeping in a liquid form ; and is the only officinal preparation of the poppy. Both these preparations are very ufeful, though liable to variation in point of ftrength : nor does this inconvenience feem avoidable by any care in the prefcriber, or the operator; fince the poppy heads themfelves (according to the degree of maturity, and the foil and feafon 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 feeds of the poppy are by many reckoned foporific : Juncker fays, they have the fame quality with those of hyofcyamus, and O Herman Herman looks upon them as a good fubfitute to opium; mifled probably by an obfervation which holds in many plants, that the feeds are more efficacious than the vefiels in which they are contained.

The feeds of the poppy have nothing of the narcotic juice which is lodged in their covering, and in the ftalks; an oil expressed from them has been used for the same purposes as oil olive; and the feeds themselves taken as food. Their tafte is sweetish and farinaceous.

PAPAVERIS ERRATICI, feu Papaweris rbæados flores : Papaweris erratici majoris C. B. Red poppy or corn-rofe; the greater of the hairy wild poppies, with deep red flowers and dark coloured feeds; its flowers [L. E.]

The flowers of this plant yield upon expression a deep red juice, and impart the fame colour by infusion to aqueous liquors. A fyrup 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 : Verbasculi pratensis odorati C. B. Primulæ veris majoris Raii. Cowflips : the flowers [L.E.]

This plant grows wild in marshes and moist meadows. The flowers appear in April; they have a pleafant fweet smell, and a subacrid, bitterish, fomewhat astringent taste. An infusion of them, used as tea, is recommended as a mild corroborant, in nervous complaints, and in fome female diforders proceeding from a deficiency of the menfitual purgations. A strong infusion of them forms, with a proper quantity of sugar, an agreeable fyrup, which has long maintained a place in the shops. By boiling,

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even for a little time, their fine flavour is destroyed.

PAREIRA BRAVA [E.] Ciffampelos Pareira Lin.

This is the root of an American convolvulus, brought to us from Brazil, in pieces of different fizes, fome no bigger than a man's finger, others as large as a child's arm. It is crooked, and varioufly wrinkled on the furface; outwardly of a dark colour, internally of a dull yellowish, and interwoven with woody fibres, fo that upon a transverse fection, a number of concentric circles appear, croffed with fibres, which run from the center to the circumference. It has no fmell ; the tafte is a little bitterifh, blended with a fweetnefs, like that of liquorice. This root is highly extolled by the Brazilians and Portuguefe, in a great variety of difeafes, particularly against suppressions of urine, nephritic pains, and the calculus. In the two first, Geoffroy fays he has given it with good fuccefs, 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 diffolving the vifcid mucus, by which the fabulous 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 foon became clear, and of a due confiftence, and was evacuated freely; and, by joining to this medicine

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dicine balfam of Copaiba, the ulcer perfectly healed. The attenuating quality, which he had difcovered in this root, induced him to make trial of it in other difeafes, proceeding from tenacious juices, and in these likewise it fully answered his expectations. In humoral afthmas, where the lungs are fluffed up, and the patient almost fuffocated by thick phlegm, an infusion of pareira, after many other medicines had proved ineffectual, occasioned a plentiful expectoration, and foon completed a cure. In the jaundice, proceeding from thick bile, it did excellent fervice : but in another icterical cafe, where the liver was fwelled and hard, this medicine did no good. His dofe of the root in fubstance is from twelve grains to half a dram, in decoction two or three drams.

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PARIETARIÆ, feu Helxines folia : Parietariæ officinarum C. B. Pellitory of the wall; the leaves [L.E.]

This is a fmall plant growing upon old walls; of an herbaceous, fubfaline tafte, without any fmell. It is one of the five emollient herbs, and in this intention is occafionally made ufe of. It is an ingredient in the nephritic decoction of the Edinburgh pharmacopœia. The exprefied juice has been given in the dofe of three ounces as a diuretic.

PARTHENIUM, vide Ma-TRICARIA.

PASTINACA HORTENSIS: Pastinaca latifolia sativa Raii. Garden parsneps.

PASTINACA SYLVESTRIS: Pastinaca sylvestris latifolia Raii. Wild Parsneps.

The roots of the garden parfnep are used as food, and prove sufficiently nutritious. The feeds of both forts are lightly aromatic; those of the wild are strongest.

PENTAPHYLLI radix : Quinquefolii majoris repentis C. B. Potentillæ reptantis Lin. Cinquefoil; the root [L.]

This grows plentifully in hedges, and by road-fides. The root is moderately aftringent; and as fuch is fometimes given internally againft diarrhϾ and other fluxes; and employed in gargarifms for ftrengthening the gums, &c. The cortical part of the root may be taken, in fubftance, to the quantity of a dram: the internal part is confiderably weaker, and requires to be given in double the dofe to produce the fame effect. It is feldom ufed but as an ingredient in the theriaca.

PEPONUM femen : Peponis oblongi C. B. The pumpion ; its feeds [E.]

These feeds are very farely met with in the shops: in quality they are not different from those of cucumbers, melons, and the others called cold feeds.

PERICLYMENUM, vide CA-PRIFOLIUM.

PERSICARIÆ MITIS folia : Perficariæ maculofæ Raij. Poligoni Perficariæ Lin. Spotted arfmart : the leaves.

This grows wild in moift watery places: the leaves fomewhat refemble those of the perfica malus, and have generally a blackift fpot in the middle : their tafte is roughish and subsaline. This herb is recommended chiefly for external purpofes. Tournefort affures us (in the Memoirs of the French academy, 1703) that it is one of the beft vulneraries and antifeptics he knows, and that a decoction of it in wine ftops gangrenes in a furprising manner. The prefent practice 0 2

practice however has no dependance on it.

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PERSICARIÆ URENTIS fo-Iia : Persicariæ vulgaris acris, sive bydropiperis Raii. Biting arfmart, lakeweed, or water pepper; the leaves [E.]

This fort is readily diffinguishable from the former, by its pungent, biting, pepper-like tafte. Its virtues are those of an acrid ftimulating medicine : in phlegmatic habits, it promotes the urinary difcharge, and has frequently done good fervice in fcorbutic complaints. The fresh leaves are sometimes applied externally for cleanfing old fiftulous ulcers, and confuming fungous fielh : for these purposes they are faid to be employed by the farriers, among whom they have been principally made use of.

PERSICÆ MALI flores : Perficæ molli carne, &c. C. B. Amygdali Perficæ Lin. The peach tree ; its flowers [E.]

Peach flowers have an agreeable fmell, and a bitterish taste : distilled, without any addition, by the heat of a water-bath, they yield one-fixth 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 An infusion in water of fruits. half an ounce of the fresh gathered flowers, or a dram of them when dried, fweetened with fugar, proves for children an useful laxative and anthelmintic. The leaves of the tree are, in this intention, fomewhat more efficacious, though less agreeable. The fruit has the fame quality with the other fweet fruits, that of abating heat, quenching thirst, and gently loofening the belly.

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PERUVIANUS CORTEX L. E. Chinchona officinalis Lin. Peruvian bark; the bark of a tall flender tree, growing in Peru. It is brought to us in pieces of different fizes, fometimes rolled up into fhort thick quills, and fometimes flat. The outfide is brownish and generally covered in part with a whitish moss; the infide is of a yellowish, reddish, or rusty iron colour. It has a lightly aromatic fmell, fomewhat musty, yet not difagreeable; a bitterish, astringent tafte, which dwells long upon the tongue, accompanied with a degree of aromatic warmth. The fmall, thin, flat pieces, are by fome accounted the beft ; by others, the quill fort, with the roughest coat, especially if of a bright cinnamon colour on the infide; though the large flat pieces, whether rough or fmooth, of a lighter or darker colour, are often of equal goodnefs. The best bark is that which is ftrongest in smell and taste : this likewife proves friable between the teeth, and does not feparate into fibres ; it breaks, not fhivery, but close and fmooth.

The virtues of this bark, as a febrifuge, were difcovered by the Indians about the year 1500. Europe did not become acquainted with it till 1649: nor was it received into general practice till feveral years after this; fome ill confequences, enfuing from its imprudent use, having brought it for a time into difrepute. At prefent, it is looked upon as the most effectual remedy in intermittent fevers of almost every kind, and fafe in all ages and conftitutions; provided it be judiciously and feafonably administered, and due regard be had to the circumstances of the disease. The modern practice, previous to the ufe of this medicine, ufually

Part II.

Part II.

ufually gives an emetic at the beginning of a paroxyfm. In fome cafes a cathartic, and in plethoric habits venæsection, are premised. These render the bark not only more fafe, but likewife more certain and fpeedy in its operation. Where these evacuations are neglected, or not fufficiently plentiful, the difeafe, if of long flanding, fcarce yields to the cortex ; or if it appear at length fubdued, yet the patient does not recover his ftrength, and foon fuffers a relapfe. The use of the bark is begun at the end of a paroxyfm, and repeated, in the quantity of half a dram (more or lefs, according to the circumftances of the patient) every third or fourth hour during the intermission. Where the fever is of the bilious kind, and accompanied with great heat, a little nitre is joined. In all cafes, moderate exercife generally promotes its effect. At first, it usually loofens the belly, and fometimes operates as if a cathartic had been taken ; and by these means supplies the omifion of evacuations before its exhibition. If the purging continue, the medicine does not anfwer the purpofes intended by it. In fuch cafe, a little opium is added, which effectually suppresses the flux. If after this the patient continue too costive, recourse is had The loofenefs, howto glyfters. ever, ought not to be ftopt too foon: on the contrary, where the bark does not itself produce this effect, it is neceffary, as Dr. Mead informs us, to join to it a little rhubarb, fo as to occafion for a time two ftools a day; by these means the difease is more effectually cured, and lefs fubject to be followed by a dropiy, or ill habit of body: after a dram or two of rhubarb have been taken, it is to be difcontinued, and the bark exhibited by itfelf. After the fever has been removed, the medicine is continued for fome time longer, to prevent a relapfe; and evacuations, unlefs abfolutely neceffary, abftained from. The difeafe is neverthelefs feldom completely cured before fome very confiderable evacuation, either by ftool, urine, or perfpiration, enfues : if this do not fucceed fpontaneoufly, cathartics, diuretics, or diaphoretics, are given in conjunction with the bark, otherwife the patient continuesweak, and without appetite, till either the difeafe returns, or changes into one of a different kind.

In fymptomatic agues, hectic and purulent fevers, cacochymic habits, and where the hypochondres are fwelled and diftended, this medicine is improper, and for the moft 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 feem to have any good effect. Neverthelefs, in the decline of long nervous fevers, or after a remiffion, when from bad habit, old age, fatigue, or the like, the patient is extremely weak, and the pulfe low, the cortex proves a medicine of excellent fervice; provided there be no extravafation, that the veffels remain entire, and pus be not already formed.

Peruvian bark has likewife been found eminently ferviceable in gangrenes and mortifications, proceeding either from an internal or external caufe. In all the cafes of this kind, where it proved fuccefsful, it occafioned a kind of fuppuration, which degenerated when the ufe of the medicine was difcontinued, and again turned kindly upon refuming it. Some have been hence induced

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to try the cortex in variolous cafes, where either the puftules did not rightly fuppurate, or petechiæ fhewed a difposition to a gangrane; and here likewife it answered expectation: the empty vesicles filled with matter, watery fanies changed into thick white pus, the petechiæ became gradually of a pale colour, and at length difappeared, and the pox began to turn sooner than was expected. See the Edinburgh medieal estays.

The bark has been applied likewife, and not without fuccefs, to the cure of periodic head-achs, hyfteric and hypochondriac fits, and other diforders, which have regular intermiffions. By its aftringency and aromatic quality, it ftrengthens the whole nervous fyftem, and proves ufeful in weaknefs of the ftomach, and fundry chronical diforders, proceeding from too great laxity of the fibres. In obftinate uterine fluxes, and old gleets, bark joined with chalybeates has good effects.

The virtues of Peruvian-bark refide chiefly in a refinous fubftance, and hence are extracted in perfection by rectified spirit. By ftrong coction in water, the refin is melted out, and mingled with the water; which whilft hot, appears transparent, but in cooling, grows turbid, and deposits great part of the refin to the bottom. Water elevates in diffillation the aromatic part of the bark; pure spirit brings over nothing. Hence an aqueous extract proves not only leis in quantity, but likewife inferior in quality to one made with rectified spirit. Proof fpirit 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 fal ammoniac, prepared with fixt alkaline falts, gains very little from the cortex, either with or without heat; the fpirit prepared

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with quicklime, and the dulcified fpirit, in a few hours become ftrongly impregnated with its fmell and tatte.

The officinal preparations of bark are, an extract [L. E.] refin [E.] fpirituous tincture [L. E.]tincture in volatile fpirit [L.] and compound tincture [E.] It is an ingredient also in the ftomachic tincture [E.]

The fubitances usually joined with bark in prefcription feem calculated either to promote its efficacy, or merely for reducing it in-. to the intended form; without much regard to its agreeablenefs, and the conveniency of taking it. This is neverthelefs a point of great confequence, as its tafte, and the quantity which is neceffary, make the patient too frequently loath it, before enough has been taken to produce the defired effect. If defigned to be given in the folid form of a bolus, electary, &c. it should be made up, not, as is cuftomary, with fyrups, but with mucilages : with the former, it flicks about the mouth and fauces, whence its taite remains for a confiderable time; with the latter, it paffes freely, fcarce leaving any taffe in the mouth. Aromatics do not prevent the taffe of the bark from difcovering itself; extract of liquorice very effectually conceals it. The extract of logwood alfo, joined to that of bark, and a proper quantity of mucilage, form a very elegant and agreeable composition.

* 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

evidently composed of three layers, The outer is thin, rugged, frequently covered with a moffy fubstance, and of a reddish brown colour. The middle is thicker, more compact, and of a darker colour : it is very brittle and refinous. The innermost layer is more woody and fibrous, and of a brighter red. In powdering this bark, the middle layer, which feems to contain the greatest proportion of refinous matter, does not break fo readily as the reft; a circumstance to be attended to, left the most active part should be left out of the fine powder.

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This red bark to the tafte difcovers all the peculiar flavour of the Peruvian bark, but much ftronger than the common officinal fort.

With refpect to medical properties, from numerous and repeated trials it appears, that the red bark poffeffes the fame virtues with the common, but in a much higher degree. A fingle half ounce of this has radically cured an obftinate intermittent, where many ounces of the other kind had either had no effect, or merely a temporary one.

There have been lately difcovered in the province of Santa-Fe, four degrees and a half north of the equator, two kinds of the chinchona, one of which appears to be the fame with the red bark of Peru; the other, one of the white fpecies. This is a fortunate difcovery, as it points out a new flore of this most valuable medicine, when the ancient ones fhall be exhausted.

PETROLEUM [E.] Rock oil.

This is a general name for fundry liquid bitumens, or mineral oils, which fpontaneoufly exude from the earth, or from clefts of rocks. Thefe oils are found in almoft 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 pitcoal, &c. afford, on diftillation, oils not greatly different.

The fineft fort of this commodity comes from the dutchy of Modena in Italy, where three different kinds are found ; the beft is almost as clear, fluid, and transparent as water, of a highly penetrating, yet not difagrecable fmell, fomewhat like that of rectified oil of amber : the fecond fort is of a clear vellow colour, not fo fluid as the former, lefs penetrating, and partaking more of the oil of amber fmell : the third, or worft, is of a blackish red colour, of a thicker confistence, and more difagreeable . than the two foregoing. The first of thefe is very rarely met with in the fhops; the fecond, mixed with a little of the third, and fome fubtile oils, is usually fent us instead of Petroleum readily catches fire, 11. and, if pure, burns entirely away: distilled, it becomes fomewhat more pellucid than before (a fmall quantity of yellowish matter remaining) and loses much of its natural smell. It unites with the effential oils of vegetables, not at all with vinous fpirits. The finer forts are fo light as to fwim upon the most highly rectified spirit of wine.

Petroleum is at prefent very rarely employed as a medicine, though if the finer kinds could be procured genuine, they fhould feem to deferve fome 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 purpofes, againft pains and aches, in paralytic complaints, and for preventing chilblains. For thefe O 4 intentions, fome 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 Britiss of the name of Britiss of the counterfeited by a small portion of oil of amber added to the common expressed oils.

PETROLEUM BARBADEN-SE [L.] Barbadoes tar.

This is thicker than the foregoing petrolea, and nearly of the confiftence of common tar. It is of a reddifh black colour, a disagreeable fmell, lefs pungent than the other forts. This bitumen is found in feveral of our American islands, where it is effected by the inhabitants of great fervice as a fudorific, and in diforders of the breaft and lungs, though in cafes of this kind, attended with inflammation, it is certainly improper; they likewife apply it externally as a difcutient, and for preventing paralytic diforders. Among us it is rarely used, and not often to be met with genuine. The London college employs it as a menftruum for fulphur in the balfamum fulphuris Barbadense, and directs an oil to be difilled from it : that of Edinburgh has not yet received it.

PETROSELINI MACEDO-NICI femen : Apii Macedonici C. B. Macedonian parfley; the feeds [L.]

PETROSELINI VULGARIS Jemen, folia, radix: Apii bortenfis Jeu petrofelini vulgo C. B. Common parfley; the roots, leaves [E.] and feeds [L. E.]

The former of these plants is sometimes met with in our gardens; the latter is commonly cultivated for culinary purposes. The seeds of both have an aromatic flavour, and

are occasionally made use of as carminatives, &c. Thofe of the Macedonian parfley are the ftronger, though generally fupplied by the other. The root of parfley is one of the five aperient roots, and in this intention is fometimes made an ingredient in apozems and dietdrinks : if liberally used, it is apt to occasion flatulencies, and thus, by diffending the vifcera, produces a contrary effect to that intended by it; the taffe of this root is fomewhat fweetish, with a light degree of warmth and aromatic flavour. The feeds of the Macedonian parfley are an ingredient in mithridate and theriaca; and those of the common in the electary of bay-berries [L.]

PEUCEDANI radix : Peucedani Germanici C. B. Peucedani officinalis Lin. Hogs fennel, or fulphurwort; the root.

This plant grows wild by the fea fhores, and in moift fhady places. The roots have a ftrong difagreeable fmell, fomewhat refembling that of fulphureous folutions; and an unctuous, fubacrid, bitterifh tafte. They are looked upon as ftimulating and attenuating, and fuppofed to promote expectoration and urine: the expressed juice was employed by the ancients, as an errhine in lethargic diforders. The prefent practice pays no regard to them in any intention.

PHU, vide VALERIANA SYL-VESTRIS.

PILOSELLA, vide AURICULA MURIS.

PIMENTA, vide Piper Ja-MAICENSE.

PIMPINELLÆ SANGUISOR-BÆ folia : Pimpinellæ Janguisorbæ minoris

minoris birsutæ et lævis C. B. Burnet; the leaves.

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This grows wild upon dry chalky hills: fuch as is cultivated in gardens, though preferred by fome, is inferior in quality to the wild fort. The leaves are mildly aftringent, and have been fometimes employed in this intention, in dyfenteries and hæmorrhages.

PIMPINELLÆ SAXIFRAGÆ radix, femen, folia. Burnet faxifrage; the root [L. E.] leaves and feeds [E.]

Three forts of this plant are taken notice of by medical writers :

1. Pimpinella faxifraga major, umbella candida C. B. This is the fpecies 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 fupplied with the following.

2. Pimpinella faxifraga minor foliis fanguiforbæ Raii. Tragofelinum alterum majus Tourn. This is not unfrequently met with in dry pafture grounds.

3. Pimpinella faxifraga minor C.B. foliis diffectis Hift. Oxon. This fort is the most common in the fields about London : it grows taller than the others, but the leaves are lefs.

All these plants seem to be posfessed of the same qualities, and to differ only in external appearance; and even in this, their difference is so inconfiderable, that Linnæus has joined them into one, under the general name of *pimpinella*. Our colleges, instead of the first, which has been generally understood as the officinal fort, allow either of the others (which are more common) to be used promiscuously.

The roots of pimpinella have a grateful, warm, very pungent tafle, which is entirely extracted by rec-

tified spirit : in distillation, the menstruum arifes, leaving all that it had taken up from the root, united into a pungent aromatic This root promifes, from refin. its senfible qualities, to be a medicine of confiderable utility; though little regarded in common practice: the only officinal composition in which it is an ingredient, is the pulvis ari compositus [L.] Stahl, Hoffman, and other German phyficians, are extremely fond of it, and recommend it as an excellent ftomachic, refolvent, detergent, diuretic, diaphoretic, and alexipharmac. They frequently gave it, and not without fuccefs, in fcorbutic and cutaneous diforders, foulneis of the blood and juices, tumours and obstructions of the glands, and difeafes proceeding from a deficiency of the fluid fecretions in general. Boerhaave directs the use of this medicine in afthmatic and hydropic cafes, where the ftrongeft refolvents are indicated : the form he prefers is a watery infusion; but the fpirituous tincture poffess the virtues of the root in much greater perfection.

There is another species of pimpinella called *nigra*, from its root being externally of a bright black colour, whilst those of the foregoing forts are whitish: this is remarkable for its yielding an effential oil of a blue colour. It grows wild in fome parts of Germany, Swifferland, &c. and is now and then met with in our gardens.

PINUS nuclei et refina : Pinus fativæ C. B. et Pinus fylvestris C. B. Pine tree; the kernels of its fruit or cones, and its refin [E.]

The pine tree differs from the firs in having its leaves ftanding in pairs, those of the firs being folitary. The pine abounds with the fame kind of refinous juice as the fir

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fir trées (fee the articles Terebinthina and Thus wulgare.) The kernels have a very pleafant fweet tafte, and appear to be nearly of the fante quality with fweet almonds: they are confidered rather as dietetic than medicinal articles

PIPER NIGRUM [L. E.] Black pepper; the fruit of a plant growing in Java, Malabar, &c. gathered probably before it is fully ripe, and exfiected in the fun.

PIPER ALBUM [L. E.] White pepper; the fruit of the black peps per plant gathered when ripe, and decorticated by maceration in water. The grains, as brought to us, have fometimes pieces of a dark coloured fkin ftill upon them.

PIPER LONGUM [L. E.] Long pepper. This is the fruit of a different plant growing also in the East-Indies. It is of a cylindrical figure, about an inch and a half in length; the external furface appears composed of numerous minute grains disposed round the fruit in a kind of spiral direction.

All these spices have a pungent fmell, and a very hot biting tafte. The long fort, which is the hotteft and ftrongest, is most frequently made use of for medicinal purposes ; the black, as being more grateful, for culinary ones ; the white, which is the weakeft of the three, is rarely employed for either. The warmth and pungency of these spices relides chiefly in their refinous part ; their aromatic odour in an effential oil. The genuine diffilled oil fmells ftrong of the pepper, but has very little acrimony ; the remaining detoction inspissated, yields an extract confiderably pungent. A tincture made in rectified spirit is extremely hot and fiery; a few drops of it fet the mouth as it were in a fiame.

The white pepper is an ingredient in philonium and mithridate; the black, in the pulvis antilyflus, electary of bayberries; confectio Paulina, and theriaca: the long, in the bitter wine, aromatic tincture, powder and pills, the compound powders of bole and fcordium, the confectio Paulina, mithridate, and theriaca [L.]

PIPER JAMAICENSE [L. E.] Pimento, or Jamaica pepper; the amomum of many of the German writers.

This is the produce of our own plantations. It is the fruit of a large tree growing fpontaneoufly in the mountainous parts of Jamaica, called by Sir Hans Sloane, myrtus arborea, aromatica, foliis laurinis. The fmell of this fpice refembles a mixture of cinnamon, cloves, and nutmegs : its tafte approaches to that of cloves, or a mixture of the three foregoing ; whence it has received the name of all-spice. The fhops have been for fome time accultomed to employ this aromatic as a fuccedaneum to the more coffly fpices, and from them it has been introduced into our hospitals. The London college has given it a place in their dispensatory, and direct a fimple water to be diffilled from it, which pollefies the flavour of the pimento in great perfection. It yields a large quantity of a pleafant effential oil, which finks in water. This oil, recommended in the Pharmacopœia reformata, is now received into the Edinburgh Pharmacopœia. Rectified spirit extracts its pungency and flavour, and elevates nothing in diffillation.

PIPER INDICUM : Capficum filiquis longis propendentibus Tourn. Capficum annuum Lin. Guinea pepper, or capficum ; the fruit. This

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This is an annual plant cultivated in our gardens; it ripens its red pods in September or October. The tafte of capficum is extremely pungent and acrimonious, fetting the mouth as it were on fire. It is rarely made use of in medicine, being chiefly employed for culinary purposes. A species of it, called in the West-Indies bird pepper, is the basis of a powder brought us thence under the name of Cayan pepper.

PIX LIQUIDA [L. E.] Tar; a thick, black, unctuous fubstance; obtained from old pines and firtrees, by burning them with a close smothering heat. It differs from the native refinous juice of the trees (fee Terebinthina) in having received a difagreeable impreffion from the fire, and containing a portion of the faline and other juices united with the refinous and oily; by the mediation of these, a part of the terebinthinate oil proves dilfoluble in aqueous liquors, which extract little or nothing from the purer turpentines. Water impregnated with the more foluble parts of tar, proves, in consequence of this hot pungent oil, warm and ftimulating. It fenfibly raifes the pulse and quickens the circulation. By these qualities, in cold languid phlegmatic habits, it strengthens the folids, attenuates viscid juices, opens obstructions of the minuter veffels, and promotes peripiration and the fluid fecretions in general; whilft in hot bilious temperaments, it disposes to inflammation, and aggravates the complaints which it has been employed to remove.

PIX ARIDA [L. E.] Dry or ftone pitch.

This is the *pix liquida* exficcated by heat : in this process, a part of the acid and the more volatile on are diffipated along with the aqueous moifture; and hence the product proves confiderably lefs active. It is made use of only in external applications, as a warm adhesive, refinous substance.

PIX NAVALIS. This is generally allowed to be the fame with the foregoing dry pitch or infpiffated tar : hence in the Edinburgh pharmacopœia the terms pix sicca and pix navalis are made fynonymous. According to Geoffroy, it is compounded of a strange mixture of tallow, tar, palimpiffa, and an artificial black pitch ; which artificial pitch is itfelf composed of tar and palimpifia ; and this palimpifia is no other than an infpissated tar ; fo that notwithitanding this flow of composition, the result is only a mixture of pitch with a little tallow.

PIX BURGUNDICA [L. E.] Burgundy pitch. This is of a folid confistence, yet somewhat soft, of a reddifh brown colour, and more agreeable in fmell than either of the foregoing. Geoffroy relates, that it is composed of gallipot (a folid whitish refin which separates from some of the terebinthing 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 faw the preparation of this commodity in Saxony (whence we are chiefly fupplied with it), that it is no more than the common turpentine boiled a little.

All these substances are employed in the shops only in external compositions. The dry pitch and Burgundy pitch, are ingredients in several plasters, ointments, and cerates: and tar gives name to one of the ointments.

PLANTAGINIS LATIFOLIÆ folia, femen : Common broad-leaved plantane, called septinervia, from its having feven large nerves or ribs running along each leaf; the narrow-leaved fort has only five ribs, and hence is named quinquenervia. They are both common in fields, and by road-fides. The leaves are lightly aftringent, and the feeds faid to be fo; and hence they ftand recommended in hæmorrhages, and other cafes where medicines of this kind are proper. The leaves bruifed a little, are the usual application of the common people to flight flefh wounds. The Edinburgh college directs an extract to be made from the leaves.

PLUMBUM [L. E.] Lead.

This is the heaviest of the metals except gold. It melts in a moderate heat, and if kept in fusion, is foon converted partly into fume and partly into an afh-coloured calx (plumbum ustum); this exposed to a ftronger fire, in fuch a manner that the flame may play upon its furface, becomes first yellow, and afterwards of a deep red, (minium or red lead); if in this process the fire be fuddenly raifed to a confiderable height, the calx melts, assumes the appearance of oil, and on cooling forms a foft leafy fubftance of a yellowish or reddish colour (litharge.) The proper menitruum of this metal is aquafortis : the vegetable acids likewife diffolve it, but in very fmall quantity : a quart of diffilled vinegar will not take up a dram; exposed to the steam of vinegar, it is by degrees corroded into a white powder (ceruffe) which is confiderably more easy of folution. The calces of lead diffolve, by heat, in expressed oils; these mixtures are the basis of feveral officinal plasters and unguents. Crystals of this metal made with diffilled vinegar (called, from their fweetifh tafte, *fugar* of lead) and a tincture drawn from thefe and green vitriol, are likewife kept in the fhops.

Preparations of lead, given internally, are supposed to incrassate the fluids, abate inflammations, and reftrain venereal defires. The fugar is a ftrong aftringent, and has been ufed, it is faid, with good fuccefs, in hæmorrhages, the fluor albus, feminal gleets, &c. The tincture is recommended for the like purpofes; and for checking immoderate fweats in phthifical cafes, whence it has been ufually called tinclura antiphthifica. The internal use of this metal is nevertheless full of danger, and ought never to be ventured upon unlefs in defperate cales, after other medicines have been employed without taking effect: it often occasions violent colics ; and though it should not prove immediately hurtful, its ill confequences are fure, though flow: tremors, spaims, or lingering tabes, too frequently follow.

" Mr. Goulard, a furgeon of Montpellier, wrote a treatife, some few years ago, profeffedly 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 folution of litharge in strong vinegar, by boiling it gently to the confiftence of a thin fyrup, and after it has flood to fettle, the clear part is to be poured off for use. A small portion of this, diluted in a large quantity of foft water, makes his vegeto-mineral water, which is employed as a lotion or fotus, or boiled with bread to make a cataplafm. The extract is likewife combined with unguentous matters into a variety of forms. These preparations have been found of great utility in various cafes of inflammation, particularly of the eryfipelatous

eryfipelatous kind, and in thofe in confequence of burns and fcalds. Their application has not, in the opinion of most practitioners, been observed to produce any of those affections of the nervous fystem, which characterize the poisonous effects of lead taken internally.

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POLII, *feu Polii montani fummi*tates. Poley mountain; the tops [L. E.]

It has been difputed among botanic writers, what fpecies of poley ought to be employed in medicine. The London college allows the promifcuous use of two, the polium maritimum erectum Monspeliacum C. B. Tucrum capitatum Lin. and the polium angustifolium Creticum C. B. Tucrum creticum Lin. The first is fometimes cultivated in our gardens, and is the fort with which the fhops have been generally supplied. They have both a light aromatic fmell, and a bitterish taste; that brought from Crete is the most agreeable. They stand recommended in catarrhs, uterine diforders, &c. but at preient are fcarce otherwife made use of than as an ingredient in the mithridate and theriaca.

POLYGONATUM, vide SI-GILLUM SALOMONIS.

POLYGONUM, vide CENTI-NODIUM.

POLYPODII radix : Filicis polypodii dista Herm. Polypody; the root [E.]

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 fenfibly different from the others. The roots are long and flender, of a reddifh brown colour on the outfide, greenifh within,

full of fmall tubercles, which are refembled to the feet of an infect; whence the name of the plant. The tafte of thefe roots is fweetish and naufeous.

Polypody has been employed in medicine for many ages; neverthelefs 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 loofen the belly ; and afterwards even this quality was denied it : fucceeding phyficians declared it to be aftringent; of this number is Boerhaave, who effeems it moderately flyptic, and antifcorbutic. For our own part, we have had no direct experience of it : nor is it employed in practice. It is probable that (as Juncker fuppofes) the fresh root may loofen the belly, and that it has not this effect when dry.

POLYTRICHUM, vide TR1-CHOMANES,

POMPHOLYX: a calx, or flowers, of zinc, produced in the furnaces where copper is made into brafs by calamine, the ore of zinc. It is found adhering to the covers of the crucibles, &c. either in form of thin crufts, or of a light downy matter, generally of a pure white colour, though fometimes yellowifh. See ZINCUM.

POPULI NIGRÆ gemmæ : Populi nigræ C. B. The black poplar; its buds [E.]

The black poplar is a large tree, growing wild in watery places; it is eafily raifed and very quick of growth. The young buds or rudiments of the leaves, which appear in the beginning of fpring, abound with a yellow, uncluous, odorous 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 purpofes. A tincture of them made in rectified fpirit, yields, upon being infpiflated, a fragrant refin fuperior to many of those brought from abroad.

PORRI radix : Porri communis eapitati C. B. Leeks; the root. This participates of the virtues of garlick, from which it differs chiefly in being much weaker. See AL-LIUM.

PORTULACÆ femen : Portulacæ hortensis latifoliæ J. B. Purflane; the feeds.

This herb is cultivated in gardens for culinary ufes. The feeds are ranked among the leffer cold feeds, and have fometimes been employed in emulfions, and the like, along with the others of that clafs.

POTENTILLA, vide Arcen-TINA.

PRASIUM, vide MARRUBIUM.

PRUNELLÆ, seu Brunellæ folia: Prunellæ majoris foliis non difsectis C. B. Prunellæ vulg. Lin. Self-heal; the leaves [E.]

This plant grows wild in meadows and pafture grounds, and produces thick fpikes of purplifh flowers during the latter part of the fummer. It has an herbaceous roughifh tafte: and hence ftands recommended in hæmorrhages and alvine fluxes: it has been principally celebrated as a vulnerary, whence its name; and in gargarifms for aphthæ, and inflammations of the faucés.

PRUNUS HORTENSIS. The

PRUNA BRIGNOLENSIA: Pruna ex flavo rufescentia, mixii saporis, gratissima C. B. The Brignole plum, brought from Provence under the name of prunelloes [E.]

PRUNA GALLICA [L. E.]: Fructus Pruni fructu parvo, dulci, atro-cæruleo Tourn. French or common prunes [L. E.] This is the plum called by our gardeners the little black damafk.

PRUNA DAMASCENA: Fructus Pruni fructu magno, dulci, atrocæruleo Tourn. Damascene plums, or damsons. This is the fort called the great damask violet of Tours. It is feldom met with dry in the shops, and is generally supplied by the common prune.

The medical effects of the damfon and common prunes are, to abate heat, and gently loofen the belly : which they perform by lubricating the paffage, and foftening the excrement, They are of confiderable fervice in costiveness, accompanied with heat or irritation, which the more fiimulating cathartics would tend to aggravate. Where prunes are not of themfelves fufficient, their effects may be promoted by joining with them a little rhubarb or the like : to which may be added fome carminative ingredient, to prevent their occasioning flatulencies. Prunelloes have fcarce any laxative quality : thefe are mild grateful refrigerants, and by being occasionally kept in the mouth, usefully allay the thirst of hydropic perions.

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PRUNA SYLVESTRIA : Fructus pruni fylwestris C. B. Pruni spinosa Lin. Sloes; the fruit of the common black thorn, or floe bush [L. E.]

These have a very rough, austere tafte, especially before they have been mellowed by frosts. The juice of the unripe fruit, inspissed to a proper confistence, is called acacia Germanica, and usually fold in the shops for the true Egyptian acacia. It is equally aftringent with the Egyptian fort, but has more of a sharp or tartish taste, without any thing of the sweetish relish of the other. The inspissed juice is directed as an officinal by the Edinburgh college, and a conferve of the fruit by the London.

PSYLLI femen : Pfyllii majoris erecti C. B. 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 stalks branched, with leaves upon them ; hence it is named by Ray, plantago caulifera. The feeds have been ufually brought from the fouth of France ; they are fmall, but fupposed to refemble in shape a flea, whence the English name of the plant. These feeds have a naufeous, mucilaginous tafte : boiled in water, they yield a confiderable quantity of mucelage, 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.

PTARMICÆ radix : Dracunculi pratenfis, ferrato folio C. B. Achillææ Ptarmicæ Lin. Sneezewort, or bastard pellitory : the root [E.] 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 occasion a plentiful difcharge of faliva; and when powdered and fnusfed up the nofe, provoke fneezing. These are the only intentions to which they have been usually applied,

PULEGII folia : Pulegii latifolii C. B. Menthæ aquaticæ seu pulegii vulgaris Tourn. 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 firiking 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: this is called by Mr. Dale pulegium erectum.

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 undeferyedly, as an aperient, and deobstruent, particularly in hysteric complaints, and fuppreffions of the uterine purgations. For these purpofes, the diffilled water is generally made use of, or what is of equal efficacy, an infusion of the leaves. It is observable, that both water and rectified spirit extract the virtues of this herb by infusion, and likewife elevate greatest part of them, in distillation.

In the fhops are kept a fimple [L. E.] and fpirituous [L.] water and effential oil [L.E.] of the plant; this herb is used also in the compound valerian water and troches of myrrh [E.] and its fimple water for making the lac ammoniaci [L.]and the camphorated emulfion [E.]PULEGII PULEGII CERVINI folia: Pulegii angustifolii C. B. Menthæ cervinæ Lin. Harts pennyroyal; the leaves.

This species is met with, though not very often, in our gardens. It is fomewhat stronger, yet rather more agreeable, than the foregoing, both in taste and smell.

PULMONARIÆ MACULO-SÆ folia: Pulmonariæ Italorum ad buglossam accedentis J. B. Pulmonariæ officinalis Lin. Spotted lungwort, or fage of Jerusalem; the leaves [E.]

This is met with in gardens : the leaves are of a green colour fpotted with white; of an herbaceous fomewhat mucilaginous tafte, without any fmell. They ftand recommended against ulcers of the lungs, phthifes, and fimilar diforders : neverthelefs experience gives little countenance to these virtues, nor does the present practice expect them.

* PULSATILLA. Pul/atilla nigricans Stærck Pb. Edinb. Pul/atilla flore minore nigricante C. B. Anemone pratenfis Lin. A fpecies of anemone, much refembling the pulfatilla vulgaris or pafque flower, but its flower is lefs, and of a darker hue. It is a native of the fouth of Germany, and other neighbouring countries.

All the anemonies have a confiderable degree of acrimony; but this feems to poffefs the largeft fhare. The whole plant, when chewed, imprefies the tongue with a fharp burning, durable taffe; the root is milder than the other parts. On diffilling the plant with water, the liquor which comes over is ftrongly impregnated with its virtues; and the remaining extract is alfo confiderably active.

Dr. Stærck of Vienna, from numerous trials, celebrates its efficacy in various chronic difeafes of the

eye; in venereal nodes and noc" turnal pains; in foul ulcers with caries; in ferpego; and fupprefied menfes.

The dofe of the diffilled water is half an ounce twice a day; of the extract, reduced to powder with fugar, five or fix grains.

PYRETHRI radix : Pyretbri flore bellidis C. B. Anthemis Pyretbri Lin. 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 fucceflively from Chriftmas to May; the roots alfo grow larger with us than those with which the shops are usually supplied from abroad.

Pellitory root has no fenfible fmell; its talte is very hot and acrid, but lefs fo than that of arum or dracunculus : the juice expressed from it has fcarce any acrimony, nor is the root itfelf fo pungent, when fresh, as after it has been dried. Water, affisted by heat, extracts fome fhare of its tafte; rectified spirit the whole : neither of them elevate any thing in diffillation. The principal use of pyrethrum in the prefent practice is as a mafticatory, for promoting the falival flux, and evacuating vifcid humours from the head and neighbouring parts. By these means it often relieves the tooth-ach, fome kinds of pains of the head, and lethargic complaints.

* QUASSIA. Quassia Pb. Edinb. Lignum Quassia Amænit. Acad. vol. vi. Bois de Coissi Fermin Surinam. Quassy Root.

This is the root of a tree growing in Surinam, called by Linnæus Quaffia amara. This root is as thick as a man's arm. Its wood is whitifh, hard, folid, and tough, becoming yellowifh on exposure to the air. Quaffi Quaffi root has no fenfible fmell; its tafte is that of a pure bitter, more intenfe and durable than that of almost any known fubstance. It communicates its bitter to watery infusions and decoctions, and its fpirituous 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 ftomachic. The root was a fecret remedy used by a negro, named Quaffi, in the fatal fevers of that country, from whom it was purchased by Don Rolander, a Swede, who returned in 1756. A confirmation of its medical powers appears in a letter from Mr. Farley, a practioner in Antigua, printed in the Phil. Tranfact. vol. LVIII. He found it remarkably efficacious in suppressing vomitings, flopping a tendency to putrefaction, and removing fevers. It may be used in infusions, or extract; the latter, made into pills, on account of the intense bitterness of the drug, is preferable for delicate ftomachs.

QUERCUS cortex : Quercus cum longis pediculis C. B. Quercus roboris Lin. Oak tree ; the bark [E.]

This bark is a firong aftringent; and hence flands recommended in hæmorrhages, alvine fluxes. and other præternatural or immoderate fecretions.

* QUERCUS MARINA five fucus veficulofus: Fucus maritimus five quercus maritima, veficulas habens C. B. Fucus veficulofus Lin. Sea Wrack or Sea Oak: a foft, very flippery, marine plant; common upon rocks that are left dry at the ebb tide; with the leaves fomewhat refembling in fhape those of the oak tree; the stalks running along the middle of the leaves, and terminated by watery bladders contain+ ing either air or a flippery fluid. The vesicles begin in March to fill with a thin juice; and about the end of July they burst, and difcharge a matter as thick as honey.

Dr. Ruffel relates, that he found this plant an useful affiftant to fea water in the cure of diforders of the glands: that he gave it in powder to the quantity of a dram, and that in large dofes it nauseated the ftomach : that by burning in the open air it was reduced into a black faline powder "; which feemed, 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 veficles, after standing to putrify, yields, on evaporation, an acrid pungent falt, amounting to about a fcruple from two fpoonfuls; that the putrified juice, applied to the fkin, finks in immediately, excites a flight fense of pungency, and deterges like a folution of foap : that one of the bell applications for difcuffing hardnefs, particularly in the decline of glandular fwellings, is a mixture of two pounds of the juicy veficles, gathered in July, with a quart of sea water, kept in a glafs veffel for ten or twelve days, till the liquor comes near to the confiftence of very thin honey : the parts affected are to be rubbed with the ftrained liquor twice or thrice a day, and afterwards walked clean with fea water.

RAPHANI RUSTICANI radix: Raphani rusticani C. B. Cochleariæ folio cubitali Tourn. Cochleariæ Armoraciæ Lin. Horferadish; the root [L. E.]

This

* Æthiops vegetabilis D. Ruffel.

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This plant is fometimes found na, and endures the colds of our wild about river-fides, and other moift places; for medicinal and culinary uses, it is cultivated in gardens. It flowers in June, but rarely perfects its feeds in this country. Horferadifh root has a quick pungent fmell, and a penetrating acrid tafte; it nevertheles contains in certain veffels a fweet juice, which fometimes exudes upon the furface. By drying, it lofes all its acrimony, becoming first fweetish, and afterwards almost infipid. If kept in a cool place, covered with fand, it retains its qualities for a confiderable time. The medical effects of this root are to flimulate the folids, attenuate the juices, and promote the fluid fecretions. It feems to extend its action through the whole habit, and effect the minuteft glands. It has frequently done good fervice in fome kinds of fcurvies and other chronic diforders proceeding from a vifcidity of the juices, or obstructions of the excretory ducts. Sydenham recommends it likewife in dropfies, particularly those which fometimes follow intermittent fevers. Both water and 'rectified fpirit extract the virtues of this root by infusion, and elevate them in diffillation. Along with the aqueous fluid, an effential oil arifes, poffeffing the whole tafte and pungency of the horferadifh. The college has given us a very elegant compound water, which takes its name from this root.

REALGAR, a foffil composed of arfenic and fulphur. Vide AR-SENICUM.

REGINA PRATI, v. ULMARIA.

RHABARBARUM [L.E.] Rhei undulati Lin. Rhubarb; the root of a plant of the dock kind, which grows fpontaneoully in Chiown climate. Two forts of rhubarb are met with in the fhops. One is imported from Turkey and Ruffia, in roundifh 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 reddiff ftreaks. The other, which is lefs effeemed, comes immediately from the East-Indies, in longifh pieces, harder, heavier, and more compact than the foregoing. The former fort, unless kept very dry, is apt to grow mouldy and worm-eaten ; the latter is lefs fubject to these inconveniencies. Some of the more industrious artifts are faid to fill up the worm holes with certain mixtures, and to colour the outfide of the damaged pieces with powder of the finer forts of rhubarb. and fometime with cheaper materials : this is often fo 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 folid, and not flinty ; that it be eafily pulverable, and appear, when powdered, of a fine bright yellow colour : that, upon being chewed, it imparts to the fpittle a faffron tinge, without proving flimy or mucilaginous in the mouth. Its tafte is fubacrid, bitterish, and fomewhat aitringent; the fmell lightly aromatic.

Rhubarb is a mild cathartic. which operates without violence or irritation, and may be given with fafety even to pregnant women and children. Befides its purgative quality, it is celebrated for an aftringent one, by which it ftrengthens the tone of the flomach and inteffines, and proves ufeful in diarrhææ and diforders proceeding from a laxity of the fibers. Rhubarb in substance operates more powerfully

powerfully as a cathartic than any of the preparations of it. Watery tinctures purge more than the fpirituous ones; whilft the latter contain in greater perfection the aromatic, aftringent, and corroborating virtues of the rhubarb. The dofe, when intended as a purgative, is from a fcruple to a dram or more.

The Turkey rhubarb is, among us, univerfally preferred to the East-India fort, though this latter is, for fome purposes at least, equal to the other. It is manifeftly more aftringent, but has somewhat less of an aromatic flavour. Tinctures drawn from both with rectified fpirit, have nearly the fame tafte. On diffilling off the menftruum. the extract left from the tincture of the East-India rhubarb proved confiderably the ftronger. They are both the produce of the fame climate, and probably the roots of the same plant taken up at different feasons, or cured in a different manner.

The officinal preparations of this drug are, roafted rhubarb [L.] a watery infufion [E.] and vinous and fpirituous tinctures [L. E.] It is an ingredient in various compositions, as the fyrup of fena and rhubarb, dyfenteric electary, ftomachic pills [E.] ecphractic pills [L.] &c.

RHAMNUS CATHARTI-CUS, vide Spina Cervina.

RHAPONTICI radix: Rhabarbari Diofcoridis et antiquorum Tourn. Rhei Rhapontici Lin. Rhapontic; the root of a large roundifh-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 fome confounded with the modern rhubarb, though confiderably different both in appearance and quality. The rhapontic is of a dufky colour on the furface, of a loofe fpongy texture; confiderably more aftringent, but lefs purgative, than rhubarb; in this latter intention, two or three drams are required for a dofe.

* RHODODENDRON CRY-SANTHEMUM. This plant is a new fpecies of the rhododendron of Linnæus, difcovered by Professior 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 Chinefe plant of that name. A ftronger preparation of it is, however, used by them as a powerful medicine in arthritic and rheu-Two drams of matic diforders. 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 dole; which occasions heat, a degree of intoxication. with a fingular uneafy kind of fenfation, and a fort 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 difagreeable fymptoms go off, commonly with two or three flools ; and the patient finds his difease greatly relieved. A repetition of the dole twice or thrice generally completes the cure.

Dr. Home has made trial of this remedy in the infirmary at Edinburgh, and the refult of his trials, as published in his Clenical Cafes P 2 and and Experiments, is, that it is a very powerful fedative, remarkably diminishing the frequency of the pulse; but that it was not peculiarly efficacious in removing the acute rheumatism.

RHUS OBSONIORUM, vide SUMACH.

RIBESIA : fructus Ribes vulgaris fructu rubro Raii. Red currant bufh ; the berries [E.]

Thefe have a cool, acidulous, fweet tafte, fufficiently agreeable both to the palate and flomach. The college of Edinburgh directs a jelly to be made from them with fugar; but at prefent they are rather looked upon as a dietetic than a medicinal article.

* RICINUS Americanus major, caule virescente H. R. P. Ricinus vulgaris C. B. & Lin. Palma-christi, Mexico-feed: with the fruit triangular, the feed furnisched with a little knob at one end, externally variegated with blackisch and whitisch streaks, resembling both in schape and colour the insect ricinus or tick.

There are four or five forts of ricinus, that grow in different parts. of Africa and America, which have much the fame virtues. This plant grows as tall as a little tree, very beautiful, and expanded into many branches; the leaves are large, rather roundish, parted into five, eight, or more fections, and fometimes into nine sharp-pointed or ferrated divisions, fashioned like the leaves of a fig-tree, fpread or open wide like the hand of a man, and has towards the top a bunch of flowers, cluftering together fome-' thing like a bunch of grapes : thefe flowers are fmall and ftaminous, growing on the top of the falk; but on the body of the plant grow

bunches of rough triangular hufks, each containing three fpeckled feeds, lefs than horfe-beans (though fometimes as large); which, in their brittle shells, contain white kernels, of a fweet, oily, and fometimes nauseous taste. From these feeds are drawn, by expression, an oil, vulgarly called, in America, caftor oil. This oil has been given from two to four large fpoonfuls, and found to act as a fufficiently mild laxative : it is faid to be particularly useful in the dry-belly-ach, bilious, calculous, and nephritic complaints.

ROSA DAMASCENA : Rofa purpurea C. B. Rofa centifolia Lin. The damafk rofe [L. E.]

This elegant flower is common in our gardens. Its fmell is very pleafant, and almost universally admired; its tafte bitterifh and fubacrid. In diffillation with water, it yields a small portion of a butyraceous oil, whole flavour exactly refembles that of the rofes. This oil, and the diffilled water, are very uleful and agreeable cordials. Hoffman ftrongly recommends them as of fingular efficacy for raifing the ftrength, chearing and recruiting the fpirits, and allaying pain; which they perform without raifing any heat in the conflicution, rather abating it when inordinate. Damask roses, besides their cordial aromatic virtue, which refides 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 fugar, forms an agreeable laxative fyrup, which has long kept its place in the shops. The other officinal preparations of this flower, are, a folutive honey, and the diffilled water; which latter is an ingredient in the musk-julep, the confection of kermes,

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kermes, and faponaceous lotion, and is used also in making the simple ointment called pomatum [L.]

ROSA RUBRA: Rofa Rubra multiplex C. B. Rofa gallica Lin. The red rofe [L. E]

This has very little of the fragrance of the foregoing pale fort; and, instead of its purgative quality, a mild, gratefully aftringent one, efpecially before the flower has opened. This is confiderably improved by hafty exficcation ; but both the aftringency and colour are impaired by flow drying. In the fhops are prepared a conferve, honey, tincture, troches [L.] vinegar and fyrup [E.] of this flower. It is an ingredient also in the compound powder of fcordium, the troches of Japan earth, mithridate, and theriaca [L.]

RORISMARINI fummitates, et flores anthos dicti : Rorifmarini hortenfis angustiore folio C. B. Rorifmarini officinalis Lin. Rosemary; the tops and flowers [E.]

This is a native of Spain, Italy, and the fouthern parts of France, where it grows in great abundance upon dry gravelly grounds; in the like foils, it thrives beft with us, and likewife proves ftronger in fmell, than when produced in moift rich ones. This obfervation obtains in almost all the aromatic plants.

Rofemary has a fragrant fmell, and a warm pungent bitterifh tafte, approaching to those of lavender. The leaves and tender tops are strongest; next to these the cup of the flower; the flowers themselves are confiderably 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 confider-

able quantity of effential oil, of an agreeable ftrong penetrating imell. Pure spirit extracts in great perfection the whole aromatic flavour of the rofemary, and elevates very little of it in diffillation ; hence the refinous mals, left upon abstracting the fpirit, proves an elegant aromatic, very rich in the peculiar qualities of the plant. The flowers of rofemary give over great part of their flavour in diffillation with pure ipirit; by watery liquors, their fragrance is much injured; by beating, destroyed. The officinal preparations of rolemary are, an effential oil from the leaves [L.] or from the herb in flower $[E_{\cdot}]$ a conferve of the flowers [L. E.] and a spirit, called Hungary-water, from the flowery tops [L. E.] The tops are ufed also in the compound spirit of lavender [L. E.] cordial confection [L.] and cephalic tincture [E.] and the effential oil in the cephalic balfam, faponaceous balfam, and nerve ointment [E.]

RUBIA TINCTORUM: radix Rubiæ tinctorum fativæ C. B. Madder; the root [L. E.]

Madder is raifed in fome of our gardens for medicinal purpofes: it was formerly cultivated among us, in quantity, for the use of the dyers, who are at prefent fupplied from Holland and Zealand. It has little or no fmell ; a fweetish tafte. mixed with a little bitternefs. The virtues attributed to it, are those of a detergent and aperient, whence it has been usually ranked among the opening roots, and recommended in obstructions of the vifcera. particularly of the kidneys, in coagulations of the blood from falls or bruifes, in the jaundice, and beginning dropfies. It is an ingredient in the icteric decoction of the Edinburgh pharmacopœia.

It is observable, that this root, P 3 taken 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 folid ones, were changed, both externally and internally, to a deep red, but neither the fleshy or cartilaginous parts fuffered any alteration : fome of these bones macerated in water for many weeks together, and afterwards fleeped and boiled in spirit of wine, lost none of their colour, nor communicated any tinge to the liquors. This root appears therefore to be poffeffed of great fubtility of parts, whence its medical virtues feem to deferve inquiry.

RUBI IDÆI fructus : Rubi idæi fpinofi C. B. The rafpberry bufh; the iruit [L.]

This fhrub is common in our gardens; and has likewife, in fome parts of England, been found wild. It flowers in May, and ripens its fruit in July. Rafpberries have a pleafant fweet taffe, accompanied with a peculiarly grateful flavour; on account of which they are chiefly valued. As to their virtues, they moderately quench thirft, abate heat, ftrengthen the vifcera, and promote the natural excretions. An agreeable fyrup, prepared from the juice, is directed to be kept in the fhops.

RUBI VULGARIS folia, fructus: Rubi vulgaris five rubi fructu nigro C. B. The bramble, or blackberry bush; its leaves and fruit.

The fhrub is frequently found wild in woods and hedges. The berries have a faint tafte, without any thing of the agreeable flavour of rafpberries : the leaves are fomewhat aftringent, RUSCI, five Brusci radix : Rusci myrtifolii aculeati Tourn. Butchers. broom, or knee-holly; the root [E.]

This is a fmall prickly plant, fometimes found wild in woods. The root has a foft fweetifh tafte, which is followed by a bitterifh one. It is one of the five aperient roots; and in this intention is fometimes made an ingredient in apozems and diet-drinks, for opening flight obftructions of the vifcera, purifying the blood and juices, and promoting the fluid fecretions.

RUTÆ folia semen: Rutæ hortensis latifoliæ C. B. Rutægraveolentis Lin. Broad-leaved rue; the leaves [L. E.] and seeds [E.]

This is a fmall fhrubby 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 narrowleaved fort, which is cultivated by fome in preference to the other, becaufe its leaves appear variegated during the winter, with white flreaks.

Rue has a strong, ungrateful fmell, and a bitterifh, penetrating taffe. Theleaves, when in full vigour, are extremely acrid, infomuch as to inflame and blifter the fkin, if much handled. With regard to their medicinal virtues, they are powerfully ftimulating, 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 fecretions. 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 praifes, particularly of the effential oil, and the distilled water cohobated or re-diffilled feveral times from fresh parcels of the herb.

Part II.

herb. After fomewhat extravagantly commending other waters prepared in this manner, he adds, with regard to that of rue, that the greatest commendations he can beflow upon it, fall fhort of its merit: "What medicine (fays he) can be more efficacious for promoting fweat and perfpiration, for the cure of the hysteric passion, and of epilepfies, and for expelling poifon ?" Whatever fervice rue may be of in the two last cafes, it undoubtedly has its use in the others : the cohobated water, however, is not the most efficacious preparation of it. (See Part iii. chap. v.) An extract made by rectified fpirit, contains, in a fmall compass, the whole virtues of the rue ; this menftruum taking up by infusion all the pungency and flavour of the plant, and elevating nothing in diffillation. With water, its peculiar flavour and warmth arife; the bitterness, and a confiderable fhare of the pungency remaining behind.

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A watery extract [E.] effential oil [L. E.] and conferve [L.] of rue are kept in the fhops. This herb is ufed alfo as an ingredient in the electary of bayberries, compound powder of myrrh, and the green oil [L.]

SABINÆ folia seu summitates : Sabinæ folio tamarisci Dioscoridis C. B. Juniperi Sabinæ Lin. Savin; the leaves or tops [L. E.]

This is an evergreen fhrub, clothed with fmall, fomewhat prickly leaves. It does not produce fruit till very old, and hence has been generally reputed barren. The leaves have a bitter, acrid, biting rafte; and a ftrong difagreeable fmell: diftilled with water, they yield an effential oil, in larger quantity (as Hoffman obferves) than any other known vegetable, the turpentine-tree alone excepted.

Savin is a warm irritating aperient medicine, capable of promoting fweat, urine, and all the glandular fecretions. The diffilled oil is one of the most powerful emmenagogues; and is found of good fervice in obstructions of the uterus, or other viscera, proceeding from a laxity and weakness of the vessels, or a cold fluggish indisposition of the juices.

The effential oil [L. E.] and a watery extract [L.] of favin are kept in the fhops: the leaves themfelves are an ingredient in the compound valerian water [E.] the extract in the compound elixir of myrrh [L.] and the effential oil in the troches of myrrh [E.]

SACCHARUM ALBUM. White or refined fugar [E.]

SACCHARUM PURISSIMUM. Double refined fugar [L.]

SACCHARUM RUBRUM. Brown or unrefined fugar [L: E.]

SACCHARUM CANDUM. Sugar-candy [E.]

Sugar is the effential falt of the arundo saccharifera, a beautiful large cane growing fpontaneoufly in the East Indies, and fome of the warmer parts of the Weft, and cultivated in great quantity in our American plantations. The exprefied juice of the cane is clarified with the addition of lime water (without which it does not affume the form of a true fugar) and boiled down to a due confiftence ; when, being removed from the fire, the faccharine part concretes from the groffer unctuous matter, called treacle, or melaffes. This, as yet impure or brown fugar, is farther purified, in conical moulds, by fpreading moift clay on the upper broad furface : the watery moisture, flowly P 4 percolating percolating through the mais, carries with it confiderable part of the remains of the tready matter. This clayed fugar, imported from America, is by our refiners diffolved in water, the folution clarified by boiling with whites of eggs and defpumation, and after due evaporation poured into moulds: as foon as the fugar has concreted, and the fluid part drained off, the furface is covered with moift clay as before. The fugar, thus once refined, by a repetition of the process, becomes the double-refined fugar of the fhops. The candy, or crystals, are prepared by boiling down folutions of fugar to a certain pitch, and then removing them into a hot room; with flicks fet across the veffel for the fugar to shoot upon. These crystals prove of a white or brown colour, according as the fugar was pure or impure.

The uses of fugar as a fweet, are fufficiently well known. The impure forts contain an unctuous, or oily matter, in confequence of which they prove emollient and laxative. The crystals are most difficult of folution, and hence are properest where this fost lubricating fweet is wanted to disfolve flowly in the mouth.

SAGAPENUM [L. E.] a concrete juice brought from Alexandria, either in diffinct tears, or run together in large maffes. It is outwardly of a yellowifh colour, incernally fomewhat paler, and clear like horn, grows foft upon being handled, and flicks to the fingers; its tafte is hot and biting; the fmell difagreeable, by fome refembled to that of a leek, by others to a mixture of afafetida and galbanum.

Sagapenum is an ufeful aperient and deobstruent; and frequently prefcribed either alone, or in conjunction with ammoniacum, or gal-

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banum, for opening obstructions of the vifcera, and in hysterical diforders arifing from a deficiency of the menstrual purgations. It likewife deterges the pulmonary veffels, and proves of confiderable fervice in fome kinds of afthmas, where the lungs are oppressed by viscid phlegm. It is most commodiously given in the form of pills. From two or three grains to half a dram, may be given every night or oftner, and continued for fome time. When fagapenum is fcarce, the druggifts ufually fupply its place with the larger and darker coloured maffes of bdellium, broken into pieces; which are not eafily diffinguished from it.

Sagapenum is an ingredient in the compound powder of myrrh, gum-pills, electary of bay-berries, mithridate and theriaca of the London pharmacopœia. The college of Edinburgh has no where employed either this gum or opoponax, giving the preference to ammoniacum and galbanum.

SAGO [E.] 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 fago brought to us. It is moderately nutritious, though not perhaps superior to our own grain.

SAL AMMONIACUS. Sal ammoniac [L. E.]

This is an artificial faline concrete, faid to be prepared by fublimation from the foot of cow dung. It is brought to us from Egypt, in large round cakes, convex on one fide, and concave on the other; and fometimes in conical loaves. On breaking, they appear compofed of needles, or ftriz, running tranf-

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Part II. The Mater 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 falt 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 spining spicula, or thin fibrous plates, like feathers.

Sal ammoniac appears from experiments to be composed of marine acid united with a volatile alkali. If mingled with fixt falts, or absorbent earths, and exposed to a moderate fire, a large quantity of pure volatile falt fublimes, the acid remaining united with the intermedium; if treated in the fame manner with quicklime, an exceeding penetrating volatile fpirit arises, but no solid falt is obtained. Exposed alone to a confiderable heat, it fublimes entire, without any alteration of its former properties : ground with certain metallic fubstances, it elevates some part of them along with itfelf, and concretes with the remainder into a mafs, which readily flows into a liquor in a moift air. This appears in most respects similar to a faturated folution of the metal made directly in fpirit of falt.

Pure fal ammoniac is a perfectly neutral falt, capable of attenuating vifcid humours, and promoting a diaphorefis, or the urinary difcharge, according to certain circumitances in the conftitution, or as the patient is managed during the operation. If a dram of the falt be taken, diffolved in water, and the patient kept warm, it generally proves fudorific; by moderate exercife, or walking in the open air, its action is determined to the kidneys;

a large dofe gently loofens the belly, and a still larger proves emetic. This falt is recommended by many as an excellent febrifuge, and by fome has been held a great fecret in the cure of intermittents. It is undoubtedly a powerful aperient, and feems to pais into the minutest veffels; and, as fuch, may in some cafes be of fervice, either alone, or joined with bitters, or the bark, where the latter would by itfelf produce dangerous obstructions, or aggravate those already formed. This falt is fometimes employed externally as an antifeptic, and in lotions and fomentations, for œdematous tumours : as alfo in gargarifms for inflammations of the ton- / fils, and for attenuating and diffolving thick vifeid mucus. It is an ingredient in the difcutient cataplasm of the Edinburgh pharmacopceia.

SAL CATHARTICUS AMA-RUS [L.E.] The bitter purging falt; extracted from the bitter liquor remaining after the crystallization of common falt from fea water. It was first prepared as a cheap fubilitute to the falt of the Epfom, and other purging mineral waters, from which it does not confiderably differ, either in fenfible qualities, or medical effects. We ufually meet with it in minute cryftals, of a fnowy appearance ; diffolved in water, and crystallized afresh, it concretes, if properly managed, into larger ones, of a rectangular prismatic figure, refembling those of the artificial cathartic falt of Glauber, for which they are fometimes fubflituted in the shops.

All these falts have a penetrating bitterish taste: they diffolve in less than an equal weight of water: in a moderate heat, they melt, bubble up into blisters, and soon change into into a white fpongy mafs, with the lofs of above half their weight: this calx taftes bitterer than the falts did at first, and almost totally diffolves again in water. The acid of these falts is chiefly the vitriolic : the bafis of the natural is a fine abforbent earth; of the artificial, an alkaline falt, the fame with the bafis of fea falt. Hence, upon adding alkaline falts to a folution of the falts of Glauber, no change enfues : whilft the falts obtained from the purging waters, or the bittern of marine waters, grow milky upon this addition, and deposit their earth, the alkaline falt being taken up in its place,

The fal catharticus is a mild and gentle purgative, operating with fufficient efficacy, and in general with eafe and fafety, rarely occafioning any gripes, fickneis, or the other inconveniencies with which purgatives of the refinous kind are too often accompanied. Six or eight drams may be diffolved for a dofe in a proper quantity of common water ; or four, five, or more, in a pint, or quart of the purging waters. These liquors may likewife be fo managed as to promote evacuation, by the other emunctories. If the patient be kept warm, they increase perspiration ; by moderate exercife in a cool air, the urinary discharge.

SAL COMMUNE. Common, or alimentary falt. This is a neutral falt, differing from moft others in occafioning drought when fwallowed. It diffolves in fomewhat lefs than three times its weight of water ; the folution flowly evaporated, and fet to fhoot, affords cubical cryftals, which unite together into the form of hollow truncated pyramids. Expofed to the fire, it crackles and flies about, or decrepitates, as it is called ; foon after it melts, and appears fluid as water. A fmall quantity of this falt, added to the nitrous acid, enables it to diffolve gold, but renders it unfit for diffolving filver. If a folution of filver be poured into liquors, containing even a minute portion of common falt, the whole immediately grows turbid and white; this phænomenon is owing to the precipitation of the filver.

This falt is either found in a folid form in the bowels of the earth, or diffolved in the waters of the fea or faline fprings.

1. Sal gemme [L. E.] Rock falt. This is met with in feveral parts of the world, but in the greatest plenty in certain deep mines, of prodigious extent, near Cracow in Poland; fome is likewife found in England, particularly in Chefhire. It is for the most part very hard, fometimes of an opake fnowy whitenefs, fometimes of red, green, blue, and other colours. When pure, it is perfectly transparent and colour. leis; the other forts are purified by folution in water and crystallization, in order to fit them for the common uses of falt.

z. Sal marinus [L. E.] The falt extracted from fea water and faline fprings. Sea waters yield from one fiftieth to one-thirtieth their weight of pure falt, Several fprings afford much larger quantities; the celebrated ones of our own country at Nantwich, Northwich, and Droitwich, yield (according to Dr. Brownrigg) from one-fixth to fomewhat more than one-third. There are two methods of obtaining the common falt from these natural folutions of it : the one, a hafty evaporation of the aqueous fluid till the falt begins to concrete, and fall in grains to the bottom of the evaporating pan, whence it is raked out, and fet in proper vessels to drain from the brine or bittern : the other,

other, a more flow and gradual evaporation, continued no longer than till a faline cruft forms on the top of the liquor, which, upon removing the fire, foon begins to fhoot, and run into cryftals of a cubical figure. In the warmer climates, both these processes are effected by the heat of the fun. The falts obtained by them differ very confiderably : that got by a hafty evaporation is very apt to relent in a moift air, and run per deliquium ; an inconvenience to which the cryftallized falt is not fubject : this latter is likewife found better for the preferving of meat, and for fundry other purpoles.

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Common falt, in fmall quantities, is fuppoled to be warming, drying, and to promote appetite and digeftion. In large dofes, as half an ounce, it proves cathartic. It is fometimes ufed to check the operation of emetics, and make them run off by flool; and as a flimulus in glyfters.

* SALIX P. E. Salix vulgaris alba arborefcens C. B. 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 ferrated leaves being hoary on both fides, though most fo on the lower, and in the branches being brittle.

The bark of this tree has lately been found an ufeful medicine in agues, of which many perfons have been cured by taking a dram of the powdered bark every four hours during the intermiflions; though in fome cafes it was neceffary to join to it a little Peruvian bark (fee the Philofophical Tranfactions for the year 1763). To the tafte, this bark difcovers a pretty flrong bitternefs and aftringency: with folu-

tion of chalybeate vitriol, it ftrikes an inky blacknefs.

SALVIÆ folia: Salviæ majoris C. B. Common fage (the green and red forts); the leaves [L. E.]

SALVIÆ hortenfis minoris foia, fummitates : Salviæ minoris auritæ et non auritæ C. B. Small fage or fage of virtue; the leaves and tops [E.]

Thefe plants are common in our gardens, and flower in May and une : the green and red common fages differ no otherwife than in the colour of the leaves; the feeds of one and the fame plant produce both : the fmall fort is a diffinct fpecies; 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 fide in the form of ears. Both forts are moderately warm aromatics, accompanied with a light degree of aftringency and bitternefs; the fmall fort is the ftrongeit, the large most agreeable.

The writers on the materia medica are full of the virtues of fage, and derive its name from its fupposed falutary qualities, (Salvia Jalvatrix, naturæ conciliatrix-Cur moriatur homo, cui salvia crescit in borto, &c.) Its real effects are, to moderately warm and strengthen the veficls; and hence, in cold phlegmatic habits, it excites appetite, and proves ferviceable in debilities of the nervous fystem. The best preparation for these purposes is an infusion of the dry leaves, drunk as tea ; or a tincture, or extract, made with rectified fpirit, taken in proper dofes; thefe contain the whole virtues of the fage; the distilled water and effential oil, only its warmth and aromatic quality, without any thing of its roughneis nefs or bitterifhnefs. Aqueous infutions of the leaves, with the addition of a little lemon juice, prove an ufeful diluting drink in febrile diforders, of an elegant colour, and fufficiently acceptable to the palate.

SALVIÆ SYLVESTRIS folia: Scorodotidis five fcordii foliis falviæ J. B. Wood fage; the leaves.

This grows wild in woods and hedges. In fmell, tafte, and medical virtues, it comes nearer to fcordium than fage: it is lefs difagreeable than the former, but more fo than the latter.

SAMBUCI folia, flores, bacea, cortex: Sambuci fructu in umbella nigro C. B. Sambuci nigræ Lin. Common black-berried elder; the leaves, bark [E.] flowers, and berries [L. E.]

This is a large fhrub, frequent in hedges. It flowers in May, and ripens in September. The inner green bark of its trunk is gently cathartic; an infusion of it in wine, or the expressed juice, in the dose of half an ounce, or an ounce, is faid to purge moderately, and in fmall dofes to prove an efficacious deobstruent, capable of promoting all the fluid fecretions. The young buds, or rudiments of the leaves, are ftrongly purgative, and act with fo much violence as to be defervedly accounted unfafe. The flowers are very different in quality: thefe have an agreeable aromatic flavour, which they give over in diffillation with water, and impart by infufion, to vinous and fpirituous liquors. The berries have a fweetifh, not unpleafant tafte : neverthelefs, eaten in substance, they offend the ftomach : the expressed juice, inspiffated to the confistence of a rob, proves an ufeful aperient medicine; it opens obstructions of the

vistera, promotes the natural evacuations, and if continued for a length of time, does confiderable fervice in fundry chronical diforders. It is observable, that this juice (which in its natural state is of a purplish colour) tinges vinous spirits of a deep red.

A rob prepared from the berries [L. E.] is used for making up the theriaca Edinenfis and pectoral electary [E.] with the intention of which it excellently coincides. The flowers are an ingredient in the alexiterial and plague waters, the common decoction for glyfters and fomentations, and the difcutient cataplasm [E.] An oil of elder is prepared by boiling the flowers in oil olive [L.]; and an ointment, by boiling them in a mixture of oil and suet [L.] An ointment is made also from the leaves and bark [E.]

SAMPSUCHUS, vide Majo-RANA.

SANDARACHA, a foffil compoled of arlenic and fulphur. Vide ARSENICUM.

SANGUIS DRACONIS [L. E.] Dragons blood, a refin brought from the East-Indies, either in oval drops, wrapped up in flag leaves, or in large maffes, composed of fmaller 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 fort breaks fmooth, free from any vilible impurities, of a dark red colour, which changes, upon being powdered, into an elegant bright crimfon. Several artificial compositions, coloured with the true dragons blood, or Brazil wood, are fometimes fold in the room of this commodity : fome of thefe

these dissolve, like gums, in water; others crackle in the fire, without proving inflammable; whilft the genuine fanguis draconis readily melts and catches flame, and is not acted on by watery liquors. It totally diffolves in pure fpirit, and tinges a large quantity of the menstruum of a deep red colour : it is likewife foluble in expressed oils, and gives them a red hue, lefs beautiful than that communicated by anchufa. This drug, in fubstance, has no fenfible fmell or tafte ; when diffolved, it discovers fome degree of warmth and pungency. It is ufually looked upon as a gentle aftringent, and fometimes directed as such in extemporaneous prescription, against seminal gleets, the fluor albus, and other fluxes : in these cases, it produces the general effects of refinous bodies, lightly incraffating the fluids, and fomewhat ftrengthening the folids. It is an ingredient in the ftyptic powder [L. E.] Locatelli's balfam [E.] and ftrengthen. ing plaster [L.]

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SANTALUM ALBUM. White faunders; a wood brought from the East-Indies, in billets, about the thickness of a man's leg, of a pale whitish colour. Greatest part of it, as met with in the shops, has no smell or taste, or any senfible quality that can recommend it to the notice of the physician.

SANTALUM CITRINUM [E.] Yellow faunders : a pale yellowifh wood brought from the Eaft Indies ; of a pleafant fmell, and a bitterifh aromatic taffe, accompanied with an agreeable kind of pungency. This elegant wood might undoubtedly be applied to valuable medical purpofes, though at prefent very rarely made use of. It is fcarcely ever directed in extempo-

raneous prefeription, and the only officinal composition in which it is an ingredient, is the confectio al-ke mei of the Edinburgh pharmacopœia. The London college have omitted it in their catalogue of fimples. Diffilled with water, it yields a fragrant effential oil, which thickens, in the cold, into the confiftence of a balfam. Digested in pure spirit, it imparts a rich yellow tincture; which being committed to diffillation, the fpirit arises, without bringing over any thing confiderable of the flavour of the faunders. The refiduum contains the virtue of fix times its weight of the wood. Hoffman looks upon this extract as a medicine of fimilar virtues to ambergris ; and recommends it as an excellent reftorative in great debilities.

SANTALUM RUBRUM [L. E.] Pterocarpus Santolinus Lin. Red faunders; a wood brought from the Eaft Indies, in large billets, of a compact texture, a dull red, almost blackish colour on the outfide, 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 fort.

The principal use of red faunders is as a colouring drug; in which intention it is employed in the balfamum Locatelli [L.] and fpiritus lavendulæ compositus [L. E.] It communicates a deep red to rectified spirit, but gives no tinge to aqueous liquors : a imall quantity of the refin, extracted by means of spirit, tinges a large one of fresh fpirit, of an elegant blood red. There is fcarce any oil, that of lavender excepted, to which it communicates its colour. Geoffroy, and others, take notice, that the Brazil

Brazil woods are fometimes fubilituted for red faunders; and the college of Bruffels are in doubt whether all that is fold among them for faunders, be not really a wood of that kind. According to the account which they have given, their faunders is certainly the Brazil wood; the diffinguifhing character of which is, that it imparts its colour to common water.

SANTONICUM [E] Wormfeed; the produce of a plant of the wormwood or mugwort kind, growing in the Levant.

It is a fmall, light, chaffy feed, composed as it were of a number of thin membranous coats, of a yellowish colour, an unpleasant smell, and a very bitter taste. These feeds 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 fugar : their unpleasant taste renders the form of a powder or decoction inconvenient. They are not very often met with genuine in the shops.

SAPO DURUS [L.] : Sapo albus Hispanicus [E.] White Spanish foap.

SAPO MOLLIS [L.] Common foft foap.

SAPO NIGER, Jen Melanofmegma [E.] Black fort foap.

Soap is composed of expressed vegetable oils, or animal fats. united with alkaline lixivia. The first fort, or white hard foap, is made with the finer kinds of oil olive; the common fost fort, with coarser oils, fat, tallow, or a mixture of all these; and the black (as is faid) with train oil.

The purer hard foap is the only

fort intended for internal use. This, triturated with oily, or refinous matters, renders them foluble in water, and hence becomes an ufeful ingredient in pills composed of refins, promoting their diffolution in the ftomach, and union with the animal fluids. Boerhaave was a great admirer of foap; and in his private practice feldom prefcribed any refinous pills without it ; unlefs where an alkalefcent, or putrid flate of the juices forbade its ufe, From the fame quality, foap likewife feems well fitted for diffolving fuch oily or unctuous matters, as it may meet with in the body, attenuating vifcid juices, opening obstructions of the vifcera, and deterging all the vefiels it paffes through. It is likewife a powerful menstruum for the human calculus: a folution of it in lime water is one of the flrongeft diffolvents that can be taken with fafety into the flomach ; the virtue of this composition is confiderably greater than the aggregate of the diffolving powers of the foap and lime water when unmixed. See the Edinburgh medical effays.

The foft foaps are more penetrating and acrimonious than the hard. The only medical use of these is for some external purposes.

Hard foap gives name to an officinal platter [L. E.] liniment [L.] and balfam [E.]; it is joined to opium, to render it more readily foluble in the flomach, in the *pi*lulæ faponaceæ [L.] and to aloes in the *pilulæ aloeticæ* [E.] Soft foap is an ingredient in the milder common cauftic [L.] and black foap in the anodyne platter [E.]

SAPONARIÆ folia radix : Saponariæ majoris lævis C. B. Sa-10 ponariæ

ponariæ officinalis Lin. Soapwort, or bruifewort; the herb and root [E.]

This grows wild, though not very common, in low wet places, and by the fides of running waters; a double-flowered fort is frequent in our gardens. The leaves have a bitter, not agreeable tafte; agitated with water, they raife a faponaceous froth, which is faid to have nearly the fame effects with folutions of foap itfelf in taking out fpots from cloths, and the like. The roots tafte fweetish and somewhat pungent; and have a light fmell like those of liquorice : digested in rectified spirit they yield a ftrong tincture, which lofes nothing of its tafte or flavour in being infpiffated to the confistency of an extract. This elegant root has not come much into practice among us, though it promifes, from its fensible qualities, to be a medicine of confiderable utility. It is greatly effeemed by the German phyficians as an aperient, corroborant, and iudorific; and preferred by the college of Wirtemberg, Stahl, Neumann, and others, to farfaparilla.

SARCOCOLLA [L. E.] a concrete juice, brought from Perfia, and Arabia, in fmall, whitish, yellow grains, with a few of a reddifh, and fometimes of a deep red colour, mixed with them ; the whiteft tears are preferred, as being the freshest. Its taffe is bitter, accompanied with a dull kind of fweetnefs. This drug diffolves in watery liquors, and appears to be chiefly of the gummy kind, with a fmall mixture of refinous matter. It is principally celebrated for conglutinating wounds and ulcers (whence its name σαρχόκολλα fiesh glue), a quality, to which neither this, nor any other drug, has a just title. It is an ingredient in the pulvis e ceruffa compofitus [L.]

SARSAPARILLA[L.E.]: Smilax Sarsaparilla Lin. a root brought from the Spanish West Indies. It confifts of a great number of long ftrings 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, fo that they might be ftript into pieces from one end to the other. They have a glutinous, bitterish, not ungrateful tafte; and no fmell. 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 likewife of feveral obstinate chronic diforders. Whatever good effects it might have produced in the warmer climates, it proved unfucceisful in this; infomuch 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 cafes of confiderable use as a fudorific, where more acrid medicines are improper. The best 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 dole.

SASSAFRAS [L. E.]: the root of a large American tree (arbor ex Florida ficulneo folio C. B.) Laurus (faffafras) Lin. brought to us in long ftraight pieces, very light, and of a fpongy texture, covered with a rough fungous bark; outwardly of an afh colour, inwardly of the colour of rufty iron. It has a fragrant fmell, and a fweetifh, aromatic, fubacrid tafte: the bark taftes much ftronger than any other part; and the fmall twigs ftronger than the

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the large pieces. As to the virtues of this root, it is a warm aperient and corroborant; and frequently employed, with good fuccefs, for purifying and fweetening the blood and juices. For these purpoles, infusions made from the rasped root or bark, may be drunk as tea. In fome conflicutions, these liquors, by their fragrance, are apt, on first taking them, to affect the head : in fuch cafes they may be advantageoufly freed from their flavour by boiling; a decoction of saffafras, boiled down to the confistence of an extract, proves fimply bitterish and subastringent. Hoffman affures us, that he has frequently given this extract to the quantity of a fcruple at a time with remarkable fuccefs, for ftrengthening the tone of the vifcera in cachexies; as also in the decline of intermittent fevers, and in hypochondriacal spafms. Saffafras yields in distillation an extremely fragrant oil, of a penetrating pungent tafte ; fo ponderous (notwithstanding the lightness of the drug itself) as to fink in water. Rectified spirit extracts the whole tafte and fmell of fassafras: and elevates nothing in evaporation; hence the fpirituous extract proves the most elegant and efficacious preparation, as containing the virtue of the root entire.

The only officinal preparation of faffafras is the effential oil [L. E.]The faffafras itfelf is an ingredient in the decoction of the woods [E.] and the compound lime waters [L. E.] and the oil in the elixir guaiacinum [E.]

SATUREIÆ folia : Satureiæ bortenfis, five cunilæ fativæ Plinii C. B. Summer favoury ; the leaves [E.]

This herb is raifed annually in gardens for culinary purpofes. It is a very pungent warm aromatic; and affords, in diffillation with water, a fubtile effential oil, of a penetrating fmell, and very hot, acrid tafte. It yields little of its virtues by infufion to aqueous liquors: rectified fpirit extracts the whole of its tafte and fmell, and elevates nothing in diffillation.

SATYRII MARIS radix: Orchidis morionis maris foliis maculatis C. B. Orchis majculæ Lin. Orchis; the root [E.]

This plant is frequent in shady places and moift meadows : each plant has two oval roots, of a whitish colour, a viscid fweetish talte, and a faint unpleasant smell. They abound with a glutinous flimy juice. With regard to their virtues, like other mucilaginous vegetables, they thicken the thin ferous humours and defend the folids from their acrimony : they have also been celebrated, though on no very good foundation, for analeptic and aphrodifiac virtues : and frequently made use of in these intentions. In the Edinburgh pharmacopœia, the root is directed to be candied.

SALEP [E.] a celebrated reftorative among the Turks, is probably the prepared root of certain plants of the orchis kind. This drug, as fometimes brought to us, is in oval pieces, of a yellowish white colour, fomewhat clear and pellucid, very hard, and almost horny, of little or no fmell, and tafting like gum tragacanth. Satyrion root, boiled in water, freed from the fkin. and afterwards fuspended in the air to dry, gains exactly the fame appearance; the roots thus prepared, diffolve in boiling water into a mucilage. Geoffroy, who first communicated this preparation of orchis, recommends it in confumptions, in bilious dyfenteries, and diforders of the breaft proceeding from an acrimony of the juices.

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SAXIFRAGÆ ALBÆ folia, radix : Saxifragæ albæ radice granulofa J. B. Saxifragæ granulatæ Lin. White-flowered faxifrage; the leaves, and the roots [E.] which latter are improperly called (from their confitting of little grains) feeds.

SAXIFRAGÆ VULGARIS folia semen : Seselis pratensis nostratis Raii. Pucedani Silaci Lin. Meadow faxifrage ; the leaves and feeds.

These herbs grow wild, the first in dry fandy grounds, the fecond in fields and meadows. The first is not very common, and hence its leaves and roots have been generally supplied by the leaves and feeds of the fecond. Neither of them is at prefent in much effeem, notwithstanding the aperient, diuretic and lithontriptic virtues formerly attributed to them.

SCAMMONIUM [L. E.] Scammony; a concrete juice extracted from the roots of a large climbing plant growing in the Afiatic Turkey. Convolvulus (Scammoniæ) Lin. The best comes from Aleppo, in light, fpungy maffes, eafily friable, of a fhining afh colour verging to black ; when powdered, of a light grey or whitish colour : an inferior fort is brought from Smyrna, in more compact, ponderous pieces, of a darker colour, and full of fand and other impurities. This juice is chiefly of the refinous kind : rectified fpirit diffolves five ounces out of fix, the remainder is a mucilaginous fubftance mixed with drofs : proof fpirit totally diffolves it, the impuririties only being left. It has a faint unpleasant smell; and a bitterish fomewhat acrimonious tafte.

ftrong purgative. Some have con-

demned it as unfafe, and laid many ill qualities to its charge; the principal of which is, that its operation is uncertain, a full dofe proving fometimes ineffectual, whilft at other times a much fmaller one occafions dangerous hypercatharfes. 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 inteffines are lined with an exceffive load of mucus, the fcammony paffes through, without exerting itself upon them ; where the natural mucus is deficient, a small dofe of this or any other refinous cathartic, irritates and inflames. Many have endeavoured to abate the force of this drug, and correct its imaginary virulence, by expoling it to the fume of fulphur, difiolving it in acid juices, and the like: but this could do no more than deftroy as it were a part of the medicine, without making any alteration in the reft. Scammony in fubftance, judicioufly managed, ftands not in need of any corrector : if triturated with fugar or with almonds, as we have formerly recommended for other refinous purgatives, it becomes fufficiently fafe and mild in operation. It may likewife be conveniently diffolved, by trituration, in a ftrong decoction of liquorice, and then poured off from the feces. The college of Wirtemberg affures us, that by this treatment it becomes mildly purgative, without being attended with gripes, or other inconveniencies; and that it likewife proves inoffenfive to the palate. The common dose of scammony is from three to

Scammony gives name to an officinal compound powder and elec-Scammony is an efficacious and tary [L.] and is an ingredient in the compound powder of fena, the cathartic

twelve grains.

cathartic extract, the coloquintida pills, mercurial pills [L.] and purgative deobstruent pills [E.]

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SCHŒNANTHUS, vide Juncus odoratus.

SCILLÆ radix: Scillæ radice alba C. B. vel Scillæ vulgaris radice rubra C. B. Scillæ maritimæ Lin. The fquill, or fea-onion; its root [E.]

This is a fort of onion, growing fpontaneoufly upon dry fandy thores in Spain and the Levant, whence the root is annually brought into Europe. It should be chosen plump, found, fresh, and full of a clammy juice; fome have preferred the red fort, others the white, though neither deferves the preference to the other; the only difference perceivable betwixt them, is that of the colour; and hence the college allow both to be used promifcuoufly. This root is to the taile very naufeous, intenfely bitter and acrimonious : much handled, it exulcerates the fkin. With regard to its medical virtues, it powerfully ftimulates the folids, and attenuates viscid juices, and by these qualities, promotes expectoration, urine, and (if the patient be kept warm) fweat. If the dofe be confiderable, it proves emetic, and fometimes purgative. The principal use of this medicine is where the prime viæ abound with mucous matter, and the lungs are opprefied by tenacious phlegm. Dr. Wagner (in his clinical observations) recommends it given along with nitre, in hydropical fwellings, and in the nephritis : and mentions feveral cures which he performed, by giving from four to ten grains of the powder for a dole, mixed with a double quantity of nitre. He fays, that thus managed, it almost always operates as a diuretic,

though fometimes it vomits or purges. The most commodious form for the taking of fquills, unleis when defigned as an emetic, is that of a bolus or pill : liquid forms are to most people too offensive, tho' these may be rendered less disagreeable both to the palate and ftomach, by the addition of aromatic distilled waters. This root yields the whole of its virtues, both to aqueous and vinous menstrua, and likewife to vegetable acids. Its officinal preparations are, baked fquills [L.] and the baked fquills made into troches [L.] defigned as an ingredient in theriaca [L.]; dried fquills [L.] a fyrup, vinegar, oxymel [L. E.] and pills [E.]

SCLAREA, vide HORMINUM.

SCOLOPENDRIUM, v. LIN-GUA CERVINA.

SCORDII folia : Chamædryon palustris canescentis Tourn. Tucri Scordii Lin. Water-germander; the leaves [L. E.]

This is a fmall, fomewhat hairy plant, growing wild in fome parts of England, though not very common ; the fhops are generally fupplied from gardens. It has a bitter talte, and a strong difagreeable fmell. Scordium is of no great efteem in the prefent practice, notwithstanding the deobstruent, diu-retic, and fudorific virtues for which it was formerly celebrated. It enters the mithridate, theriaca, and cataplasm of cummin feed. [L.]; and gives name to two compound powders and an electary [L.] though not the most valuable of their ingredients.

SCORZONERÆ radix. Scorzoneræ latifoliæ finuatæ C. B. Scorzoneræ hifpanicæ Lin. Vipers grafs; the root [E.]

Scorzonera is met with only in gardens.

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gardens. The roots abound with a milky juice, of a bitterifh fubacrid tafte; and hence may be of fome fervice, for ftrengthening the tone of the vifcera, and promoting the fluid fecretions. They were formerly celebrated as alexipharmics, and for throwing out the meafles and fmall-pox; but have now almost entirely lost their character.

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SCROPHULARIÆ VULGA-RIS folia, radix : Scrophulariæ nodofæ fætida C. B. Fig-wort; the leaves and root [E.]

This herb grows wild in woods and hedges: the roots are of a white colour, full of little knobs or protuberances on the furface. This appearance gained it formerly fome repute against fcrophulous diforders and the piles; and hence it received its name: but modern practitioners expect no fuch virtues from it. It has a faint unpleafant fmell, and a fomewhat difagreeable tafte.

SCROPHULARIÆ AQUA-TICÆ MAJORIS, folia : Scrophulariæ maximæ radice fibrofa J. B. Great water fig-wort ; the leaves [E.]

This is a large plant, met with chiefly on the fides of rivers. The leaves have a bitter tafte, and an ungrateful fmell: they are principally celebrated, though on no very good grounds, as a corrector of fena. See the article SENA.

SEBESTEN: Mixa five Sebeften J. B. A fort 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 steff sticks close to the stone, which contains fometimes one and fometimes two kernels. This fruit has a fweet, very glutinous tafte: and hence has been employed for foftening acrimonious humours, in fome kinds of hoarfenefs, and in coughs from thin fharp defluxions. At prefent it is not often met with in the fhops.

SEDI MAJORIS, feu Sempervivi majoris folia: edi majoris vulgaris C. B. Sempervivi teztorum Lin. Great houfe-leek; the leaves [E.]

This is a low flefhy-leaved plant, growing on old walls, and on the tops of houses. It stands recommended as a cooler, though its fenfible qualities difcover no great foundation for any virtue of this kind : the tafte is herbaceous, with a flight degree of pungency. It is remarkable of this plant, that its juice purified by filtration (when it appears of a dilute yellowish colour) upon the admixture of an equal quantity of rectified spirit of wine, forms a beautiful white light coagulum, like the finer kinds of pomatum. This proves extremely volatile; freed from the aqueous phlegm, and exposed to the air, it in a very little time totally exhales. Hence it is concluded (in the medicor Silefiac fatyræ) that houfeleek contains a volatile alkaline falt : but there are many fubftances befides these falts which coagulate with fpirit of wine.

SEMPERVIVUM, v. SEDUM.

SENA [L. E.] the leaves of a fhrubby plant (*fena Alexandria foliis acutis C. B. Caffia (Senna) Lin.*) cultivated in Perfia, Syria, and Arabia; whence they are brought, dried and picked from the ftalks, to Alexandria in Egypt; and thence imported into Europe. They are of an oblong figure, fharp pointed at the ends, about a quarter of an inch broad, and not a full inch in length, of a lively yellowifh green Q 2 colour, colour, a faint not very difagreeable fmell, and a fubacrid, bitterifh, naufeous tafte. Some inferior forts are brought from Tripoli and other places; thefe may eafily be diftinguifhed by their being either narrower, longer, and fharper pointed; or larger, broader, and round pointed, with fmall prominent veins; or large and obtafe, of a fresh green colour, without any yellow caft.

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Sena is a very useful cathartic, operating mildly, and yet effectually: and, if judiciously dosed and managed, rarely occasioning the ill confequences which too frequently follow the exhibition of the ftronger purges. The only inconveniencies complained of in this drug are, its being apt to gripe, and its naufeous flavour. The griping quality depends upon a refinous substance, which, like the other bodies of this clafs, is naturally disposed to adhere to the coats of the inteffines : the more this refin is divided by fuch matters as take off its tenacity, the lefs adhefive, and confequently the lefs irritating and griping it will prove; and the lefs it is divided, the more griping. Hence fena given by itfelf, or infusions made in a very fmall quantity of fluid, gripe feverely and purge lefs than when diluted by a large portion of suitable menstruum, or divided by mixing the infusion with oily emulfions. The ill flavour of this drug is faid to be abated by the great water figwort : but we cannot conceive that this plant, whole fmell is manifeltly fetid, and its tafte nauseous and bitter, can at all improve those of fena: others recommend bohea tea, though neither has this any confiderable effect. The fmell of fena relides in its more volatile parts, and may be discharged by lightly boiling infufions of it made in water : the liquor thus freed from the peculiar flavour of the fena, may be eafly rendered grateful to the tafte, by the addition of any proper aromatic tincture or diffilled water. The colleges, both of London and Edinburgh, have given feveral very elegant infufions of this drug (which may be feen in Part III. chap iii.) and alfo fpirituous tinctures [L. E.]compound powders [L. E.] and a fyrup [E.] The dofe of fena in fubftance is from a fcruple to a dram; in infufion from one to three or four drams.

It has been cuffomary to reject the pedicles of the leaves of fena as of little or no ufe : Geoffroy however obferves, that they are not much inferior in efficacy to the leaves themfelves. The pods, or feed-veffels, met with among the fena brought to us, are by the college of Bruffels preferred to the leaves. They are lefs apt to gripe, but proportionably lefs purgative.

SENECIO, vide ERIGERUM.

SENEKA [E.] Polygala (Jenega) Lin. Senecka, rattleinake root; the root of a species of polygala, which grows spontaneoully in Virginia, and bears the winters of our own climate. This root is usually about the thickness of the little finger, varioully bent and contorted, and appears as if composed of joints, whence it is fuppofed to refemble the tail of the animal whofe name it bears. A kind of membranous margin runs on each fide, the whole length of the root. Its tafle is at first acid, afterwards very hot and pungent.

This root is not at prefent much known in the fhops. The Senegaro Indians are faid to prevent the fatal effects which follow from the bite of the rattle-fnake, by giving it internally, and applying it externally

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ternally to the wound. It has of late been strongly recommended in pleurifies, peripneumonies, and other inflammatory diftempers. In these cases, Lemery, du Hamel, and Juifieu, experienced its good fuccels (fee the French memoirs for the years 1738, 1739.) Its more immediate effects are those of a diuretic, diaphoretic, and cathartic; fometimes it proves emetic: the two last operations may be occafionally prevented, by giving the root in imail dofes, along with aromatic fimple waters, as that of cinnamon. The ufual dofe of the powder is thirty grains or more.

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Some have likewife employed this root in hydropic cafes, and not without fuccess : Bouyart (in the memoirs before mentioned, 1744) relates examples of its occasioning a plentiful evacuation by ftool, urine and perspiration, and by these means removing the difeafe, after the common diuretics and hydragogues had failed : where this medicine operates as a cathartic, it generally proves fuccefsful; if it act by liquifying the blood and juices, without occasioning a due discharge, it should either be abftained from, or affilted by proper additions.

SERICUM et folliculi bombycis. Silk and filkworms bags. Thefe are fcarce ever made ufe of for any medicinal purpofes. In their crude state they are certainly very infignificant : though if burnt in a close veffel, after the fame manner as fponge, they would probably prove a medicine of fimilar, and perhaps of fuperior virtue. They yield a larger quantity of . feeds called oily purging grain. volatile falt, than any other animal fubstance I know.

SERPENTARIA VIRGINI-

ANA [L. E.] Aristolochia ferpentaria Lin. Virginian inake-root; the root of a species of aristolochia, growing in Virginia and Carolina.

It is a fmall, light, bufhy root, confifting of a number of ftrings or fibres, matted together, iffuing from one common head ; of a brownish colour on the outfide, and paler or yellowith within. It has an aromatic fmell, like that of valerian, but more agreeable ; and a warm, bitterish, pungent taste. This root is a warm diaphoretic and diuretic : it has been greatly celebrated as an alexipharmic, and effected one of the principal remedies in malignant fevers and epidemic difeafes. In theie intentions, it is given in fubflance from ten to thirty grains, and in infusion to a dram or two. Both watery and fpirituous menstrua extract its virtue by infusion, and elevate fome fhare of its flavour in diffillation : along with the water a fmall portion of effential oil arifes. A spirituous tincture L. E.] and compound decoction [E.] of it are directed as officinals : it enters alfo the cephalic tincture, compound tincture of Peruvian bark, fudorific tincture, tinctura facra, ftomachic elixir, theriaca Edinensis [E.] and cataplaim of cummin-feed [L,]

SERPILLI folia : Serpilli vulgaris minoris C. B. Thymi Serpill: Lin. Mother of thyme; the herb [E.]

This is a fmall creeping plant, common on heaths and dry pafture grounds. Its tafte, fmell, and medical virtues are fimilar to those of thyme, but weaker.

SESAMI Semen : Digitalis orientalis sesam dicta Tourn. The

This plant is cultivated in the eastern countries, whence the feeds are brought to us. They very properly deferve the name of oily, 23 as as they yield upon expression a larger quantity of oil, than almost any other known vegetable. To the appellation purging, they have no title; among the Indians, they are faid to be used as food.

SESELIS VULGARIS femen: Liguflici quod fefeli officinarum C. B. Laferpitium Siler Lin. Common hartwort; the feeds [L. E.]

SESELIS MASSILIENSIS femen : Sefelis Massiliens ferulæ folio. C. B. Sefelis tortuosi Lin. Italian hartwort; the feeds [L. E.]

These plants grow spontaneously in the warmer climates; amongst us they are met with only in the gardens of the curious. The feeds and roots of both forts have an agreeable aromatic smell and taste; and in this light might be occasionally employed, though at present they are in difuse: being scarcely otherwise regarded than as the feeds of the first fort are an ingredient in mithridate and theriaca.

SESELI PRATENSE, vide Saxifraga vulgaris.

SIGILLI SALOMONIS, feu Polygonati radix : Polygonati latifolii vulgaris C. B. Convallariæ multifloræ Lin. Solomon's feal; the root [E.]

This grows wild in woods, but is not very common: the root has feveral joints, with fome flat circular deprefilions, fuppofed to refemble the flamp of a feal. It has a fweetifh mucilaginous tafte. As to its virtues, practitioners do not now expect any confiderable ones from it, and pay very little regard to the vulnerary qualities for which it was formerly celebrated.

SILER MONTANUM, vide SESELI VULGARE. SIMAROUBA [E.] Quaffica Simarouba Lin. a bark with pieces of the wood adhering to it, brought from Guinea, in long tough pieces, of a pale yellowifh colour, and a pretty firong bitter tafte. It has lately come into effeem in dyfenteric fluxes. A decoction of half a dram is given for a dofe, and repeated at intervals of three or four hours.

SINAPIS femen : Sinapis rapi folio C. B. Sinapis nigræ Lin. Muftard; the feeds [L. E.]

This plant is fometimes found wild, but for culinary and medicinal uses is cultivated in gardens. Muftard, by its acrimony and pungency, ftimulates the folids, and attenuates vifcid juices ; and hence ftands defervedly recommended for exciting appetite, promoting digeftion, increasing the fluid fecretions, and for the other purposes of the acrid plants called antifcorbutic. It imparts its taffe and fmell in perfection to aqueous liquors, whilft rectified spirit extracts very little of either : the whole of the pungency arifes with water in distillation. Committed to the prefs, it yields a confiderable quantity of a foft infipid oil, perfectly void of acrimony : the cake left after the expreffion is more pungent than the multard was at first. The oil is directed as an officinal [L. E.] Thefe feeds are fometimes employed externally as a ftimulant; and give name to a composition for this intention in the Edinburgh difpenfatory.

SISON, v. AMOMUM VULGARE.

SMYRNIUM, vide HIPPOSE-LINUM.

SOLANI VULGARIS folia: Solani hortensis seu vulgaris J. B. Common nightshade; the leaves. SOLANI

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SOLANI LETHALIS, feu Belladonnæ folia: Solani melanocerafi C. B. Atropæ Belladonnæ Lin. Deadly nightshade: the leaves.

These plants grow wild; the first in cultivated grounds, the fecond in fhady wafte ones. They have both been fuppofed cooling and difcutient in external applications, and poifonous when taken internally. Late experience has shewn, that an infusion of half a grain or a grain of the dried leaves of either may be taken with lafety, and that in many cafes the dofe may be increased by degrees to five or fix grains; that they generally occafion some confiderable evacuation, and fometimes, especially in the larger of the above doles, alarming nervous fymptoms, which however ceale with the operation of the medicine. It has been expected, that a cautious use of these very active plants would afford relief in fome obstinate disorders : but though in fome inflances they promised great benefit, the general event of these trials has not been very favourable. The Edinburgh college, who retained thefe plants at the revifal of their Pharmacopœia in the year 1744, rejected them both in 1756.

SOLANUM LIGNOSUM, vide Dulcamara

SOLDANELLA, vide BRAS-SICA MARINA.

SPERMA CETI [L. E.] improperly fo called : an unctuous flaky fubftance, of a fnowy whitenefs, a foft butyraceous take, without any remarkable fmell; faid 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

confiderable ufe in pains and erofions of the inteffines, in coughs proceeding from thin sharp defluxions, and in general, in all cafes where the folids require to be relaxed, or acrimonious humours to be softened For external purposes, it readily diffolves in oils; and for internal ones, may be united with aqueous liquors into the form of an emulfion, 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 foap, have little effect upon fperma ceti. This drug ought to be kept very clofely from the air, otherwife its white colour foon changes into a yellow : and its mild unctuous tafte, into a rancid and offensive one. After it has fuffered this difagreeable alteration, both the colour and quality may be recovered again by steeping it in alkaline liquors, or in a fufficient quantity of spirit of wine.

SPICA VULGARIS, vide LA-VENDULA ANGUSTIFOLIA.

SPICA NARDI vide NARDUS INDICA.

* SPIGELIA Pb. Edinb. Anthelmia Dro. Lining. Spigelia marilandica Lin. Indian Pink: this plant has a perennial fibrous root, whence arife fingle ftems, befet with oppofite oval-lanceolate, entire leaves, and crowned with a fpike of tubular monopetalous red flowers, with five ftamina and one piftil. Each flower is fucceeded by two round united bivalvular capfules, containing feveral fmall feeds. It grows fpontaneoufly in South Carolina, and other fouthern provinces of North America.

The use of the root of this plant as an anthelmintic, was communi-Q 4 cated cated from the native Indians to the colonifts, and it has fince 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 Effays Physical and Literary; and Dr. Garden has confirmed it in Vol. III. of the fame publication, and has given a figure and particular defeription of the plant.

The root is given both in powder and infusion ; but the powder is effeemed most efficacious. The dofe is not accurately afcertained, but extends to from twelve to fixty or feventy grains of the powder. It is found to be most efficacious when it purges, which it does not always without fome additions. The exhibition of a vomit previous to the use of the Indian pink has proved very ferviceable. It fometimes produces difagreeable effects on the nervous fystem, fuch as giddinefs, dimnefs of the fight, and convultive motions of the muscles of the eye. It is faid to act powerfully as a fedative in abating the exacerbations of low remittent worm-fevers.

SPINÆ CERVINÆ baccæ: Rhamni cathartici C. B. Buckthorn; the berries [L. E.]

This tree, or bufh, 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 fome other trees, as the frangula or black berry-bearing alder, and the cornus famina or dogberry-tiee, have of late years been frequently mixed with, or fubilituted for, those of buckthorn. This abuse may be difcovered by opening the berries : those of buckthorn have almost always four feeds, the berries of the frangula two, and those of the cornus famina only one. Buckthorn berries, bruifed on white

paper, give it a green tincture, which the others do not. Those who fell the juice to the apothecaries, are faid to mix with it a large proportion of water.

Buckthorn berries have a faint difagreeable fmell, and a naufeous bitter tafte. They have long been in confiderable efteem as cathartics; and celebrated in dropfies, rheumatifms, and even in the gout ; though in these cases, they have no advantage over other purgatives, and are more offenfive, and operate more churlifhly, than many with which the fhops are furnished ; they generally occasion gripes, fickness, dry the mouth and throat, and leave a thirst of long duration. The dofe is about twenty of the fresh berries in fubilance, and twice or thrice this number in decoction, an ounce of the expressed juice, or a dram of the dried berries. A fyrup prepared from the juice is kept in the fhops. In this preparation, the naufeous flavour of the buckthorn is fomewhat alleviated by the fugar, and the addition of aromatics.

SPIRITUS VINOSUS REC-TIFICATUS. Rectified fpirit of wine ; " a spirit diffilled from wine " or other fermented liquors, pu-" rified as much as poffible from " its fetid fmell, and the phlegm " that arifes with it in the first di-" ftillation." [L.] 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 refides (fee Part III. chap. v.) These spirits, from whatever vegetable subjects they have been produced, are, when perfectly pure, the fame. They have a hot pungent tafte, without any particular flavour; they readily catch flame, and burn entirely away, without leaving any marks of an aqueous

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aqueous moifture behind ; diftilled by a heat lefs than that of boiling water, they totally arife, the laft runnings proving as flavourlefs and inflammable as the firft : they diffolve effential vegetable oils and refins into an uniform transparent fluid. Thefe spirits are the lightest of almost all known liquors : expressed oils, which so 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 fee hereafter. and in this place confider only their own. Pure fpirit coagulates all the fluids of animal bodies, except urine, and hardens the folid parts. Applied externally, it ftrengthens the veffels, thickens the juices in them, and thus powerfully restrains hæmorrhages. It inftantly contracts the extremities of the nerves it touches, and deprives them of fenie and motion ; by thefe means ealing them of pain, but at the fame time destroying their use. Hence employing spirituous liquors in fomentations (notwithstanding the fpecious titles of vivifying, heating, reftoring mobility, refolving, dislipating, and the like, ufually attributed to them) may fometimes be attended with unhappy confequences. Thefe liquors, received undiluted into the flomach, produce the fame effects, thickening the fluid, and contracting all the folid parts which they touch, and deftroying, at least for a time, their use and office: if the quantity be confiderable, a palfy or apoplexy follows, which ends in death. Taken in fmall quantity, and duly diluted, they brace up the fibres, raife the fpirits, and promote agility: if further continued, the

fenfes are difordered, voluntary motion deftroyed, and at length the fame inconveniences brought on as before. Vinous fpirits therefore, in fmall dofes, and properly diluted, may be applied to ufeful purpofes in the cure of difeafes; whilft in larger ones, or if their ufe be long continued, they act as a poifon of a particular kind.

SPIRITUS VINOSUS TE-NUIOR. Proof fpirit: " the " fame fpirit, containing an ad-" mixture of an equal quantity of " water : the best proof spirit is " that diffilled from French wine; " but for common ules may be " employed the spirit drawn from " melaffes, or the fyrupy matter " that runs from fugar in the pu-" rification, commonly called me-" lasses spirit." [L.] The spirits ufually 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 eafily judged from the tafte, especially if the spirit be first duly diluted. It were to be wished, that we had a certain standard with regard to their firength, or the quantity of water contained in them ; a circumstance which greatly influences fundry medicinal preparations, particularly the tinctures: for as pure spirit diffolves the refin and volatile oil, and water only the gummy and faline parts of vegetables, it is evident that a variation in the proportions wherein these are mixed, will vary the diffolving power of the menftruum, and confequently 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 feem neceffary fary for the nicer purposes, and where a perfectly flavourless proof fpirit 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-fix of water.

SPONGIA [L. E.] Sponge; a foft, light, very porous and compreffible fubstance, readily imbibing water, and diffending thereby. It is found adhering to rocks, particularly in the Mediterranean fea, about the islands of the Archipelago. It is generally supposed to be a vegetable production : neverthelefs fome obfervations, lately made by Juffieu, give room to fufpect that it is of animal origin. Chemical experiments favour this fuppofition; analyfed, it yields the fame principles with animal fubfances in general : the volatile falt is in larger quantity than I have obtained from any animal matter, except the bags of the filkworm. On this falt, which is generated by fire, feem to depend the virtues of the officinal spongia usta [L.] (See Part III, chap. i.) Crude iponge, from its property of imbibing and diffending by moisture, is fometimes made use of as a tent for dilating wounds and ulcers.

STANNUM [L. E.] Tin is the lighteft and eafieft of fufion of all the metals. Heated, it becomes fo brittle as to fall in pieces by a blow; and by agitation (when juft ready to melt) into a powder; hence the officinal method of pulverifing this metal, to be defcribed in its

unlefs previoufly well calcined. With regard to the virtues of this metal, it was formerly accounted a specific in diforders of the uterus and lungs; a calx of tin and antimony is still retained in fome difpensatories, under the name of an antihectic : but thefe are virtues, to which it certainly has little claim It has of late been celebrated, on better foundation, as an anthelmintic; and faid to deflroy fome kinds of worms which elude the force of many other medicines. Poffibly the caufe of this effect may be very different from what may be suspected, an admixture of a portion of arienic.

In has a ftrong affinity with arienic : infomuch that when once united therewith, the arlenic, notwithflanding its volatility in other circumstances, cannot be totally expelled either by flow calcination, or by a vehement fire. Almost all the ores of tin contain more or lefs of this poilonous mineral, which is not entirely feparable in the common proceffes 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, imelling of garlic; which fmcll is univerfally held, in mineral substances, to be a certain criterion of arfenic. Henckel has discovered a method of separating actual arienic from tin ; this is effected by folution in aqua regis and crystallization : Mr. Margraff has (in a volume of the Berlin memoirs) given a farther account of this procefs; and relates, that from the tins usually reputed pure, he has obtained one-eighth their weight of crystals

crystals of arsenic. For the preparations of tin, see the third part of this work.

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STAPHISAGRIÆ femen : Delpbinii platoni folio Tourn. Delphinii Staphyfagriæ Lin. Stavefacre; the feeds [E.]

Thefe are large rough feeds, of an irregularly triangular figure, of a blacklin colour on the outlide, and yellowish or whitish within. They are usually brought from Italy; the plant is not very common in this country, though it bears our levereft colds. They have a difagreeable fmell, and a very nauseous, bitterish, burning tafte. Stavelacre was employed by the antients as a cathartic; but it operates with fo much violence both upwards and downwards, that its internal ule has been, among the generality of practitioners, for fome time laid afide. It is chiefly employed, in external applications, for fome kinds of cutaneous eruptions, and for deftroying lice and other infects ; infomuch, that it has from this virtue received its name, in different languages ; herba pedicularis, berbe aux poux, laufskraut, lou/ewort.

STIBIUM, vide ANTIMONIUM.

STECHAS, Stæchas purpurea C. B. Lawendulæ Stæchas. Arabian ftechas, or French lavender flowers [L. E.]

This is a fhrubby plant, confiderably fmaller than the common lavender: the flowery heads are brought from Italy and the fouthern parts of France. They are very apt to grow mouldy in the paffage, and even when they efcape this inconvenience, are generally much inferior to those raifed in our gardens. The best flechas which we receive from abroad, has no great

fmell or tafte. Pomet affirms, that fuch as the fhops of Paris are fupplied with, is entirely deftitute of both; whilft that of our own growth, either whilft fresh, or when carefully dried, has a very fragrant fmell, and a warm, aromatic, bitterifh, fubacrid tafte ; diffilled with water, it yields a confiderable quantity of a fragrant esfential oil; to rectified spirit it imparts a strong tincture, which inspissated proves an elegant aromatic extract. This aromatic plant is rarely met with in prefcription ; the only officinal compositions into which it is admitted, are the mithridate and theriaca.

There is another plant called ftechas, which from the beauty and durability of its flowers has of late years had a place in our gardens, and whole aromatic qualities render it worthy of one in the fhops; this is the elichryfum feu flæchas citrina latiore folio C. B. golden stechas, goldilocks, or yellow caffidony : its flowers fland in umbels on the tops of the branches; they are of a deep fhining yellow colour, which they retain in perfection for many years; their fmell is fragrant and agreeable, fomewhat of the musky kind; their tafte warm, pungent, and fub-aftringent; they impart their flavour to water in distillation, and by infution to rectified fpirit.

* STRAMONIUM [E.] Solanum factidum, pomo Jpinofo oblongo C. B. Datura Stramonium Lin. Thorn-Apple: an herbaceous plant, with a thick branched stalk, two or three feet high, large finuated leaves, and long tubular white or purplish flowers, succeeded by large, prickly, green, fleshy feed-vessels, which open at the end in four divifions, and disclose numerous black feeds. It flowers in July.

This

This plant, which has been long known as a narcotic poifon, has been introduced into the catalogue of medicines by Dr. Stærck. An extract made from the expressed juice of the leaves is acrid and faline to the tafte, and yields chryftals of nitre on flanding. This preparation, given in dofes of from one to five grains twice or thrice a day, is faid to be a very powerful remedy in various convultive and fpafmodic diforders, epilepfy and mania. The accounts of other practitioners have confirmed it; and it has been received into some pharmacopoetas. An ointment prepared from the leaves has been found to give eale in external inflammations and hæmorrhoids.

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STYRAX CALAMITA [L.E.] Storax; an odoriferous refinous fubftance, exuding, in the warmer climates, from a tree called by C. Bauhine flyrax folio mali cotonei. It has been cuftomary to diffinguish three forts of florax, though only one is ufually met with in the flops.

1. Styrax calamita, or florax in the cane, fo called from its having been formerly brought inclosed in reeds from Pamphylia. It is either in fmall diffinct tears, of a whitish or reddish colour, or in larger massies composed of fuch.

2. Storax in the lump, or red florax. This is in maffes of an uniform texture and yellowish red or brownish colour, though sometimes likewise interspersed with a few whitish grains. Of this fort there has been some to be met with in the shops, under the name of storax in the tear.

3. The common florax of the fhops is in large maffes, confiderably lighter and lefs compact than the foregoing. It appears upon examination to be composed of a fine refinous juice, mixed with a quantity of faw-duft. For what purpose

this addition is made, I fhall not here enquire; obferving only, that it can fcarce be fuppoled to be done with any fraudulent view, fince the faw-duft appears at fight. This common ftorax is much lefs efteemed than the two firft forts; though, when freed from the woody matter, it proves fuperior in point of fragrancy to either of them. Rectified fpirit, the common menitruum of refins, diffolves the ftorax, leaving the wood behind: nor does

this tincture lose much of its valuable parts, in being inspissated to a folid confistence; whilst aqueous liquors elevate almost all the fragrancy of the storax.

Storax is one of the moft agreeable of the odoriferous refins, and may be exhibited to great advantage in languors and debilities of the nervous fystem. It is not however much used in common practice, unlefs as an ingredient in the traumatic balfam, the compound powder and electary of fcordium, the florax pill, confectio Paulina, mithridate, and theriaca [L.]

STYRAX LIQUIDA [E.] Liquid florax. What is most commonly met with under this name, is a fost refinous substance, of a grey colour, a weak imell. fimilar to that of the foregoing folid ftorax. It is fuppoled to be compounded of folid ftorax, refin, wine, and oil, beaten up together, into a proper confittence. The genuine liquid florax, according to Petiver's account (Phil. Tranfact. Nº 313.) is obtained from a tree growing in the island Cobros in the Red iea. The preparers of this commodity yearly clear off the bark of the tree, and boil it in fea water to the confiltence of bird-lime; the refinous matter which floats upon the furface, is taken off, liquined again in boiling water, and pafied through a frainer. The purer part which paires

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passes through, and the more impure which remains on the strainer, and contains a confiderable portion of the substance of the bark, are both fent to Moco, whence they are sometimes, though very rarely, brought to us. The former is of the confistence of honey, tenacious, of a reddish or ash brown colour, an acrid unctuous taste, approaching in smell to the solid storax, but so the ris full of woody matter, and much weaker in stores.

Liquid ftorax is among us fcarce ever made use of in medicine, and not often found in the fhops; hence the London college has expunged it from the catalogue of officinals: that of Edinburgh employs it as an ingredient in the mercurial plaster.

SUCCINUM [L. E.] Amber; a folid, brittle, bituminous fubftance, dug out of the earth, or found upon the fea fhores. The largest quantities are met with along the coafts of Polifh Pruffia and Pomerania. It is of a white, yellow, or brown colour, fometimes opaque, and fometimes very clear and tranfparent: the dark coloured and opaque forts, by digettion with certain expressed oils and animal fats, become clearer, paler coloured, more pellucid, and confiderably harder. Amber boiled in water, neither foftens nor undergoes any fenfible alteration : exposed to a greater heat, without addition, it melts into a black mais like fome of the more common bitumens: fet on fire, its fmell refembles that which arifes from the finer kinds of pitcoal : diffilled in a retort, it yields an oil and a volatile acidulous falt (fee Part III. chap. viii.)

Amber in fubitance has very little fmell or talte; and hence it has by fome been reckoned a mere inactive earthy body. It was formerly accounted an abforbent, and as fuch had a place in the compound powder of crabs claws. It certainly has no title to this clafs of medicines, as not being acted upon by any acid. It is supposed to be of fervice in the fluor albus, gleets, hysteric affections, &c. and in these intentions is fometimes 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 tafte and a fragrant fmell) promifes to be of real fervice in these Boerhaave extols this diforders. tincture as having incredible efficacy in all those distempers which proceed from weakness and relaxation, and in hypochondriacal, hysterical, and cold languid cafes. If part of the fpirit be abstracted by a gentle heat, the remainder proves a very elegant aromatic balfam, which is perhaps one of the most ufeful preparations obtainable from this concrete. Amber is levigated in the fhops into an impalpable powder, which gives name to a compound powder [L.] and is an ingredient in mithridate and theriaca [L.] A tincture of it in dulcified spirit of vitriol [E.] and the diffilled oil and falt [L. E.] are likewife officinals. The oil is an ingredient in the volatile aromatic fpirit, powder for promoting delivery, gum pills, cephalic balfam, and cephalic plafter [E,]

SULPHUR [L. E.] Sulphur or brimitone is a yellow fubftance, of the mineral kingdom, fufible in a fmall degree of heat, totally volatile in a ftronger, readily inflammable, burning with a blue flame, which is accompanied with a fuffocating acid fume. It diffolves in alkaline liquors and in oils, not in acids, water, or vinous fpirits.

Greatest part of the sulphur met with in the shops is obtained from certain

certain ores by a kind of diffillation, or artificially composed by uniting the vitrolic acid with inflammable matters. At fome of the Saxon fulphur works (whence we are chiefly fupplied) certain minerals abounding with vitrolic acid, but containing little or no fulphur, being stratified with wood, and the latter fet on fire, a large quantity of fine fulphur is produced. It is ufually brought to us in large irregular maffes, which are afterwards melted and cast into cylindrical rolls, with the addition of fome coarfe refin, flour, or the like; whence the paler colour of the rolls. Sulphur is not alfo unfrequently found native in the earth, fometimes in transparent pieces of a greenish or bright yellow colour; but more commonly in opaque grey ones, with only fome fireaks of yellow. This last is the fort which is understood by the name SULPHUR VIVUM [E.] though that met with under this name in the fhops is no other than the drofs remaining after the fublimation of fulphur. All the forts of fulphur are, when perfectly pure, in no respect different from one another : notwithflanding the preference given by fome to the more uncommon fossil forts, these last are of all others the least proper for medicinal purpofes, as being the most subject to an admixture of foreign matter, both of the metallic and arfenical kind.

Pure fulphur loofens the belly, and promotes infenfible perfpiration: it feems to pafs through the whole habit, and manifeftly tranfpires through the pores of the fkin, as appears from the fulphureous fmell of perfons who have taken it, and filver being flained in their pockets of a blackith colour, which is the known effect of fulphureous fumes. It is a celebrated remedy againft cutaneous difeafes, both gi-

ven internally, and externally applied. It has likewife been recommended in coughs, afthmas, and other diforders of the breaft and lungs; in these cafes, however, it has no very confiderable effect, unlefs, as Hoffman obferves, where the difease proceeds from the blood's being tainted by fcrophulous or fcorbutic humours. Where this happens, the prudent use of fulphur is faid to do good fervice, throwing out a plentiful eruption upon the fkin, and by degrees carrying off the peccant matter. The common dofe of fulphur rarely exceeds a fcruple, though Geoffroy goes as far as two drams. The trochisci e sulphure of the dispensatory are one of the most elegant forms for the taking of it. It enters fix officinal preparations for external ufe, and gives name to one of them. Some have imagined that fulphur 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 fupported by fome late writers, has no just foundation. Sulphur has nearly the fame effects, whether used internally or externally. In both cales, the eruptions become frequently more copious after the first use of it.

It is remarkable of this concrete, that though itfelf a medicine of confiderable efficacy, it neverthelefs reftrains that of fome others of the moft powerful kind. Mercury is rendered, by the admixture of fulphur, inactive; and the virulent antimonial regulus, almost fo. Hence, when antimonial and mercurial medicines exceed in operation, fulphur has been given for abating their violence; and fometimes reftrains their farther action. Even the corrofive poifon arfenic, by the addition

addition of fulphur, becomes almost innocent; and hence if a fmall proportion of arfenic should be contained in fulphur, it possibly may not receive thence any poisonous qualities.

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SYMPHYTUM, vide Conso-LIDA.

TACAMAHACA [E.]: a refin obtained from a tall tree (tacamahaca populo fimilis, fructu colore pæoniæ simili 7 B. Populus balsamifera Lin.) which grows spontaneously on the continent of America, and in a sheltered situation bears the winters of our own climate. Two forts of this refin are fometimes to be met with. The beft, called from its being collected in a kind of gourd - shells) tacamahaca in fhells, is fomewhat unctuous and foftish, of a pale yellowish or greenith colour, an aromatic tafte, and a fragrant delightful fmell, approaching to that of lavender and ambergris. This fort is very rare: that commonly found in the fhops is in semitraniparent grains or glebes, of a whitish, yellowish, brownith, or greenish colour, of a less grateful fmell than the foregoing. The former is faid to exude from the fruit of the tree, the other from incifions made in the trunk. This refin is faid to be employed among the Indians, externally, for difcuffing and maturating tumours, and abating pains and aches of the limbs. It is an ingredient in the anodyne. hysteric, cephalic, and stomachic platters of the Edinburgh pharmacopœia. The fragrance of the finer fort sufficiently points out its being applicable to other purpofes.

TAMARINDUS [L. E.] Tamarind; the fruit of a tree growing in the East and West Indies,

called by C. Bauhine filiqua Arabica quæ tamarindus. Tamarindus indica Lin. It is a pod refembling a bean-cod, including feveral hard feeds, together with a dark coloured viscid pulp of a pleasant acid tafte : the East-India tamarinds are longer than the West-India fort ; the former containing fix or feven feeds 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 fame time, by its acidity, quenches thirst, and allays immoderate heat. It increases the action of the purgative fweets, cafia and manna, and weakens that of the refinous cathartics. Some have supposed it capable of abating the virulence of antimonial preparations; but experience fhews, that it has rather a contrary effect, and that all vegetable acids augment their power. Tamarinds are an ingredient in the electary of cafia [L.] the lenitive electary [E.] and decoction of tamarinds with fena [E.]

TANACETI folia, flores, femen : Tanaceti vulgaris lutei C. B. Tanfy : the leaves [I..] flowers and feeds [E.]

Tanfy grows wild by road-fides, and the borders of fields, and is frequently also cultivated in gardens, both for culinary and medicinal uses : it flowers in June and July. Confidered as a medicine, it is a moderately warm bitter, accompanied with a ftrong, not very difagreeable flavour. Some have had a great opinion of it in hyfieric diforders, particularly those proceeding from a deficiency, or fupprefion of the uterine purgations. The leaves and feeds have been of confiderable effeem as anthelmintics ; the feeds are lefs bitter, and more

more acrid and aromatic than those of rue, to which they are reckoned fimilar; or of fantonicum, for which they have been frequently fubftituted.

TAPSI BARBATI, seu Verbasci folia, flores : Verbasci maris latifolii lutei C. B. Mullein; the leaves and flowers.

This is met with by road-fides, and under hedges: it is clothed all over with foft downy leaves, and produces long fpikes of yellow flowers in July. The tafte difcovers in it a glutinous quality; and hence it ftands recommended as an emollient, and is in fome places held in great effeem in confumptions. The flowers of mullein have an agreeable, honey-like fweetnefs; an extract prepared from them by rectified fpirit of wine taftes extremely pleafant.

TARAXACUM, v. DENS LEO-NIS.

TARTARUM [L. E.] Tartar is a faline fubstance, thrown off from wines, after fermentation, to the fides and bottom of the cafk. It proves of a red or white colour, and more or lefs foul or droffy, according to the colour and quality of the wine; the white is generally looked upon as the pureft : of either fort, fuch as is clean, folid, fomewhat transparent, and has its outfide covered over with fmall fhining chrystals, is preferable to fuch as appears porous, droffy, opaque, and lefs bright. This fubstance, though truly faline, is fcarce acted upon by cold water ; the purelt fort, or fuch as has been purified by art, requires four and twenty times its weight of boiling water to diffolve in : the folutions of both the tartars pafs the filter colourlefs, and fhoot, in the cold, into fmall, white, fc-

mitransparent chrystals. All fuch earths as are foluble in vinegar, and alkaline falts, render tartar more eafily foluble in water: hence the refiners at Montpelier are faid to employ a certain earth for promoting its folutions, with fome particular managements for making it fhoot into large crystals. This addition may occasion a confiderable alteration in the falt, infomuch that the finer forts of white tartar are perhaps preferable, on many occafions, to the common chryftals. 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 himfelf a few times with fix drams of the crude falt, after many other medicines had been tried to no purpole. For the preparations of tartar, see Part III. chap. iii. fect. 7. This falt is likewife an ingredient in the common infusion of fena, compound powder of fena [L.] and is used for diffolving or corroding fome metallic bodies, particularly antimony, from which it receives a ftrong emetic impregnation.

TELEPHIUM, vide CRAS-SULA.

TEREBINTHINÆ. Turpentines; refinous juices extracted from certain trees. There are four kinds of turpentine diffinguished in the shops.

TEREBINTHINA CHIA, five CYPRIA [L. E.] Chio, or Cyprus turpentine.

This is generally about the confiftence 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, bitterith taste ;

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tafte; and a fragrant fmell, more agreeable than any of the other turpentines.

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This juice is the produce of the terebinthus vulgaris C. B. common terebinth, an evergreen tree or fhrub, which grows spontaneously in the warmer climates, and endures the colds of our own. The turpentine brought to us, is extracted in the illands whole names it bears; by wounding the trunk and branches a little after the buds have come forth. The juice iffues limpid, and clear as water, and by degrees thickens into the confistence in which we meet with it. A like juice exuding from this tree in the eastern countries, inspissated by a flow fire, is of frequent ufe, as a malticatory, among the Perfian ladies, who (as Kcempfer informs us) are continually chewing it, in order to fasten and whiten the teeth, fweeten the breath, and promote appetite.

TEREBINTHINA VENETA [E.] Venice turpentine.

This is ufually thinner than any of the other forts, of a clear, whitish, or pale yellowish colour, a hot, pungent, bitterish, disagreeable tatte, and a ftrong fmell, without any thing of the fine aromatic flavour of the Chian kind.

The true Venice turpentine is obtained from the larix folio deciduo conifera J. B. larch, 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 fhops, 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 confiderably different from the true fort above defcribed.

TEREBINTHINA ARGEN-TORATENSIS [L. E.] Strafburgh turpentine.

This, as we generally meet with it, is of a middle confistence betwixt the two foregoing, more tranfparent, and lefs tenacious than either ; its colour a yellowish brown. Its fmell is very fragrant, and more agreeable than that of any of the other turpentines, except the Chian; in tafte it is the bittereft, yet the least acrid.

This refin is obtained from the two forts of fir trees mentioned be= fore, which are the most plentiful, and perhaps the only ones that grow fpontaneoully in Europe. There is another whole refin is much fuperior to the common turpentine; and has fometimes been brought to us from abroad under the name of BALSAMUM CANADENSE. This fpecies is the abies minor, pectinatis foliis, Virginiana conis parvis Jubrotundis Pluk. Virginian, or Canada fir-tree ; which, though not a native of this climate, has been found to endure its fevereft colds.

TEREBINTHINA COMMU-NIS [L. E.] Common turpentine is the coariest, and heaviest, in taste and fmell the most difagreeable, of all the forts : it is about the confiftence of honey, of an opaque brownifh white colour.

This is obtained from the pinus sylvestris C. B. wild pine, a low unhandsome tree, common in different parts of Europe; this tree is extremely refinous, and remarkably fubject to a difease from a redundance and extravalation of its refin, infomuch that, without due evacuation, it swells and burits. The juice as it iffues from the tree is received in trenches made in the earth, and afterwards freed from the groffer impurities by colature through wicker balkets:

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All these juices yield in diffillation with water, an highly penetrating effential oil, a brittle infipid refin remaining behind. With regard to their medical virtues, they promote urine, cleanfe the parts concerned in the evacuation thereof, and deterge internal ulcers in general; and at the fame time, like other bitter hot substances, firengthen the tone of the vefiels : they have an advantage above most other acrid diuretics, that they gently loofen the belly. They are principally recommended in gleets, the fluor albus, and the like; and by some in calculous complaints : where these last proceed from fand or gravel, formed into a mais by vifcid mucous matter, the turpentines, by diffolving the mucus, promote the expulsion of the fand; but where a calculus is formed, they can do no fervice, and only ineffectually irritate or inflame the parts. In all cafes accompanied with inflammation, these juices ought to be abstained from, as this fymptom is encreafed, and not unfrequently occafioned by them. It is observable, that the turpentines impart, foon after taking them, a violet fmell to the urine; and have this effect, though applied only externally to remote parts ; particularly the Venice fort. This is accounted the most powerful as a diuretic and detergent; and the Chian and Strafburgh as corroborants : the Strafburgh is an ingredient in the mercurial pills and Locatellus's balfam, and the Chian in mithridate and theriaca [L.] The common turpentine, as being the most offensive, is rarely given internally; its principal use is in platters and ointments among farriers, and for the distillation of the oil, or fpirit, as it is called. The dole of these juices is from a fcruple to a dram and a half. They are

most commodiously taken in the form of a bolus, or diffolved in watery liquors by the mediation of the yolk of an egg or mucilage. Of the distilled oil, a few drops are a fufficient dose. This is a most potent, stimulating, detergent diuretic, often greatly heats the constitution, and requires the utmost caution in its exhibition.

TERRA JAPONICA, vide JA-PONICA.

TERRA LEMNIA et SILESI-ACA, vide Bolus.

THEÆ folia [E.] Tea; the leaves of a thrub (thea frutex, folio cerafs, flore rofæ fylvestris, Ec. Kampf.) cultivated in China.

The feveral forts of tea met with among us, are the leaves of the fame plant, collected at different times, and cured in a fomewhat different manner. The fmall young leaves very carefully dried, are the finer green. The older afford the ordinary green and bohea. The two first have a fensible flavour of violets; the other of roles. The. former is the natural odour of the plant ; the latter, as Neumann obferves, is probably introduced by Some of the dealers in this art. commodity in Europe, are not ignorant that bohea tea is imitable by the leaves of certain common plants, artificially tinctured and impregnated with the role flavour. The tafte of both forts is lightly bitterifh, fubaftringent, and fomewhat aromatic. The medical virtues attributed to these leaves, are fufficiently 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 flomach : the diuretic, diaphoretic, and other virtues which they Rave

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have been celebrated for, depend more on the quantity of warm fluid, than any particular qualities which it gains from the tea. Nothing arifes in diffillation from either fort of tea with rectified fpirit; water elevates the whole of their flavour.

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THLASPIS, femen. Treacle, or mithridate, mustard; the feeds [L.]

Two forts of thlapfi are ufed promifcuoufly, thlapfi arven/e filiquis latis C. B. and the thlapfi arven/e vaccariæ incano folio majus C. B. they both grow wild, the latter most plentifully. These feeds have an acrid biting taste like common mustard, with which they agree in medical qualities. Their principal use is as ingredients in the compofitions whose name they bear.

THUS MASCULUM, vide OLIBANUM.

THUS VULGARE [L. E.] Gommon frankincenfe; a folid, brittle refin, brought to us in little glebes or maffes, of a brownifh, or yellowifh colour on the outfide, internally whitifh, or variegated with whitifh fpecks; of a bitterifh, acrid, not agreeable tafte, without any confiderable fmell. It is fuppofed to be the produce of the pine tree which yields the terebinthina communis; and to concrete on the furface of the terebinthinate juice foon after it has iffued from the plant.

It is an ingredient in mithridate, the gum platter, ftrengthening platter, and ftomach plafter [L.]

THYMI folia: Thymi vulgaris folio tenuiore C. B. Common thyme; the leaves [E.]

This plant is frequent in our gardens, and flowers in June and July. It has an agreeable aromatic fmell, and a warm pungent taffe; which it imparts by infusion to rectified fpirit, and fends over in distillation with water. Along with the water arifes an effential oil, extremely hot and pungent.

THYMI CITRATI folia : Serpylli foliis citri odore C. B. Lemonthyme; the leaves [L.]

This is found wild in dry mountainous places, but the fhops are fupplied from gardens. In tafte and fmell it is lefs acrid and more grateful than the common thyme. Its fmell, in particular, is remarkably different, approaching to that of lemons. It gives over its flavour in diffillation both with water and fpirit. With the former an elegant effential oil arifes. The diffilled fpirit is an agreeable aromatic cordial liquor, not inferior to any thing of this kind.

TILIÆ flores: Tiliæ fæminæ folio majore C. B. Tiliæ Europææ Lin. The lime or linden tree; its flowers [L. E.]

The lime tree has been much valued on account of its quick growth and pleafant shade; it flowers in July, and lofes its leaves foon after. The flowers are made ufe of chiefly on account of their agreeable flavour, which water extracts from them by infusion, and elevates in diffillation. Among the writers on the materia medica, they have the character of an antiepileptic, and a specific in all kind of fpalms and pains. Frederick Hoffman relates, that he knew a chronical epilepfy cured by the use of an infusion of these flowers drunk as tea.

THYMELÆÆ baceæ: Thymelææ foliis lini C. B. Daphnes Gnidii Lin. Spurge flax; its berries, called grana enidia.

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TITHYMALI radix. Euphorbiæ Paraliadis Lin. Spurge; the root. Several forts of fpurge are mentioned in catalogues of the materia medica. The Edinburgh college, in a former edition, retained two (ESULA MAJOR, titbymalus palustris fruticofus C. B. German fpurge; and ESULA MINOR, titbymalus foliis pini C. B. pine-fpurge): both the Edinburgh and London colleges have now rejected them all.

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The fpurges and grana cnidia are extremely acrid, irritating cathartics, and operate with fo much violence as to be altogether unfit for internal ufe.

TINCAR, vide BORAX.

TORMENTILLÆ radix : Tormentillæ fylvestris C. B. Tormentillæ eredæ Lin. Tormentil, or septfoil; the root [L. E.]

Tormentil is found wild in woods and on commons. It has long flender stalks, with ufually feven long narrow leaves at a joint; the root is for the most part crooked and knotty, of a blackish colour on the outfide, and reddifh within. This root has an auftere flyptic taffe, accompanied with a flight kind of aromatic flavour. It is one of the most agreeable and efficacious of the vegetable aftringents, and is employed with good fuccefs in all cafes where medicines of this clafs are proper. It is more uled, both in extemporaneous prefcription and in officinal composition, than any of the other ftrong vegetable aftringents. It is an ingredient in the two compound powders of bole [L.] the two powders and electary of fcordium [L.] the compound white decoction [E.] and Japonic confection [E.] A tincture made from it with rectified spirit possesses the whole altringency and flavour of

the root, and lofes nothing of either in infpiffation.

TRAGACANTHA, vide GUMMI TRAGACANTHÆ.

TRICHOMANIS folia : Trichomanis sive polytrichi officinarum C. B. Asplenii Trichomanis Lin. English maidenhair; the leaves [L. 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 fhady places. The leaves have a mucilaginous, fweetish, subastringent taste, without any particular flavour; they are elteemed useful in diforders of the breaft proceeding from a thickness and acrimony of the juices; and are likewife fupposed to promote the expectoration of tough phlegm, and to open obstructions of the vifcera. They are usually directed in infusion or decoction, with the addition of a little liquorice. A fyrup prepared from them has frequently supplied the place of that made from the adianthum verum : fome have fubstituted a still cheaper ingredient, and perhaps much to the difadvantage of the medicine ; both the maiden-hairs yielding little more than a mucilaginous juice, greatly refembling the fubflitute made use of. The fyrup brought from abroad has an admixture of orange flower water.

TRIFOLII PALUDOSI folia: Trifolii palustris C; B. Menyanthis trifoliatæ Lin. Marsh trefoil, or buck beans; the leaves [L.E.]

This plant grows wild in moift marfhy places; it has three oval leaves, ftanding together upon one pedicle which iffues from the root; their tafte is very bitter, and fomewhat naufeous. Marfh trefoil is

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an efficacious aperient and deobftruent, promotes the fluid fecretions, and, if liberally taken, gently loofens the belly. It has gained great reputation in fcorbutic and fcrophulous diforders: 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 fome weeks. Boerhaave relates, that he was relieved of the gout by drinking the juice mixed with whey.

TRISSAGO, v. CHAMÆDRYS.

TRITICI farina, amylum, furfur: Tritici vulgaris glumas triturando deponentis J. B. Wheat; the meal or flour, and flarch [L. E.] (prepared from the meal by maceration in fresh quantities of water) and bran [E.]

Wheat, a common article of our food, is more glutinous and nutritious than moft other kinds of grain. The flour, or the flarch, prepared from it, forms with water a foft vifcid fubflance, which has been taken with good fuccefs in diarrhœas and dyfenteries. Starch is an ingredient in the compound powder of gum tragacanth and the white pectoral troches [L.] and gives name to a lohoch [E.]

Bran contains, befides the hufks, or fhells of the wheat, a portion of its farinaceous matter. This is lefs glutinous than the finer fleur, and is fuppofed to have a detergent quality. Infufions of bran are not unfrequently employed in this intention externally, and fometimes likewife taken inwardly.

BREAD, carefully toafted, 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 good fervice in a weak lax flate of the flomach and inteflines : and in bilious vomiting and purging, or the cholera morbus: examples are related in the Edinburgh effays of feveral cafes of this kind cured by it, without the ufe of any other medicine.

TUNICA, vide CARYOPHYL-LUS HORTENSIS.

TURPETHUM, Sive Turbith [E.] 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 outfide, and whitish within. The best is ponderous, not wrinkled, easy to break, and discovers a large quantity of refinous matter to the eye. Its tafte is at first fweetish; chewed for a little time, it becomes acrid. pungent, and naufeous. This root is a cathartic, not of the fafeft or most certain kind. The refinous matter, in which its virtue refides, appears to be very unequally diffributed, infomuch that fome pieces. taken from a fcruple to a dram, purge violently; while others, in larger dofes, have fcarce any effect. at all. An extract made from the root is more uniform in firength, though not fuperior, or equal to purgatives more common in the thops.

TUSSILAGINIS five farfaræ folia, flores : Tuffilagimis vulgaris C. B. Coltsfoot: the leaves and flowers [E.]

This grows wild in watery places, producing yellow flowers in February and March. Thefe foon fall off, and are fucceeded by large roundifh leaves, hairy underneath. Their tafte is herbaceous, fomewhat glutinous and fubacrid. Tuffilago flands recommended in coughs, and R 2 other other diforders of the breaft and lungs; the flowers are an ingredient in the pectoral decoction of the Edinburgh pharmacopœia.

TUTIA [L.E.] Tutty; an impure fublimate of zinc, or an argillaceous fubftance 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 fmall protuberances on the outfide, fmooth and yellowish within. Some pieces have a blueifh caft, from minute globules of zinc being thrown up by the heat in its me-tallic form. Tutty is celebrated as an ophthalmic, and frequently employed as fuch in unguents and collyria. It gives name to an officinal ophthalmic ointment [L. E.] See ZINCUM.

VALERIANÆ HORTENSIS MAJORIS radix: Valerianæ majoris odorata radice J. B. The great garden valerian; its roots [E.]

This is an oblong wrinkled root, with feveral fibres at the bottom, of a brownish or ash colour on the outfide, and whitish within; of an aromatic smell and taste, approaching to nard. It is deemed less efficacious as a medicine than the following.

VALERIANÆ SILVESTRIS radix : Valerianæ fylvestris majoris montanæ C. B. Valerianæ fylvestris majoris foliis angustioribus. Morison. plant ambelliff. Wild valerian (the narrow-leaved fort, growing on open, dry, mountainous places) its root [L. E.]

This root confifts of a number of ftrings or fibres matted together, iffuing from one common head; of a whitish or pale brownish colour: its smell is strong, like a mixture of aromatics with setinds; the taste unpleafantly warm, bitterifh, and fubacrid. There is another wild valerian, with broader leaves, of a deeper and thining green colour, met with in watery places. Both forts have hitherto been used indiferiminately, and Linnæus has joined them into one species, under the name of valeriana foliis omnibus pinnatis. Our college have restrained the fhops to the former, which is confiderably the ftronger, and lofes much of its quality if transplanted into fuch foils as the other naturally delights in. The roots produced in low watery grounds, have a remarkably faint fmell in comparifon of the others, and fometimes fcarce any at all. Wild valerian is a medicine of great use in nervous disorders, and is particularly ferviceable in epilepfies proceeding from a debility of the nervous system. It was first brought into efteem in these cases by Fabius Columna, who by taking the powdered root, in the dole of half a spoonful, was cured of an inveterate epilepfy after many other medicines had been tried in vain. Repeated experience has fince confirmed its efficacy in this diforder; and the present practice lays confiderable ftreis upon it. The common dofe is from a fcruple to a dram; in infusion from one to two drams. Its unpleafant flavour is molt effectually concealed by a fuitable addition of mace.

A tincture of valerian in proof fpirit and in volatile fpirit are kept in the fhops [L.] This root gives name also to a compound water [E.] and is an ingredient in the cephalic tincture [E.] epileptic powder [E.] mithridate and theriaca [L.]

VERATRUM, vide Hellebo-RUS ALBUS.

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VERBASCUM, vide TAPSUS BARBATUS.

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VERONICA FOEMINA, vide ELATINE.

VERONICÆ MARIS, seu Betonicæ Pauli folia: Veronicæ maris supinæ et vulgatissimæ C. B. Male speedwell; the leaves [E.]

This is one of the veronicæ which produce their flowers in clufters at the joints of the stalks. It is a rough procumbent plant, not unfrequently met with on dry commons, and in fandy grounds. In tafte, fmell, and medical virtues, it is fimilar 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 treatifes on this plant, recommending infusions of it, drunk in the form of tea, as very falubrious in many diforders, particularly those of the breaft.

VINCETOXICI, Asclepiadis, seu Hirundinariæ radix: Asclepiadis flore albo C. B. Swallow-wort, or tame poifon; the root [E.]

This is a native of the warmer climates : it is fometimes met with in our gardens, but rarely perfects its feeds. It is reckoned by botanifts, a species of apocynum, or dogfbane; from all the poifonous forts of which it may be diffinguished, by yielding a limpid juice, whilft that of the others is milky. The root has a firong fmell, especially when fresh, approaching to that of valerian, or nard; the tafte is at first sweetish and aromatic, but soon becomes bitterish, subacrid, and nauseous. Thisroot is effeemed fudorific, diuretic, and emmenagogue, and frequently employed by the French and German Phyficians as an alexipharmic, fometimes as a fuc-

cedaneum 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 indifputably preferable to it.

VINUM. Wine; the fermented juice of the grape. Among the great variety of wines in common use among us, five are employed in the shops as menstrua for medicinal simples.

Vinum album [L.] vinum album Hispanicum [E.] Mountain.

Vinum album Gallicum [E.] French white wine.

Vinum Canarinum [L. E.] Canary or fack.

Vinum Rhenanum [L. E.] Rhenifh.

Vinum rubrum [L.] 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 confider only their effects on the human body. These are, to chear the fpirits, warm the habit, promote perspiration, render the veffels full and turgid, raise the pulse, and quicken the circulation. The effects of the full-bodied wines, are much more durable than those of the thinner; all fweet wines, as Canary, abound with a glutinous nutritious fubstance; whilft the others are not nutrimental, or only accidentally fo, by ftrengthening the organs employed in digettion. Sweet wines in general do not pais 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 aftringent quality, by which they ftrengthen the tone of the ftomach and intestines, and thus prove R4

prove ferviceable for reftraining immoderate fecretions: 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 examples or occasion gouty and calculous diforders; and that new wines of every kind have this effect.

VIOLÆ folia, flores: Violæ martiæ purpureæ flore fimplici odoro G. B. Violæ odoratæ Lin. The fingle March violet; its flowers [L.E.] and leaves [E.]

This is often found wild in hedges and fhady places, and flowers in March ; the fhops are generally fupplied from gardens. In our markets, we meet with the flowers of a different species, named by botanists viola martia major birfuta, inodora : thefe may be diffinguished from the foregoing by their being larger, of a pale colour, and of no imell. The officinal flowers have a very pleaiant fmell, and a deep purplish blue colour, denominated from them violet. They impart their colour and flavour to aqueous liquors : a fyrup made from the infusion has long maintained a place in the fhops, and proves an agreeable and ufeful laxative for children.

* VIOLÆ Tricoloris folia Lin. Panfies or heartfeafe: This plant has been lately recommended by Dr. Strack, a German phyfician, as a specific in the crusta lastea of children. He directs a handful of the freth, or half a dram of the dried leaves to be boiled in half a pint of milk, which is to be ftrained for ufe. This dofe is repeated mornufe. ing and evening. He observes, that when it has been administered eight days, the eruption ufually increafes confiderably, and the patient's urine acquires a fmell like that of cats. When the medicine has been taken a fortnight, the fourf begins to fall off in large fcales, leaving the fkin clean. The remedy is to be perfifted in, till the fkin has refumed its natural appearance, and the urine ceafes to have any particular fmell.

VIPERA [L. 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 poifon of this ferpent is confined to its mouth. At the bafis of the fangs, or long teeth with which it wounds, is lodged a little bag containing the poifonous liquid ; a very minute portion of which, mixed immediately with the blood, proves fatal. Our viper-catchers are faid to prevent the mischiefs otherwife following from the bite, by rubbing oil olive warm on the part. The flefh of the viper is perfectly innocent ; and firongly recommended as a medicine of extraordinary fervice in fcrophulous, leprous, and other obflinate chronical diforders : its virtues however, in these cases, are probably too much exaggerated. The viper is doubtless an high nutritious food; and hence in some kinds of weakneffes, and emaciated habits, is not undefervedly looked upon as a good reftorative. To answer any valuable purposes, fresh vigorous vipers (not fuch as have been long kept alive after they are caught) should be liberally used as food. The wines and tinctures of them can fcarce be supposed to receive any confiderable virtue from the animal; the dry fielh brought us from abroad, is entirely infignificant.

In the fhops, a broth is directed to be prepared from frefh vipers, and a vinous tincture from dried ones [L.]: the dried flefh is alfo an ingredient in theriaca, and the fat in the ointment of tutty [L.] this fat being fuppofed peculiarly ufeful ful in diforders of the eyes, for which that ointment is defigned.

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VIRGÆ AUREÆ folia: Virgæ aureæ angustifoliæ, minus ferratæ C. B. Solidaginis Virgæ aureæ Lin. Golden rod; the leaves [E.] This is found wild on heaths and in woods, producing fpikes of yellow flowers in August. The leaves have a moderately astringent bitter taste, and hence prove ferviceable in debility and laxity of the viscera, and diforders proceeding from that cause.

VISCI QUERNI lignum folia: Vifci baccis albis C. B. Vifci albi Lin. Miffeltoe; the wood and leaves [E.]

This is a bufhy 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 feeds that flick 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 poifons. Of late it has been celebrated as a specific in epilepfies, palfies, &c. virtues, to which it were greatly to be wished that experience gave any countenance.

VITEX, vide AGNUS CASTUS.

VITIS VINIFERA. The vine tree. The leaves of this tree were formerly celebrated as aftringents, but have for a long time been entirely difregarded : their tafte is herbaceous, with only a flight

roughneis. The trunk of the tree, wounded in the fpring, yields a clear, limpid, watery juice : this tear of the vine has been accounted excellent for fore eyes ; and by fome recommended likewife in ardent and malignant fevers, and as a diuretic. The flowers have a pleafant fmell, which water elevates from them in diffillation; along with the water, a fmall portion of an elegant effential oil is faid to arife, possessing in great perfection the fragrance of the flowers. The unripe fruit is of a very harfh. rough, four tafte : its expressed juice, called verjuice, omphacium, agresta [E.] was of great effeem among the ancients; and ftill continues fo in fome places, as a cooling altringent medicine. A' rob and fyrup were formerly prepared from it. The ripe fruit or grapes, of which there are feveral kinds, properly cured and dried, are the raifins and currants of the fhops: the juice by fermentation affords wine, vinegar, and tartar; of all which in their places.

VITRIOLUM. Vitriol is a faline cryftalline concrete, composed of metal, and an acid fimilar to those of support and alum. There are but three metallic bodies, which this acid is capable of perfectly diffolving or being united with into a crystalline appearance, zinc, copper, and iron. With the first it forms a white, with the fecond a blue, and with the third a green falt.

VITRIOLUM ALBUM [L. E.] White vitriol, or vitriol of zinc; found in the mines of Goflar, fometimes in transparent pieces, but more commonly in form of white efflorescences, which are dissolved in water, and asterwards reduced by evaporation and crystallization into

into large maffes. We rarely meet with this fort of vitriol pure ; after the zinc, which is its proper bafis, has been revived by inflammable fluxes, there remains a fubftance which is attracted by the magnet, and discovers itself, on other trials alfo, to be iron : a folution of the vitriol deposits, on standing, an ochery fediment, which generally gives a blue tincture to volatile alkalies, and hence appears to contain copper. White vitriol is fometimes given from five or fix grains to half a dram, as an emetic; it operates very quickly, and if pure, without violence. Externally, it is employed as an ophthalmic, and often made the basis of collyria, both in extemporaneous prefeription, and in difpenfatories. A folution of it is directed in this intention both by the Edinburgh and London colleges.

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VITRIOLUM CORULEUM [L. E.] Blue vitriol, or vitriol of copper, falfely called Roman vitriol. Greatest part of the blue vitriol at prefent met with in the shops, is faid to he artificially prepared by uniting copper with the vitriolic acid. This falt has a highly auftere, acrid, and very naufeoustafte. It is a firong emetic, too violent to be exhibited with any tolerable degree of fafety. Its principal use is externally as an escharotic ; and for ftopping hæmorrhages, which it effects by coagulating the blood, and contracting the mouths of the veffels. It gives name to an officinal water for this intention.

VITRIOLUM VIRIDE [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 diffolving iron in the acid liquor,

which runs from certain fulphureous pyritæ, exposed for a length of time to the air. When pure, it is fimilar in quality to the officinal *fal* martis.

The green and blue vitriols (as well as the white) are in many places found native in the earth ; though ufually in this flate, neither fort is free from an admixture of the other: hence vitriols are met with of all the intermediate colours betwixt the grafs green of the one, and the fapphire blue of the other. The acid of thefe falts has the greatest affinity with zinc, next to this with iron, and with copper the leaft of all. Hence, folutions 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 polifhed iron to folutions 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.

ULMARIÆ, seu Reginæ prati folia, flores: Ulmariæ barbæ cupri floribus compactis C. B. Spirææ Ulmariæ Lin. Meadow-sweet, or queen of the meadows; the leaves and flowers [E.]

This herb is frequent in moift meadows, and about the fides of rivers. It flowers in the beginning of June, and continues in flower a confiderable time. The flowers have a very pleafant flavour, which water extracts from them by infufion, and elevates in diftillation. The leaves are herbaceous.

URTICÆ MAJORIS VUL-GARIS folia, femen : Urticæ racemiferæ majoris perennis Raii. Stinging nettle; the leaves and feeds [E.]

UVÆ

UVÆ PASSÆ [L.] majores [E.] Raifins of the fun; the dried grapes of the witis Damascena.

Part II.

UVÆ PASSÆ minores [E.] Currants; the dried grapes of the with Corinthiaca.

The principal use of these is as an agreeable sweet; they impart a very pleafant flavour both to aqueous and spirituous menstrua. The seeds or shones are supposed to give a disagreeable reliss, and hence are generally directed to be taken out; but I have not found that they give any taste at all. The raisins of the fun are an ingredient in the pectoral decortion, tincture of sena, and ftomachic tincture [L.]

WINTERANUS 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 failors then employed the bark as a fpice, and afterwards found it ferviceable in the fcurvy; for which purpole it is, at prefent alfo, fometimes made ufe of in diet-drinks. The true Winter's bark is not often met with in the fhops, canella alba being generally substituted for it, and by many reckoned to be the fame. There is nevertheless a confiderable 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 taftes much warmer and more pungent.

ZEDOARIA [L. E.] 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 forts have an agreeeble fragrant fmell, and a warm, bitterift aromatic tafte.

In diffillation with water, it yields an effential oil, poffesting the fmell and flavour of the zedoary in an eminent degree ; the remaining decoction is almost fimply bitter. Spirit likewife brings over fome fmall fhare of its flavour ; neverthelefs the fpirituous extract is confiderably more grateful than the An extract made zedoary itself. from it with proof spirit (which is inferior to that prepared with rectified (pirit) is an ingredient in the confectio cardiaca [L.] the root in fubstance enters the confectio Paulina, mithridate, and theriaca [L.]

ZIBETHUM [E.] Civet; a foft unctuous fubftance, of a white, brown, or blackifh colour, brought from the Brazils, the coaft of Guinea, and the Eaft Indies. It is met with in certain bags, fituated in the lower part of the belly of an animal faid to be of the cat kind. The chief use of this drug is in perfumes. It is rarely, if ever, employed for any medicinal purpose.

ZINCUM. Zinc; a metal, differing from all the other bodies of that class, in being inflammable per se, fublimable into flowers which afterwards remain fixed in the ftrongeft fire, foluble in every acid, not miscible in fusion with fulphur, changing copper into a yellow metal, brafs. Several productions of this metal, though not generally known to be fuch, 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

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form with oily fubftances an ufeful unguent, and with rofe-water, and the like, elegant collyria, for defluxions of thin fharp humours upon the eyes: they are moderately aftringent; and act, if the levigation have been duly performed, without acrimony or irritation. Taken internally, they prove emetic.

ZINGIBER [L. E.] Amomum Zingiber Lin. Ginger; a root brought from China and the Eaft and Weft Indies; of a fragrant fmell, and a hot, biting, aromatic tafte. Rectified fpirit extracts its virtues by infufion, in much greater perfection than aqueous liquors. The latter elevate its whole flavour in diffillation, the former little or nothing. Ginger is a very ufeful fpice, in cold flatulent cholics, and in laxity and debility of the inteffines. It does not heat fo much as those of the pepper kind, but its effects are more durable. It gives name to an officinal fyrup [L. E.] and enters a great number of the compositions.

Part II.

General titles including several simples.

The five opening roots :

The five emollient herbs :

The four cordial flowers :

The four greater hot feeds :

The four leffer hot feeds :

The four greater cold feeds :

Smallage, Afparagus, Fennel, Parfley, Butchers broom

Marfhmallows, Mallows, Mercury, Pellitory of the wall, Violets.

Borage, Buglofs, Rofes, Violets.

Anife, Caraway, Cummin, Fennel.

Bishopsweed, Stone parsley, Smallage, Wild carrot.

Water melons, Cucumbers, Gourds, Melons.

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The four leffer cold feeds :

The four capillary herbs :

Succory, Endive, Lettuce, Purflane.

Maidenhair, English maidenhair, Wall rue, Ceterach.

The four carminative flowers: {

Camomile, Feverfew, Dill, Melilot.

The fimples of each of the above claffes 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 pharmacopocias, though still retained in foreign ones.

General rules for the collection and prefervation of simples.

ROOTS.

ANNUAL roots are to be taken up before they fhoot out falks or flowers: biennial ones, chiefly in the autumn of the fame year in which the feeds were fown: 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] fhady, airy place, till fufficiently dried. The thicker roots require to be flit longitudinally, or cut transversely into thin flices. Such roots as lofe their virtues by exficcation [or are defired to be preferved in a fresh state, for the greater conveniency of their use in certain forms] are to be kept buried in dry fand [E.]

THERE are two feasons, 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 confiderably 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 confequently shrivel much in drying, and are rather more difficultly preferved, it is commonly thought most advisable ble to take them up in autumn. No rule however can be given, that fhall obtain univerfally. Arum root is taken even in the middle of fummer, without fufpicion of its being lefs active than at other feafons; while angelica root is inert during the fummer, in comparifon of what it was in the autumn, fpring, or winter.

HERES and LEAVES.

HERBS are to be gathered when the leaves have come to their full growth, before the flowers unfold; but of fome plants the flowery tops are preferred. They are to be dried in the fame manner as roots [E.]

For the gathering of leaves, there cannot perhaps be any univerfal 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 fome 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 fame 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 beat, but from the Brong action of the folar light, by which last their colours are very liable to be altered or deftroyed, much more fo 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 preferved in greatest perfection, when they are dried haftily, by a heat of common fire as great as that which the fun can impart: the juicy ones in particular require to be dried by heat, being otherwife fubject to turn black. Odoriferous herbs, dried by fire till they become friable, difcover indeed, in this arid ftate, very little fmell; not that the odorous matter is diffipated ; but on account of its not being communicated from the perfectly dry fubject, to dry air ; for as foon as a watery vehicle is fupplied, whether by infufing the plant in water, or by exposing it for a little time to a moift air, the odorous parts begin to be extracted by virtue of the aqueous moifture, and difcover themfelves in their full force.

Of the use of heat in the drying of plants, we have an inftance in the curation of tea among the Chinefe. According to the accounts of travellers, the leaves, as foon as gathered, are brought into an apartment furnished with a number of little furnaces or floves, each of which is covered with a clean fmooth iron plate. The leaves are fpread upon the plates, and kept rolling with the hands till they begin to curl up about the edges; they are then immediately fwept off on tables, on which one perfon continues to roll them, while another fans them that they may cool haftily : this process is repeated twoor three times, or oftener, according as the leaves are disposed to unbend on flanding.

FLOWERS.

FLOWERS.

FLOWERS are to be gathered when moderately expanded, on a clear dry day, before noon. Red rofes are taken before they open, and the white heels clipt off and thrown away [E.]

THE quick drying, before recommended for the leaves of plants, is more particularly proper for flowers; in most of which both the colour and fmell are more perifhable than in leaves, and more fubject to be impaired by flow exficcation. Of the flowers which come fresh into the apothecaries' hands, the only ones employed dry in the London pharmacopœia, are red rofes; and these, in all the compositions in which they are used in a dry state, are expressly ordered to be dried hastily, (celeriter arefacte.) One of the most valuable aromatics of European growth, faffron, is a part of a flower, dried on paper on a kind of kiln, with a heat fufficient to make it fweat, with care only not to endanger the fcorching of it,

It may here be obferved, that the virtues of flowers are confined to different parts of the flower in different plants. Saffron is a fingular production, growing at the end of the ftile or piftil : the active part of camomile flowers is the yellow difk, or button in the middle; that of lilies, rofes, clove-july-flowers, violets, and many others, the petala or flower-leaves; while rofemary has little virtue in any of thefe parts, the fragrance admired in the flowers of this plant refiding chiefly in the cups.

SEEDS and FRUITS.

SEEDS should be collected when ripe and beginning to grow dry, before they fall off fpontageoufly. Fruits alfo are to be gathered when ripe, unlefs they are ordered to be otherwife [E.]

Or the fruits whole collection comes under the notice of the apothecary, there are few which are ufed in an unripe flate : the principal is the floe, whole virtue as a mild aftringent, is greatly diminished by maturation. The fruit of the orange, tree raifed in our gardens or green-houses, is fometimes gathered in a flate of much greater immaturity, foon after it is formed on the tree, before it has acquired its acid juice; at this time it proves an elegant aromatic bitter, greatly refembling what are called Curaffao oranges, which appear to be no other than the fame fruit gathered at the fame period. in a warmer climate.

The rule for collecting feeds is more general than any of the others, all the officinal feeds being in their greatest perfection at the time of their maturity. As feeds 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 grois expressible oil, as those commonly called the cold. feeds, fhould never be exposed to any confiderable heat; for this would haften the rancidity, which, however carefully kept, they are very liable to contract. Seeds are best preferved in their natural hufks, or coverings, which should be feparated only at the time of using; the husk, or cortical part ferving to defend the feed from being injured by the air.

WOODS and BARKS.

THE most proper feafon for the felling of woods, or shaving off their their barks, is generally the winter [E.]

THE only woods of our own growth, retained in the catalogues of fimples in our pharmacopœias, are the juniper and box; the former of which is rarely or never kept in the fhops, or employed in practice; the other is procured from the turner, and it is indifferent at what feafon it has been cut down, being at all times fufficiently fit for the only use it is applied to, the yielding of an empyreumatic oil by diffillation in a ftrong fire.

Of the barks of our own growth, the London college has not retained one: in the Edinburgh pharmacopœia there are feveral, viz. thofe of the ash tree, birch tree, oak, elm, floe, wild fervice, black alder, and elder, which, however, have been fo rarely used in medicine, that the feafons of their greatest perfection cannot be afcertained from experience. It may be doubted, whether barks be not generally more replete with medicinal matter in the fummer and fpring than in winter. The barks of many trees are, in fummer, fo much loaded with refin and gum, as to burft fpontaneoufly, and difcharge the redundant quantity. It is faid that the bark of the oak anfwers beft for the tanners, at the time of the rifing of the fap in fpring; and as its ufe in tanning depends on the fame aftringent quality for which it is ufed in medicine, it fhould feem to be fitteft for medicinal purpofes alfo in the fpring. It may be obferved, likewife, that it is in this laft feafon 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 [E.]

THE animals of the London Pharmacopœia are only millepedes and the viper; to which the Edinburgh adds fnails, earthworms, and bees. Whatever virtues thefe bodies may have, they are fuppofed to be beft when they have attained to their common full growth. As there are no diffinctions of maturity or immaturity in the mineral kingdom, the only rule for directing our choice here must be, the purity of the fubjects from any mixture of other bodies. None of them are ever to be ufed in an impure flate.

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PART III.

Pharmaceutical Preparations.

CHAPTER I.

THE MORE SIMPLE PREPARATIONS.

TERREORUM, aliorumque quæ aqua non diffolvuntur corporum præparatio. The preparation of EARTHY and fuch other pulverable bodies as will not diffolve in water.

THESE fubftances are first to be pulverifed in a mortar, and then levigated with a little water, upon a hard and fmooth marble, into an impalpable powder: this is to be dried upon a chalk stone, 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. Chelx cancrorum, crabs claws. L. E. Corallium, coral. L. E. Creta, chalk. L. E.

Lapis bezoar : bezoar flone ; which is to be moistened in the levigation, with spirit of wine instead of water. L. Lapis calaminaris, calamine flone, previoufly calcined for the use of those who make brass. L. Where this is not to be had, the mineral may be calcined by heating three times red-bot, and quenching it as often in water. E.

Lapis hæmatites, blood-flone. L. E. Lapis lazuli. E.

Margaritæ, pearls. L. E.

S

Oculi cancrorum, crabs eyes, fo called. L. E.

Offreorum tefta, oyfter fhells, wafbed clean from dirt. L. Thefe may also be prepared by exposing them for some days to the fun, and then rubbing them in a marble mortar till they come into a kind of paste; this is to be again dried in the fun, and afterwards rubbed into an impalpable powder: the bollow shells are preferred [E.] on account of their containing more of the fine white earth, in proportion to the outward rough coat, than the thinner flat ones : the rough matter appears to be largely impregnated with marine falt.

Pharmaceutical Preparations.

Ovorum teftæ, egg shells, freed by boiling, from the skin that adheres to them. L. Succinum, amber. L.E.

Tutia, tutty. L. E.

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In preparing antimony, calamine and tutty, particular care ought to be taken to reduce them into the most subtile powder peffible. L.

WHERE large quantities of the foregoing powders are to be prepared, it is cuffomary, inftead of the flone and muller, to employ hand-mills made for this ufe, confifting of two flones, the uppermoft of which turns horizontally upon the lower, and has an aperture in the middle, for the conveniency of fupplying frefh matter, or of returning that which has already paffed, till it is reduced to a proper degree of finenefs.

For the levigation of hard bodies, particular care fhould be taken, whatever kind of inftruments is made use of, that they be of fufficient hardness, otherwise they will be abraded by the powders. The hæmatites, a hard iron ore, is most conveniently levigated betwixt two iron planes; for if the common levigating stones be made use of, the preparation, when finished, will contain almost as much of foreign matter from the instrument as of the hæmatites.

It has been cultomary to moiften feveral powders in levigation, with rofe, balm, and other diffilled waters. These nevertheless have no advantage over common water, fince in the fubsequent exficcation they must necessarily exhale, leaving the medicine possessed of no other virtue than what might be equally expected from it when prepared with the cheaper element.

Some few fubitances indeed are more advantageoufly levigated with

fpirit of wine than with water. Thus bezoar has the green colour, ufually expected in this coftly preparation, confiderably improved thereby. A little fpirit may be added to the other animal fubitances, 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, fometimes happens when they are levigated with water only. Crabs eyes, which abound with animal gelatinous matter, are particularly liable to this inconvenience.

The caution given before for reducing antimony, calamine and tutty, to the greatest fubtilty poffible, demands particular attention. The tenderness of the parts to which the two last are usually applied, requires them to be perfectly free from any admixture of grofs irritating particles. The first, when not thoroughly comminuted, might not only, by its sharp needlelike fpicula, wound the ftomach, but likewife anfwers little valuable purpole as a medicine, proving either an ufelefs load upon the vifcera, or at belt patting off without any other fentible effect than an increase of the groffer evacuations : whilft, if reduced to a great degree of finenefs, it turns out a medicine of confiderable efficacy.

The most fuccessful method of obtaining these powders of the requifite 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 fome time, fuspended in the fluid; a process received in the Edinburgh pharmacopaia, and there directed as follows.

Edinb.

A quantity of water is to be poured upon the levigated powder, in a large veffel, and the veffel repeatedly

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The more simple Preparations. Chap. I.

peatedly fhaken, that the finer parts of the powder may be diffuled through the water: the liquor is then to be poured off, and fet by till the powder fettles. The gross part, which the water would not take up, is to be further levigated, and treated in the fame manner.

After this method are prepared antimony, calamine, tutty, bloodstone, chalk, and lapis lazuli.

By this method, which is that commonly practifed in the preparation 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 coarfer matter fettles at first, and the finer powder continues fuspended in the water, longer and longer, in proportion to the degree of its finenefs. The fame process may likewife be advantageoufly applied to other hard pulverable bodies of the mineral kingdom, or artificial preparations of them; provided they be not foluble in, or specifically lighter than water. The animal and abforbent powders, crabs claws, crabs eyes, oyster shells, egg shells, chalk, pearl, coral and bezoar, are not well adapted to this treatment ; nor indeed do they require it. Thefe subftances are readily foluble in acid juices without much comminution. If no acid be contained in the first passages, they are apt to concrete, with the mucous matter ufually lodged there, into hard indiffoluble maffes; the greater degree of fineness they are reduced to, the more are they disposed to form fuch concretions, and enabled to obstruct the orifices of imall vesiels. See page 62.

250 AXUNGIÆ PORCINÆ, SEVIque OVILLI purificatio.

The purification or trying of hogs lard and mutton fuet.

Lond.

Chop them into fmall pieces, and melt them by a gentle heat, with the addition of a little water; then firain 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 fomewhat prolongs the process, and is likewife apt to be in part imbibed by the fat. The Edinburgh difpenfatory directs the fat to be first freed from the fkins, blood veffels, and fibres, then washed in fresh quantities of water till it no longer give the liquor any bloody tinge, afterwards melted, ftrained, and kept close from the injuries of the air. The fhops are ufually fupplied with these fats ready prepared.

AXUNGIÆ VIPERINÆ curatio.

The purification of viper's fat. Lond.

Let the fat, feparated from the intellines, be melted by a gentle fire, and then prefled through a thin linen cloth.

THE quantity of this fat usually purified at a time, is fo fmall, that the heat may be easily regulated to as to prevent burning, without the addition of any water.

It is not neceffary, as Dr. Pemberton observes, to be very curious in picking out the fat. It is fufficient if the heart, liver, and other bloody parts be taken away; for the

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the reft of the membranes crifp up while the fat melts, fo as to be eafily feparated by ftraining.

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MELLIS DESPUMATIO.

The despumation or clarifying of honey.

Lond. and Edinb.

Let the honey be liquefied in a water-bath (that is, by fetting the veffel containing the honey in a veffel of hot water) and the fcum which arifes, 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.

SCII.LÆ COCTIO. The baking of fquills. Lond.

Let the fquill (freed from the outer fkin, and the hard part to which the little fibres adhere) be inclofed in a pafte, made of wheatflour and water, and baked in an oven, till the pafte become dry, and the fquill foft and tender throughout.

THIS preparation is as old as the theriaca, and is continued in our difpenfatory, for no other use than making the troches of fquills, which are one of its principal ingredients. The Edinburgh dispensatory having now dropt the theriaca, has dropt also the baked squills and the troches, and admitted them formerly only in compliance with cuf-

tom, giving expressly the preference to fquills moderately dried. The intention of baking the root is to abate its acrimony.

SCILLÆ EXSICCATIO. The drying of fquills. Lond.

Let the fquill, cleared from its outer fkin, be cut transversely into thin flices, and dried with a very gentle heat.

By this method, the fquill dries much fooner than when only its feveral 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 fkin, that impedes the exhalation of the moifture. The root lofes, in this process, four-fifths of its original weight; the parts which exhale, appear to be merely watery : hence fix grains of the dry root are equivalent to half a dram of it when fresh; a circumitance to be particularly regarded in the exhibition of this medicine. In the preceding editions of our dispensatory, a particular caution was given, not to use an iron knife for cutting fquills, but one of wood, ivory, or other bone : the foundation of this caution is faid to be not fo much that the fquill would receive any ill qualities from the iron ; as, that its acrid juice, adhering to the knife, might render a wound received by it extremely painful, or even dangerous.

RHABARBARI et NUCIS MOSCHAT Æ torrefactio. The roafling of rhubarb and nutmeg.

Lond. Roaft them with a gentle heat, until they become eafily friable.

NUTMEGS,

Chap. 1. The more simple Preparations.

NUTMEGS, in their natural fate, are fo foft and unctuous, as fcarce to be reducible into powder, a form in which they are occafionally wanted; and rhubarb is very difficultly fo, unlefs it be thoroughly dry. The torrefaction renders them eafily pulverable, and as foon as this point is obtained, fhould be immediately difcontinued, otherwife the drugs will be confiderably injured. This treatment is supposed by some to increase the astringency of the fubjects, perhaps on no very good foundation : it undoubtedly renders the rhubarb lefs purgative, and the nutmegs lefs aromatic. Both drugs may be reduced into fufficiently fine parts for most purposes, by means of a grater, without any alteration being made in their native quality.

SPONGIÆ USTIO. The burning of fponge. Lond.

Burn the fponge in a close earthern veffel, until it becomes black, and eafily friable : then powder it in a glass or marble mortar.

THIS medicine, now first received in the difpenfatory, has been in ufe for a confiderable time; and employed against scrophulous diforders, and cutaneous foulnefies, in dofes of a fcruple and upwards. Its virtues feem to depend upon a volatile falt, just formed, and combined with its own oil: if the fponge be diffilled with a ftronger heat, it yields a large proportion of that falt in its proper form. The falt is in this preparation fo far extricated, that if the burnt fponge be ground in a brais mortar, it corrodes the metal, fo as to contract a difagreeable taint, and fometimes an emetic quality.

Bees, earthworms, and other ani-

mal fubftances, have by fome been prepared in the fame manner, and recommended in different difeafes; but as thefe fubftances fall greatly fhort of fponge in the quantity of volatile falt producible from them by fire, they are probably inferior alfo in medicinal efficacy. Of all the animal matters that have been tried, raw filk is the only one which exceeds, or equals fponge, in the produce of falt.

A good deal of addrefs is requifite for managing this procefs in perfection. The fponge should be cut small, and beaten for some time in a mortar, that all the ftony matters may be got out, which compared with the weight of the fponge when prepared, will fometimes amount to a confiderable quantity. The burning should be discontinued as foon as ever the matter is belf the come thoroughly black. quantity put into the veffel at once be large, the outfide will be fufficiently burnt before the infide is affected; and the volatile falt of the former will in part escape, before that in the latter is begun to be formed. The best method of avoiding this inconvenience, feems to be, to keep the fponge continually ftirring, in fuch a machine as is used for the roafting of coffee.

CORNU CERVI CALCINA-TIO.

The calcination of hartshorn.

Lond.

Burn pieces of harthorn in a potter's furnace, till they become perfectly white; then powder and levigate them after the fame manner as the other earthy bodies.

The intention here is, totally to burn out and expel the oil, falt, and other volatile parts; fo as to leave only a white infipid animal earth. S 3 For

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For this purpole, a ftrong fire, and the free admission of air, are neceffary. The potter's furnace is directed merely for the fake of convenience; where this is not to be had, any common furnace or flove may be made to ferve : on the bottom of the grate fpread fome lighted charcoal, and above this lay the horns. The whole will burn vehemently: the vegetable matter is reduced to afhes; and the horns are burnt to whitenefs, ftill retaining their original form, by which they are eafily diffinguished from the other : they ought to be feparated as foon as grown cold, to prevent their imbibing any fixed falt from the vegetable ashes moistened by the air. The horns left after the distillation of the volatile falt and oil of hartshorn, are as proper for this use as any other; that process only collecting fuch parts as are here diffipated in the air.

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Calcined hartfhorn is the pureft of the animal abforbent powders; as being perfectly free from any glutinous or oily matter, with which most of the others abound. It appears nevertheles to be one of the weakest in abforbent power, or the most difficult of solution in acids.

PULPARUM EXTRACTIO. The extraction of pulps. Lond.

Unripe pulpy fruits, and ripe ones if dry, are to be boiled in a fmall quantity of water until they become foft: then prefs out the pulp through a firong hair fieve, and afterwards boil it down to due confiftence, in an earthen vefiel, over a gentle fire; taking care to keep the matter continually flirring, to prevent its burning.

The pulp of caffia fiftularis is in like manner to be boiled out from the bruifed pod, and reduced afterwards to a proper confifience, by evaporating the water.

The pulps of fruits that are both ripe and fresh, are to be pressed out through the fieve, without any previous boiling.

STYRACIS COLATIO. The straining of storax. Lond.

Soften ftorax calamita in hot water; then prefs it out betwixt warm iron plates; and feparate the ftorax, now purified, from the water.

THE ftorax commonly met with, stands greatly in need of purification. It contains a large quantity of woody matter, from which this process effectually frees it, though in other refpects liable to fome inconveniencies. The woody fubftance in fome measure defends the florax from the action of the prefs, and retains part of it; at the fame time that the florax is apt to fuffer a confiderable diffipation of its volatile parts, in which its fragrance and principal virtue confift. To prevent as much as possible this inconvenience, the operator ought carefully to avoid. using a greater heat than is ablolutely neceffary; and as foon as the ftorax is fufficiently foftened, to be expeditious in the ftraining of it. It has been queried whether this refin do not communicate fomewhat to the water it is boiled in ; as benzoine, with which it agrees in its other pharmaceutical characters, imparts to water a faline matter fimilar to the fublimed flowers. On trial it could not be observed that any faline matter was thus feparated from florax, though it impregnated the water confiderably with its fragrance.

Storax may be excellently purified by means of fpirit of wine, in which this refin totally diffolves, to as to pais through a filtre, the impurities alone being left. If the ftorax be afterwards wanted in a folid form, it may be recovered from this folution by gently distilling off the fpirit, which will elevate very little of its flavour, or by pouring to it a quantity of water. See chap. vi. fect. 3.

OPIUM COLATUM, vel EX-TRACTUM THEBAICUM. Strained opium, or the thebaic extract.

Lond.

Take of opium, cut into flices, one pound : diffolve it into the confiitence of a pulp, in a pint of boiling water, with care to prevent its burning : and whilft it remains quite hot, ftrongly prefs it from the feces through a linen cloth : the ftrained opium is then to be reduced, by a water-bath or other gentle heat, to its original confiftence.

Opium thus foftened by a fmall quantity of water, paffes the strainer entire, the feces only being left behind. If it were diffolved in a large quantity of water, its refinous and gummy parts would be separated from one another.

WHERE large quantities of opium are purified at once, the infpiffation is most commodiously performed in a water-bath : but finall quantities may be very fafely infpiffated, by placing the veffel immediately over a gentle fire, the matter being kept ftirring, and the veffel occasionally removed from the fire, whenever there is any fufpicion of its becoming too hot. The groffer impurities of the opium are by this process effectually feparated; but fome of its heterogeneous admixtures, confifting chiefly of duft and farinaceous matters, are fo fine, as partly to pais along with it through the pores of the strainer when dilated by the prefs; this manifeftly appears upon boiling the ftrained opium in water, and afterwards in spirit; when a confiderable quantity of earthy matter will be left, which is not foluble in either of those menstrua.

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THE OTHER GUMS, as ammoniacum, galbanum, afafætida, and the like, are purified after the fame manner, only here a larger quantity of water may be made use of without injury. If the refinous part happen to fubfide, take it out, and referve it to be added again towards the end of the infpissation, that it may unite with the reft into one uniform mais.

Any gum that melts eafily, as galbanum, may likewife be purified by including it in a bladder, and keeping it in boiling water, until the gum becomes foft enough to be prefied from its impurities through a canvas strainer. L.

In the ftraining of all the gums, care should be taken, that the heat be neither too great, nor too long continued; otherwife a confiderable portion of their more active volatile matter will be loft : an inconvenience which cannet, by any care, be wholly avoided : hence, as the faculty of Paris observes, the purer tears, unstrained, are preferable, for internal ufe, to the ilrained gums. The method of fostening 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

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thus liquefied fufficiently; both as exhalation is prevented during the liquefaction ; and the ftrained gum returns in cooling to its original confistence, without the further heat which is requifite in the other method for evaporating the water. Opium is perhaps lefs injured by heat than the rest of the gums, the virtues of this drug feeming to refide more in its fixed than in the volatile parts : it is neverthelefs expedient, that the fmell of the opium, which affords an uleful mark of its genuineness be as much as poslible preferved ; this, if the quantity of water were large, would be destroyed by the long evaporation which would then become neceffary.

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IN the Edinburgh difpenfatory, opium, and the fouler kinds of aloes, are directed to be purified, by diffolving them in a fufficient quantity of water with a gentle heat, ftraining the folutions, and evaporating them to the confiftence of honey. The other gums are not required to be purified.

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It were to be wifhed that the confiftence, to which the ftrained folutions are to be reduced, was determined with more precifion, particularly in regard to opium, that there might be as little uncertainty as poffible in its dofe.

Part III.

MILLEPEDARUM PRÆPA-RATIO.

Preparation of millepedes. Lond.

The millepedes are to be inclosed in a thin canvas cloth, and fufpended over hot fpirit of wine, in a close vessel, till they are killed by the steam, and rendered friable.

Edinb.

Let them be included in a proper veffel, and dried with a very gentle heat.

BOTH thefe are convenient ways of rendering millepedes pulverable, without endangering any lofs of fuch virtues as they may posses.

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CHAPTER II.

Substances extracted from vegetables by expression.

SECT. I.

Juices.

UICES are obtained from the fucculent parts of plants, by including them, after being properly cut, bruifed, &c in a hair bag, and preffing them, betwixt wooden cheeks, in the common fcrew prefs, as long as any liquor drops from them. Called balm of Gilead, have fcarcely any thing of the flavour of the plants, and feem to differ little from decoctions of them, made in water, boiled till the volatile odorous parts have been diffipated. Many of the odoriferous flowers, as the lily, violet, hyacinth, not

THE harder fruits require to be previoufly well beaten or ground; but herbs are to be only moderately bruifed; for if thefe be over bruifed, a large quantity of the herbaceous matter will be forced out along with the juice. Hempen or woollen bags are apt to communicate a difagreeable flavour; the threads of thefe likewife fwell in proportion as they imbibe moifture, fo as in great meafure to prevent the free percolation of the juice.

The fluids thus extracted from fucculent fruits, both of the acid and fweet kind, from moft of the acrid herbs, as fcurvy-grafs and water creffes, from the acid herbs, as forrel and wood-forrel, from the aperient lactefcent plants, as dandelion and hawkweed, and from fundry other vegetables, contain great part of the peculiar tafte and virtues of the refpective fubjects. The juices, on the other hand, extracted from moft of the aromatic herbs, as those of mint and the fragrant Turkey balm, commonly any thing of the flavour of the plants, and feem to differ little from decoctions of them, made in water, boiled till the volatile odorous parts have been diffipated. Many of the odoriferous flowers, as the lily, violet, hyacinth, not only impart nothing of their fragrance to their juice, but have it totally deftroyed by the previous bruifing. From want of fufficient attention to these particulars, practitioners have been frequently deceived in the effects of preparations of this clais: juice of mint has been often prescribed as a stomachic, though it wants those qualities, by which mint itfelf, and its other preparations, operate in that intention.

The juices, thus forcibly prefied out from plants, differ from thole which flow fpontaneoufly or from incifions; thele laft confifting chiefly of fuch fluids as are not diffufed through the whole fubflance of the vegetable fubject, but elaborated in diffinct veffels, or fecreted into particular receptacles. From poppy heads, flightly wounded, there iffues a thick milky liquor, which dries by a moderate warmth, into opium; whilft the juice obtained from them by preffure is of a dark green colour, and far weaker virtue.

Juices, newly expressed, are generally

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nerally thick, vifcid, and very impure: by colature, a quantity of grofs matter is feparated, the juice becomes thinner, limpid, and better fitted for medicinal purpofes, though as yet not entirely pure. On flanding, it becomes again turbid, and apt to run into a fermentative or putrefactive flate. 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 preferving these liquors, is, to let the strained juices stand in a cool place, till they have depofited their groffer feces, and then gently pais them feveral times through a fine strainer till perfectly clear; when about one-fortieth part their weight of good fpirit of wine may be added, and the whole fuffered to stand as before : a fresh fediment will now be deposited, from which the liquor is to be poured off, strained again, and put into fmall bottles that have been washed with spirit and dried. A little oil is to be poured on the furface, fo as very nearly to fill the bottles, and the mouths closed with leather, paper, or flopt with ftraw, as the flafks in which Florence wine is brought to us : this ferves to keep out duft, and fuffers the air, which in process of time arifes from all vegetable liquors, to efcape ; which air would otherwife endanger the buriting of the glaffes, or, being imbibed afreih, 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 fand. By this method, juices may be preferved for a year or two ; and fome 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 fubjects: there are equal differences in regard to their preferving those virtues, and this independently of the volatility of the active matter, or its disposition to exhale. Even the volatile virtue of fcurvy-grafs may, by the above method, be preferved almost intire in its juice for a confiderable time ; while the active parts of the juice of the wild cucumper quickly separate and settle to the bottom, leaving the fluid inert. Juices of arum root, iris root, bryony root, and fundry other vegetables, throw off in like manner their medicinal parts to the bottom.

SUCCI SCORBUTICI. The fcorbutic juices.

Lond.

- Take the juice of
 - Garden scurvy-grass, two pints; Brooklime,
 - Water creffes, each one pint ;
 - Seville oranges, a pint and quarter.
- Mix them together, let them fland till the feces have fubfided, and then either pour the liquor off clear, or pafs it through a strainer.

Edinb.

Take the juice of

Garden icurvy-grafs,

- Water crefies, expressed from fresh gathered herbs,
- Seville oranges, of each two pounds :
- Spirituous nutmeg water half a pound.

Mix them together; let them fland till the feces have fubfided, and pour off the clear liquor.

BOTH these compositions are of confiderable use for the purposes expressed

expressed in the title; the orange juice is an excellent affistant to the fcurvy-grass and other acrid and antifcorbutics, which, when thus mixed, have been found from experience to produce much better effects than when employed by themfelves. These juices may be taken, from an ounce or two to a quarter

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of a pint, two or three times a day: they generally increase the urinary fecretion, and sometimes introduce a laxative habit. Preferved with the cautions above mentioned, they will keep good for a confiderable time; though, whatever care be taken, they are found to answer better when fresh,

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SECT. II.

Expressed oils.

E XPRESSED oils are obtained chiefly from certain feeds and kernels of fruits, by thoroughly pounding them in a ftone 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 ftrongly prefied betwixt iron plates. The canvas, if employed alone, would be fqueezed fo clofé to the plates of the prefs, as to prevent the oil from running down : by the interpofition of the hair cloth, a free paffage is allowed it.

SUNDRY machines have been contrived, both for grinding the fubject, and preffing out the oil, in the way of bufinefs. To facilitate the expression, it is customary to warm either the plates of the prefs; or the fubject itself after the grinding, by keeping it ftirring, in a proper veffel over the fire : the oil, liquefied by the heat, feparates more freely and more plentifully. When the oil is defigned for medicinal purpofes, this practice is not to be allowed ; for heat, especially if its degree be fufficient to be of any confiderable advantage for promoting the feparation, renders the oil lefs foft and

palatable, imprefies a difagreeable 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 fo often used for abating immoderate irritation.

So much are thefe 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 feeds 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 fundry different subjects, as nuts, poppy-feed, hemp-feed, rape-feed, and others. Those directed for medicinal purposes in the London and Edinburgh pharmacopœias, are,

Part III.

OLEUM AMYGDALINUM. Oil of almonds. OLEUM SEMINUM LINI. Oil of linfeed.

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OLEUM SEMINUM RICINI. Oil of ricinus.

OLEUM SEMINUM SINAPI. Oil of mustard feed.

THE oil of almonds is prepared from the fweet and bitter almonds indifferently; the oils obtained from both forts being altogether the fame. Nor are the differences of the other oils very confiderable, the difcriminating qualities of the fubjects not refiding in the oils that are thus obtained by expreffion : the oil of muftard-feed is as foft, infipid, and void of pungency, as that of fweet almonds, the pungency of the multard 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 fosten and relax the folids, and obtund acrimonious humours: and thus become ferviceable, internally, in pains, inflammations, heat of urine, hoarfenefs, tickling coughs, &c. in glysters, for lubricating the inteffines, and promoting the ejection of indurated feces; and in external applications, for tenfion and rigidity of particular parts. Their common dole is half an ounce : in some cales, they are given to the quantity of three or four ounces. The most commodious forms for their exhibition, we shall fee hereafer, in the chapter of Emulfions.

The oils expressed from aromatic substances, differ from the foregoing, in retaining, for the moft part, an admixture of the aromatic matter of the fubject. Thus nutmegs and mace yield, upon expreffion, an oil impregnated with the flavour of the fpices; and an oil expressed from anifeeds, has a great share of the peculiar fmell of the feeds. A purgative oil also is extracted in America from the purgative feeds of the ricinus. It does not appear that other qualities of vegetables are communicated to their expressed oils.

THE rinds of the feveral varieties of oranges, lemons and citrons, yield by a kind of expression their effential oils almost pure, and nearly fimilar to those which are obtained from them by diffillation. The effential oils, in which the fragrance and aromatic warmth of these fruits relide, are contained in numerous little veficles, which may be diffinguished by the naked eye, fpread all over the furface of the peel. If the rind be cut in flices, and the flices feparately doubled or bent in different parts, and fqueezed between the fingers, the veficles burft at the bending, and discharge the oil in a number of fine flender jets. A glafs plate being fet upright in a glafs or porcelain veffel, and the flices fqueezed against the plate, the little jets unite into drops upon the plate, and trickle down into the veffel beneath. But though this process affords the true native oil, in the fame state wherein it existed in the fubject, unaltered by fire or other agents, it is not practicable to advantage, unlefs where the fruit is very plentiful; as only a fmall part of the oil it contains can thus be extracted or collected.

The oil is more perfectly feparated by rubbing the rind upon a lump

Expressed oils. Chap. 2. 260 lump of fugar. The fugar, by the on the fresh surface. The oil thus inequality of its furface, produces combined with the fugar, is fit for the effect of a rafp, in tearing open most of the uses, to which it is applied in a fluid ftate. Indeed the the oily veficles : and in proportion as the veficles are opened, the pure effential oils, obtained by diftillation, are often purpofely mixed fugar imbibes the oil. When the outward part of the lump is fufwith fugar, to render their ufe the ficiently moistened, it is fcraped more commodious. off, and the operation continued the second s and the entering the strang - I how you appear of the Protes A second a s The state of a substant of the second they instruct the state of the sar hi tradice while the south the the and the stand is and spine is all for and address and the de land THE STATE OF THE PARTY OF THE PARTY OF THE same Statistics in the second states of the Interested anti-makers in onesis to the Anthen which is the province of a anter arter prover at Anten webbe Citing the state of the second CHAPTER

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CHAPTER III.

Infusions in different menstrua.

SECT. I.

Infusions and decoctions in water.

7 A T E R, the direct menftruum of gums and falts, extracts readily the gummy and faline parts of vegetables. Its action, however, is not limited to thefe; the refinous and oily principles being, in most vegetables, fo intimately blended with the gummy and faline, as to be in great part taken up along with them : fome of the refinous cathartics, and most of the aromatic herbs, as well as bitters and aftringents, yield to water greatest part of their fmell, tafte, and medicinal virtue. Even of the pure effential oils and odorous refins of vegetables, separated from the other principles, water imbibes a part of the flavour; and by the artificial admixture of gummy or faline matter, the whole fubftance of the oil or refin is made diffoluble in water.

Of pure falts, water diffolves only certain determinate quantities (fee page 39.) 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 feparates, and the water retains no more than it would have diffolved without heat. With gummy fubftances, on the other hand, it unites unlimitedly, diffolving more and more of them till it lofes 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 refins made foluble in water by the artificial admixture of gum, partake of this property of pure gums, being diffoluble without faturation.

It has been imagined that vegetables in a fresh state, while their oily, refinous, 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 moifture has been diffipated by drying. Experience however fhews, that dry vegetables, in general, give out more than fresh ones, water feeming 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 fame length of time, the infusion of the dry herb will be remarkably the ftronger : and the cafe appears to be the fame in all the vegetables that have been tried.

In all the preparations defcribed in this chapter, it is to be underflood that the fubjects muft be moderately and newly dried; unlefs when they are expressly ordered to be taken fresh; in which cafe it is to

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Chap. III. Infusions in cold Water.

be judged that their virtues are defroyed 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 themfelves, give fcarcely any to the menstruum. Of the first kind are the yellow and red flowers; of the fecond, the leaves of most plants; of the third, fome of the blue flowers, as those of cyanus and tarkspur. 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 fubftances, water extracts the gelatinous and nutritious parts, whence glues, jellies, broths, &c. and, along with thefe, it takes up principles of more activity, as the acrid matter of cantharides. It diffolves alfo fome 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.

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 fleep for fix 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 fits eafier on the flomach than any other medicine I know of the bitter kind; whereas, by long continued maceration, or by the application of heat, the groffer and more ungrate. ful parts are taken up, and the liquor becomes naufeous, fo as to provoke vomiting. I have often given the light infusion, with great benefit, in weakneffes of the flomach, where the common bitters did not agree. It may be flavoured at pleafure with aromatic materials; inflead of pure water, a mixture thereof, with fome grateful diffilled fpirituous water, as twelve ounces of common water, and four of the fpirituous water of orange peel, may be used for the menstruum. The little quantity of spirit contained in this compound will not confiderably vary the diffolving power of the water.

MANY other vegetables may be advantageoufly treated in the fame 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 simall compass, the finer, more subtile, and active principles of vegetables, in a form readily miscible with the fluids of the human body.

TINCTURA MENTHÆ. Tincture of mint. Edinb.

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.

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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.

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INFUSUM CORTICIS PERUVIANI. 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, occafionally fhaking the veffel; then pour off the clear liquor, and pafs it through a fine ftrainer.

THE extraction of the virtues of Peruvian bark, with aqueous liquors, has hitherto been attempted by ftrong 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 refinous matter, containing the aftringency of the bark, is haftily melted out by the heat, but not truly diffolved by the water, and hence, in cooling, it begins to leparate, renders the liquor turbid, and at length fettles to the bottom; whereas, by maceration in cold water, the aftringent and bitter parts are gradually extracted together, and the former, as well as the latter, are retained by the water in a flate of perfect folution. The infusion appears to be one of the best preparations of the bark for weak flomachs, and may be given in dofes of two or three ounces, in

intermitting fevers, and in other diforders where the corroborating virtues of bark are required.

Part III.

AQUA PICEA. Tar water.

Take of Tar, two pounds; Water, one gallon.

Stir them firongly together with a wooden rod; and after flanding to fettle for two days, pour off the water for use.

TAR water has been recommended to the world as a certain and fafe medicine in almost all diseases ; a flow yet effectual alterative in cachexies, fcurvies, chlorotic, hyfterical, hypochondriacal, and other chronical complaints ; and a fudden remedy in acute diftempers which demand immediate relief, as pleurifies, peripneumonies, the fmall pox, and all kinds of fevers in general. The medicine, though certainly far inferior to the character that has been given of it, is doubtlefs in many cafes of confiderable utility : it fenfibly raifes the pulfe ; and occasions fome confiderable evacuations, generally by perfpiration or urine, though fometimes by ftool or vomit : hence it is supposed to act by increasing the vis vitæ, and enabling nature to expel the morbific humours.

I shall here infert, from the first public recommender of this liquor (bishop Berkley) fome 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 e.e. not a spirit very sensibly per-** ceived in drinking, you may 66 conclude the tar water is not ... " good. It may be drank either " cold or warm : in cholics, I " take

Infusions in cold Water.

" take it to be best warm. As to " the quantity, in common chro-" nical indispositions, a pint a day " may fuffice, taken on an empty " ftomach, at two or four times, " to wit, night and morning, and " about two hours after dinner and " breakfast : more may be taken " by ftrong ftomachs. But those " who labour under great and in-" veterate maladies, must drink a " greater quantity, at least a quart " every twenty-four hours : all of " this clafs must have much pa-" tience and perfeverance in the " use of this, as well as of all " other medicines, which, though " fure, must yet in the nature of " things be flow in the cure of in-" veterate chronical diforders. In " acute cafes, fevers of all kinds, " it must be drank in bed, warm, " and in great quantity (the fever " ftill enabling the patient to " drink) perhaps' a pint every " hour, which I have known to " work furprifing cures. But it " works to quick, and gives fuch " fpirits, that the patients often " think themselves cured before " the fever hath quite left them."

Chap. 3.

AQUA CALCIS SIMPLEX. Simple lime water. Lond.

Take a pound of quicklime, and a gallon and a half of water. Pour the water gradually upon the lime, and when the ebullition is over, let the whole ftand to fettle : then filter the liquor through paper.

Edinb.

Take half a pound of fresh unflacked lime, put it into an earthen vessel, and sprinkle upon it four ounces of water; keep the vessel close stopped till the effervescence ceases, and the lime is thoroughly flacked; when pour upon it twelve pounds of water, and mix them well together. As foon as the lime is fettled, fhake it again; obferving to keep the vefiel ftill clofe fhut, to exclude the air. This is to be repeated nine or ten times; and when the lime is perfectly fettled, filter it through paper.

A lime water may be prepared in the fame manner from calcined oyfter fhells.

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 fubstance, or foft paste, which in fome 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 preicriptions, occafion any fenfible difference in the ftrength of the product; the quicklime is far from yielding all its foluble parts to either proportion; the remainder giving a ftrong impregnation to many fresh quantities of water, though not fo ftrong as to the first. The caution of keeping the water in close-flopt veffels ought to be firictly attended to; for in open ones, the calcareous matter, disfolved in the liquor, foon begins, to separate, and forms a white cruft upon the furface. This crust is not of a faline nature, as fome have imagined; but an infipid earth, no longer miscible with watery liquors.

Lime water has been found of great fervice in fcrophulous and fcorbutic complaints, in fome kinds of alvine fluxes, female weakneffes, and other diforders, proceeding from a laxity and debility of the folids : particularly in corpulent and phlegmatic habits. It appears likewife to be poffeffed of a lithontriptic power, and in fundry calculous cafes has procured confiderable re-T

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lief: the lime water prepared from calcined oyster shells, is found to be, in this intention, more efficacious than that of the common stone or chalk lime. It is given internally, in the dose of a quarter of a pint, three or four times a day; and likewise used externally for washing foul ulcers.

AQUA CALCIS. COMPOSITA. Compound lime water. Edinb.

Take of

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Sassafras, root and bark, shaved, two ounces ;

Nutmegs, well bruised, three drams;

Liquorice fliced, one ounce; Lime water, fresh prepared, four pints.

Digest them together for two days, in a very close vessel; and then strain the liquor.

AQUA CALCIS MINUS COMPOSITA. Lime water lefs compounded. Lond.

Take of

Liquorice, one ounce; Saffafras bark, half an ounce; Simple lime water, fix pints. Macerate without heat for two days, and then ftrain off the liquor.

AQUA CALCIS MAGIS COMPOSITA. Lime water more compounded. Lond.

Take of

Guaiacum wood, fhaved, half a pound;

Liquorice, one ounce;

Saffafras bark, half an ounce; Coriander feeds, three drams; Simple lime water, fix pints.

Macerate without heat for two days, and then firain off the liquor.

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THIS last water has been used for fome time in our hospitals under the title of AQUA LIBERANS. As the guaiacum wood difficultly communicates its virtues to the cold liquor, fome have proposed boiling it in the lime water before the other ingredients are added; but though this treatment more perfectly extracts the virtues of the wood, it very much injures those of the lime water, the greatest part of the matter it had taken up from the lime being separated and thrown off in the boiling. Nor indeed is there any occasion to have recourse to expedients of this kind; the quantity of the wood in the above prefcription being fo large, that the liquor receives a fufficient impregnation from it by maceration in the cold. If however, on this or other occasions, it should be thought expedient to increase the diffolving power of lime water by boiling, we may do it, without any injury to the lime water, by the method directed by the London college for obtaining a folution of fulphur in this menftruum, viz. by adding fome quicklime in fubitance, which will continue to give a fresh impregnation to the water, after the lime at first diffolved in it has been separated by the boiling.

In all thefe compositions, the additional articles take off the ill flavour of the lime water, render it more grateful both to the palate and ftomach, and at the fame time confiderably promote its medicinal efficacy, especially when intended against cutaneous diforders, and foulness of the blood and juices. They may be taken in the same quantities as the simple lime water, and continued for some time; the patient keeping moderately warm during their use.

ARTICLE

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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 feed, half a dram; Proof spirit, four ounces; Water, one pound.

Pour on the spirit first, and let it stand three hours, and then the water; macerate without heat twelve hours, and strain it.

INFUSUM AMARUM SIMPLEX. – Simple bitter infusion. Lond.

Take of

Gentian root,

- Fresh yellow rind of lemon peel, carefully freed from the inner white part, each half an ounce;
- Dry yellow rind of Seville orange peel, freed in like manner from the white, one dram and a half;
- Boiling water, three quarters of a pint.
- Macerate for an hour or two; then filter the liquor through paper, or pafs it through a ftrainer, without prefiure.

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 flands in need. The committee of the London college obferve, that " most of the ingredi-" ents, which usually enter the " composition of bitter infusions, " being prepared by them fepa-" rately, amongst all the flrong " bitters, gentian gave the most " unexceptionable colour, but it " wants the affifiance of fome in-" gredient to furnish an accepta-" ble flavour; fcarce any of the " bitters accompanied with flavour, " fuch as zedoary, calamus aro-" maticus, and the like, appear-" ed to be truly grateful, except " orange peel and cardamom " feeds : but cardamom feeds are " mucilaginous, and render the " liquor cloudy; and orange peel " is accompanied with a hot oil, " that requires it to be but ipar-" ingly used. Lemon peel, in its " outer rind, to which all its fla-" vour is confined, is not a bitter, " but fupplies the gentian most " fuccessfully with what is wanted; " though the composition, by a " moderate addition of orange " peel, becomes yet more perfect."

INFUSUM AMARUM PURGANS. Purging bitter infusion.

Lond.

Take of Sena.

> Yellow rind of lemon peel, fresh, each three drams ;

Gentian root,

- Yellow rind of Seville orange peel, dry,
- Leffer cardamom feeds, freed from the hufks, each half a dram;
- Boiling water, five ounces by meafure.

Macerate them together, and when cold firain off the liquor.

INFUSUM AMARUM cum SENA. Bitter infusion with sena. Edinb.

Take of Sena, one dram; T 2

Gentian

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Gentian root,

Sweet fennel feeds, each half a dram;

Boiling water, a quarter of a pint.

Infuse them for four hours, and then ftrain the liquor.

This infufion may likewife be prepared with two, three, or more times the quantity of fena.

BOTH thefe are ufeful purging bitters. The quantities here prefcribed are intended for one dofe: the first is the larger, and the other the fmaller dofe, that fena is usually given in.

INFUSUM SENÆ COMMUNE. Common infusion of fena.

Lond.

Take of

Sena, an ounce and a half;

- Crystals of tartar, three drams;
 Leffer cardamom feeds, freed from the hufks, two drams;
 Water, one pint.
- Boil the cryftals of tartar in the water, until they are diffolved; then pour the water, whilft it continues boiling, upon the other ingredients; and when cold, frain off the liquor for ufe.

In our former pharmacopceia, an alkaline falt was used in the infusion of fena, instead of the acid one here directed. The first was fuppofed to promote the operation of the medicine, by fuperadding a degree of purgative virtue of its own, and by enabling the water to extract fomewhat more from the capital ingredient, than it would be capable of doing by itfelf; whilft acids have rather a contrary effect. Experience however has fufficiently thewn (as the committee affure us) " that this infusion, and the " following one with lemon juice,

" do not fail in their intention : " and in a medicine, very naufe-" ous to many, it is of principal " confequence to prepare it fo, that e the lightest and least difgustful " parts may be extracted." Alkaline falts increase the offentiveness of the fena; whilft crystals of tartar confiderably improve the colour. of the infusion, and likewife render the tafte to fome perfons lefs difagreeable. Soluble tartar fhould feem a good ingredient in these kinds of compositions, as it not only improves the tafte, but promotes the purgative virtue of the medicine ; this addition also renders the infusion less apt to gripe, or occasion flatulencies.

INFUSUM SENÆ LIMONIATUM. Infusion of sena with lemon.

Take of

Sena, an ounce and a half ;

Lond.

Yellow rind of lemon peel, fresh, one ounce;

Lemon juice, one ounce, by meafure;

Boiling water, one pint.

Macerate them together, and when cold, firain off the infufion.

THIS is a very pleafant and fufficiently efficacious purge: the committee obferve, that it is the moft agreeable form they have been able to contrive for the exhibition of fena to fuch as are more than ordinarily offended with its flavour. The dole is from two ounces to four.

INFUSI SENÆ UNCIÆ QUATUOR. A four ounce infusion of sena. Edinb.

Take of Sena, three drams;

Gingers

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Ginger, one scruple ; Boiling water, four ounces. Infuse for four hours, and then ftrain off the liquor.

THIS infusion is tolerably grateful, the ill flavour of the fena being in good measure covered by the ginger ; the quantity of which is here increased to double of that in former editions of the pharmacopœia. Formerly two drams of the greater water-figwort were added. The water-figwort has been discovered to be the Brazilian herb iquetaia, celebrated as a specific corrector of the flavour of fena. That plant, however, has not been found from experience to answer this purpole fo effectually as it was supposed to do before it was commonly known.

INFUSUM RHABARBARI. Infusion of rhubarb. Edinb.

Take of

Rhubarb, fliced, half an ounce; Boiling water, one pint ;

Infuse them for a night, and to the ftrained liquor add two ounces of fpirituous cinnamon water.

THIS appears to be one of the best preparations of rhubarb when defigned as a purgative ; water extracting its virtue more effectually than either vinous or fpirituous menftrua : in this refpect rhubarb differs from most of the other vegetable cathartics.

TINCTURA ROSARUM. Tincture of roses. Lond.

Take of

Red role buds, freed from the white heels, half an ounce; Strong fpirit (called oil) of vitriol, one fcruple ;

Boiling water, two pints and a half;

- Double refined fugar, one ounce and a half.
- First mingle the spirit of vitriol with the water, in a glass or glazed earthen veffel, and in this mixture macerate the rofes; when the liquor is grown cold, strain it, and add the fugar.

Edinb.

Take of

Red rofes, cleared from the heels, and dried, one ounce; Spirit of vitriol, one dram;

Boiling water, five pounds; White fugar, two ounces.

Mix the acid fpirit with the water, and infuse the roses therein for four hours ; than filter the tincture, and add to it the fugar.

Some have directed the oil of vitriol to be dropt upon the roles before the water is put to them : but this method is certainly faulty, for fuch of the rofes as this cauftic liquor falls upon undiluted, will be burnt up by it, and have their texture deftroyed. Others have made an infusion of the roles 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, as the committee observe, whatever the acid fpirit will hinder the water from extracting, it must precipitate, if added afterwards; though in this preparation, the oil of vitriol bears fo fmall 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.

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This tincture is of an elegant red colour, and makes a very grateful addition to juleps in hæmorrhages, and all cafes that require mild coolers and fubaftringents. It is fometimes taken with bolufes or electaries of the bark; and likewife makes a good gargle.

INFUSUM LINI. Infusion of linsed.

Take of

- Linfeed, whole, two fpoonfuls; Liquorice, fliced, half an ounce; Boiling water, four pints.
- Let them fland in infusion by the fire for fome hours, and then strain off the liquor.

AN ounce of coltsfoot leaves is fometimes added to thefe ingredients; which addition procures this medicine the title of INFU-SUM PECTORALE, *pefloral infu*fon. Both infufions are foft, emollient, mucilaginous liquors; and as fuch they are directed in defluxions of thin, acrid rheums, and erofions of the veffels. They are given to the quantity of a pint a day.

INFUSUM ANTISCORBUTICUM. Antiscorbutic infusion.

Take of

Buckbean leaves, two ounces; Curaffao oranges, half an ounce; Compound horferadifh water, four ounces;

Common water, four pints.

Let the common water, boiling, be poured on the buckbean and orange, and fuffered to fland in a cloie vefiel for a night; then ftrain out the liquor, and add to it the horferadifh water.

THIS infusion is a very useful, and not inelegant, antifcorbutic : 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 fame 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; Rofemary, or fage, half an ounce; Aromatic water, four ounces; Common water, four pints.

Let the common water be poured, boiling, on the herb and root, and fuffered to fland for a night in a clofe veffel; then flrain out the infufion, and add to it the aromatic water.

THIS infufion is calculated againft epileptic diforders, and other like affections of the nervous fyftem. The dofe is a quarter of a pint, to be taken twice a day.

INFUSUM ALCALINUM. Alkaline infusion.

Take of

Salt of tartar, half an ounce; Saffron, half a dram; Liquorice root, two ounces; Boiling water, three pints.

Let them ftand together in a warm place for eight or ten hours, and then ftrain out the liquor for use.

THIS infusion is of fervice in a lentor or viscidity of the blood and juices, the confequence of an obstructed perspiration, and oftentimes the origin of inflammatory distempers. It attenuates thick humours, and promotes the natural fecretions. It is to be taken warm, in little quantities at a time, but frequently repeated.

INFUSUM

INFUSUM DIURETICUM. Diuretic infusion.

Take of

- Wormwood leaves, dried, half an ounce;
- Salt of tartar, two fcruples;
- Compound juniper water, two ounces;

Common water, twelve ounces.

Pour the common water, boiling, on the wormwood and falt of tartar, and, when grown cold, firain off the liquor, and mix with it the juniper water.

THIS infusion is much of the fame nature with the foregoing. It is directed in the obstructions of the viscera, which frequently fucceed a long continuance of bilious fevers, or frequent relapses into them; and which generally end in a dropfy, 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 diforders, they are then successfully treated by the bark.

Preparations of this kind are likewife of confiderable ufe in maniacal diforders; in which, as Dr. Mead obferves, evacuations by the kidneys are of greater confequence than is generally fuppofed; efpecially if the mania be of the furious kind, and accompanied with febrile heat. Alkaline falts, given in large dofes, are here the most effectual diuretics.

> INFUSUM PARALYTICUM. Paralytic infusion.

Take of

Horferadifh root, fhaved, Muftard feed, bruifed, each four ounces;

Boiling water, four pints.

Let them steep together, in a close yeffel, for twenty-four hours.

THIS infusion is strongly impregnated with the pungency of the muitard feed and horferadifh, which by this fimple procefs give out the whole of their virtues. Though the medicine is deligned chiefly (as its title expresses) for a ftimulant in paralytic complaints, there are feveral other diforders in which it may be employed to good advantage ; in scorbutic cases, in particular, it promifes 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.

THEA ANTIPHTHISICA. Antiphthifical tea.

Take of

Avens root, two ounces ; Male fpeedwell, Ground-ivy, each one ounce and a half ; Liquorice, one ounce ; Sweet fennel feeds, three drams.

THESE ingredients are to be cut, bruifed, and well mixed together; and half an ounce of the compolition infufed for a few minutes in five or fix tea-cups full of boiling water. In confumptive cafes and diforders of the breaft, one cup of the infusion, with a tea-fpoonfull of honey, may be drank every hour or two. After the fame manner, medicated teas may be prepared from other vegetable fubftances, as camomile flowers, linfeed, orange peel, fumitory, &c.

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.

T4

THIS

pregnated with the flavour and warmth of the fpice, and may,

THIS infusion is agreeably im- on many occasions, supply the place of the fimple cinnamon water.

Part III.

ARTICLE III. Decoctions.

THE effect of boiling differs from that of infusion in some material particulars. One of the molt obvious differences is, that as the effential oils of vegetables, in which their specific odours relide, are volatile in the heat of boiling water, they exhale in the boiling along with the watery iteam, and thus are loft to the remaining decoction ; whereas both in cold and hot infufions they are preferved. Odorous fubstances, and those in general whofe virtues depend on their volatile parts, are therefore unfit for this treatment. The foluble parts of thefe may, neverthelefs, be united in this form with those bodies of a more fixed nature ; by boiling the latter till their virtues are fufficiently extracted, and then infusing the former in this decoction.

The extraction of the virtue of the fubject is usually promoted or accelerated by a boiling heat; but this rule is lefs 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 fome cafes, boiling occasions a manifest difunion of the principles of the fubject. Thus, when almonds are triturated with cold water, their oil, blended with the mucilaginous or other foluble matter of the almond, unites with the water into a milky liquor called an emulfion : but on boiling them in water, the oil feparates and rifes to the furface; and if the most perfect emuliion be made to boil, a like feparation happens.

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DECOCTUM ALBUM. The white decoction.

Lond.

Calcined hartfhorn, prepared, two ounces;

Gum Arabic, two drams;

Water, three pints.

Boil them till only two pints remain, and then firain off the liquor.

Edinb.

Take of

Take of

Calcined hartfhorn, prepared, one ounce;

Gum Arabic, two drams;

Common water, three pints;

Cinnamon, bruifed, one dram ; White fugar, two drams.

Boil the calcined hartfhorn and gum in the water till only two pints remain, adding the cinnamon towards the end : in this decoction, unstrained, diffolve the iugar.

THESE decoctions are used as common drink in acute difeafes attended with a loofenefs, and where acrimonious humours abound in the primæ viæ. The gum is added in order to render the liquor lightly glutinous, and thus enable it to fuftain more of the calx; which is the ingredient that the colour, but probably not the virtue, of the medicine depends upon. Calcined hartfhorn has no quality from which it feems capable either of confiringing and firengthening the veffels, giving a greater degree of confiftency to thin fluids, or obtunding acrimonious humours. It blunts and abforbs acid juices; but acrimony and

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and acidity are very different : there are few (perhaps none of the acute) diforders of adults attended with the latter ; and few of infants are unaccompanied therewith. Some have proposed starch as an ingredient in these kinds of decoctions; a fmall quantity of this loft, gelatinous, farinaceous fubstance fhould feem to be greatly preferable to the earthy calx. It may be observed that the water is not enabled by the boiling to diffolve any part of the calx; and that in the decoction, the earth is only diffused in fubitance through the water, as it would be by agitation.

DECOCTUM ALTHÆÆ. Decoction of marshmallow root, Edinb.

Take of

Marshmallow root, dried, four ounces;

Raifins of the fun, ftoned, two ounces;

Water, feven pounds.

Boil to five pounds; ftrain the liquor, and when the fæces have fettled, pour it off.

DECOCTUM CRETACEUM. Chalk decostion. Edinb.

Take of

White chalk, prepared, one ounce;

Nutmeg, bruised, one dram; Gum Arabic, two drams; White sugar, half an ounce; Common water, three pints.

Boil the water with the chalk and gum till it is reduced to a quart, adding the nutmeg towards the end; and, in the turbid decoction, diffolve the fugar.

HERE, as in the white decoction, the abforbent earth is only mixed in fubftance with the water, and the wfe of the gum is to prevent its

fubfiding. As a medicine, chalk is more effectual than calcined hartfhorn, in all the intentions for which thefe kinds of earths are given.

DECOCTUM JAPONICUM, Japonic decoction, Edinb.

Take of

- The confectio japonica (deferibed hereafter among the electaries) 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 fyrup.

THIS decoction is used, both in draughts and in glysters, as an anodyne and restringent in fluxes. The quantity here prefcribed contains two grains and a half of opium, exclusive of the fyrup.

DECOCTUM ad ICTERICOS. Decoction for the jaundice. Edinb.

Take of

Celandine, roots and leaves, Turmeric, Madder, each one ounce ;

Millepedes, two hundred ; Water, three pints.

Boil the celandine, turmeric, and madder, in the water, till only a quart of liquor remains after ftraining : then, having prefied out the juice of the millepedes, add this to the decoction when grown cold.

THE ingredients of which this decoction is composed, have been long held by many as specifics for the

the cure of the difease expressed in its title. The medicine, though not a little unpleasant, is well calculated to answer many useful purposes, if well managed and properly assisted. A quarter of a pint may be taken twice a day, or oftener.

DECOCTUM LIGNORUM. Decoction of the woods. Edinb.

Take of

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Guaiacum fhavings, three ounces; Raifins of the fun, ftoned, two ounces;

Saffafras wood, fhaved, one ounce;

Liquorice, fliced, half an ounce; Water, one gallon.

Boil the guaiacum and raifins with the water, over a gentle fire, to the confumption of one half: adding, towards the end, the faffafras and liquorice. Strain out the liquor, and having fuffered it to reft for fome time, pour off the clear from the faces.

THIS decoction is very well contrived, and if its ufe be duly continued, will do great fervice in fome cutaneous difeafes, foulnefs of the blood and juices, and fome diforders of the breaft; particularly in cold phlegmatic habits. It may be taken by itfelf, in the quantity of a quarter of a pint, two or three times a day, or ufed as an affiltant in a courfe of mercurial or antimonial alteratives; the patient in either cafe keeping warm, in order to promote the operation of the medicine.

DECOCTUM ad NEPHRITI-COS. Nephritic decoction. Edinb.

Take of

Marfhmallow roots, one ounce and a half; Liquorice,

Linfeed, each half an ounce; Pellitory of the wall, one ounce; Raifins of the fun, floned, two ounces;

Water, fix pints.

Boil the water with the marshmallow root and raisins to four pints, adding the other ingredients towards the end. Strain out the liquor, and let it settle till fine.

THIS decoction is intended chiefly as an emollient, to be liberally drunk in nephritic paroxyims; in which cafes, by foftening and relaxing the parts, it frequently relieves the pain, and procures an eafy paffage for the fabulous matter. The medicine is now made more fimple, without any diminution of its virtue, by the rejection of wild carrot feed, reitharrow root, and figs, the place of which is abundantly supplied by an increase of the marshmallow root, linfeed, and liquorice. The carrot feeds were indeed unfit for this form, as they give out little of their virtue to watery liquors.

DECOCTUM NITROSUM. Nitrous decoction. Edinb.

Take of Pure nitre, half an ounce; White fugar, two ounces; Cochineal, one fcruple; Water, two pints and a half.

Boil to two pints, then fuffer the whole to reft for fome time, and pour off the clear decoction.

THIS is an elegant way of difguifing nitre, and rendering it agreeable to the patient, both which intentions are fully anfwered by the cochineal and fugar. There does not feem to be any occafion for fo long boiling: for tha

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the water will diffolve a much larger quantity of the nitre and fugar than is directed above, without any heat, and it eafily extracts a fine colour from cochineal.

The virtues of nitre have been already mentioned in the preceding part. This, or other fimilar forms, are the most commodious for the exhibition of it; for when given in a folid form, it often occasions great uneasines about the ftomach. Two or three ounces of this decoction may be taken for a dose.

DECOCTUM PECTORALE. Pectoral decoction. Lond.

Take of Common barley,

Stoned raifins, Figs, each two ounces; Liquorice, half an ounce; Water, four pints.

First boil the water with the barley, then add the raisins, and lastly (just before the end of the process) the figs and liquorice; the boiling is to be continued fo long, that the liquor, when strained, may be no more than two pints.

Edinb.

Take of Stoned raifins of the fun, Barley, each one ounce; Fat figs, in number four; Florentine orris root,

Liquorice,

Coltsfoot flowers, each half an ounce:

Water, fix pints.

Boil the water with the raifins, barley, and figs, till only four pints remain; adding, towards the end, the other ingredients; then ftrain out the liquor for use.

BOTH these decoctions are useful fost 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 fervice by themselves. They may be drunk at pleasure.

DECOCTUM SERPENTA-RIÆ COMPOSITUM. Compound decostion of fnakeroot. Edinb.

Take of

Virginian inakeroot, fix drams; Edinburgh theriaca (defcribed hereafter among the electaries) half an ounce;

Cochineal, one scruple; Water, two pints.

Boil the water with the fnakeroot to one half, adding the theriaca and cochineal towards the end: then firain out the liquor for ufe.

THIS preparation is an uleful fudorific and alexipharmac, containing nearly all the virtue of the fnakeroot, and great part of that of the theriaca. The quantity of theriaca here prefcribed holds nearly three grains and a half of opium; fo that about a fifth of a grain of opium, or fomewhat more, goes to an ounce measure of the decoction.

DECOCTUM TAMARINDORUM cum SENA.

Decostion of tamarinds with fena. Edinb.

Take of

Tamarinds, fix drams; Cryftals of tartar, two drams;

Sena, one dram ;

Syrup of violets, one ounce ; Simple cinnamon water, half an

Common water, a pint and a half.

Boil the common water with the tamarinds and crystals of tartar,

fo long that there may be a pint of ftrained liquor : in which, whilft hot, infufe the fena for four hours : afterwards ftrain off the liquor, and add to it the fyrup of violets and cinnamon water.

This decoction may likewife be prepared with two, three, or more times the quantity of fena,

THIS is a fufficiently efficacious, and not difagreeable, cooling purge. The quantity here prefcribed, is intended for a dofe, which may be divided into three or four parts, to be taken at fhort intervals, as the ftomach will bear it.

AQUA HORDEATA, Barley water. Lond.

Take of

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Pearl barley, two ounces; Water, four pints.

First wash the barley from the mealy matter that adheres to it, with fome cold water; then boil it a little with about half a pint of fresh water, which will acquire a confiderable tinge from it. Throw away this tinged water; put the barley into the water prefcribed, made first to boil; and continue the boiling till half the water is wasted.

THIS liquor is to be drunk freely, as a diluter, in fevers and other diforders. Hence it is of confequence that it should be prepared fo as to be as elegant and agreeable as possible; for this reason, it was inferted in the pharmacopœia, and the several circumstances which contribute to its elegance fet 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,

fo long that there may be a pint in the cure of acute difeafes, than of ftrained liquor : in which, many more laborious preparations.

MUCILAGO SEMINUM CYDONIORUM. Mucilage of quince feeds. Lond.

Take of Quince feeds, one dram; Water, fix ounces by meafure.

Boil them, over a foft fire, till the water grows flimy, almost like the white of an egg; then pass it through a linen cloth.

THIS is a pleafant foft mucilage, of a fomewhat fweetifh tafte, and a light agreeable fmell: in thefe refpects, and in its eafy folubility in water, it differs from the mucilage of gum tragacanth, to which fome have fuppofed it fimilar. It has another difference, to its difadvantage, being apt to grow mouldy in keeping.

GELATINA CORNU CERVI, Jelly of harishorn. Edinb.

Take of

Hartshorn shavings, half a pound ; Water, three quarts ;

White fugar, fix ounces ;

Mountain wine, a quarter of a pint;

Orange (or lemon) juice, one ounce.

Boil the hartfhorn with the water by a gentle heat in a glazed earthen veffel, till two parts are wafted; ftrain out the remaining liquor, add to it the other ingredients, and boil the whole over a gentle fire, to the confiftence of a foft jelly.

JUS VIPERINUM. Viper broth. Lond.

Take the middle-fized viper, freed from the head, fkin, and inteftines;

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Decoctions.

tines; and two pints of water. Boil them to a pint and a half; then remove the veffel from the fire ; and when the liquor is grown cold, let the fat, which congeals upon the furface, if the viper were fresh, be taken off. Into this broth, whilft warm, put a pullet of a moderate fize, drawn and freed from the fkin, and all the fat, but with the fleih intire. Set the veffel on the fire again, that the liquor may boil; then remove it from the fire, take out the chicken, and immediately chop its fiesh into little pieces: put these into the liquor again, set it over the fire, and as foon as it boils up, pour out the broth, first carefully taking off the fcum.

HERE, all the circumstances fubfervient to the perfection of the broth, are carefully fet down: and even plain chicken broth, for the use of the fick, ought to be made in a fimilar manner.

This feems 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 reftorative food : continued for a length of time, it has fometimes done good fervice in leprous and other obitinate cutaneous difeases. The dried flesh of the vipers, brought from abroad, is not at all fuperior to the fresh vipers of our own country. The wines and tincture of the animal, probably, have little virtue. The volatile falt, however strongly recommended by fome, does not appear to differ from that producible from every animal substance. See chap. viii. fect. 2.

DECOCTUM ANTIHECTICUM. Antihectic decoction. Take of Comfry root, Eryngo root, each half an ounce; Conferve of rofes, two ounces; Dulcified fpirit of vitriol, forty drops;

Water, three pints.

Boil the water with the roots and the conferve, till one pint is wafted; then firain off the remaining liquor, and add to it the dulcified fpirit.

THIS decoction is usefully given in hectic cases, where thin acrimonious humours abound, and in beginning confumptions. The dose is a quarter of a pint, to be taken two or three times a day.

DECOCTUM VULNERARIUM. Vulnerary decolion.

Take of

The herb ground-ivy,

Plantane leaves,

White fugar, each half an ounce; Water, three pints.

Boil the herbs in the water, fo long that there may be only two pints of ftrained liquor; in which diffolve the fugar.

THE herbs which give virtue to this decoction, have long been celebrated as fpecifics for the cure of internal contufions and ulcerations, of coughs and pulmonary phthifes proceeding either from bruifes, or an erofion of the vifcera from a fpontaneous acrimony of the humours. Though the real virtues of thefe plants fall fhort of the character which has been ufually given of them, yet experience has fhewn that they are fuperior to numerous others which have been very ftrongly recommended.

DECOCTUM ANTIFEBRILE. Antifebrile decoction. Take of Virginian fnake-root, bruifed,

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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, arifing from foul air in crowded hospitals and jails, this medicine has been given with remarkable fuccefs. In the low state of this dangerous difease, when the pulse, before quick, begins to fink, the flupor to increase, and petechiæ to appear; it promifes to be a very ufeful remedy for fupporting the vis vita, promoting a critical diaphorefis, and correcting the putrid humours. Four spoonfuls of the decoction are to be taken every four or fix hours; and moderate quantities of wine or cordial bolufes, with volatile falts interposed, at proper intervals.

DECOCTUM FEBRIFUGUM. A febrifuge decoction.

Take of

Camomile flowers, dried, two ounces;

Salt of tartar, 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 diffolve in it the alkaline falt.

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 fometimes removed intermittent fevers, after the Peruvian bark had been tried in vain. It is nearly fimilar to the al-

Peruvian bark, in powder, each kaline and diuretic infusions defcribed above.

> APOZEMA APERIENS. Aperient apozem.

Take of Rhubarb, Madder, each three drams ; Salt of tartar, two drams; Water three pints.

Boil them together for an hour, and having firained out the decoction, add to it three ounces of fyrup of ginger.

THIS promifes to be a very powerful aperient and attenuating medicine, of great fervice in icterical and hydropic cafes. The dofe is three ounces, which may be repeated thrice a day.

DECOCTUM ASTRINGENS. Astringent decoction.

Take of

Tomentil root, one ounce;

Pomegranate peel,

Plantane leaves, each half an ounce ;

Syrup of dry roles, 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 fyrup.

THE title of this preparation fufficiently expresses its virtues. The dole, in fluxes where the morbid matter has been evacuated, and aftringency is the only indication, is from one to four ounces, three or four times a day.

> DECOCTUM BARDANÆ. Decostion of burdock.

Take of

Burdock roots, two ounces; Vitriolated tartar, one dram; Water, three pints.

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Boil the water with the roots, fo _ pellitory, and raifins, fo long, long, that the liquor, when ftrained, 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 fweetner, in fcorbutic and rheumatic complaints.

DECOCTUM CAMPECHENSE. Decoction of logwood.

Take of

three Shavings of logwood, 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 itrain out the decoction for ule.

THIS is an agreeable mild restringent, in diarrhœas and other fluxes, where ftronger altringents would be improper or unfafe. It is given in the hofpitals in dofes of a quarter of a pint, three or four times a day. It generally tinges the ftools red, which has occasioned fome to be alarmed, as if the colour proceeded from a discharge of blood. The patient therefore is to be cautioned against any furprize on that account.

DECOCTUM DIURETICUM. Diuretic decoction.

Take of 1. Pariley, or fennel roots, one ounce:

Wild carrot. feeds, three drams; Pellitory of the wall, half an ounce:

Raifins, two ounces ;

Nitre one dram ;

Water, three pints:

Boil the water with the roots, feeds,

that there may be only two pints of liquor after straining; in which diffolve the nitre.

Take of

Grafs roots, two ounces ;

Sorrel, or wood forrel leaves, one handful;

2.

Tamarinds, an 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 forrel, tamarinds, and nitre : then strain out the apozem for uie.

Take of

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 wafted; then strain off the remaining decoction, and diffolve in it the nitre.

THESE cooling aperient liquors are used, like the nephritic decoction already defcribed, as common drink for promoting urine in nephritic difeafes. They may be taken with fafety, and often with good effect, in inflammatory cafes, where the hot ftimulating diure. tics would be manifeltly prejudicial.

DECOCTUM PERUVIANUM. Peruvian decoction.

Take of

Peruvian bark, in powder, two ounces ;

Water, three pints.

Boil them together till one pint of the liquor be wasted, and then ftrain

strain off the remaining decoction for use.

THIS decoction should be passed only through a coarfe strainer, and drunk whilst turbid : if fuffered to stand till clear, the more efficacious parts of the bark will subside. We have formerly observed, that the virtues of this drug consist chies in its refinous substance, which, though it may be totally melted out by the heat of boiling water, remain only partially suspended in that menstruum : see page 272.

> DECOCTUM SENEKÆ. Decoction of Seneka.

Take of

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Seneka, rattle-fnake root, one ounce;

Water, a pint and a half. Boil to one pint, and firain.

The virtues of this decoction will be eafily underflood by those of the root from which it is prepared. See page 227. 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 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 wafted; then fuffer the decoction to fettle, and having poured off the clear part, add to it the fpirituous water and the fyrup.

This decoction is a very agreeable and useful medicine in fluxes,

that are not critical or fymptomatic, and in a weak lax flate of the inteffines. A fpoonful or two may be taken every hour or oftener: thus managed, it produces much better effects than if larger dofes be given at once.

FOTUS COMMUNIS. The common fomentation. Lond.

Take of

Abrotanum leaves, dried, Sea wormwood tops, dried, Camomile flowers, dried, each one ounce;

- Bay leaves, dried, half an ounce; Water, fix pints.
- Lightly boil them, and firain out the decoction for use.

IT is left to the choice of the apothecary to take either the male or female abrotanum, that is fouthernwood, or lavender - cotton : which, though differing from one another in fome respects, may be looked upon as fimilar with regard to the purpoles for which this compolition is intended : nor indeed can either of them give much affiftance 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 prefcriber, in fuch quantity as particular cales may require.

DECOCTUM COMMUNE pro CLYSTRE.

The common decoction for glysters. Lond.

Take of

Mallow leaves dried, one ounce; Camomile flowers, dried,

Sweet fennel feeds, each half an ounce;

Water, one pint.

Boil

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Boil them together, and ftrain out the decoction for use.

THE title of this decoction fufficiently expresses its use, as the basis of glysters. The ingredients should be very lightly boiled, at least the camomile flowers and fennel feeds not put in till towards the end, a part of the virtue of these being foon lost by boiling.

DECOCTUM COMMUNE. The common decoction. Edinb.

Take of

Camomile flowers, one ounce; Coriander feed half an ounce; Water, two quarts.

Make them just boil, and then ftrain out the liquor. The virtues of the ingredients may be fufficiently extracted alfo, by infusing them for fome hours in the boiling water.

THIS decoction is intended to anfwer the purpoles of both the foregoing. It is lefs loaded with the ingredients than either, but not perhaps for that reason the lefs useful.

Forus 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 prefcribed 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 queficined; as the effects of the composition may be attributed perhaps more to the warm fluid foftening and relaxing the fkin, 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 firain off the liquor.

THIS preparation is intended not only as a mere topical application for external complaints, but likewife for relieving the internal parts. The pains of the bowels which accompany dyfenteries and diarrhœas, flatulent colics, uneafinefs at the ftomach, and reachings to vomit, are frequently abated by fomenting the abdomen and region of the ftomach 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 feveral times quenched) three pints.
- Boil the water, with the oak bark and granate peel, to the confumption of one-third; then ftrain the remaining decoction, and diffolve in it the alum.

THIS is a flrong aftringent liquor, in which intention it is directed both as a fomentation for flrengthening relaxed parts, and as an injection in the fluor albus.

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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 damafk rofe, operates very gently by ftool, and for this purpofe is held by fome in great efteem. Its action may be quickened, and its tafte rendered more agreeable, by the addition of a fuitable proportion of cryftals of tartar.

SERUM SINAPINUM.

Mustard whey.

Take of

Muftard feed, bruifed, three fpoonfuls;

Cows milk, two pints.

Set the milk over the fire to boil, and add to it the muftard feed, that a curd may be formed, from which the whey is to be carefully feparated.

THIS is not an inelegant form for the exhibition of muftard feed; 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 feparate the

and then carefully feparate the whey.

THIS medicine is a ftrong, though not very grateful, aftringent. It is given in immoderate uterine fluxes, and fometimes in the diabetes, in which laft intention it is recommended by Dr Mead. The dofe is a quarter of a pint three or four times a day. It has been recommended alfo in intermittent fevers, the quantity above prefcribed to be taken before the approach of a fit, divided into different dofes : but, in this diforder, great caution is requifite in the ufe of fo ftrong an aftringent.

SERUM SCORBUTICUM. Scorbutic whey. Lond.

Take of

Cows milk, one pint;

Scorbutic juices, a quarter of a

Boil them till the milk is curdled, and then carefully feparate the whey.

THIS whey may be used as common drink in fcorbutic cases: the quantity above directed, at least, ought to be taken every day, if any confiderable effect be expected from it.

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Vinegars.

SECT. III.

Vinegars.

7 INEGAR extracts the virtues of feveral medicinal substances in tolerable perfection; but at the fame time its acidity makes a notable alteration in them, or fuperadds 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 purpofes, excellently affifts, or coincides with, as fquills, garlick, ammoniacum, and others: and, in many cafes where this acid is itfelf principally depended on, it may be advantageoufly 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 inftance, if freth parcels of them be infused in vinegar in the cold for a little time, communicate to the liquor a pleafant 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 diffolved.

ACETUM ROSACEUM. Vinegar of Rofes. Edinb.

Take of

Red rofes dried, one pound ; Strong vinegar, one gallon.

Expose them to the fun in a close veffel, for forty days, and then strain off the liquor.

THIS is fcarce otherwife 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 fervice.

ACETUM SCILLITICUM. Vinegar of Squills. Lond.

Take of

Dried squills, one pound; Vinegar, fix pints.

Macerate the fquills in the vinegar with a gentle heat; then prefs out the liquor, and fet it by till the fæces have fubfided. The vinegar being afterwards poured off, add to it about one-twelfth of its quantity of proof fpirit, that it may keep the longer from growing mothery.

Ir fhould feem 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 effusion 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 an half;
- Rectified spirit of wine, three ounces.

Macerate the fquills with the vinegar eight days, and express the vinegar, to which add the spirit, and, when the fæces are subfided, pour off the liquor.

VINEGAR of fquills is a medicine of great antiquity. We find in a treatife attributed to Galen, an account of its preparation, and U 2 of

of many particular virtues then afcribed to it. It is a very powerful ftimulant, aperient, and attenuant of tenacious juices : and hence is frequently used, with good fuccefs, in diforders of the breaft occafioned by a load of thick vifcid phlegm, for promoting urine in hydropic cafes, &c. See the fection of acrids, page 69. The dofe 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 fmall dofes, be apt to occafion.

ACETUM PROPHYLACTICUM. Prophylactic winegar. Paris.

Take of

Fresh tops of common wormwood, Roman wormwood, Rofemary, 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 fun or a fand-bath, in a matrafs closely flopt, for twelve days; then strongly prefs out and strain the liquor, and having afterwards filtered it, add half an ounce of camphor diffolved in spirit of wine.

THIS composition is defigned, as its title expresses, for an antipestilential. It is faid that during the

plague at Marfeilles, four perfons, by the use of this prefervative, attended, unhurt, multitudes of those who were infected; that under colour of those fervices, they robbed both the fick and the dead ; and that one of them being afterwards apprehended, faved himfelf from the gallows by difcovering 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 antifeptic vegetables, will contribute greatly to prevent the effects of contagious air.

ACETUM THERIACALE. Treacle vinegar. Edinb.

Take of

Edinburgh theriaca, described hereafter among the electaries, one pound;

Strong vinegar, four pints.

Digeft them together, in a very gentle heat for three days; and then firain out the vinegar for use.

THIS medicine has been greatly celebrated in acute and contagious difeafes, as a fudorific and alexipharmic. Some have chofen to employ the vinegar as a vehicle, rather than as a menftruum, for the theriaca; in either cafe, it is indifputably, for fundry purpofes, an ufeful addition. To half an ounce by meafure of the composition here prefcribed, there goes fomewhat more than half a grain of opium; tho' it does not appear that the medicine has all the effect which might be expected from that article.

ACETUM LITHARGYRITES Vinegar of letharge. Edinb.

Take of Litharge, four ounces; Strong vinegar, one pint.

Digeft

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Vinegars.

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Digeft in a fand-heat, for three days, frequently fhaking them; then filter the liquor for use.

THIS liquor is of the fame nature with folutions of facebarum faturni, of which hereafter. It is only used externally, as a cofmetic, against cutaneous eruptions, rednefs, inflammations, &c. But even here, it is not void of danger; there are examples of its continued use having occasioned fundry ill consequences.

SECT. IV.

Wines.

HE 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, notwithftanding the repugnance and averfion which the fick often manifeft to those directly furnished from the shops : and hence the inferior fort of people had their medicated ales. Nevertheless, as vinous liquors excellently extract the virtues of feveral fimples, and are not ill fitted for keeping, they have been employed as officinal menstrua alfo, and substances of the greatest effieacy are truffed in this form. As compounds of water and inflammable spirit, they take up fuch parts of vegetables and animals as are foluble in those liquors; though most of them abound at the fame time with a mucilaginous or viscous fubitance, which renders them lefs effectual menstrua than purer mixtures of water and ipirit. They contain likewife a subtile acid, which fomewhat further obstructs their action on certain vegetable and animal matters, but enables them, in proportion to its quantity, to diffolve fome bodies of the metallic kind, and thus impregnate themfelves with the corroborating virtues of ficel, the alterative and

emetic powers of antimony, and the noxious qualities of lead.

NOTE.

To all the medicated wines, after they have been ftrained, you may add about one-twentieth of their quantity of proof fpirit, to preferve them from fermentation. They may be conveniently kept in the fame kind of glafs bottles that wines generally are for common ufes, which fhould likewife be corked with the fame care [L.]

VINUM ALOETICUM ALKA-LINUM.

Alkaline aloetic wine. Lond.

Take of

Any fixt alkaline falt, eight ounces;

Socotorine aloes,

Saffron,

Myrrh, each one ounce ; Sal ammoniac purified, fix drams; Mountain wine, two pints.

Macerate without heat for a week or longer; then filter the wine through paper.

THIS is the ELIXIR PROPRIE-TATIS HELMONTII, with fome little variations, which affect the compounder rather than the compofition. It is observable, that the U 3 fal

fal ammoniac is decompounded in this process, after the fame manner as in the diffillation of the Spiritus salis ammoniaci (fee chap. viii. fect. 2.) its acid being abforbed by, and neutralizing a part of, the fixt alkali, and its volatile alkaline falt being fet at liberty ; fo that the refult is the fame as if as much pure volatile falt were added as the fal ammoniac is capable of affording, viz. near half an ounce, with about fix drams of marine falt.

Helmont's elixir, in a preceding pharmacopœia, is thus directed :

Take of

Red tartar,

Nitre, each twelve ounces ;

White wine, two pints ;

Aloes,

- Saffron, each an ounce and a half.
- Let the nitre and tartar be reduced into powder, and the mixture thrown by degrees into an hot crucible: when fufficiently calcined, pour the matter into a glass mortar, and add the wine, fo as to make a ley thereof; with which ley, a tincture is to be drawn from the aloes and faffron.

Take of

Sal ammoniac, eight ounces ; Spring water, twenty ounces; White wine, one pint; Myrrh, an ounce and a half.

- Diffolve the fal ammoniac in the water, strain the folution, and evaporate it to dryneis. One ounce of this dry falt is to be diffolved in the wine; and with this folution, draw a tincture from the myrrh.
- Mix both tinctures together, in a close veffel, fo as to make them into an elixir.

THE preparation made after this

troublesome method, is not different from the foregoing. The nitre and tartar, when calcined together, form an alkaline falt, fimilar to those which the shops are fupplied with at a cheaper rate.

Part III.

Helmont and others have entertained a very high opinion of this medicine, and looked upon it as " a vivifying and preferving bal-" fam, capable of continuing health " and prolonging life to the utmost " poffible limits." The medicine is doubtlefs a very efficacious and uleful one for many purposes : it may be fo managed as to attenuate vifcid juices, and open obstructions in the remoter parts, and promote evacuation by almost all the emunctories. In dofes of one, two, or three drams, it increases the urinary fecretion; and if the patient be kept moderately warm, generally proves diaphoretic or fudorific; in larger dofes, it gently loofens the belly.

VINUM AMARUM. Bitter wine. Lond.

Take of Gentian root,

> Yellow rind of lemon peel, frefh, each one ounce;

Long pepper, two drams;

Mountain wine, two pints.

Macerate without heat, and firain out the wine for ufe.

THIS is a very elegant bitter, which the addition of the long pepper renders confiderably warmer than the watery infusion. Gentian and lemon peel, as we have already feen, make a bitter of a very grateful flavour : " the fpice here add-" ed was felected after the trial of " many other materials."

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VINUM ANTIMONIALE. Antimonial Wine. Lond.

Take of

Crocus of antimony, washed, one ounce;

Mountain wine, a pint and a half.

Digeft without heat, filter the wine through paper.

Edinb.

Take of

Crocus metallorum, one ounce; Mountain wine, fifteen ounces.

Stir them well together; then let the mixture fland till it has perfectly fettled, and carefully pour off the wine.

HOWEVER carefully the fettling and decantation be performed, the filtration of the wine through paper appears to be neceffary, left fome of the finer parts of the crocus should chance to remain fufpended in fubstance. It is not here, as in most other wines and tinctures, where the matter left undifiolved by the menstruum is of little confequence: the antimonial crocus, after the action of the wine, continues as virulent as ever, and capable of impregnating fresh parcels of the liquor as ftrongly as the first, and this, in appearance, inexhauftibly; yet, after thirty repeated infusions, it has been found scarce fensibly diminished in weight.

The antimonial wine poficifies the whole virtues of that mineral, and may be fo dofed 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 diffolved and rendered mifcible with the animal fluids, its operation is more certain. Given from ten to fifty or fixty drops, it acts generally as an alterative and diaphoretic; in larger dofes, as a diuretic and cathartic: whilft three or four drams prove for the most part violently emetic. It has been chiefly used in this last intention, in fome maniacal and apoplectic cafes; and hence gained the name of emetic wine.

* VINUM E TARTARO ANTI-MONIALI. Emetic tartar wine. Edinb.

THIS is made by diffolving twenty-four grains of emetic tartar in one pound of white wine.

VINUM CHALYBEATUM. Steel wine.

Lond.

Take of

Iron filings, four ounces; Cinnamon,

Mace, each half an ounce ;

Rhenish wine, four pints.

Macerate without heat for a month, frequently shaking the vessel, and strain off the wine for use.

Edinb.

Take of

Iron filings, three ounces; Cochineal, half a dram: Rhenifh wine, two pints.

Digeft them together for twenty days, frequently fhaking the veffel, and then pafs the wine through a filter.

BOTH these wines are fufficiently elegant ones. Rhenish is an excellent menstruum for steel, and diffolves a confiderable quantity of it; the cochineal, in the second, imparts a fine colour; and the spices, in the first, give the liquor an agreeable savour, make it fit easier on the stomach, and likewise promote its medicinal efficacy. In a preceding edition of the Edinburgh U 4.

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pharmacopceia, the digeftion was ordered to be performed in a fandheat, continued for ten days. Some have objected to the use of heat, that it impregnated the wine more ftrongly with the metal, and thus rendered it more unpleafant to the taite: but if this were the only inconvenience, the remedy would be easy, of diluting it with more wine. Heat has another effect, much less desirable, and which art cannot remedy ; making a difagreeable alteration in the quality of the wine itfelf.

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Steel wine is a very uleful preparation of this metal, and frequently exhibited in chlorotic and other indifpolitions where chalybeates are proper. Boerhaave recommends it as one of the nobleft 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 folids, and an indolent, cold, aqueous indifpolition of the juices : for in this cale, lays 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 firong, whether this proceed from the fluids or the folids. The dofe is from a dram to half an ounce ; which may be repeated two or three times a day.

Some direct folutions of iron, made in wine or other vegetable acids, to be evaporated to the confiftence 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 form, 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 themfelves, and are tenacious enough to reduce other fubftances into that form.

VINUM CROCEUM.

Saffron wine.

Lond.

Take of Saffron, one ounce :

Canary, one pint.

Macerate without heat, and firain off the wine.

CANARY has been objected to by fome, as an improper menstruum for medicinal fimples, fince it contains a large quantity of uncluous matter, which impedes its diffolving power; a pint of this fort of wine left, upon evaporation, two ounces of a mellaginous substance, not unlike honey boiled hard. It is neverthelefs, for faffron, a very well adapted mensiruum, as not only sufficiently loading itfelf with its virtues, but likewife coinciding in the general intention of the medicine, that of a cordial. The preparation made with Canary is also better fitted for keeping, than when wines that have had any tendency to acidity are employed ; for tinctures of faffron drawn with these last, soon loie their fine colour ; whilf those made with the first, retain it for a much longer time. The dofe of this tincture is from one dram to three or more.

Wine of ipecacuanha.

Lond.

Take of

Ipecacuanha, two ounces ; .

Yellow rind of Seville orange peel, dried, half an ounce:

Canary, two pints.

Macerate without heat, and firain out the wine.

TINCTURA

Chap. 3. TINCTURA IPECACU-ANHÆ. Tincture of ipecacuanha. Edinb.

Take of

Ipecacuanha, in powder, one ounce;

Mountain wine, fifteen ounces. After three days digettion, let the tincture be filtered for use.

BOTH thefe wines are very mild and fafe emetics, and equally ferviceable, in dyfenteries alfo, with the ipecacuanha in fubstance; this root yielding nearly all its virtues both to the mountain and Canary wines here ordered, as it does a good fhare of them even to aqueous liquors. The common dofe is an ounce, more or lefs, according to the age and ftrength of the patient. The college of Edinburgh added formerly a icruple 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, fometimes alarmed the patient, as if it proceeded from a difcharge 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 firain off the wine.

It has been difputed, whether live or dry vipers are preferable for making this medicine. Such as are moderately and newly dried, are perhaps the moft eligible, fince by exficcation they feem to lofe only their phlegmatic or aqueous parts. Whether they communicate to the wine, either when ufed fresh or dry, fo much virtue as they are fuppofed to do, is greatly to be doubted. Some compositions under this name have been highly celebrated, as reftoratives, in debilities and decays of conflictation; but what virtues of this kind they posseffed, were fupplied chiefly from other ingredients.

VINUM MILLEPEDARUM. Wine of millepedes. Edinb.

Take of

Live millepedes, bruifed, two ounces;

Rhenish wine, one pound.

Infuse them together for a night, and afterwards prefs the liquor through a strainer.

THIS wine has been commended as an admirable cleanfer of all the vifcera, yielding to nothing in the jaundice, and obstructions of the kidneys or urinary paffages, of excellent fervice in almost all chronical diffempers, even in fcrophulous 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 prefent, there are few who have any great dependence on it. It is directed to be given from half an ounce to two ounces.

TINCTURA CEPHALICA. Cephalic tincture. Edinb.

Take of

Wild valerian root, four ounces; Virginian fnakeroot, one ounce; Rofemary tops, half an ounce; French white wine, fix pints.

Digest them together for three days, and then filter the tincture.

THIS preparation promifes to be a medicine of confiderable utility as a cephalic, that is, in diforders

of

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of the nervous fyftem, wherein the membranes of the brain are often principally affected, as in vertiginous, epileptic, and paralytic complaints. The composition is improved from former editions, by the rejection of fome ingredients, of which the beft were fuperfluous; viz. cafumunar, white dittany roots, peony roots, misletoe of the oak, and peacocks dung. Cafumunar is doubtless an article of importance, but much inferior, in the prefent intention, to the ingredients now retained.

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Here it may be proper to obferve, that though fome of the distilled waters, to be treated of hereafter, receive many fupernumerary ingredients, without any confiderable injury to the produce ; yet in medicines prepared by infusion, it is far otherwife. For there, ingredients, which give nothing over, do little harm : but as all those commonly employed in infusions communicate fomething to the menstruum; fo, if superfluous ones be admitted, they load the liquor with an ufelefs matter, and occupy in it the place that ought to be poffeffed by the more efficacious.

TINCTURA CEPHALICA PURGANS.

Purging cephalic tincture. Edinb.

This is made by adding to the foregoing, of

Sena, two ounces;

Black hellebore roots, one ounce;

French white wine, two pints.

PURGATIVES are often very neceffary additions to medicines of the foregoing clafs. Those here made choice of are well adapted to the purpose, and in such quantity as to make the wine gently laxative in doles of two ounces.

TINCTURA RHABARBARI VINOSA. Vinous tincture of rhubarb. Lond.

Take of

Rhubarb, two ounces;

Leffer cardamom feeds, freed from the hufks, half an ounce; Saffron, two drams;

Mountain wine, two pints.

Macerate without heat, and then ftrain off the tincture.

THIS is a warm, cordial, laxative medicine. It is used chiefly in weakness of the ftomach and bowels, and some kinds of looseness, for evacuating the offending matter, and ftrengthening the tone of the viscera. It may be given from half a spoonful to three or four spoonfuls or more, according to the circumstances of the diforder, and the purposes it is intended to answer.

TINCTURA SACRA. Lond.

Take of

Socotorine aloes, eight ounces ; Canella alba, two ounces ; Mountain wine, ten pints.

Reduce the aloes and canella feparately into powder, then mix, and pour on them the wine ; afterwards macerate without heat, for a week or longer, occafionally fhaking the veffel ; laftly, ftrain off the wine.

It will be convenient to mix with the powders fome white fand, well washed from dirt, to prevent the aloes from concreting, which it is apt to do upon being moistened.

Edinb.

Take of

Socotorine aloes, one ounce;

The

Wines.

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The leffer cardamom feeds, Ginger, of each one dram ; White wine, two pounds.

Digeft for feven days, often fhaking the veffel, and firain off the tincture.

THIS medicine has long been in great effeem, not only as a cathartic, but likewife as a ftimulus; the wine diffolving all that part of the aloes in which these qualities refide, a portion only of the lefs active refinous matter being left. The aromatic ingredients are added, to warm the medicine, and fomewhat alleviate the ill flavour of the aloes. Canella alba, or cloves, are faid, among numerous materials that have been made trial of, to answer this end the most fuccessfully. The fnakeroot*, in the fecond of the above prescriptions, seems designed for promoting the flimulating virtue of the aloes, and thus extending its action to further purposes than it is by itfelf capable of. Probably in the fame intention, afarum was made an ingredient in our former pharmacopœias : in a preceding edition of this work, the tincture is directed as follows : Take of

Aloes, eight ounces ; Afarum, Cinnamon,

Zedoary,

Cardamom feeds, Saffron, each four drams; Cochineal, a icruple;

Mountain wine, ten pints.

Pour the wine on the other ingredients reduced into powder, digest them together, and afterwards firain off the tincture for ufe. The tinctura Jucra appears, from long experience, to be a medicine of excellent fervice in languid, phlegmatic habits, not only for cleaning the primæ viæ, but like-

* Omitted in the last edition of the Edinb.

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wife for attenuating and diffolving vifcid juices in the remoter parts, for ftimulating the folids, warming the habit, promoting or exciting the uterine purgations, and the hæmorrhoidal flux. The dofe, as a purgative, is from one to two ounces, or more : it may be introduced into the habit, fo as to be productive of excellent effects, as an alterant, by giving it in fmall doses, at proper intervals; thus managed, it does not for a confiderable time operate remarkably by ftool; but at length proves purgative, and occasions a lax habit, of much longer continuance than that produced by the other common cathartics.

TINCTURA AD STOMA-CHICOS. Stomachic tincture. Edinb.

Take of

Calamus aromaticus,

Gentian root, each one ounce and a half;

Peruvian bark, in powder, two ounces ;

Curafioa oranges,

- Leffer centaury tops,
- Carduus benedictus feeds, each one ounce ;
- Iron filings (to be tied up in a bag) three ounces;;

French white wine, one gallon. Digeit for the space of three days,

and then filter the tincture.

This tincture may likewife be made without the iron.

THIS tincture is a very efficacious medicine in weakness of the ftomach and chylopoietic organs, and in a lax flaccid flate of the vifcera in general. It is here rendered much more elegant and grateful than as it flood in former editions, by the rejection of some exceptionable ingredients, as galangal,

langal, zedoary, camomile, and wormwood. The carduus feeds and centaury tops might still perhaps be spared without injury, as they do not feem to have any virtues which gentian root does not poffels in a greater degree. The Seville orange peel of former editions is here exchanged for the unripe young fruit of the orange tree, called Curaffao oranges, an article well adapted to compositions of this kind, being an aromatic bitter of a very agreeable flavour.

TINCTURA THEBAICA. Thebaic tincture. Lond.

Take of

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Strained opium, two ounces; Cinnamon,

Cloves, each one dram ;

Mountain wine, one pint.

Macerate without heat for a week, and then filter the tincture through paper.

THIS is the LIQUID LAUDA-NUM of SYDENHAM, with the exchange of Canary wine for mountain, and the omifion of an ounce of faffron. The aromatics in the form above are in to imall quantity, that the preferiber can fcarce expect any confiderable effect from them, the proportion of each that goes to a grain of opium, amounting to no more than the fixteenth part of a grain. Even these minute proportions, however, are in good measure sufficient to take off the ill odour of the opium, which feems to be all that is intended by them.

The principal advantages of exhibiting opium in this form are, that by being already difiolved, it exerts itself the fooner in the body; and that by fome perions, liquids are more commodioufly

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taken, than a bolus or pill. The common dofes of the tincture are from ten drops to forty, fifty, or more, according to the exigencies of the cafe. It were to be withed, that the dofe could be more exactly afcertained, by weight or measure ; as the drops may, according to different circumftances, vary in quantity, though in number the fame; 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, fo much as that quantity of wine will extract from one grain ; for the liquor does not diffolve the whole fubstance of the opium, nor is the folution equivalent, in its effect, to the full quantity of opium employed in it.

A liquid opiate, free from the inconveniencies here complained of. will be defcribed under the head of fpirituous tinctures.

VINUM AROMATICUM.

Aromatic wine.

Take of

Cloves,

Ginger, each half an ounce ; Cinnamon,

Nutmegs, each one ounce ; Canary wine, fix pints.

Beat the fpices into a coarfe powder, and steep them in the wine for some days; then pais the liquor through a strainer.

THIS wine is a very high cordial, and greatly commended for warming the habit and firengthening the nervous fystem. It is to hot of the fpices as to require being diluted for use, and to be taken only in fmall quantities at a time. Mixed with a little lemon juice, and a large proportion of milk, it forms a pleafant and useful whey in low fevers.

VINUM

Chap. 3.

Wines.

VINUM ANTISCORBUTICUM. Antiscorbutic wine. Paris.

Take of

Leaves of Buckbean, Water-creffes, Brooklime, Dittander, Scurvy-grafs, Jack-by-the-hedge,

Roots of horferadifh, each one ounce;

Florence orris, two drams; 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 twentyfour hours; after which the wine is to be filtered for use.

THIS composition is not ill contrived for answering the purpole expressed by its title; though some of the ingredients are not unexceptionable. An ounce of the herbaceous brooklime is altogether infignificant in half a gallon of an infusion of fuch 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, raifed in our gardens, are, while fresh, strong purgatives ; but their purgative matter is fo little difpofed to folution in watery menftrua, that it feparates from the exprefied juices and fettles to the bottom. In drying they change their nature; and the Florentine fpecies, in a dry flate, might be an ufeful addition, for giving an agreeable flavour to the wine. The flayour which this root communicates to vinous liquors, greatly refembles that of raipberries.

> VINUM SCORBUTICUM. Scorbutic wine.

Take of

- Garden feurvy-grafs, one handful;
- Horseradish root, scraped, half an ounce;
- Winter's bark, two drams;

Mountain wine, two pints.

Let them fleep together in the cold for three days.

THIS wine is fo far impregnated with the virtues of the ingredients, as to do confiderable fervice in fcorbutic habits. It is used chiefly in the fpring, in the quantity of a common wine glass, two or three times a day. Though far more fimple than the preceding, it is not perhaps less efficacious.

> VINUM SCORBUTICUM MUNTINGII. Muntingius's fcorbutic wine.

Take of

The roots of the greater waterdock, fix ounces;

Gentian root,

Liquorice,

Cinnamon,

- Black pepper,
- Mace, each three ounces ;
- Saffron, two ounces ;
- Mountain wine, fixteen pints;
- Strong vinegar, four pints ;
- Yolks of three fresh eggs.
- Reduce the roots and fpices into a grofs powder, and pour on them the wine, vinegar, and yolks of eggs. Digeft the whole in a clofe veffel, with a gentle warmth, for three days; and then ftrain out the liquor for ufe.

THE author of this composition recommends it as a medicine of infallible efficacy against inveterate fourvies, and all kinds of foorbutic complaints, particularly fuch as are not accompanied with a fever or inflammation : even palsies, and the venereal lues, he fays, have yielded to it. The dose is from three to fix

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fix ounces, to be taken in the morning on an empty flomach, and continued for fourteen or twenty days, or longer : fome quantity of it is likewife to be mixed with the patient's common drink, which he directs to be either good Rhenifh wine, or found malt liquors not too new. If the patient complain of heat, drynefs, a violent cough, or where there are any fymptoms of a confumption, the black pepper is ordered to be omitted, and the liquorice increafed in its room to fix ounces.

A composition differing from the above only in the omifion of vinegar, and employing spirit of wine for the menstruum, is faid to have come into esteem at Paris, against the gout.

VINUM FEBRIFUGUM. Febrifuge wine. Paris.

Take of

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Peruvian bark, in powder, two ounces;

Rough red wine, two pints.

Digeft them together in a circulatory veffel, with a moderate heat, for forty-eight hours, occafionally fhaking the veffel : then fuffer the whole to cool, and pafs the wine through a firainer.

THIS is the preparation of bark made use of by fir 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 confequences following its imprudent use had brought it into difetteem. He kept this preparation a secret, till Lewis XIV. purchased it for a confiderable sum, and communicated it to the public. It was not however the preparation, but a proper method of managing the medicine,

upon which the fuccefs of his practice depended. See page 197. It appears from experience, that this wine is lefs certain in the cure of agues, than the bark given in fubftance; nor is it equal, in this intention, for general use, to the watery infusion described in page 271 ; the wine preventing its being taken fo freely as is in many cafes requifite. It neverthelefs has its uses, in those intermittent fevers where a large quantity of the bark is not neceffary; and is particularly ferviceable in a laxity and debility of the flomach and inteflines.

VINUM GUAIACINUM.

Guaiacum wine.

Take of

Guaiacum wood,

Yellow faunders, each two ounces;

Orange peel, dried,

Leffer cardamom feeds, each one ounce;

Mountain wine, one gallon -

Let them fleep together for a week, and then firain out the wine for ufe.

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 prefervative 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;

Leffer cardamon feeds,

Orange

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Orange peel, dried, each one ounce;

Mountain wine, four pints.

Let these ingredients steep together for a week or longer, and then strain out the wine for use.

FROM the warm, ftimulating, deobstruent qualities of this wine, it may be used, to good advantage, in cold phlegmatic habits, where the humours flagnate in the remote vessels, and where there is a dispofition 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.

Ales.

EDICATED ales are intended as diet-drinks in chronical indifpolitions. There are two ways, of impregnating malt-liquors with the virtues of medicinal fubftances; macerating the fubject 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 refolutive power of that procefs, 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 fo 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 inconfiderable.

CEREVISIA AMARA. Bitter Ale.

Take of Gentian root, Lemon peel, fresh, each four ounces; Long pepper, one ounce; Ale, one gallon. Let them sleep together without heat.

THIS is an agreeable bitter ftomachic ale, much fuperior to the common purls, or any of the compolitions of this kind in the extemporaneous recipe writers.

CEREVISIA APERIENS.

Aperient Ale.

Take of

Mustard feed, unbruised, ten ounces;

Long birthwort root, fix ounces; Leffer centaury tops, two ounces; Savin tops, one ounce; New fmall ale, ten gallons.

THIS is an useful aperient dietdrink 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-grafs,

Roman

Pharmaceutical Preparations.

Roman wormwood, each three Take of handfuls; Broom t

Elecampane roots, Horferadifh 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 fo far obtained among the common people, as to have been frequently made and fold in public houfes. It is ufed in the fpring, for purifying the blood, and preventing forbutic diforders.

CEREVISIA CEPHALICA. Cephalic ale.

Take of

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Wild valerian root, ten ounces; Muttard feed, whole, fix ounces; Virginian fnakeroot, two ounces; Rofemary, or fage, three ounces; New fmall ale, ten gallons.

THE ingredients of this compolition are all of the warm and ftimulating kind; and confequently tend to invigorate the nervous fystem, 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

Muftard feed, whole,

Juniper berries, each eight ounces;

Wild carrot feeds, three ounces; Common wormwood, two ounces; New fmall ale, ten gallons. ake of 2. Broom tops, Muftard feed, each fixteen ounces; Flower-de-luce roots, Sharp-pointed dock roots, each twelve ounces; Winter's bark, Elder bark, Wild carrot feeds, Juniper berries, each two pounds; New ale, twelve gallons.

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IN hydropic cafes, and corpulent fcorbutic 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

- Horferadish 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 imall ale, ten gallons.

IN fcorbutic diforders, and impurities of the blood and juices, this liquor, ufed as common drink, generally does good fervice. All the ingredients are very effectual for the intention, and well fuited to the form. If the fharp-pointed dock roots were exchanged for those of the great water dock, the composition would be ftill more powerful. Spirituous Tinctures.

SECT. VI.

Spirituous Tinclures.

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R ECTIFIED spirit of wine is the direct menstruum of the refins and effential oils of vegetables; and totally extracts these active principles from fundry vegetable matters, which yield them to water either not at all, or only in part. It disfolves likewise the sweet faccharine matter of vegetables; and generally, those parts of animal bodies, in which their peculiar smells and tastes reside.

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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 folubility in this menstruum in great measure depends, while rectified spirit extracts them almost pure from gum. Hence, when the fpirituous tinctures are mixed with watery liquors, a part of what the fpirit had taken up from the fubject generally feparates and fubfides, on account of its having been freed from that matter which, being blended with it in the original vegetable, made it foluble in water. This however is not universal; for the active parts of fome vegetables, when extracted by rectified spirit, are not precipitated by water, being almost equally diffoluble 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 falts deepen the colour of fpirituous tinctures; and hence have been fuppofed to promote the diffolving power of the menfiruum, 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 fo 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 thefe falts, in making tinctures, ufelefs only, but likewife prejudicial, as they, in general, injure the flavour of aromatics, and superadd a quality, fometimes contrary to the intention of the medicine. Volatile alkaline falts, in many cafes, promote the action of the fpirit. Acids generally weaken it ; unlefs when the acid has been previoufly combined with the vinous fpirit into a compound of new qualities, called dulcified spirit.

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General rules for extracting tinctures; from the Edinburgh Pharmacopaia.

The vegetable fubflances ought to be moderately and newly dried, unless they are expressly ordered They should likeotherwife. wife be cut and bruifed, before the menstruum is poured on them.

If the digestion be performed in balneo, the whole fuccefs depends upon a proper management of the fire : it ought to be all along gentle, unless the hard texture of the fubject fhould require it to be augmented; in which cafe the heat may be increafed fo as to make the menftruum boil a little, towards the end of the proceis.

111.

Very large circulatory veffels ought to be employed for this purpofe, which should be heated before they are luted together.

Circulatory vefiels are thole, which are fo contrived, and of fuch a height, that the vapour, which arifes during the digestion, may be cooled and condenfed in the upper part, and fall down again into the liquor below : by these means the diffipation, both of the spirit and of the volatile parts of the ingredients, is prevented. They are generally composed of two long-necked matrafies or boltheads; the mouth of one of which is to be inferted into that of the other, and the juncture fecured by a piece of wet bladder. The ufe of heating the veffels is to expel a part of the air; which otherwife, rarifying in the process, would endanger burfting them, or blowing off the uppermoft matrafs. A fingle

matrafs with a long neck, or with a glass pipe inserted into its mouth, is more commodious than the double veffel. See page 44.

The veffel is to be frequently fhaken during the digeftion.

All tinctures fhould be fuffered to fettle before they are committed either to the filter or ftrainer.

In the tinctures (and diffilled spirits likewife) defigned for internal use, no other spirit (drawn from malt, melaffes, or other fermented matter) is to be used, than that expressly prefcribed. VII.

Refins and refinous gums yield tinctures more fuccefsfully, if, after being ground into powder, they be mixed with fome white fand, well washed and dried, which will prevent their running into lumps by the heat. If the powders prescribed be fufficient for this purpole, such an addition is unneceffary.

TINCTURA AMARA. Bitter tincture. Lond.

Take of

Gentian root, two ounces : Yellow rind of Seville orange peel, dried, one ounce ;

- Leffer cardamom feeds, freed from the huiks, half an ounce ; Proof fpirit, two pints.
- Digeft without heat, and ftrain off the tincture.

THIS is a very elegant spirituous bitter. As the preparation is defigned for keeping, lemon peel, an

н.

Spirituous Tinctures.

an excellent ingredient in the watery bitter infufions, has, on account of the perifhablenefs of its flavour, no place in this. The cardamom feeds are here a very commodious ingredient, as in this fpirituous menftruum they are free from the inconvenience with which they are attended in other liquors, of rendering them untranfparent. The Edinburgh pharmacopœia has a compofition fimilar in intention to this, under the title of

ELIXIR STOMACHICUM. Stomachic elixir.

Take of

Chap. 3.

Gentian root, two ounces; Curaffao oranges, one ounce; Virginian fnakeroot, half an ounce;

Cochineal, half a dram; French brandy, two pints.

Let them fleep for three days, and then filter the elixir.

THIS elixir differs from that of former editions, in the fubflitution of Curaffao oranges to frefh orange peel, and in the addition of half an ounce of Virginian fnakeroot. The first is a grateful aromatic bitter, and the latter fuperadds a degree of pungency coinciding with the intention. Both this and the preceding composition are very ufeful flomachic bitters.

TINCTURA AROMATICA. Aromatic tincture. Lond.

Take of

Cinnamon, fix drams ;

Leffer cardamom feeds, freed from the hufks, three drams; Long pepper,

Ginger; each two drams; Proof spirit, two pints.

Digest without heat, and then strain off the tincture.

This is a very warm aromatic,

too much fo to be given without dilution. A tea fpoonful or two may be taken in wine, or any other convenient vehicle, in languors, weaknefs of the ftomach, flatulencies, and fimilar complaints. The ftomachic tincture defcribed hereafter, is fimilar in intention to this, but contrived lefs hot of the fpices, that it may be taken by itfelf.

* TINCTURA AROMATICA. Aromatic tincture. Edinb.

Take of

Cinnamon, fix drams;

Leffer cardamom feeds, one ounce; Garden angelica root, three drams;

Long pepper, two drams;

Proof fpirit, two pounds and an half.

Macerate feven days, and filter.

THIS preparation is improved from the preceding editions, by the omiffion of fome articles either fuperfluous or foreign to the intention; galangal, gentian, zedoary, and bayberries. As now reformed, it is a fufficiently elegant warm aromatic.

TINCTURA BALSAMICA. Balfamic tincture. Edinb.

Take of

Balfam of Copaiba, one ounce and a half;

Balfam of Peru, half an ounce; English faffron, one dram;

Rectified spirit of wine, one pint.

Digest these ingredients together, in a fand heat, for three days; and, then, pass the tincture thro' a strainer.

THIS tincture is an excellent balfamic, both for internal and external purpofes. It is usually X 2 given,

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given, in doses of ten, twenty, or thirty drops, in the fluor albus, gleets, cachexies, fome kinds of afthmas, and nephritic complaints, for firengthening the tone of the vifcera, and corroborating the nervous fystem in general. Some caution is requifite in the use of these 'refinous warm medicines : in cold, languid, phlegmatic habits, they have for the most part good effects; but in bilious and plethoric conflitutions, where there is any tendency to inflammation, or immoderate heat, they are manifeftly prejudicial, and raife or continue febrile fymptoms.

TINCTURA CANTHARI-DUM. Tincture of cantharides. Lond.

Take of

Cantharides, bruised, two drams; Cochineal, half a dram;

Proof fpirit, a pint and a half.

Digest them together, and afterwards filter the tincture through paper.

Edinb.

Take of

Cantharides, one dram; Proof spirit, one pound. Digest four days, and filter.

THESE tinctures pofiefs the whole virtues of the fly, and are the only preparations of it defigned for internal use; tinctures being by far the most commodious and fafe form for the exhibition of this active drug. If any additional fubftances should be thought requisite for promoting the effect of the cantharides, whether as a diuretic, as a detergent in ulcerations of the urinary paffages, or as a specific reftringent of feminal gleets and the fluor albus, they are more advantageoufly joined extemporaneoully to the tincture, or interposed by themselves Part III.

a day; and increased by two or three drops at a time, according to the effect.

TINCTURA CARDAMOMI. Tincture of cardamoms. Lond.

Take of

Leffer cardamom feeds, hufked, half a pound ;

Proof spirit, two pints.

Digeft without heat, and ftrain the tincture.

TINCTURE of cardamoms has been in use for a confiderable time, though now first received into the dispensatory. It is a pleasant, warm cordial, and may be taken, along with any proper vehicle, from a dram to a spoonful or two.

TINCTURA CASTOREI. Tincture of caftor. Lond.

Take of

Ruffia caftor, powdered, two ounces;

Proof spirit, two pints.

Digeft for ten days without heat, and ftrain off the tincture.

Edinb.

Take of

Ruffia caftor, one ounce and an half;

Rectified spirit of wine, one pound;

Macerate for fix days, and ftrain.

An alkaline falt was formerly added in this last prefcription, which is here judiciously rejected, as being at least an useles, if not a prejudicial ingredient. It has been disputed, whether a weak or rectified

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tified 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 caf-" tor having been infufed in good " French brandy, without heat, " for twenty days, the tincture " proved very weak : on the fame " individual caftor (the magma or " refiduum of the former tincture) " the fame quantity of rectified " fpirit was poured, as before of " brandy; and after a few hours " warm digestion, a tincture was " extracted much fronger than the " other." But this experiment is not fatisfactory; 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 caftor, 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 groffer and more nauseous matter; and that proof ipirit extracts this laft more readily than rectified.

Chap. 3.

The tinctute of caftor is recommended in most kinds of nervous complaints, and hysteric diforders: in the latter it fometimes does fervice, though many have complained of its proving ineffectual. The dofe is from twenty drops to forty, fifty, or more.

TINCTURA CASTOREI COMPOSITA. Compound tincture of caftor. Edinb.

Take of

Ruffia caftor, one ounce ;

Afafetida, half an ounce ;

Vinous spirit of fal ammoniac, one pound.

Digeft for fix days in a clofe-flopt phial, frequently flaking the veffel; and then frain the tincture.

THIS composition is a medicine of real efficacy, particularly in hysterical diforders, and the feveral fymptoms which accompany them. The *wolatile oily fpirit*, here intended, is the fecond of those hereafter described under that title. It is an excellent menstruum both for the castor and the asafetida, and greatly adds to their virtues.

TINCTURA CINNAMOMI. Tincture of cinnamon. Lond.

Take of

Cinnamon, an ounce and a half; Proof fpirit, a pint.

Digest without heat, and strain off the tincture.

THE tincture of cinnamon poffession fession for 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 CORTICIS PERUVIANI SIMPLEX. Simple tincture of Peruvian bark. Lond.

Take of

Peruvian bark, four ounces;

Proof spirit, two pints.

Digest and strain.

A medicine of this kind has been for a long time pretty much in effeem, and ufually kept in the fhops, though but lately received into the difpenfatory. Some have employed highly-rectified fpirit of wine as a menftruum ; which they have taken care fully to faturate, by digeftion on a large quantity of the bark. Others have thought to affift the action of the fpirit, by the addition of a little fixt alkaline falt, which does not, however, appear

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to be of any advantage; and others have given the preference to the vitriolic acid, which was supposed, by giving a greater confistence to the fpirit, to enable it to fuftain more than it would be capable of doing by itfelf; at the fame 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 fpirit 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 purpofes it is intended to answer. See PERUVIANUS COR-TEX.

TINCTURA CORTICIS PERU-VIANI VOLATILIS. Volatile tinsture of Peruvian bark. Lond.

Take of

Peruvian bark, four ounces;

Spirit of fal ammoniac, two pints. Digeft without heat, in a veffel clofe ftopt; and afterwards ftrain the tincture.

THIS tincture is but lightly impregnated with the virtues of the bark; and is fo acrimonious, that the largest dose, which can with fafety be given of it, can contain only a very fmall quantity of the fubject. The medicine neverthelefs has its uses, and may be ierviceable in fome cafes where the ftronger are improper, as in difficulty of breathing, obstructions, and oppreffions of the breaft. Stronger tinctures of this kind may be obtained by means of dulcified fpirit of fal ammoniac, or the fpirit 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 weaknefs of digeftion, attended with a cold fenfation at the ftomach, and fome fluxes, particularly those from the uterus, where the circulation is languid, the fibres relaxed, and where there is a periodical return of flight feverifh complaints. In these cases, I have often experienced falutary effects from a tincture in dulcified fpirit of fal ammoniac, given to the quantity of a tea spoonful five or fix times a day, in any appropriated vehicles.

TINCTURA CORTICIS PERU-VIANI. COMP.

Compound tincture of Peruvian

bark. Edinb.

Take of

Peruvian bark, in powder, three ounces;

Virginian Inakeroot,

Gentian, each two drams ;

French brandy, two pints.

Let them steep together for three days, and afterwards filter the tincture.

THE fubstances here joined to the bark, in many cafes, promote its efficacy in the cure of intermittents; and not unfrequently, are abfolutely neceffary. In fome bad habits, particularly where the juices are fluggish and tenacious, the vifcera and abdominal glands obftructed, the bark, by itfelf, proves unfuccefsful, if not injurious; whilft, given in conjunction with corroborant flomachics and deobftruents, it rarely fails of the due effect. Gentian and Virginian fnakeroot are among the belt additions for the purpose ; to which it is often necessary to join chalybeate medicines alfo.

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Chap. 3. Spirit TINCTURA CROCI. Tincture of faffron. Edinb.

Take of

English faffron, one ounce ; Proof spirit, fifteen ounces ; Digest for seven days, and strain.

THIS tincture is fimilar in virtue to the faffron wine. A fpirituous menftruum is here preferred to the wine, as a tincture drawn with the former retains its elegant colour longer, and is not apt to deposit, in keeping, any part of what it had taken up from the faffron. The shops have been accustomed to employ treacle water as a menstruum for faffron, with a view to promote its efficacy in the intention of an alexipharmic; but the acid in that compound water soon destroys the colour of the tincture.

TINCTURA FŒTIDA. Fetid tincture. Lond.

Take of

Afafetida, four ounces; Rectified spirit of wine, two pints. Digest and strain.

THIS tincture, now received into the pharmacopœia, has been in ufe for a confiderable time. It poffeffes the virtues of the afafedita itfelf; and may be given from ten drops to fifty or fixty. It was first proposed to the college to be made with proof fpirit: this diffolves more of the afafetida than a rectified one, but the tincture proves turbid; and therefore rectified spirit, which extracts a transparent one, is very justly preferred.

TINCTURA FULIGINIS. Tincture of foot. Lond.

Take of Wood foot, two ounces; Afafetida, one ounce; Proof fpirit, two pints. Digest and strain.

Edinb.

Take of Shining wood-foot, one ounce; Afafetida, half an ounce; Rectified fpirit of wine, Proof fpirit, of each half a pound. Digeft fix days, and ftrain.

THE proof spirit is not liable to the fame objection here as in the foregoing tincture; for when foot is added, whatever spirit be ememployed, the tincture will not prove transparent. Fuller, in his pharmacopœia domestica, has a medicine under the title of Hys-TERICTINCTURE, fimilar to thefe, only with a little myrrh, which is no very material addition to afafe-These medicines tida and foot. are found ferviceable, not only in hyiteric cafes, but likewise in other nervous diforders. They may be given from a tea-spoonful to a common spoonful twice a day.

TINCTURA GUAIACINA VOLATILIS. Volatile tincture of guaiacum.

Lond.

- Take of Gum guaiacum, four ounces; Volatile aromatic fpirit, a pint and a half.
- Digeft, without heat, in a veffel close ftopt; and afterwards let the tincture be paffed through a ftrainer.

THIS is a very elegant and efficacious tincture; the volatile fpirit excellently diffolving the gum, and, at the fame time, promoting its medicinal virtue. In rheumatic cafes, a tea-fpoonful, taken every morning and evening in any con-X 4

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venient vehicle, has proved of fingular fervice.

TINCTURA JALAPII. Tincture of jalap. Lond.

Take of

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Jalap root, eight ounces; Proof fpirit, two pints. After proper digettion, ftrain off

the tincture.

THIS tincture is an useful and mild purgative, the menstruum, here employed, taking up fo much of the gummy parts, as corrects the griping quality with which the refin is attended. It may be taken by itfelf 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, three ounces; Proof fpirit, fifteen ounces. Digeft for eight days, and firain.

RECTIFIED spirit of wine was formerly ordered for the preparation of this tincture; but rectified fpirit, diffolving little more than the pure refinous parts of the jalap, rendered the use of the medicine fomewhat lefs commodious than that of the tincture prepared with proof spirit. Most of the tinctures made in rectified fpirit, diluted with water fo as to be fit for taking, form a turbid white mixture: many of them are fafely taken in this form, without any further addition ; but the cathartic ones are never to be ventured on without an admixture of fyrup or mucilage to keep the refin united with the liquor; for if it feparate, in its pure undivided state, it never fails to produce violent gripes.

Some have preferred to the tincture of jalap, a folution in spirit of wine of a known quantity of the refin extracted from the root; and observe, that this folution is more certain in firength than any tincture that can be drawn from the root directly. For, as the purgative virtue of jalap refides in its refin, and as all jalap appears, from experiment, not to be equally refinous, fome forts yielding five, and others not three ounces of refin from fixteen; it follows, that although the root be always taken in the fame proportion as the menstruum, and the menftruum always of the fame ftrength, it may neverthelefs, according to the degree of goodnefs of the jalap, be impregnated with different quantities of refin, and confequently prove different in degree of efficacy. Though this objection against the tincture does not reach fo far as some feem to suppose, it certainly behoves the apothecary to be careful in the choice of the root. The inferior forts may be employed for making the refina jalapii, which they yield in as great perfection, though not in fo large quantity, as the best. Neumann thinks even the worm-eaten jalap as good, for that purpole, as any other.

TINCTURA JALAPPÆ COMPOSITA.

Compound tincture of jalap. Edinb.

Take of Jalap, fix drams; Black hellebore roots, three drams; Juniper berries, Guaiacum fhavings, each half an ounce; French brandy, a pint and a half. Digeft for three days, and afterwards firain the tincture.

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THIS tincture requires to be taken in larger quantity than either of the foregoing. If intended to act fully as a cathartic, it may, in some cases, be employed to advantage, in imall The quandoses, as an alterant. tity of the purgative materials, that goes to an ounce of the tincture, is fifteen grains of jalap, and feven and a half of the black hellebore root.

TINCTURA JAPONICA. Japonic tinsture.

Lond.

Take of

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- Japan earth, three ounces; Cinnamon, two ounces ; . Proof fpirit, two pints.
- After a proper digettion, let the tincture be paffed through a ftrainer.

A tincture of this kind, with the addition of Peruvian bark, ambergris, and musk, to the ingredients above directed, was formerly kept in the The tincture here received fhops. is preferable for general use. Where any other ingredients are required, tinctures of them may be occasionally mixed with this in extemporaneous prescription. The cinnamon is a very useful addition to the Japan earth, not only as it warms the ftomach, &c. but likewile as it improves the roughness and aftringency of the other.

> TINCTURA E KINO. Tinclure of gum kino. Edinb.

Take of

Gum kino, two ounces ;

- Proof spirit, one pound and an half.
- Digest eight days, and strain off the tincture.

THESE tinctures are of good fer-

vice in all kinds of defluxions, catarrhs, loofeneffes, uterine fluors, and fimilar diforders, where mild aftringent medicines are indicated. Two or three tea-spoonfuls may be taken every now and then, in red wine, or any other proper vehicle.

> TINCTURA LACCÆ. Tincture of gum-lac. Edinb.

Take of

- Gum-lac, powdered, an ounce : Myrrh, powdered, half an ounce: Spirit of fcurvy-grafs, a pint and a half.
- Digest in a fand heat for fix days: after which, ftrain off the tincture.

THIS tincture is principally employed for strengthening the gums, and in bleedings and fcorbutic exulcerations of them : it may be fitted for use in these intentions, by mixing it with honey of rofes, or the like. Some recommend it internally against fcorbutic complaints, and as a corroborant in gleets, female weaknesses, &c. Its warmth, pungency, and manifestly astringent bitterish taste, point out its virtues, in these cales, to be considerable, though common practice, among us, has not yet received it.

TINCTURA FLORUM MAR-TIALIUM. Tincture of the martial flowers. Lond.

Take of

Martial flowers, four ounces; Proof spirit, one pint, Digeft and strain.

TINCTURA MARTIS. Tincture of iron. Edinb.

Take of Iron filings, purified and reduced to powder, three ounces ; Marine

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Marine acid, enough to diffolve the powder.

Digeft with a gentle heat, and, when the powder is diffolved, add fuch a quantity of fpirit of wine as will make up the whole liquor two pounds.

TINCTURA MARTIS IN SPI-RITU SALIS.

Tincture of iron in spirit of falt. Lond.

Take of

Iron filings, half a pound ;

- Glauber's spirit of falt, three pounds;
- Rectified fpirit of wine, three pints.
- Digeft the iron filings in the fpirit of falt, without heat, as long as the fpirit acts upon the iron. After the feces have fubfided, evaporate the liquor to one pound, and add thereto the vinous fpirit.

ALL the tinctures of fleel are no other than real folutions of the metal made in acids, and com-The bined with vinous fpirits. three tinctures, here directed, differ from one another only in ftrength, the acid being the fame in all: the first is the weakest, and the last the strongest. In a former pharmacopœia there was a tincture from the matter which remains after the fublimation of the martial flowers; which, though it appears to be a good one, is now expunged as fuperfluous. Some have recommended dulcified fpirit of nitre as a menitruum ; but though this readily diffolves the metal, it does not keep it fuspended. The marine is the only acid that can be employed for this ule.

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 latter, in fome cafes, pafs off through the inteflinal cube with little effect ; whilft the tinctures fcarce 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 feldom advifable to extend the dofe fo far as the laft of the quantities, efpecially in regard to the tincture in fpirit of falt, which is exceedingly firong of the iron.

TINCTURA MELAMPODII.

Tincture of melampodium, or black hellebore.

Lond. and Edinb.

Take of

Black hellebore roots, four ounces;

Cochineal, two fcruples;

Proof ipirit, two pints.

Digest them together, and afterwards filter the tincture through paper.

THIS is perhaps the best preparation of hellebore, when deligned for an alterative, the menstruum here employed extracting the whole of its virtues. It has been found, from experience, particularly ferviceable in uterine obffructions: in fanguine conflitutions, where chalybeates are hurtful, it feldom fails of exciting the menftrual evacuations, and removing the ill confequences of their fupprefiion. So great is the power of this medicine, that wherever, from an ill conformation of the parts, or other causes, the expected difcharge does not fucceed 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 tea spoonful of the tincture may be taken twice in a day,

convenient vehicle.

The college of Edinburgh had formerly a tincture of this root with wine. Proof fpirit is undoubtedly preferable, both as a menstruum, and as being better calculated for keeping.

TINCTURA MYRRHÆ.

Tinelure of myrrh.

Lond.

Take of

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Myrrh, three ounces ;

Proof fpirit, two pints.

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 affiftance of fixt alkaline falts. But it appears from proper experiments, that these falts only heighten the colour of the tincture, without enabling the menftruum to diffolve any more than it would by itfelf. Rectified spirit extracts, without any addition, all that part of the myrrh, in which its peculiar fmell and tafte refide, viz. the refin : and proof fpirit diffolves almost the whole drug, except its impurities.

Tincture of myrrh is recommended internally for warming the habit, attenuating viscid juices, ftrengthening the folids, opening obstructions, particularly those of the uterine vefiels, and refifting putrefaction, Boerhaave greatly

day, in warm water, or any other effeems it in all languid cafes, proceeding from fimple inactivity; in those female diforders which are occationed by an aqueous, mucous, fluggish indisposition of the humours, and a relaxation of the veffels; in the fluor albus, and all difeafes arifing from a fingular caufe. The dole is from fifteen drops to forty or more. The medicine may doubtlefs be given in these cafes to advantage ; though with us, it is more commonly used externally, for cleanfing foul ulcers, and promoting the exfoliation of carious bones.

TINCTURA MYRRHÆ ET ALOES.

Tincture of myrrh and aloes. Edinb.

Take of

- Myrrh, in powder, one ounce and a half ;
- Hepatic aloes, in powder, one ounce ;
- Rectified spirit of wine, two pints.
- Digeft in a fand-heat for fix days, and then let the tincture be ftrained off.

THIS tincture is employed only in chirurgical dreffings, for cleanfing foul ulcers, reftraining the progrefs of gangrenes, &c. in which intention the aloes is an ufeful addition to the myrrh. The hepatic aloes is reckoned more effectual for thefe purposes than the finer Socotorine.

TINCTURA OPII, vulgo LAU-DANUM LIQUIDUM.

Tincture of opium, commonly called liquid laudanum. Edinb.

Take of Opium, two ounces ;

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pound and an half. Digest four days, and filter.

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THIS is a very elegant liquid opiate, the menftruum diffolving nearly the whole substance of the opium, and effectually covering its ill flavour. The proportion of menstruum is somewhat larger than in the vinous tinclure formerly defcribed : one grain of opium goes to about twenty drops of that tincture, and twenty-five of this : neverthelefs, as there appears to be more of the opium diffolved here than in the other, this tincture may poffibly be the ftronger of the two. It were to be withed that the fhops were furnished with a liquid opiate, in which the proportion of menfiruum was still much larger, io as to admit of the dole being determined by weight or measure; the method, by drops, feeming too precarious for a medicine of fo 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 diffolved, and then filter the folution through paper.

THIS preparation I apprehend to be free from all the inconveniencies attending the common opiate tinctures. The menstruum diffolves the whole of the opium except the impurities, and confequently the tincture is not liable to any uncertainty in point of ftrength. The dofe may be afcertained to the greatest exactnels : one grain of opium is contained

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Spirituous cinnamon water, one in one ounce by measure, which is equal nearly to feven drams by weight. Neither the tinctures in wine nor proof spirit are fo well adapted for keeping, as could be wifhed; in long flanding, a part of the opium is gradually thrown off from both, and confequently the tinctures become gradually weaker : the part which thus feparates, amounts fometimes, as I have been informed, to near onefourth of the quantity of opium at first diffolved ; it floats on the furface of the vinous tincture, and in the spirituous finks to the bottom. In the preparation here recommended, it has not been obferved that any feparation happens.

> Inftead 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 fmell of the opium, any proper tincture or diffilled water may be extemporaneously joined. Saffron, an addition employed by the Edinburgh college, has been looked upon as a corrector of opium; but the qualities it was supposed to correct, are merely imaginary: nor indeed can that article be of much importance in any intention, in the fmall quantity that enters a dole of the tincture; a grain of opium being accompanied with only half a grain of faffron.

TINCTURA RHABARBARI SPIRITUOSA.

Spirituous tincture of rhubarb.

Lond. Take of Rhubarb, two ounces; Leffer cardamom feeds, hufked, half an ounce : Saffron, two drams;

Proof spirit, two pints.

Digeft

Spirituous TinEtures.

Digeft without heat, and ftrain off the tincture for use.

TINCTURA RHEI AMARA. Bitter tincture of rhubarb. Edinb.

Take of

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Rhubarb, two ounces; Gentian root, half an ounce; Virginian inakeroot, one dram; Proof ipirit, two pounds and an half.

Digest seven days, and strain off.

TINCTURA RHEI DULCIS. Sweet tincture of rhubarb. Edinb.

Take of

Rhubarb, two ounces ;

Leffer cardamoms, half an ounce; French brandy, two pints.

Digeft for two days; and then, having firained out the tincture, add to it four ounces of white fugar-candy, in powder, and digeft again until the fugar is diffolved.

THE last of these preparations is fomewhat improved from the former edition. Two ounces of liquorice and one of raisins are supplied by an increase of the sugar; and two drams of canella alba, by increasing the cardamom seeds from two to four drams.

All the foregoing tinctures of rhubarb are defigned as flomachics and corroborants, as well as purgatives. Spirituous liquors excellently extract thofe parts of the rhubarb in which the two firft qualities refide, and the additional ingredients confiderably promote their efficacy. In weaknefs of the ftomach, indigeftion, laxity of the inteftines, diarrhœas, cholicky and other like complaints, thefe medicines are frequently of good fervice. The fecond is alfo, in many

cafes, an ufeful addition to the Peruvian bark, in the cure of intermittents, particularly in cachectic habits, where the vifcera are obftructed. In thefe intentions, a fpoonful or two may be taken for a dofe, and occafionally repeated.

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TINCTURA SATURNINA. Saturnine tinsture.

Lond.

Take of

Sugar of lead,

Green vitriol, each two ounces ; Rectified fpirit of wine, two pints.

Reduce the falts feparately into a powder; then add the fpirit, and digeft them together without heat; afterwards filter the tincture through paper.

TINCTURA ANTIPHTHI-SICA. Antiphthisical tincture. Edinb.

Take of

Sugar of lead, an ounce and a half;

Vitriol of iron, an ounce;

Rectified spirit of wine, a pint.

Let a tincture be extracted without heat.

THE reducing of the falts *fepa*rately 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 foft and almost liquid : and if heat be made use of, scarce any tincture will be obtained.

These tinctures are fometimes given from twenty to thirty drops, for restraining immoderate secretions, particularly the colliquative sweats attending hectic severs and phthisical diforders, whence the name antiphthisical tincture. They

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are undoubtedly medicines of great efficacy in thefe cafes, but too dangerous ones to be rafhly ventured on. Some have fuppofed, that they do not contain any of the fugar of lead; but experiments, made for that purpofe, have fhewn that they do: and therefore, the London college has very judicioufly changed the title of their tincture into one expreffing its being a preparation of lead.

TINCTURA SENÆ. Tincture of Sena. Lond.

Take of

- Raifins, ftoned, fixteen onnces; Sena, one pound;
- Caraway feeds, one ounce and a half;
- Leffer cardamoms, hufked, half an ounce;

Proof spirit, one gallon.

Digest without heat, and then strain the tincture.

TINCTURA SENÆ COMPO-SITA, vulgo ELIXIR SA-LUTIS.

Compound tineture of sena, commonly called elixir of health. Edinb.

Take of

Sena leaves, two ounces;

lalap root, one ounce ;

- Coriander feeds, half an ounce; Proof fpirit, three pounds and an half.
- Digest for seven days, and to the strained liquor add four ounces of fine sugar.

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 fuperior to most of them.

TINCTURA SERPENTARIÆ. Tinclure of fnakeroot. Lond.

Take of

Virginian Inakeroot, three ounces;

Proof fpirit, two pints.

Digeft without heat, and strain off the tincture.

THE tincture of inakeroot was in a former pharmacopceia directed with the *tinctura falis tartari*, which being now expunged, it was propoled to the college to employ rectified fpirit; but as the heat of this fpirit prevents the medicine from being taken in fo large a dole as it might otherwise be, a weaker fpirit was made choice of. The tincture made in this menftruum, which extracts the whole virtues of the root, may be taken to the quantity of a fpoonful or more every five or fix hours.

The college of Edinburgh directs this tincture to be drawn with plague water; a diffilled fpirituous water, impregnated with mafterwort, angelica, and elder flowers, and mixed with diffilled vinegar.

Edinb.

De

Take of Virginian fnakeroot, two ounces;

Cochineal, one dram;

Proof spirit, two pounds and an half.

Digeft four days, and firain off.

THE plague water, as directed in a former pharmacopœia, is equally efficacious, as a menftruum, with the fimple proof fpirit; and likewife coincides with the general intention

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tention of the medicine, as an alexi- (which is faid to be the fame with pharmic in fevers. (which is faid to be the fame with that of EATON) differs from it no

TINCTURA STOMACHICA. Stomachic tincture. Lond.

Take of

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Raifins, ftoned, four ounces; Cinnamon, half an ounce; Caraway feeds, Leffer cardamoms, hufked, Cochineal, of each two drams, Proof fpirit, two pints.

Digeft without heat, and ftrain off the tincture.

THIS is a moderately warm ftomachic tincture, much more pleafant than the USQUEBAUGH of our former pharmacopœias. It may be taken, without any vehicle, to half an ounce or an ounce, though oftener ufed in mixtures.

TINCTURA STYPTICA. Styptic tincture. Lond.

Take of

Green vitriol, calcined, one dram ;

French brandy (fuch as has acquired a yellowish tinge from the cask) two pints.

Mix them together, that the fpirit may grow black; then pais it through a ftrainer.

Some have fuppofed, that no other fpirit than French brandy would fucceed in striking the black colour, for which this tincture is valued. But any fpirit, that has gained an impregnation from the oak cafks, which thefe kinds of liquors are generally kept in, or from other vegetable astringents, will equally exhibit this phænomenon; and French brandy will not do it, without such affistance. The title of this tincture express its medicinal intention. The celebrated STYPTIC OF HELVETIUS (which is faid to be the fame with that of EATON) differs from it no otherwife, than in being more operofe in composition. They are recommended both for internal ufe, and for reftraining external hæmorrhages. Their virtues do not feem to depend fo much on the iron, as on the menstruum; the quantity of metal diffolved being extremely fmall. In keeping, the iron is apt to feparate, and the liquor to lose its black colour.

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TINCTURA SUCCINI. Tinsture of amber.

Take of

Yellow amber, two ounces ; Rectified fpirit of wine, twenty ounces.

Digest in a fand-heat for eight days, and afterwards filter the tincture.

THIS is a very elegant preparation of amber, of a grateful balfamic tafte, and fragrant fmell. Boerhaave, Hoffman, and others, ftrongly recommend it in diforders proceeding from a lax ftate of the folids and debility of the nervous fyftem; in fuppreffions of the menftrual difcharges, the fluor albus, feminal gleets, rheumatic complaints, and fome kinds of epilepfies. It is directed to be taken from ten to an hundred drops, in Canary or other rich wine.

The medicine is doubtlefs an efficacious one; though it would be much more fo, if a part of the fpirit were drawn off, fo as to leave, what it had extracted from the amber, concentrated into the confiftence of a balfam : a tea-fpoonful of this may be taken three or four times a day, with fugar, or in any convenient vehicle. The fpirit diftilled off, which is richly impregnated with the amber fmell, may be referved for extracting a frefh

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fresh tincture from another parcel of amber. A tincture of amber, made in this spirit, possesses the whole virtue of the concrete, and appears to be one of the most valuable preparations of it.

Fixt alkaline falts have been commonly employed in the preparation of this tincture; but with no good effect; for they not only do not promote the diffolution of the amber, but likewise injure the medical virtue of the preparation. Scarcely any of the fubftances that have been made trial of, give any confiderable affiftance to fpirit of wine in diffolving this concrete, except the vitriolic acid ; which, when intimately combined with it into a dulcified spirit, forms a menstruum faid to be much more efficacious for amber than the fimple vincus fpirit. The college of Edinburgh have accordingly made choice of this menstruum, and directed the tincture as follows.

Take of

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Yellow amber, two ounces;

Dulcified fpirit of vitriol, one pint.

Digest them in a fand-bath, with a gentle heat, for four days; and then filter the tincture.

TINCTURA SUDORIFICA. Sudorific tineture. Edinb.

Take of

Virginian inakeroot, fix 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 be-

ing of the most powerful kind, and the menftruum not only extracting those parts of them in which their virtues confift, but co-operating ftrongly in the fame intention. Ruffia castor, a supernumerary ingredient in former editions, is now omitted : and cochineal, which from the quantity of it formerly employed, seemed to have been defigned with a medicinal view, is now reduced to one half, and nothing more is expected from it, 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.

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TINCTURA SULPHURIS. Tincture of Sulphur.

Take of

- Rectified spirit of wine, one pint.
 - Hepar fulphuris (that is, a mixture of fulphur and fixt alkaline falt melted together) four ounces.
- Grind the hepar into powder whilft hot from the fire, add to it the fpirit, and digeft in a moderate heat for twenty four hours; then pour off the tincture from the feces.

THE digeftion may be commodioufly performed in a glafs receiver. Put the fpirit firft into the veffel, and pour the hot powder upon it: then fhake them together; and, to prevent the exhalation of any part of the fpirit during the digeftion, infert a glafs tube into the mouth of the receiver.

This tincture is of a rich gold colour, a hot aromatic tafte, and a not ungrateful fmell. Its virtues are those of a warm, attenuating, aperient, and anti-acid medicine. Some have recommended it as a laft refource

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refource in phthifics and ulcerations of the lungs; but in thefe cafes it promifes little fervice, and has been fometimes found prejudicial. The dofe is from ten to fixty drops: it is most commodiously taken in Canary or other rich wines.

TINCTURA ANTIMONII. Tincture of antimony. Lond.

Take of

Any fixt alkaline falt, one pound; Antimony, half a pound ; Rectified fpirit of wine, two pints.

Reduce the antimony into powder, mix it with the falt, and melt them together, with a ftrong fire, for an hour. Then pour out the matter, pulverize it, add the fpirit, and digeft them for three or four days: after which, ftrain off the tincture for ufe.

Edinb.

Take of

Antimony, in powder, four ounces;

Salt of tartar, fix ounces;

Rectified spirit of wine, two pints.

Mix the antimony with the falt of tartar, and inject them by little and little into a crucible placed in a ftrong fire. The mixture melts thin, and is to be continued in this flate for half an hour; after which, it is to be poured out into a hot and dry iron mortar. Powder the mafs while hot, put it into a heated matrafs, and pour thereon the fpirit. Digeft them together, for three days, in a gentle heat of fand; and then decant the tincture.

In these processes, the alkaline falt unites with the fulphur of the autimony into a hepar; which communicates to the fpirit a tincture fimilar to the foregoing. This antimonial tincture is fuppofed to contain likewife fome of the reguline parts of the mineral, and is faid to have fometimes provoked a puke when taken on an empty flomach, even in a fmall dofe. It ftands recommended, in dofes of from ten to fixty drops or more, as a deobstruent, promoter of urine, and a purifier of the blood.

TINCTURA ANTIMONII DIA-PHORETICI.

Tincture of diaphoretic antimony. Take of

Diaphoretic antimony, fixteen ounces;

Nitre, four pounds ;

- Tartarized spirit of wine, three pints.
- Let the antimony and nitre be finely powdered, mixed, injected by a fpoonful at a time into a redhot crucible, and kept in a ftrong melting heat for half an hour. Then pour the matter into a warm iron mortar, powder it whilft hot, and immediately add the vinous fpirit. Digeft for three days, and filter the tincture for ufe.

THIS tincture is recommended for the fame purposes as the foregoing, and in the fame dose. It is very fragrant in fmell, and agreeable to the tafte.

TINCTURA SALIS TARTARI. Tincture of falt of tartar.

Take of

Salt of tartar, fix ounces.

Melt it in a crucible till it acquires a greenifh colour; pulverize it whilft hot, and immediately pour upon it, in a ftrong long-necked matrafs, as much rectified fpirit of wine as will ftand three or four inches above it. Digeft, for Y feveral feveral days, in a pretty firong Take of fand-heat, that a tincture may Wild w be obtained. Proof

THIS preparation is taken from a former edition of our pharmacopœia. It has been ufually expected to be of a red hue; but (as the committee observe) if neither the falt nor the fpirit have any oily tincture, the fpirit, though it acquires from the alkali a hot pungent tafte, will scarce receive any degree of colour, unless by some fpark of coal, which may accidentally fall into the crucible, while the falt is calcining. For this reafon, this tincture has been ufually prepared in a counterfeit manner, by adding fome portion of antimony to the falt, whereby it refembled too much the tincture of antimony, for both to be retained.

TINCTURA TOLUTANA. Tincture of balfam of Tolu. Edinb.

Take of

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Balfam of Tolu, an ounce and a half;

Rectified spirit of wine, a pint.

Digest in a fand heat, until the balfam is disfolved : and then strain the tincture.

THIS folution of balfam of Tolu poffeffes all the virtues of the balfam itfelf. It may be taken internally, in the feveral intentions for which this valuable balfam is proper, to the quantity of a tea fpoonful or two, in any convenient vehicle. Mixed with the plain fyrup of fugar, it forms an elegant balfamic fyrup.

TINCTURA VALERIANÆ. SIMPLEX. Simple tincture of valerian. Lond.

Wild valerian root, four ounces :

Proof spirit, two pints. After due digestion, strain off the tincture.

The valerian root ought to be reduced into fine powder, otherwife the fpirit will not fufficiently extract its virtues. The tincture proves of a deep colour, and confiderably ftrong of the valerian; though it has not been found to answer fo well in the cure of epileptic diforders, as the root in fubfiance 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.

VOLATILIS. Volatile tincture of valerian. Lond.

Take of

- Wild valerian root, four ounces ; Volatile aromatic fpirit, two pints.
- Digeit without heat, in a veffel closely flopt, and afterwards ftrain off the tincture.

The volatile fpirit is here an excellent menstruum, and, at the fame time, confiderably promotes the virtues of the valerian, which in fome cases wants an affistance of this kind. The dole may be a teaspoonful or two.

TINCTURA VERATRI. Tincture of veratrum, or white hellebore.

Lond.

Take of White hellebore root, eight ounces;

Proof. fpirit, two pints.

Digest them together, and filter the tincture through paper.

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Spirituous Tinctures.

THIS tincture is fometimes used for acuating cathartics, &c. and as an emetic in apoplectic and maniacal diforders. It may likewise be fo 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 confiderable, it proves violently emetic or cathartic.

BALSAMUM GUAIACINUM. Balfam of guaiacum. Lond.

Take of

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Gum guaiacum, one pound; Balfam of Peru, three drams; Rectified fpirit of wine, two pints and a half.

Digeft till the gum is diffolved, and then ftrain off the balfam.

ELIXIR GUAIACINUM. Elixir of guaiacum. Edinb.

Take of

Gum guaiacum, one pound; Balfam of Peru, three drams; Rectified fpirit of wine, two pounds and an half. Digett for ten days, and strain off.

• ELIXIR GUAIACINUM VOLATILE. Volatile elixir of guaiacum. Edinb.

Take of

Gum guaiacum, four ounces; Balíam of Peru, two drams; Effential oil of faffafras, half a dram;

Vinous fpirit of fal ammoniac, one pound and an half.

Macerate for fix days, in a well ftopped vial, and ftrain off the elixir.

THESE compositions are medicines of great efficacy, and capable

of answering many useful purposes. They warm and ftrengthen the habit, and promote infenfible perspi-Twenty or thirty drops ration. may be taken two or three times a day, or oftener, in any proper vehicle, in rheumatic complaints, cutaneous defedations, &c. particularly where the patient is of a cold phlegmatic temperament, and the folids weak and relaxed. In hot, bilious constitutions, and tensity or rigidity of the veffels, like other ftimulating medicines, they are evidently improper.

BALSAMUM COMMENDATORIS.

Baume de commandeur. Take of

Dry Peruvian ballam, one ounce; Storax in the tear, two ounces; Benjamin, three ounces;

Socotorine aloes,

Myrrh,

Olibanum,

Angelica roots,

- St. John's wort flowers, each half an ounce;
- Spirit of wine, two pounds eight ounces by weight.
- Let them fland together in the fun, during the dog-days, in a glafs veffel, clofely flopt; and afterwards flrain out the balfam thro' a linen cloth.

THIS balfam has been inferted, with little variation, in some foreign pharmacopœias, and likewife kept a secret in private hands, under the titles of Balfamum Perficum, Balfam of Berne, Wade's Balfam, Friar's Balfam, Jesuit's drops, &c. The form above is taken from the original receipt published by Pomet (Histoire des drogues, edit. 2. tom. ii. p. 56.) It stands greatly recommended, externally, for cleanfing and heating wounds and ulcers, difcutting cold tumors, allaying gouty, rheumatic, and other old 2 pains

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pains and aches; and likewife internally, for warming and firengthening the flomach and inteffines, expelling flatulencies, and relieving colicky complaints. Outwardly, it is applied cold on the part with a feather; inwardly, a few drops are taken at a time, in wine or any other convenient vehicle.

BALSAMUM TRAUMATI-CUM:

Traumatic or vulnerary balfam. Lond.

Take of

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Benzoine, three ounces; Storax, firained, two ounces; Balfam of Tolu, one ounce; Socotorine aloes, half an ounce; Rectified fpirit of wine, two pints.

Digeft, that the gums may as much as poffible be diffolved; and then ftrain off the ballam for ufe.

THIS is an elegant reformation , of the preceding composition, confiderably more fimple, yet not infenor in efficacy. The balfam of Tolu supplies, with advantage, the dry Peruvian balfam, a drug very rare to be met with in this country: the olibanum, myrrh, and angelica roots here omitted, were certainly superfluous in a medicine containing fo much more powerful materials ; and the St. John's wort flowers are as defervedly thrown out, as having little elfe to recommend them than prejudice or superfit-LIOR.

Edinb.

Take of Benzoine, powdered, three ounces;

Balfam 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.

THIS is a further contraction of the baume de commandeur, without any injury to it as a medicine, at leaft with regard to the purpofes for which the title fnews it defigned. Socotorine aloes is here judicioufly exchanged for the hepatic, which appears from experience to be the most ferviceable in external applications.

ELIXIR ALOES. Elixir of aloes. Lond.

Take of

Tincture of myrrh, two pints; Socotorine aloes,

Saffron, each three ounces.

Digeft them together, and ftrain off the elixir.

ELIXIR PROPRIETATIS. Edinb.

Take of

Myrrh, in powder, two ounces; Rectified fpirit of wine,

Proof spirit, of each one pound, Digest for four days, and add

Socotorine aloes, powdered, one ounce and a half;

English faffron, one ounce.

Digest for two days more, and, when it is fettled, pour it off.

THIS is the *elixir proprietatis* of Paracelfus, improved with regard to the manner of preparation. The myrrh, faffron, and aloes, have been ufually directed to be digefted in the fpirit together. By this method, the menftruum foon loads itfelf with the latter, fo as fcarce to take up any of the myrrh; whilf a tincture, extracted firft from the myrrh, readily diffolves a large quantity of the others. The alkaline falt, commonly ordered in these preparations.

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tions, with a view to promote the diffolution of the myrrh, we have already obferved to be ufelefs; and, accordingly, it is now omitted.

This medicine is greatly recommended, and not undefervedly, as a warm ftimulant and aperient. It ftrengthens the ftomach and other viscera, cleanses the first passages from tenacious phlegm, and promotes the natural fecretions in general. Its continued ufe has frequently done good fervice in cachectic and icteric cafes, uterine obstructions, and fimilar diforders ; particularly in cold, pale, phlegmatic habits; where the patient is of a hot, bilious conffitution, and florid complexion, this warm ftimulating medicine is lefs proper, and fometimes prejudicial. The dofe may be from twenty drops to a teafpoonful or more, two or three times a day, according to the purposes which it is intended to anfwer.

ELIXIR PROPRIETATIS VITRIOLICUM. Edinb.

Take of

Myrrh, Socotorine alocs, of each an ounce and an half;

English faffron, one ounce ;

Sweet spirit of vitriol, one pound. Digest the myrrh with the spirit, in

- a well ftopped vial, four days, then add the faffron and aloes.
- Digeft them again for four days more, and when the feces have fubfided, pour off the elixir.

HERE the dulcified fpirit of vitriol is very judicioufly fubfiituted for the fpirit of fulphur, ordered in other books of pharmacy to be added to the foregoing preparation: for that ftrong acid precipitates from the liquor great part of what it had before taken up from the other ingredients; whereas, when the acid is previoufly combined with the vinous fpirit, and thereby dulcified, as it is called, it does not impede its diffolving power. This elizir poffeffes the general virtues of the preceding, and is, in virtue of the menftraum, preferred to it in hot conflications, and weakneffes of the flomach. See *Elixir* witrioli in the following page.

ELIXIR PAREGORICUM. Paregoric elixir.

Lond.

Take of

Flowers of benzoine;

Opium strained, each one dram;

Camphor, two fcruples;

- Effential oil of anifeeds, half a dram;
- Rectified spirit of wine, two pints.

Digeft and ftrain.

*Edinb.

Take of

Flowers of benzoine,

English faffron, of each three drams;

Opium, two drams;

- Effential oil of anifeed, half a dram ;
- Vinous spirit of fal ammoniac, fixteen ounces.

Digest for four days, in a well-closed bottle, and grain it off.

THESE elixirs are taken from Le Mort, and were originally preferibed under the title of ELIXIR ASTHMATICUM, which they do not ill deferve. They contribute to allay the tickling, which provokes frequent coughing; and at the fame time are fuppofed to open the breaft, and give greater liberty of breathing. The opium procures (as it does by itfelf) a temporary Y 3

a second det the second fill as a state	
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relief from the fymptoms; whilft the other ingredients tend to re-	by the author, and in other books of pharmacy; the oil of vitriol and
move the caule, and prevent their	fpirit of wine being there first mix-
return. It is given to children.	ed together, and then digested
against the chin-cough, &c. from	upon aromatics.
five drops to twenty; to adults, from twenty to an hundred. Half	Mynficht's elixir of vitriol is di-
an ounce by measure contains about	rected, in a preceding pharmaco- pœia, as follows ;
a grain of opium.	Take of
a first of the second s	Cinnamon,
ELIXIR PECTORALE.	Ginger,
Pectoral elixir.	Cloves, each three drams;
Edinb. Take of	Calamus aromaticus, one ounce;
Balfam of Tolu, two ounces;	Galangal, an ounce and a half; Sage,
Balfam of Peru, one ounce ;	Mint, each half an ounce;
Flowers of benzoine,	Cubebs,
English saffron, each half an	Nutmegs, each two drams;
Rectified spirit of wine, two	Aloes wood, Citron peol, each and dram
pints.	Citron-peel, each one dram. Reduce these ingredients into a
Digest them in a fand-heat for three	powder, to which add of
days, and then firain off the	Sugar-candy three ounces ;
elixir.	Spirit of wine, a pint and a
THIS balfamic elixir is given to	half; Oil of withink one pint
the quantity of a tea-spoonful, two	Oil of vitriol, one pint. Digeft them together for twenty
or three times a day, as an expecto-	days, and then filter the tincture
rant and detergent, in coughs and	for use.
ulcerations of the breaft. The bal-	IN a late edition of the Edin-
fam of Peru is a new ingredient, introduced in a late edition; and	burgh pharmacopocia, the elixir wi-
the flowers of benzoine are fubiti-	trioli is thus prepared.
tuted to bengoine in Cablence	Take of

ELIXIR VITRIOLI ACIDUM. Acid elixir of vitriol. Lond.

Take of the

Aromatic tincture, one pint ; Strong fpirit (called oil) of vitriol, four ounces.

Mix them together, and after the feces have fubfided, filter the elixir through paper.

THIS preparation was originally taken from Mynficht, and has been usually distinguished by his name. It is here prepared in a somewhat different manner from that directed Cinnamon one ounce and a half; Ginger, one ounce;

Oil of vitriol, fix ounces;

Rectified spirit of wine, two pounds.

Drop the oil of vitriol by little and little into the fpirit of wine, and digeft them together in a fandbath, with a very gentle heat, for three days: then add the other ingredients; continue the digeftion, in the fame gentle heat, for three days longer; and afterwards filter the tincture in a glafs funnel.

THE intention in these process is, to obtain a tincture of aromatic vegetables,

vegetables, in fpirit of wine, combined with a confiderable proportion of vitriolic acid. When the tincture is first drawn with vinous fpirits, and the acid added afterwards, as in the first of the above preferiptions; 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 fpirit immediately before the extraction, as in the fecond procefs, it prevents the diffolution of all that it would have precipitated by the former way of treatment. By previoully uniting the acid and the vinous spirit together by digeition, as in the last process, the inconvenience is fomewhat leffened.

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All these compositions are valuable medicines in weakness and relaxations of the flomach, and decays of conflitution, particularly in those which proceed from irregularities, which are accompanied with flow febrile symptoms, or which follow the suppression of intermittents. They have frequently taken place after bitters and aromatics, by themfelves, 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 ftomach could bear the acidity, produced happy effects.

Fuller relates (in his Medicina gymnastica) that he was recovered, by Mynficht'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 formach is most empty.

ELIXIR VITRIOLI DULCE. Sweet elixir of vitriol. Lond. Take of the

Aromatic tincture, one pint ; Dulcified fpirit of vitriol, eight ounces by weight. Mix them together.

THIS is defigned for perfons whole flomach is too weak to bear the foregoing acid elixir. To the tafte, it is gratefully aromatic, without any perceptible acidity. The dulcified fpirit of vitriol, here directed, occafions little or no precipitation upon adding it to the tincture.

THE college of Edinburgh, in a former edition of their pharmacopœia, employed dulcified fpirit of vitriol as the menstruum. The composition was as follows; Take of

- Dulcified spirit of vitriol, two pounds;
- Effential oil of mint, half an ounce;

of lemon peel,

of nutmegs, each two drams.

Gradually drop the oils into the fpirit, and mix the whole well together.

THIS elixir, if the effential oils be good, and the dulcified fpirit made as it ought to be, (if it be not, it will not diffolve the oils), proves a very elegant and grateful ftomachic, fimilar to the foregoing fweet elixir : a tea-fpoonful of either may be taken two or three times a day.

A medicine of this kind was formerly in great effeem under the title of VIGANI'S VOLATILE ELIXIR OF VITRIOL; the composition of which was first communicated to the public in the *Pharmacopæia re*formata. It is prepared by digesting fome volatile fpirit of vitriol upon a fmall quantity of mint-Y 4.

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leaves curioufly dried, till the liquor has acquired a fine green colour. If the fpirit, as it frequently does, partakes too much of the acid, this colour will not fucceed : in fuch cafe it fhould be rectified from a little fixt alkaline falt, as hereafter directed in chap. viii. fect. 5. The mint is most commodioufly fufpended in the fpirit in a fine linen cloth : this prevents the neceffity of filtration, during which the more volatile parts would exhale.

ELIXIR MYRRHÆ COMPO-SITUM. Compound elixir of myrrh. Lond.

Take of

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Extract of favin, one ounce; Tincture of caltor, one pint; Tincture of myrrh, half a pint. Digeft them together, and then ftrain the elixir.

THIS preparation is improved from one defcribed in fome former difpenfatories under the name of ELIXIR UTERINUM. It is a medicine of great importance in uterine obstructions, and in hypochondriacal cafes; though, possibly, means might be contrived of fuperadding more effectually the virtues of favin to a tincture of myrrh and caftor. It may be given from five drops to twenty or thirty, or more, in pennyroyal water, or any other fuitable vehicle.

ELIXIR SACRUM.

Take of

Rhubarb, ten drams;

Socetorine aloes, fix drams; Leffer cardamom feeds, half an ounce;

Proof spirit, two pounds and an half.

Digest for feven days, and strain off the elixir.

SPIRITUS VINOSUS CAM-PHORATUS.

Camphorated Spirit of wine. Lond. and Edinb.

Take of

Camphor, two ounces;

Rectified spirit of wine, two pints.

Mix them together, that the camphor may be diffolved.

THIS folution of camphor is employed chiefly for external ufes, againft rheumatic pains, paralytic numbneffes, inflammations, for difcuffing tumors, preventing gangrenes, or reftraining their progrefs. It is too pungent to be exhibited internally, even when diluted, nor does the dilution fucceed well; for on the admixture of aqueous liquors, the camphor gradually feparates and runs together in little maffes.

Hoffman, Rothen, and others, mention a camphorated spirit not fubject to this inconvenience. It is prepared by grinding the camphor with fomewhat more than an equal weight of fixt alkaline falt, then adding a proper quantity of proof fpirit, and drawing off one half of it by diffillation. This fpirit was proposed to the college to be received into the pharmacopœia, under the title of SPIRITUS CAM-PHORÆ TARTARIZATUS. But upon trial, it did not answer expectation ; fome of the camphor, as the committee observe, riles with the fpirit in diffillation, though but a fmall quantity; whence, mixed with a large portion of water, it does not fenfibly render it turbid : but in a proper quantity, it exhibits the fame appearance as the more common camphorated fpirit. It did not appear, that fpirit diffilled from camphor, with or without the alkaline falt, differed at all in this refpect.

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Spirituous Tinctures.

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 emulfion, at the fame time that its pungency is confiderably abated. It may also be commodiously exhibited in the form of an oily draught, expressed oils totally disfolving it.

TINCTURA BENZOINI, Tincture of benzoine.

Take of

Benzoine, four ounces :

Rectified fpirit of wine, one pint.

Digest them together in a fandheat for three or four days, and then decant off the tincture.

THIS tincture stands recommended in afthmas, and other diforders of the lungs, in dofes of from twenty to fixty or feventy drops. It has, however, been principally made use of externally, as a colmetic, for clearing and fmoothing the fkin. For these purposes it is mixed with a large portion of water, when it forms a white liquor called LAC VIRGINIS. If this be fuffered to reft for fome time, the benzoine precipitates, in form of a white magistery (of a very pleafant fmell, and not difagreeable tafte), which in the Brandenburgh pharmacopœia is preferred to the flowers of benzoine, 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 benzoine in its whole fubftance ; whereas the flowers are a diffinct part of it, not refinous, like the reft of the mais, but rather, as we shall see hereafter, of the faline kind. The

The most convenient method of precipitation is directed to be made niting camphor with aqueous li- with rose water.

GUTTE VITE. Drops of life.

Take of

Opium, four ounces; Saffron, one ounce; Virginian fnakeroot, Cochineal, each half an ounce; Nutmegs, Zedoary, each two ounces; Camphor, one ounce; Tincture of diaphoretic antimony, one pint; Water, two pints.

Digeft the opium with the water in a fealding heat, till as much as poffible of it is diffolved, and pafs the folution through a ftrainer. Digeft the other ingredients in the antimonial tineture for three or four days. Mix both liquors together; let them ftand in digeftion for two days longer, and after the feces have fubfided, pour off the clear for ufe.

THIS medicine has been recommended as preferable to the common opiates, and lefs apt to leave a naufea on the ftomach. The dofe is from ten drops to forty or fifty.

TINCTURA seu Essentia AM-BRÆ. Tincture or essence of ambergris.

Parif.

Take of

Ambergris, one dram; Tartarized fpirit of wine, Spirit of rofes, that is, highly rectified fpirit of wine drawn off from dried damafk rofes, each one ounce and a half. Digeft in the heat of a water-bath.

THE ambergris, if pure, is here totally diffolved into a reddifh liquor, provided the heat be fufficient

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cient to make the fpirit boil or fimmer. With a weaker heat, or if the fpirit be not highly rectified, the folution does not fucceed. This tincture is a high cordial : eight or ten drops may be taken on fugar.

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TINCTURA seu Essentia REGIA. The royal tincture or essence.

Parif. Take of Ambergris, two fcruples; Mufk, one fcruple; Civet, ten grains; Oil of cinnamon, fix drops; Oil of rhodium, four drops; Salt of tartar, half a dram; Rectified fpirit of wine, Spirit of rofes,

Spirit of orange flowers, each one ounce and a half.

Grind the falt of tartar with the ambergris, mufk, civet, and effential oils, till they are thoroughly mixed; then add the fpirits, and digeft in a warm place for fome days, frequently fhaking the veffel; afterwards let the liquor fettle, and pour off the clear from the dregs.

THIS tincture is a very high perfume; and by those who can bear fubftances of that class, may be taken like the preceding, as a cordial. A few drops gives a fine flavour to a large quantity of other liquors. The ambergris diffolves here with less heat than in the foregoing preparation : the effential oils promoting its folution.

TINCTURA ODONTALGIA MYN-SICHTI. Mynficht's tincture for the tootbach. Argentoratenf.

Take of Guaiacum wood, two ounces; Saffafras, Sarfaparilla, each one ounce; Pellitory of Spain, Alum,

Sal prunellæ, each half an ounce; Stavefacre feeds,

Henbane feeds, each two drams; Opium,

Cloves, each one dram and a half;

Serpyllum,

Origanum,

Saffron, each one dram ;

Rectified spirit of wine,

Vinegar, each one pint and a half.

Reduce the dry ingredients into powder, and extract a tincture from them with the fpirit and vinegar mixed.

" A LITTLE of this tincture is ** to be taken warm into the " mouth, and repeated if there " should be occasion. It effectu-" ally relieves the most violent " toothachs ; preventing the afflux " of humours, and furprifingly ex-" tracting those already fettled up-" on the parts; the pain feems " often, on the first application of " it, to increase, but soon after " abates and goes off." The above composition, and this account of its virtues, is from the pharmacopœia of the college of Strafburgh.

Essentia ALEXIPHARMACA STAHLII. Stahl's alexipharmic effence. Argentoratenf. Take of the roots of Mafterwort, Carline thiftle, Angelica, Pimpinella alba, each half an ounce; Swallow wort, Elecampane, White dittany, Contrayerva, Wild valerian, each one ounce.

Extract

Extract an effence or tincture from these ingredients, with a sufficient quantity of highly rectified spirit of wine.

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THIS tincture, kept a fecret by its celebrated author, and first published by Juncker, is greatly efteemed by many of the German phyficians, as a diaphoretic and alexipharmic, for attenuating vifcid humours, and gently promoting urine; both in low fevers, particularly in exanthematous ones, where the eruptions have been repelled, and in chronical diforders. The dole is twenty or thirty drops or more. It is doubtless a medicine of efficacy, though fome of its ingredients might be retrenched without injury to its virtue.

> ESSENTIA LIGNORUM. Essentia the avoods, Argentoratens.

Take of

Saffafras, two ounces ; Guaiacum, three ounces ;

China root,

Sarfaparilla,

Red faunders,

Yellow faunders, 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 effence.

THIS effence, or tincture, is given in venereal and catarrhous diforders, and impurities of the humours in general, from a fcruple to a dram or more. By gently

drawing off half of the spirit, the remainder becomes proportionably stronger, and is then called effentia lignorum concentrata.

> BALSAMUM VITE. Bal/am of life. Brandenburgh.

Take of

Effential oils of Lavender,

Nutmegs, Cloves, Rhodium, Serpyllum, each half a dram ; Cinnamon, Lemon peel, Bergamotte, each two fcruples ;

Balfam of Peru, one dram ; Highly rectified fpirit of lavender, fifteen ounces.

First diffolve the balfam in the spirit, then add the oils, and digest till the whole is diffolved.

THIS fragrant balfam is an improvement on one defcribed by Hoffman, in his notes on Poterius. and is probably the fame, or nearly the fame, with the balfam fo much celebrated afterwards in that author's practice, internally in languors, faintings, debilities of the nervous fystem, colics, &c. from ten to twenty or thirty drops; and externally applied to the noftrils, temples, &c. in vertiginous, lethargic, and other like complaints. Thus much is certain, from Hoffman's own writings, that his balfam was composed of fragrant oils diffolved in rectified spirit of wine.

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SECT. VII.

Oils by infusion and decostion.

E XPRESSED oils extract the retables, but do not act upon, or unite with the gummy and mucilaginous. Hence the oleum e mucilaginibus of the fhops contains nothing of the mucilage with which its ingredients abound. These oils may be tinged, by vegetable matters, of almost all colours; the leaves of most plants communicate a green; yellow flowers, a dilute gold colour; fome red flowers, a light red; alkanet root, a beautiful and deep red.

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In making the officinal oils from the leaves of plants, a good deal of care is necessary, to give them the fine green colour expected in them. If the boiling of the herb in the oil be not continued till all the aqueous moisture has exhaled (the mark of which is, the herb's being crifp) the oil will have a dingy yellowish hue; if continued longer, it turns black, and contracts an empyreumatic fmell. The most convenient method of managing the process feems to be, to firain off the oil when fufficiently impregnated with the virtue of the plant, and afterwards to let it ftand in a clean veffel, over a gentle fire, until, by frequent trials on a white tile, it appears to have gained the deep green colour required.

OLEUM CHAMÆMELI. Oil of chamomile. Edinb.

Take of

Chamomile, with the flowers, freih gathered and bruifed, one pound; Oil olive, three pints.

Boil them gently till the herb is almost crifp; then strain and prefs out the oil.

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The oils of other herbs are prepared in the fame manner.

> OLEUM HYPERICI. Oil of St. John's wort. Lond.

Take of

The flowers of St. John's wort, full blown, freih gathered, and carefully freed from the cups, four ounces;

Oil olive, two pints.

Pour the oil upon the flowers, and let them ftand together, till the oil is fufficiently coloured.

OLEUM E MUCIL AGINIBUS. Oil of mucilages. Lond.

Take of

Marshmallow root, fresh, half a pound;

Linfeed,

Fenugreek feed, each three ounces;

Water, two pints ;

Oil olive, four pints.

Bruife the roots and feeds, and gently boil them in the water for half an hour: then add the oil, and continue the boiling till all the water is waited : afterwards let the oil be carefully poured off for ufe.

OLEUM SAMBUCINUM. Oil of elder.

Lond.

Take of Elder flowers, one pound; Oil olive, two pints. Chap. 3. Oils by Infusion and Decoction.

Boil the flowers in the oil, till they are almost crifp; then prefs out the oil, and fet it by till the feces have fubfided.

> OLEUM VIRIDE. Green oil. Lond.

Take of

Bay leaves, Rue leaves, Marjoram leaves, Sea wormwood leaves, Chamomile leaves, each, fresh gathered, three ounces; Oil olive, two pints.

Bruife the herbs and gently boil them in the oil till they are almost crifp; then prefs out the oil, let it ftand to fettle, and afterwards pour it off from the fediment.

ALL the foregoing oils are defigned for external applications only. They are supposed, besides the general emollient quality of the oil itfelf, to receive particular virtues from the ingredients : that of chamomile flowers, to be a warm difcutient and refolvent; that of St. John's wort flowers, to be peculiarly grateful to the nerves, to give great relief in all kinds of pains and wearinefs, to refolve tumours, and heal wounds and ulcers; and the oil of mucilages to be fofter and more emollient than common oil. An oil prepared in the fame manner from wormwood, rubbed on the flomach and umbilical region, is faid to excite appetite, ftrengthen the vifcera, and kill worms; and one from rue, to be of fingular efficacy against worms and colicky pains and fwellings.

It is prefumed, however, that, at prefent, there are few who expect much more from these preparations than from common oil itself, which has the advantage of being less of-

dients, marshmallow root and linfeed, in the oleum e mucilaginibus, make no addition to the virtue of the oil; for mucilages, as already obferved, are not foluble in oils. Experience has not difcovered any fuch fingular 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 diffipated by the boiling heat; and, although the remaining matter, if it were taken internally, either by itself, or diffolved in watery or fpirituous liquors, might not be defitute of activity ; yet it can fearcely be fuppofed, when combined with a large quantity of oil, to have any material effect in external applications. The number of these oils has, therefore, been judiciously retrenched, at a late reformation. The five above retained, are not one-tenth part of those which were formerly ordered The most to be kept in the shops. certain way of anfwering the purpofes intended by these preparations, appears to be, by mixing with the expressed oil a fuitable quantity either of the native refins of vegetables, or of the effential oils and refinous extracts artificially prepared from them.

fenfive. The mucilaginous ingre-

OLEUM CAMPHORATUM. Camphorated oil. Edinb.

Take of

Fresh drawn oil of almonds, or linfeed, two ounces ; Camphor, half an ounce. Diffolve the camphor in the oil.

THIS oil is defigned, like the foregoing ones, for external purpofes. It has been in use for some time, in the infirmary of Edinburgh, against burns, rheumatic pains, &c. and

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and is thence received into the pharmacopœia of the Edinburgh college.

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OLEUM ODORIFERUM. Odoriferous oil.

Let some fine carded cotton be dipt in oil olive, or oil of ben nuts, that it may be thoroughly imbibed with the oil, without retaining fo much as to drip fpontaneoully. Lay a bed of this cotton in the bottom of a tin or procelane veffel, and lightly fpread upon it a pretty thick layer of any odoriferous flowers fresh gathered, as jasmine flowers, violets, lilies of the valley, &c. Above these fpread more of the cotton, and then more flowers alternately, till the veffel is full: then cover it clofe, and let it ftand for twentyfour hours in a gentle warmth. Great part of the fragrance of

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the flowers will be communicated to the oil in the cotton, which is to be ftratified in the fame manner with two or three frefh quantities of the flowers, till it is fufficiently impregnated therewith; after which the oil is to be fqueezed out from the cotton in a prefs.

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THIS appears to be the most effectual method of transferring into expressed oils, the odoriferous matter of those tender flowers which yield little or no effential oil; the perfumed oils and effences of those flowers, brought from Italy, are prepared in this manner. The odorous parts may be again separated from the oil, and transferred into water or spirit, by distillation with those liquors.

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CHAPTER IV.

Confervation of recent vegetables and their infuftons, E. by fugar and honey.

SECT. I.

Conferves.

CONSERVES are compositions of recent vegetable matters and fugar, beaten together in an uniform mass.

This management is introduced for preferving certain fimples, undried, in an agreeable form, with as little alteration as possible in their native virtues; and to fome fubjects it is very advantageoufly applied. Vegetables, whole virtues are loft or destroyed in drying, may in this form be kept uninjured for a length of time : for, by carefully fecuring the mouth of the containing veffel, the alteration, as well as diffipation, of their active principles, is generally prevented; and the fugar preferves them from the corruption which juicy vegetables would otherwife undergo.

There are, however, fundry vegetables, whole virtues are impaired by this treatment. Mucilaginous fubftances, by long lying with fugar, becomes lefs glutinous; and aftringents, fenfibly fofter upon the palate. Many of the fragrant flowers are of fo tender and delicate a texture, as almost entirely to lofe their peculiar qualities on being beaten or bruifed.

In general, it is obvious, that in this form, on account of the large admixture of fugar, only fubflances of confiderable activity can be taken

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to advantage as medicines. And indeed, conferves are at prefent confidered chiefly as auxiliaries to medicines of greater efficacy; or as intermedia for joining them together. They are very convenient for reducing into bolufes or pills, the more ponderous powders, as mercurius dulcis, the calces of iron, and other mineral preparations; which with liquid or lefs confiftent matters, as fyrups, will not cohere.

The fhops were formerly incumbered with many conferves, altogether infignificant; the few now retained have in general either an agreeable flavour to recommend them, or are capable of anfwering fome ufeful purpofes as medicines. Their common dofe 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 conferves.

Leaves are picked from the flalks, and flowers from their cups. They are then beaten in a marble mortar, with a wooden peftle, into a imooth mais; after which, thrice their weight of doublerefined fugar is added by degrees, grees, and the beating continued till they are uniformly mixed.

The fugar fhould be pulverized by itfelf, and paffed through a fieve, before it is mixed with the vegetable mais; otherwife it cannot eafily be reduced to fufficient finenels fo as to be duly incorporated. Some vegetables are fcarce reducible to the requisite finenels by beating in a mortar : fuch is orange-peel. This is most conveniently rafped or grated off from the fruit, then well mixed with the fugar, and the compound fet by in a close vefiel for some weeks : after which, it may be beaten fmooth with confiderable lefs labour than at first. This peel, and red role buds, are commonly ground in a wooden mill made for that purpofe.

CONSERVA foliorum COCH-LEARIÆ hortenfis. Conferve of the leaves of garden feurvy-grafs. L.E.

THIS is the only form in which fcurvy-grafs in fubstance can be kept, without the total lofs of its virtues. The conferve retains the full tafte and virtue of the herb for a very confiderable length of time ; as a year or two; provided the veifel be made perfectly clofe, and fet in a cool place. It may be given in fcorbutic habits, three 'or four times a day, or oftener : though it is more frequently used as an affistant to other medicines of fimilar intention, than depended on by itfelf. It is an excellent addition to arum-root in rheumatic cafes ; and in this form, even the fresh root of arum may be taken freely, without any complaint of the excellive pungency which of itself it imprefies on the tongue. An ounce of fresh arum root, beaten into a pulp, and tour ounces or lefs of conterve of

fcurvy-grafs, well mixed together, form a compound, in which the pungency of the arum is hardly perceived, and which I have given, with good effect, to the quantity of a nutmeg twice or thrice a day. To further fheath the acrimony of the arum, it may be beaten with equal its weight of powdered gum arabic, before the admixture of the conferves.

CONSERVA foliorum LUJULÆ. Conferve of the leaves of woodforrel. L. E.

THIS is a very elegant and grateful conferve; in taffe it is lightly acidulous, with a peculiar flavour, which fome refemble to that of green tea. It is taken occafionally, for quenching thirst; and cooling the mouth and fauces in hot diftempers. It may be usefully joined to the foregoing preparation, whose virtue it fomewhat promotes, at the fame time that it improves the taffe.

CONSERVA foliorum MEN-THÆ vulgaris. Conferve of the leaves of fpearmint. Lond.

THE conferve of mint retains the tafte and virtues of the herb. It is given in weaknefs of the flomach and reachings to vomit; and not unfrequently does fervice in fome cafes of this kind, where the warmer and more active preparations of mint would be lefs proper.

CONSERVA foliorum RUTÆ. Conferve of the leaves of rue. Lond.

THIS conferve is given from a dram to half an ounce, in crudities

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of the primæ viæ, for promoting digeftion, and in hyfteric diforders. It gently flimulates the folids, attenuates vifcid juices, and excites the natural fecretions. Some have had a great opinion of it, taken in a morning, as a prefervative againft the effects of contagious air or exhalation.

CONSERVA fummitatum AB-SINTHII maritimi.

Conferve of the tops of fea wormwood.

Lond.

THE conferve of wormwood has been celebrated in dropfies. Matthiolus relates, that feveral perfons were cured by it of that diftemper, without the affiftance of any other medicine. Where the diforder indeed proceeds from a fimple laxity or flaccidity of the folids, the continued use of this medicine may be of fome fervice; as it appears to be a not inelegant mild corroborant. It is directed to be given in the dose of half an ounce, about three hours before meals.

CONSERVA florum LAVEN-DULÆ. Conferve of lavender flowers. Lond.

THIS conferve is not near fo fragrant as the flowers themfelves. It is neverthelefs a fufficiently agreeable one; and is fometimes ufed as a mild cordial, and in debilities of the nervous fystem.

CONSERVA florum MALVÆ. Conferve of the flowers of mallows. Lond.

THIS is looked upon as an emollient, and fometimes made ufe of as fuch in diforders of the breaft and urinary paffages. It is the most unimportant of the conferves: nor do the flowers themselves appear to have much virtue.

Conferves.

CONSERVA florum ROSARUM rubrarum immaturarum.

Conferve of the buds of red rofes. L.E.

THIS is a very agreeable and useful conferve. A dram or two, diffolved in warm milk, are frequently given as a light reftringent. in weakness of the stomach, and likewife in coughs and phthifical complaints. In the German ephemerides, examples are related of very dangerous phthifes cured by the continued use of this medicine. In one of these cases, twenty pounds of the conferve were taken in the space of a month; and in another, upwards of thirty. Riverius mentions feveral other inflances of this kind.

CONSERVA florum RORISMA-RINI.

Conferve of rofemary flowers. L. E.

ROSEMARY flowers in great meafure lofe their peculiar fragrance by beating, and hence the conferve has very little of their flavour. Some are therefore accustomed to make this preparation from the leaves of the plant (which retain their virtues under the pessible) or at least to add a portion of these to the flowers. The conferve of rosemary is directed in weakness of the nerves, and as a light cordial.

CONSERVA flavedinis CORTI-CUM AURANTIORUM Hifpalenfium.

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338 Pharmaceutical Preparations. Conferve of the yellow rind of Seville orange peel. L. E. Bood deal of car the part of the ap ing this conferve

THIS conferve is a very elegant one, containing all the virtues of the peel, in a form fufficiently agreeable, both with regard to the dofe and the convenience of taking. It is a pleafant warm ftomachic, and in this intention is frequently ufed.

CONSERVA FRUCTUS CY-NOSBATI. Conferve of hips. L. E.

Hips require lefs fugar for reducing them into a conferve, than the fubftances above enumerated. Twelve ounces of the pulp of the ripe fruit are to be mixed with only twenty ounces of fugar.

THE conferve of hips is of fome effeem, as a foft, cooling reftringent. Three or four drams or more are given at a time, in bilious fluxes, fharpness of urine, and hot indispositions of the stomach. A

SECT. II.

Preferves.

PRESERVES are made by fteeping or boiling recent fimples, firft in water, and then in fyrup, or folution of fugar. The fubject is afterwards either kept moift in the fyrup, or taken out and dried, that the fugar may candy upon it; the latter is the more ufual method.

In this process, some of the valuable parts of the subject are extracted by the liquor, and confequently lost to the preparation; greater regard being here had to palatableness than medicinal efficacy. And indeed most of the

good deal of care is requifite on the part of the apothecary in making this conferve : the pulp is apt to carry with it fome of the prickly fibres, with which the infide of the fruit is lined. If these be retained in the conferve, they will irritate the ftomach, fo as to occasion vomiting.

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CONSERVA PRUNORUM SIL-VESTRIUM.

Conferve of floes. Lond.

Let the floes be put into water, and fet over the fire till they grow foft, with care that they do not burft. Then take the floes out of the water, prefs out their pulp, and mix with it thrice its weight of double-refined fugar.

THIS preparation is a gentle aftringent, and may be given as fuch in the dofe of two or three drams. The degree of its aftringency will vary according to the maturity of the floes, and the length of time that the conferve has been kept.

preparations of this kind are confidered rather as fweetmeats than as medicines; as the bufinefs of the confectioner rather than of the apothecary. It would be needlefs therefore to mention the dofes of the feveral articles, or give particular remarks on the manner of preparing them.

RADIX ERYNGII CONDITA. Candied eringo roots. Lond.

Boil them in water, till the rind will eafily peel off; when peeled, flit

Preferves.

Chap. 4.

flit them through the middle, take out the pith, and wafh them three or four times in cold water. For every pound of the roots, fo prepared, take two pounds of double-refined fugar, which is to be diffolved in a proper quantity of water, and fet over the fire: as foon as the liquor begins to boil, put in the roots, and continue the boiling till they are foft.

After this manner are candied ANGELICÆ CAULES. Angelica stalks.

CORTEX AURANTIORUM CONDITUS. Candied orange peel.

Lond.

Steep the fresh peels of Seville oranges in water, which is to be frequently renewed, until they lose their bitterness. Then, having disolved in water a fuitable quantity of double refined fugar, boil the peels in this liquor till they become soft and transparent.

After the fame manner are candied LIMONUM CORTICES. Lemon peels. [L.]

In the fame, or a fimilar manner, may likewife be candied

> RADICES ANGELICÆ. Angelica roots. [E.] RADICES HELENII. Elecampane roots. [E.]

All forts of fruits, flowers, and feeds may also be preferved, either by keeping them in fyrup; or crufting them over with fugar; but these kinds of preparations scarce belong to the art of pharmacy.

Nutmegs and ginger are brought to us ready candied from the East Indies. [E.]

MARS SACCHARATUS. Candied Steel.

Edinb.

Put any quantity of clean filings of iron into a brafs kettle, fufpended over a very gentle fire. Add to them, by little and little, twice their weight of white fugar, boiled to the confiftence of candy, with which powdered flarch has been previoufly mixed, in the proportion of a dram to every pound; agitating the kettle continually, that the filings may be crufted over with the fugar, and taking great care to prevent their running into lumps.

THIS is a very agreeable preparation of steel; but has hitherto been made only by the confectioners. The college of Edinburgh received it in former editions ; but, as there defcribed, it was almost impossible to hinder the matter from concreting into lumps. They have now difcovered the intermedium which prevents that inconvenience, and which the confectioners have kept a fecret ; the addition of a little farch to the fugar. The preparation may be given to the quantity of half a dram, in cales in which chalybeate medicines are proper. See page 141.

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Part III. Pharmaceutical Preparations.

IH SECT. the for they plant

Jellies.

TEGETABLE jellies are composed of the juices of fruits and fugar, boiled to a thick confistence. Independently of the admixture of fugar, the boiling appears to occasion fome alteration in the quality of the juices themfelves. The recent juices of the fummer fruits are prone to fermentation. After they have been boiled, they are lefs disposed to ferment, and at the fame time they are much lefs liable to produce, in the human body, flatulencies, gripes, or fluxes; though they fill retain, in no fmall degree, their original antifeptic, anti-inflammatory, and aperient or reftringent virtues.

GELATINA, seu miva, CYDO-NIORUM. Jelly, or marmalade, of quinces. Edinb.

Take three pints of depurated quince juice, and a pound of white fugar. Simmer them together, to a proper thickness.

THIS is an uteful, cooling, reftringent medicine. It is given in weaknefs of the flomach, reachsings to vomit, diarrhœas and dyfenteries, proceeding from a hot indifposition, or sharp bilious humours. It is beit taken in little quantities, as a tea spoonful or two now and then, either by itfelf. or diluted with any fuitable liquors.

GELATINA BERBERORUM. Jelly of barberries. Edinb.

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Take a pound of barberries picked clean from the ftalks, and the fame quantity of white fugar. Boil them with a gentle heat to a due confistence ; then pais the jelly through a flannel cloth.

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Later in month

Boundare.

GELATINA RIBESIORUM. Jelly of currants. Edinb.

Is prepared after the fame manner.

HERE the trouble of expression is faved; these foft fruits freely giving out their juice, which incorporates with the fugar, in the procefs. Both thefe preparations are gratefully fub-acid and cooling, and in this intention are occafionally made use of, for moiftening the mouth and fauces in febrile or inflammatory distempers. Diffolved in water, they afford an useful diluent drink, of a faponaceous nature, which mingles with the blood or its ferum when thickened (as in fome kinds of fevers) where pure water runs off by the kidneys almost unchanged. By the fame qualities, they prove ferviceable likewife in chronical diforders proceeding from obstructions of the vifcera, or accompanied with immoderate heat: in bilious fluxes and putrid feurvies, their liberal and continued, use has fometimes had good effects. Boerhaave greatly commends these kinds of preparations in the fcorbutic diforders to which feafaring people are particularly subject.

SECT. IV.

Syrups.

Syrups.

YRUPS are faturated folutions) of fugar, made in water, or watery or vinous infufions, or in juices. They were formerly confidered as medicines of much greater importance than they are thought to be at prefent. Syrups and diffilled waters were for fome ages made use of as the great alteratives; infomuch that the evacuation of any peccant humour was never attempted, till by a due courfe of thefe, it had first been regularly prepared for expulsion. Hence arole the exuberant collection of both, which we meet with in pharmacopœias; and like errors have prevailed in each. As multitudes of diffilled waters have been compounded from materials unfit to give any virtue over the helm; fo numbers of fyrups have been prepared from ingredients, which in this form cannot be taken in fufficient dofes to exert their virtues; for two-thirds of a fyrup confift of fugar, and the greateft part of the remaining third is an aqueous fluid.

Syrups are at prefent chiefly regarded as convenient vehicles for medicines of greater efficacy; and made use of for sweetening draughts and juleps, for reducing the lighter powders into boluses, pills, or electaries, and similar purposes. Some likewise may not improperly be confidered as medicines themselves; as fyrup of fassion, and buckthorn berries.

General Rules for preparing Syrups.

All the rules laid down for making decoctions, are likewife to be obferved in the decoctions for fyrups. Vegetables, both for decoctions and infutions, ought to be dry, unlefs expressly ordered otherwife [E.]

Ι.

- In the London pharmacopœia, only the pureft or double-refined fugar is allowed.
- In the Edinburgh, the directions are lefs explicit. For fuch fyrups as are prepared without boiling, it is left to the choice of the operator to employ either the double-refined, or the common white fugar; which latter he is directed to purify for those fyrups

(not for the others) by previoully diffolving it in water, clarifying the folucion with whites of eggs, and boiling it down to a thick confidence, with care to take off the fcum which rifes during the boiling.

In the fyrups prepared by boiling, it has been cultomary to perform the elarification with whites of eggs, after the fugar had been diffolved in the decoction of the vegetable. This method is apparently injurious to the preparation: fince not only the impurities of the fugar are thus diffharged; but a confiderable part likewife of the medicinal matter, which the water had before taken up from the ingredients, is feparated along with Z 3

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them. Nor indeed is the clarification and defpumation of the fugar, by itfelf, very adviseable; for its purification by this process is not fo perfect as might be expected ; after it has undergone this process, the refiners still separate from it a quantity of oily matter, which is difagreeable to weak flomachs. See page 215. It appears therefore most eligible to employ fine sugar for all the fyrups; even the purgative ones (which have been ufually made with coarfe fugar, as iomewhat coinciding with their intention) not excepted ; for, as purgative medicines are in general ungrateful to the flomach, it is certainly improper to employ an addition which increases their offenfiveneis.

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III.

- Where the weight of the fugar 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 diffolved in the liquor by the heat of a water-bath, unless ordered otherwife. [L.]
- Although in the formulæ of feveral of the fyrups, a double weight of fugar to that of the liquor is directed, yet lefs will generally be fufficient. First therefore diffolve in the liquor an equal weight of fugar, then gradually add fome more in powder, till a little remains undiffolved at the bottom, which is to be afterwards incorporated by fetting the fyrup in a water-bath [E.]

The quantity of fugar fhould be fo much, that the liquor may keep diffolved in the cold : if there be more, a part of it will feparate, and concrete into crystals, or candy; if lefs, the fyrup will be fubject to ferment, efpecially in warm weather, and change into a vinous or four liquor. If, in crystallizing,

only the fuperfluous fugar feparated, it would be of no inconvenience; but, when part of the fugar has candied, the remaining fyrup is found to have an under proportion, and is as fubject to fermentation as if it had wanted fugar at first.

IV.

Copper veffels, unlefs well tinned, fhould not be employed in the making of acid fyrups, or fuch as are composed of the juices of fruits [E.]

The confectioners, who are the most dextrous people at these kinds of preparations, to avoid the expence of frequently new tinning their veffels, rarely make ule of any other than copper ones untinned, in the preparation even of the most acid fyrups, as of oranges and lemons. Neverthelefs, by taking due care that their coppers be well fcoured and perfectly clean, and that the fyrup remain no longer in them than is abfolutely necessary, they avoid giving it any ill tafte or quality from the metal. This practice, however, is by no means to be recommended to the apothecary.

The fyrup, when made, is to be fet by till next day; if any faccharine crust appear upon the furface, take it off [L.]

SYRUPUS ex ALLIO. Syrup of garlick. Lond.

Take of

Garlick, fliced, one pound ; Boiling water, two pints.

Macerate them in a clofe veffel for twelve hours, then ftrain off the liquor, and diffolve in it a proper quantity of fugar, fo as to make a fyrup.

THIS fyrup is occasionally made use of for attenuating viscid phlegm, and promoting expectoration in humoural

Part III.

moural affhmas, and oppreffions of the breaft. In these cases, it proves a medicine of confiderable efficacy, though a very unpleasant one: it tastes and smells strongly of the garlick. The college have received it as an alterative to the oxymel ex allio, for the use of those with whom honey disagrees.

SYRUPUS ex ALTHÆA. Syrup of marshmallows. Lond.

Take of

- Marshmallow roots, fresh, one pound;
- Double refined fugar, four pounds;

Water, one gallon.

Boil the water with the roots, to one half: when grown thoroughly cold, pour off and prefs out the decoction, and fet it by for a night to fettle: next morning pour off the clear liquor, and adding to it the fugar, boil the whole to the weight of fix pounds.

Edinb.

Take of

Marshmallow roots, nine ounces; White fugar, four pounds; Water, ten pounds.

Boil the water with the marfamallow roots to the confumption of one-third, then firain out the remaining decoction, and fuffer it to reft for fome time. Pour off the clear liquor from the fediment, and boil it with the fugar over a gentle fire, keeping the matter continually ftirring, till it becomes a fyrup. This fyrup fupplies likewife the place of the pectoral fyrup.

THE fyrup of marshmallows feems to have been a fort of favourite among dispensatory-writers, who have taken great pains to alter and amend it, but have been won-

derfully tender in retrenching any of its articles. In the above prefcriptions, it is lopt of its fuperfluities, without any injury to its virtues. It is used chiefly in nephritic cafes, for fweetening emollient decoctions, and the like. Of itself, it can do little fervice, notwithstanding the high opinion which fome 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? The college of Edinburgh has very properly united this and the pectoral fyrup into one: for the fyrup of marshmallows has always, till this reformation, contained the principal ingredients of the pectoral fyrup, and its own capital ingredient coincides in the fame intention.

SYRUPUS e CORTICIBUS AURANTIORUM. 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; next morning, strain out the liquor, and dissolve in it the proper quantity of fugar for making it into a syrup.

Edinb.

Take of the

Yellow rind of orange peel, fresh, fix 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 syrup without boiling.

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IN making this fyrup, it is particularly neceffary, that the fugar be previoufly powdered and diffolved in the infution with as gentle a heat as poffible, to prevent the exhalation of the volatile parts of the peel. With these cautions, the fyrup proves a very elegant and agreeable one, posseffing great thare of the fine flavour of the orangepeel.

SYRUPUS BALSAMICUS. Balfamic fyrup. Lond.

Take of

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Balfam of Tolu, eight ounces; Water, three pints.

Boil them for two or three hours in a circulatory veffel, or at leaft in a long-necked matrafs, having its mouth lightly covered. When grown cold, ftrain out the liquor, and mix therewith a proper quantity of fugar to make it into a fyrup.

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 fugar diffolved in the diftilled liquor.

Edinb.

Take of the

- Syrup of fugar, just made, and warm from the fire, two pounds;
- Tincture of balfam of Tolu, one ounce
- When the fyrup has grown almost cold, flir into it the tincture, by little at a time, agitating them well together, till perfectly united. The mixture is then to be kept in the heat of a water-bath until the fpirit has exhaled.

THIS method of making the bal-

famic fyrup was dropt in one of the the preceding editions of the Edinburgh pharmacopœia, on a complaint that the fpirit fpoiled the tafte of the fyrup; which it did in a great degree when the tincture was drawn with malt fpirits; the naufeous oil, with which all the common malt spirits are accompanied, being left in the fyrup after the evaporation of the pure ipirituous part. Particular care therefore fhould be taken, that the ipirit, employed for making the tincture, be perfectly clean, and well rectified from all ill flavour.

The intention of the contrivers of the two foregoing proceffes feems to have been fomewhat different. In the first, the more fubtile and fragrant parts of the balfam are extracted from the groffer refinous matter, and alone retained in the fyrup : the other fyrup contains the whole fubstance of the balfam, in larger quantity. They are both moderately impregnated with the agreeable flavour of the balfam.

In fome pharmacopœias, an elegant fyrup of this kind is prepared from a tincture of balfam of Peru, with rofe-water, and a proper quantity of fugar.

SYRUPUS CARYOPHYLLO-RUM RUBRORUM. Syrup of clove july-flowers. Lond.

Take of

Clove july-flowers, fresh gathered, and freed from the heels, three pounds;

Boiling water, five pints.

Macerate them for a night in a glais or glazed earthen veffel; then firain off the liquor, and diffolve therein its due proportion of fugar to make it into a fyrup.

One pound of the flowers is to be infufed

infused in four pounds of water, and the fyrup made as above, without boiling.

THIS fyrup is of an agreeable flavour, and a fine red colour; and for these it is chiefly valued.

* SYRUPUS COLCHICI. Syrup of colchicum. Edinb.

Takeof

The root of colchicum, fresh and fucculent, and cut into flices, one ounce;

Vinegar, fixteen ounces.

Macerate the root in the vinegar two days, fhaking the veffel often; then ftrain the liquor by gentle preffure, and add the fugar powdered; boil it gently to the confiftence of a fyrup. Vide Colchicum.

> SYRUPUS CROCI. Syrup of Saffron. Lond.

Take of

Saffron wine, one pint;

Double-refined fugar, twentyfive ounces.

Diffolve the fugar in the wine, fo as to make a fyrup.

SAFFRON is very well fitted for making a fyrup, as in this form a fufficient dofe of it is contained in a reafonable compafs. This fyrup is at prefent more frequently prefcribed than the wine from which it is made: it is a pleafant cordial, and gives a fine colour to juleps.

SYRUPUS CYDONIORUM. Syrup of quinces. Lond.

Take of Quince juice, depurated, three pints; Cinnamon, one dram; Cloves,

Ginger, each half a dram ;

Red Port wine, one pint; Double refined fugar, nine pounds.

Digeft the juice with the fpices, in the heat of afhes, for fix hours; then adding the wine, pafs the liquor through a firainer; and afterwards diffolve in it the fugar, fo as to make a fyrup.

IF the quinces be kept for fome time in an airy place, before the juice is prefled out, the fyrup proves rather more elegant, and richer of the fruit, than when they are taken fresh from the tree. In either cafe, the preparation is a very agreeable, mild, cordial reftringent; and in some kinds of loofeneffes and diforders of the ftomach, may be either taken by itfelf, in the quantity of a spoonful or two at a time, or employed for reconciling to the palate and ftomach, medicines of the more ungrateful kind.

SYRUPUS KERMESINUS. Syrup of kermes. Edinb.

This fyrup is brought to us ready made, from the fouthern parts of France.

THE fyrup of kermes is of an agreeable tafte, and a fine red colour. It is accounted cordial and corroborant, and fuppofed to be particularly ferviceable in weakneffes and other diforders of pregnant women.

SYRUPUS e SUCCO LIMO-NUM. Syrup of lemon juice.

Lond.

Take of

Juice of lemons, fuffered to fland till the feces have fubfided, and afterwards ftrained, two pints ; Double

Double refined fugar, fifty ounces.

Diffolve the fugar in the juice, fo as to make a fyrup thereof.

Edinb.

Take of

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Lemon juice, depurated, two pounds and an half;

White fugar, fifty ounces.

Make them into a fyrup according to art, without boiling

After the fame manner are prepared

SYRUPUS e SUCCO MORO-RUM. Syrup of mulberries [L.]

SYRUPUS e SUCCO FRUC-TUS RUBI IDÆI. Syrup of raspberries [L.]

ALL thefe are very pleafant, cooling fyrups, and in this intention are occafionally made use of, in draughts and juleps, for quenching thirft, abating heat, &c. in bilious or inflammatory distempers. They are fometimes likewise employed in gargarisms for inflammations of the mouth and tonfils.

SYRUPUS e MECONIO, five DIACODION.

Syrup of meconium, or diacodium. Lond.

Take of

White poppy heads, dried and cleared from the feeds, three pounds and a half;

Water, fix gallons.

Cut the heads, and boil them in the water, ftirring them now and then to prevent their burning, till only about one-third part of the liquor remains, which will be almost entirely foaked up by the poppies. Then remove the vefiel from the fire, ftrongly prefs out the decoction, and boil it down to about four pints: ftrain it whilft hot, firft through a fieve, and afterwards through a fine woollen cloth : and fet it by for a night, that the feces may fubfide. Next morning, pour the liquor off clear, and boil it with fix pounds of double-refined fugar, until the weight of the whole be nine pounds, or a little more, that it may become a fyrup of a proper confiftence.

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SYRUPUS PAPAVERIS ALBI, feu 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 feeds, two pounds;

Boiling water, thirty pounds;

The finest fugar, four pounds.

Macerate the heads, cut in fmall pieces, for a night; afterwards boil it till one third part only of the liquor remains; ftrain it, and ftrongly prefs out the remainder. Boil the ftrained liquor to one half, and ftrain it again; then add the fugar, and boil it to a fyrup.

THESE fyrups, impregnated with the opiate matter of the poppy heads, are given to children in dofes of two or three drams; to adults, from half an ounce to an ounce and upwards, for obtunding and incraffating acrimonious humours, eafing pain, procuring reft, 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 fame ftrength; and

and accordingly the colleges have been very minute in their description of the process.

SYRUPUS PAPAVERIS ERRA-TICI.

Syrup of wild poppies. Lond.

Take of

- Wild poppy flowers, fresh, four pounds;
- Boiling water, four pints and a half.
- Pour the water on the poppies, fet them over the fire, and frequently fir them, until the flowers be thoroughly moiftened. As foon as they have funk under the water, let the whole be fet by to fleep for a night : next day pour off and prefs out the liquor, and fet it by for a night longer to fettle : afterwards add the proper quantity of double-refined fugar to make it into a fyrup.

THE defign of fetting the flowers over the fire is (as Dr. Pemberton obferves) that they may be a little fealded, fo as to fhrink enough to be all immerged in the water : without this artifice, they can fearce be all got in ; but they are no longer to be continued over the fire, than till this effect is produced, left the liquor become too thick, and the fyrup be rendered ropy.

This fyrup has been recommended in diforders of the breaft, coughs, fpitting of blood, pleurifies, and other difeafes, both as an emollient, and as an opiate. It is one of the lighteft of the opiate medicines, and in this refpect fo weak, that fome have doubted of its having any anodyne quality.

SYRUPUS PECTORALIS. Pectoral fyrup. Lond.

Take of

Syrups.

English maidenhair, dried, five ounces;

Liquorice, four ounces; Boiling water, five pints.

Macerate them for fome hours; then ftrain out the liquor, and, with a proper quantity of double-refined fugar, make it into a fyrup.

THE title of this composition expreffes its medical intention. It is fuppofed to foften acrimonious humours, allay tickling coughs, and promote the expectoration of tough phlegm. The true maidenhair is the only fort that has been ufually directed in these kinds of compositions: the use of the English is here very judicioufly allowed; not only as being more eafily procurable, and having been fubfituted for the other in the fhops, but likewife as there does not feem to be any medicinal difference betwixt Fuller finds great fault them. with both these ingredients, on a supposition that all their virtues fly away in drying : but in this he certainly miftook ; for the virtues of both these maidenhairs confift in a mucilaginous fubitance, which fuffers no injury by being dried. There is one species indeed, the Canada maidenhair, which has a confiderable share of a pleafant fmell and flavour joined to its mucilage; but this is as yet little known in the fhops, though not uncommon in fome of our gardens.

SYRUPUS e FLORIBUS PA-RALYSIS.

Syrup of cowflips. Lond.

This is made from cowflip flowers, after the fame manner as the fyrup of clove july-flowers.

IT has been supposed ferviceable in

in nervous diforders ; its agreeable flavour recommends it to the patient, though at prefent there are few who fuppofe it to possifies any fingular virtues.

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SYRUPUS ROSARUM SOLU-TIVUS.

Solutive fyrup of roses. Lond.

Take the liquor that remains after the diffillation of fix pounds of damafk rofes;

Of double-refined fugar, five pounds.

Having prefied out the liquor from the rofes, boil it down to three pints, and fet it by for a night to fettle. Next morning, pour it off clear from the fediment, and adding the fugar, boil the mixture to the weight of feven pounds and an half.

SYRUPUS ROSARUM PALLI-DARUM. Syrup of pale rofes.

Edinb.

Take of

Pale rofes, fresh gathered, one pound;

Boiling water, four pounds; White fugar, three pounds.

- Macerate the rofes in the water for a night; then firain the liquor, and adding to it the fugar, boil them into a fyrup.
- This fyrup may likewife be made from the liquor remaining after the diffillation of role water, depurated from its feces.

THE liquor remaining after the diffillation of rofes (provided the fill has been perfectly clean) is as proper for making this fyrup as a fresh infusion: for the diffillation only collects those volatile parts, which are diffipated in the air, whils the infusion is boiling to its confishence. This fyrup is an agree-

able and mild purgative for children, in the dole of half a fpoonful, or a fpoonful. It likewife proves gently laxative to adults, and in this intention may be of fervice in coffive habits. Its principal ufe is in folutive glyfters.

SYRUPUS de ROSIS SICCIS. Syrup of dry rofes. Edinb.

Take of

Red rofes dried, feven ounces; White fugar, fix pounds; Boiling water, five pounds.

Infuse the roles in the water for a night, then boil them a little, strain out the liquor, and, adding to it the fugar, boil them to the confistence of a fyrup.

THIS fyrup is fupposed 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.

Take of

Vinegar of fquills, a pint and a half ;

Cinnamon,

Ginger, each one ounce;

Double-refined fugar, three pounds and a half.

Steep the fpices in the vinegar for three days; then firain out the liquor, and add the fugar, fo as to make a fyrup.

Edinb.

Take of

- Vinegar of fquills, two pounds ;, White fugar, three pounds and an half.
- Make them into a fyrup, without boiling.

THE spices, in the first of these compositions,

Part III.

compositions, somewhat alleviate the offensiveness of the squills, though not fo much as to prevent the medicine from being difagreeable. It is used chiefly in doses of a spoonful or two, for attenuating viscid phlegm, and promoting expectoration, which it does very powerfully.

SYRUPUS SIMPLEX. The simple syrup. Lond.

Diffolve in water lo much doublerefined fugar as will make it into a fyrup.

> SYRUPUS SACCHARI. Syrup of Jugar. Edinb.

Take of

White fugar,

Water, each equal quantities. Boil them into a fyrup.

THESE preparations are plain liquid fweets, void of flavour or colour. They are convenient for fun-, dry purposes where these qualities are not wanted, or would be exceptionable.

SYRUPUS e SPINA CERVINA. Syrup of buckthorn.

Lond. Take of the

> Juice of ripe and fresh buckthorn berries, one gallon ;

Cinnamon, Ginger,

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Nutmegs, each one ounce;

- refined sugar, feven Double pounds.
- Set the juice by for fome days, to fettle; then pass it through a ftrainer, and in fome part thereof macerate the fpices. Boil the reft of the juice, adding towards the end that part in which the through a strainer: this part of

the procefs must be fo managed, that the whole liquor may be reduced to four pints. Laftly, put in the fugar, and make the mixture into a fyrup.

Edinb.

Take of

Syrups.

The juice of ripe buckthorn berries, depurated, feven pounds and an half;

White fugar, three pounds and an half.

Boil them to the confistence of a iyrup.

BOTH these preparations, in dofes of three or four spoonfuls, operate as brick cathartics. The principal inconveniencies attending them are, their being very unpleafant, and their occasioning a thirst and drynefs of the mouth and fauces, and fometimes violent gripes. Both these may be prevented, by drinking liberally of water-gruel, or other warm liquids, during the operation. The ungratefulnefs of the buckthorn is endeavoured to be remedied in the first of the above prefcriptions, by the addition of aromatics, which, however, are fcarcely fufficient for that purpofe. The fecond alfo had formerly an aromatic material for the fame intention, a dram of the effential oil of cloves; which being found ineffectual, is now rejected.

SYRUPUS VIOLARUM. Syrup of violets. Lond.

Take of

Violets, fresh, and well coloured, two pounds ;

Boiling water, five pints.

Macerate them, for a whole day, in a glafs, or at leaft a glazed earthen veffel; then pour out the liquor, fpices were macerated, first passed and pass it through a thin linen cloth, carefully avoiding even the lighteft

Part III.

lightest pressure : afterwards adding the due proportion of sugar, make it into a syrup.

Edinb.

Take of

March violets, fresh, one pound; Boiling water, three pints.

Steep them together for a night in a glazed earthen veffel, clofe covered; then ftrain out the liquor, and diffolve in it twice its weight of white fugar, fo as to make a fyrup without boiling.

THIS fyrup is of a very agreeable flavour, and in the quantity of a fpoonful or two, proves to children gently laxative. It is apt to lofe, in keeping, the elegant blue colour, for which it is chiefly valued; and hence fome have been induced to counterfeit it with materials whofe colour is more permanent. This abuse may be readily discovered, by adding to a little of the suspected fyrup any acid or alkaline liquor. If the fyrup 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 prefcriber would be deceived if he fhould expect to give any blue tinge to acidulated or alkalized juleps or mixtures, by the addition of the blue fyrup.

SYRUPUS ZINGIBERIS. Syrup of ginger. Lond.

Take of

Ginger, cut into thin flices, four ounces;

Boiling water, three pints.

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Macerate them for fome hours, then ftrain out the liquor, and make it into a fyrup with a proper quantity of double-refined fugar.

Edinb.

Take of

- Ginger, fliced and bruifed, three ounces;
- White fugar, feven pounds and an half.

Boiling water, four pounds.

Steep the ginger in the water, in a clofe veffel, for a night; then boil them a little, and having ftrained out the decoction, fet it by to fettle. Pour off the clear liquor, add to it the fugar, and make them into a fyrup.

These are agreeable and moderately aromatic fyrups, lightly impregnated with the flavour and virtues of the ginger.

CONFECTIO ALKERMES. Confection of kermes.

Take of

- Juice of kermes grains, warmed and ftrained, three pounds;
- Damaik role water, fix ounces by measure;

Oil of cinnamon, half a scruple; Double-refined sugar, one pound.

Diffolve the fugar in the role water, by the heat of a waterbath, into a fyrup; 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 faunders,

Cinnamon, each fix drams; Cochineal, three drams;

Saffron, one dram and a half. Evaporate the fyrup, with a gentle heat, to the confiftence of honey; then mix with it the other ingredients reduced to a very fine powder.

Both

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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 juleps, without spoiling their transparency, which the powders in the second always do. Particular care ought to be had in the choice of the effential 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. V.

Honeys and Oxymels.

THE more fixt parts of vegetables, diffolved 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 confiftence.

MEL ELATINES. Honey of fluellin. Lond.

Take of

Depurated juice of fluellin, four pints;

Clarified honey, four pounds. Boil them to a due confiftence.

THIS preparation made its first appearance in a preceding edition of our pharmacopœia. It is very rarely made use of, and not often kept in the shops.

MEL HELLEBORATUM. Honey of heliebore. Lond.

Take of

White hellebore roots, dried and cut in flices, one pound; Clarified honey, three pounds;

Water, four pints.

Let the roots be macerated in the leges.

water for three days, and then boiled a little; prefs out the liquor, and, having paffed it again through a frainer, boil it with the honey to a proper thicknefs.

PARTICULAR care ought to be had to reduce this preparation as nearly as possible to the honey confiftence, that its ftrength may not be too uncertain. It acts, as a draftic purgative or emetic, too violent and precarious for common use. It has been fometimes given in maniacal cases, in doses of one or two drams and upwards; though more frequently employed in glyfters. The present practice very rarely makes use of it at all.

MEL MERCURIALE. Honey of Mercury.

Take of

Juice of French-herb-mercury, Honey, each three pounds.

Boil them together to the confiftence of honey, taking off the four which rifes to the top.

THIS is defigned chiefly for glyfters: it is very rarely made use of, and hence is now dropt both by the London and Edinburgh colleges.

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MEL ROSACEUM. Honey of roses. Lond.

Take of

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Red role-buds, freed from the heels, and haftily dried, four ounces;

Boiling water, three pints ;

Clarified honey, five pounds.

Steep the roles in the water for fome hours; then ftrain off the liquor, mix with it the honey, and boil them to a due confiftence.

Edinb.

Take of

Red rofes, dried, half a pound ; Boiling water, four pints ; Clarified honey, fix pounds.

Steep the roles in the water for a night, then firain out the liquor, add to it the honey, and boil the mixture to the confistence of honey.

THIS preparation is not unfrequently made use of as a mild cooling detergent, particularly in gargarifms for ulcerations and inflammation of the mouth and tonfils. The defign of haftily drying the rofes, as directed in the first of the above prefcriptions, is, that they may the better preferve their aftringency. See page 254.

MEL SOLUTIVUM. Solutive honey. Lond.

Take

The liquor remaining after the distillation of fix pounds of damaik rofes ;

Cummin seeds, bruised a little, one ounce;

Brown fugar, four pounds ; Honey, two pounds.

Having preffed out the liquor, boil it to three pints ; adding, toward the end, the feeds tied up ... Gum ammoniacum, one ounce ;

in a linen cloth. Then put in the fugar and honey, and boil down the mixture to the confiftence of thin honey.

THIS composition is very well contrived for the purpofe expressed in its title. It is principally employed in laxative glyfters; and hence brown fugar is here allowed ; whilft, for all other uses, the doublerefined is directed.

OXYMEL ex ALLIO. Oxymel of garlick. Lond.

Take of

Garlick, cut in flices, an ounce and an half;

Caraway feeds,

Sweet fennel feeds, each two drams;

Vinegar, half a pint;

- Clarified honey, ten ounces by weight.
- Boil the vinegar, for a little time, with the feeds bruifed, in a glazed earthen veffel ; then add the garlick, and cover the veffel clofe : when grown cold, prefs out the liquor, and diffolve in it the honey by the heat of a water-bath.

THIS oxymel is recommended for attenuating vifeid juices, promoting expectoration, and the fluid fecretions in general. It is doubtless a medicine of confiderable efficacy, though very unpleafant; the flavour of the garlick prevailing, notwithstanding the addition of the aromatic feeds.

OXYMEL PECTORALE. Pectoral oxymel. Eainb.

Take of

- Elecampane roots, one ounce ; Florence orris roots, half an ounce;
 - Vinegar,

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Vinegar, half a pint ; Clarified honey, one pound ; Water, three pints.

Let the roots, cut and bruifed, be boiled in the water till one third be wafted; then firain off the liquor, let it fiand to fettle, and having poured it off clear from the feces, add to it the honey, and the ammoniacum, previoufly diffolved in the vinegar. Mix them together, by boiling them a little.

THE title of this composition expresses its medical virtues. It is defigned for those disorders of the breast that proceed from a load of viscid phlegm (which this medicine attenuates and promotes the expectoration of) 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 fquills. Lond.

Take of

Clarified honey, three pounds; Vinegar of squills, two pints.

Boil them in a glazed earthen veffel, over a gentle fire, to the confistence of a fyrup.

Edinb.

Take of

Clarified honey, four pounds; Vinegar of fquills, two pints.

Boil them to the confiftence of a fyrup.

THE honey was formerly employed for this preparation unclarified; and the fcum, which in fuch cafes arifes in the boiling, taken off. By thefe means, the impurities of the honey were difcharged; but fome of the medicinal parts of the fquills, with which the vinegar was impregnated, were alfo feparated. For this reafon the colleges both of London and Edinburgh have now judicioufly ordered the honey, for all thefe kinds of preparations, to be previoufly clarified by itfelf.

Oxymel of fquills is an ufeful aperient, detergent, and expectorant, and of great fervice in humoural afthmas, coughs, and other diforders, where thick phlegm abounds. It is given in dofes of two or three drams, along with fome aromatic water, as that of cinnamon, to prevent the great naufea which it would otherwife be apt to excite. In large dofes, it proves emetic.

OXYMEL SIMPLEX. Simple oxymel. [L. E.]

Take of

Aa

Clarified honey, two pounds; Vinegar, one pint.

Boil them to a due confistence.

THIS fimple preparation is not inferior in efficacy to many more elaborate compositions. It is an agreeable, mild, cooling, faponaceous, detergent, and attenuating medicine. It is often used in cooling, detergent gargarisms, and not unfrequently as an expectorant.

The boiling of oxymels in glazed earthen veffels, is not free from danger. Their glazing is procured by a vitrification of lead; and vinegar, by a boiling heat, may corrode fo much of vitrified lead, as to receive from it noxious qualities. See page 35.

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CHAPTER V.

Separation and collection of those parts of vegetable and animal substances, which are volatile in the heat of boiling water.

T HERE are many vegetable, and fome animal fubflances, whofe virtues refide, wholly or in part, in a matter which is capable of totally exhaling in the heat of boiling water. In most of the proceffes hitherto defcribed, it has been endeavoured, as much as poffible, to preferve this volatile matter along with the more fixt parts; whether those fixt parts were themsfelves medicinal, or only fubfervient to the union of the volatile matter with the fluids employed. The aim, in the prefent chapter, will be to completely feparate this volatile fubtile principle, and collect it pure from the groffer fixt parts, either in a concentrated flate, or diluted with water or fpirit of wine. In its concentrated flate, it appears commonly an oil; which, from its containing always the fpecific odour, and frequently the other medicinal powers of the fubject, is called *effential oil*.

SECT. I.

Esfential Oils.

SSENTIAL oils are drawn by diffillation in an alembic, with a large refrigeratory. A quantity of water is added to the fubject, fufficient to prevent its burning; and, in this water, it is likewife macerated a little time before the diffillation. The oil comes over along with the water; and either lwims on its furface, or finks to the bottom, according as it is lighter or heavier than that fluid [L.]

In the Edinburgh pharmacopœia, fome fea falt is ordered to be added to the water, fufficient to give it a flight brackish taste. The length of the maceration is

to be varied according to the texture and compactness of the fubject. The most tender fubjects fcarce require any. Those of a foft and loofe texture are to be fleeped for two or three days; and the more vifcous ones, for a longer time. The further the maceration is intended to be protracted, the greater quantity of fea falt must be added. From vifcous fubstances the oil may be obtained in a fhorter time, by fubmitting them to a flight, and not too long continued, fermentation ; in which cale, the addition of falt is improper. Seeds and fpices are to be bruifed, and woods to be raiped, previoully to -h-

Effential Oils.

Chap. 5.

the maceration or fermentation [E.]

ESSENTIAL oils are obtained only from odoriferous substances; but not equally from all of this clafs, nor in quantity proportionable to their degree of odour; fome which, if we were to reafon from analogy, should feem very well fitted for this process. yielding extremely little oil, and others none at all. Roles and camomile flowers, whole firing and latting fmell promises abundance, are found, upon experiment, to contain but a fmail quantity. The violet and jafmine flower, which perfume the air wich their odour, lofe their fmell upon the gentieft coction, and do not afford the leaft perceptible mark of oil upon being distilled, unlefs immense quantities be fubmitted to the operation at once ; whilft favin, whole difagreeable fcent extends to no great diftance, gives out the most oil of almost any vegetable known.

Nor are the fame plants equally fit for this operation, when produced in different foils or feafons; 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 fage, afford the largest quantity when young, before they have fent forth any flowers; and others, as thyme, when the flowers have juft appeared. All fragrant herbs yield a larger proportion of oil when produced in dry foils and warm fummers, than in the oppofite circumstances. On the other hand, fome of the difagreable ftrong fcented ones, as wormwood, are faid to contain most in rainy featons, and moift rich grounds.

SEVERAL of the chemifts have

been of opinion, that herbs and flowers, moderately dried, yield a greater quantity of effential oil, than if they were diffilled when freih. It is fuppofed, that the oil being already blended, in fresh plants, with a watery fluid, great part of it remains diffused through the water after the diffil ation, divided into particles too minute to unite and be collected; whereas, in drying, the oily parts, on the exbalation of the moifture which kept them divided and dispersed, run together into globules, which have little difposition to mingle with watery fluids, and eafily feparate from the water employed in the distillation.

This theory, however, does not appear to be altogether fatisfactory; for though the oil be collected in the fubject into diffinct globules, it does not rife in that form, but refolved 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 diffolved by the water before the diffillation, I can fee no reason why it should have a greater tendency to feparate from the water afterwards.

The opinion of dry plants yielding moft oil, feems to have arifen from an obfervation of Hoffman, which has, I think, been mifunderflood: " A pound, he fays, of " dry fpike flowers yields an ounce " of oil, but if they were diffilled " frefh, they would fearcely yield " above half an ounce; and the " cafe is the fame in balm, fage, " &c. The reafon is, that in dry-" ing, the watery humidity ex-A a 2 hales 3

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356 " hales; and as from two pounds " of a fresh plant we do not ob-" tain above one pound of dry, " and little of the fubtile 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 lois of the oil, then the one pound dry ought to be equivalent to the two freth. A later writer quotes an experiment of Neumann, which appears to be mifunderstood in the same manner; for Neumann, in the place referred to, fays only, that dry wormwood is found to yield much more oil than an equal weight of the fresh plant. I do not recollect any inftance, in which fresh and dry plants have been brought to a fair comparison, by dividing the quantity of the fubject into two equal weights, and diftilling one, while fresh, and the other, after it has been carefully and moderately dried.

But whatever may be the effect of moderate exficcation, 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 ufed, or the fhavings of woods, as much of either may be put into the veffel, as, lightly preffed, will occupy half its cavity; and as much water may be added, as will rife up to two thirds its height. The water and ingredients, altogether, fhould never take up more than three-fourths of the ftill; there fhould be liquor enough to prevent any danger of an empyreuma, but not fo much as to be too apt to boil over into the receiver.

The maceration should be continued io long, as that the water may fully penetrate the parts of the fubject. To promote this effect, woods should be thinly shaved acrofs the grain, roots cut tranfverfely into thin flices, barks reduced into coarfe powder, and feeds lightly bruifed. Very compact and tenacious substances require the maceration to be continued a week or two, or longer; for those of a foster and looser texture, two or three days are fufficient; whilft fome tender herbs and flowers not only fland not in need of any at all, but are even injured by it.

Whether the addition of fea falt be of any real fervice, is greatly to be doubted. The uses generally affigned to it are, to penetrate and unlock the texture of the fubject more effectually than fimple 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 fea falt feems rather to harden and condenfe, than to foften and refolve, both vegetable and animal subjects; and if it prevent putrefaction, it must, on that very account, be rather injurious than of fervice. The refolution, here aimed at, approaches near to a beginning putrefaction ; and faline fubstances, by retarding this, prolong the maceration far beyond the time that would otherwife be neceffary. It is in the power of the operator, when he perceives the process coming near this pitch, to put a ftop to it at pleasure, by proceeding immediately to diffillation. 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, raiping, and the like which

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Chap. 5.

which are equally necessary in ei- -rily debase its quality. And inther cafe, be fcientifically complied with.

Bodies of a very viscous and compact texture, are directed, in the Edinburgh pharmacopœia, to be fermented for fome days with a little yeaft : half their quantity of water is fufficient for performing the fermentation; fo much more as is neceffary, is to be added afterwards, before the diffillation. This procefs undoubtedly promotes the refolution of the fubject, and the extrication of the oil; it rarely happens, however, that affiltances 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-choien ferment, or using too large a quantity of any.

Some chemists pretend, that by the addition of falts and acid fpirits, they have been enabled to gain more oil from certain vegetable matters, than can possibly be got from them without fuch affiftance. Experiments made on purpofe to fettle this point feem to prove the contrary. This at leaft is conftantly 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 effential oil in vegetables can by no means be increafed ; and what is, really contained in them may be eafily separated without any addition of this kind. All that faline matters can do in this respect, is, to make the water fusceptible of a greater degree of heat than it can fultain by itfelf, and thus enable it to carry up a grofs unctuous matter, not volatile enough to arife with pure water. This grois matter, mingling with the pure oil, increases the quantity, but at the same time must necessa-

deed, when water alone is made ufe of, the oil which comes over about the end of the operation is remarkably lefs fragrant, and of a thicker confiftence, than that which arifes at the beginning; diffilled a fecond time, with a gentle heat, it leaves a large quantity of grofs, almost infipid, refinous matter behind.

THE choice of proper inftruments is of great confequence to the performance of this procefs to advantage. There are fome oils. which pafs freely over the fwan neck of the head of the common still : others, leis volatile, cannot eafily be made to rife to 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 afcent (and thence conveyed at once into the receiver), the advantages of which are fufficiently obvious.

With regard to the fire, the operator ought to be expeditious in raifing it at first, and to keep it up, during the whole process, of fuch 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 pollible to be avoided. Fire communicates to all these oils a difagreeable impression, as is evident from their being much lefs grateful when newly distilled, than after they have flood for fome 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 diffillation the heat of water strongly boiling; but there are many alfo which rife with a confiderable lefs heat: fuch as those of lemon-peel, citron-peel, oils of the flowers of lavender and rofemary, and

Aas

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and of almost all the more odoriferous kinds of flowers. We have already obferved, that these flowers have their fragrance greatly injured, of even deftroyed, by beating or bruifing them. It is impaired also by the immersion in water, in the prefent process; and the more fo in proportion to the continuance of the immeriion, and the heat. Hence these oils, distilled in the common manner, prove much lefs agreeable in fmell than the fubjects themselves. For the diffillation of fubftances of this clafs, I have contrived another method. Initead of being immerfed 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 bafket, of fuch a fize that it may enter into the still, and reft against its fides, just above the water. The head being then fitted on, and the water made to boil, the fteam, percolating through the fubject, imbibes the oil, without impairing its fragrance, and carries it over into the receiver. Oils thus obtained, poffeis the odour of the fubject in an exquisite degree, and have nothing of the difagreeable fcent perceivable in those diffilled by boiling them in water in the common manner.

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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. 1 have avoided these expressions, as they might be thought to relate to the comparitive gravities of the oils; with which the volatility or fixedness have no connection. Oil olive is lighter than most of the effen-

tial oils; but the heat requisite to make it distil exceeds that in which the heaviest effential oil distils, confiderably more than the heat of boiling water exceeds that of ice.

THE water employed in the difillation of effential oils, always imbibes fome portion of the oil; as is evident from the fmell, tafte, and colour which it acquires. It cannot however retain above a certain quantity; and therefore fuch as has been already ufed, and almost faturated itself, may be advantageoufly employed, instead of common water, in a fecond, third, or any future diffillation of the fame fubject.

Some late chemical writers recommend, not the water which comes over, but that which remains in the flill, to be used a fecond time. This can be of no fervice; as containing only such parts of the vegetable as are not capable of arising in distillation, and which ferve only to impede the action of the water as a menftruum, and to endanger an empyreuma.

After the diffillation of one oil, particular care fhould be had to duly cleanfe the worm before it is employed in the diffillation of a different plant. Some oils, those of wormwood and anifeeds for inftance, adhere to it fo tenacioufly, as not to be melted out by heat, or wafhed off by water. The best way of cleansing the worm from these, is to run a little spirit of wine through it.

Effential oils, after they are diftilled, fhould be fuffered to ftand for fome days, in seffels loofely covered with paper, till they have loft their difagreeable fiery odour, and become limpid : then put them

up

Chap. 5.

up in fmall bottles, which are to be kept quite full, closely flopt, in a cool place. With these cautions, they will retain their virtues in perfection for many years.

When carelefsly kept, they in time gradually lofe their flavour, and become grofs and thick. Some endeavour to recover them again, after they have undergone this change, by grinding them with about thrice their weight of common falt, then adding a large proportion of water, and diffilling them afresh. The purer part arifes thin and limpid, poffeffing a great degree of the priftine fmell and tafte of the oil, though inferior in both respects to what the oil was at first. This rectification, as it is called, fucceeds equally without the falt. The oils, when thus altered, are nearly in the fame flate with the turpentines, and other thickened oily juices, which readily yield their purer oil in distillation with water alone.

When effential oils have entirely loft their fmell, fome recommend adding them in the diffillation of a fresh quantity of the oil of the fame plant ; by which means they are faid to fatiate themfelves anew with the odorous matter, and become entirely reno-This practice, however, vated. ought doubtless to be disapproved, as being no other than a specious fophistication; 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.

Effential oils, medicinally confidered, agree in the general qualities of punge cy 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 feveral fubjects refide. Thus the carminative virtue of the warm feeds, the diuretic of juniper berries, the emmenagogue of favin, the nervine of rolemary, the ftomachic of mint, the antifcorbutic of fcurvy-grafs, the cordial of aromatics, &c. are concentrated in their oils.

There is another remarkable difference in effential oils, the foundation of which is lefs 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 fubject they were drawn from. The oil of cinnamon, for inflance, is exceffively pungent and fiery ; in its undiluted state, it is almost caustic: whereas cloves, a fpice which in fubstance is far more pungent than the other, yields an oil which is far leis fo. This difference feems to depend partly upon the quantity of oil afforded, cinnamon yielding much lefs than cloves, and confequently having its active matter concentrated into a smaller volume ; partly, upon a difference in the nature of the active parts themfelves : for though effential oils contain always the specific odour and flavour of their fubjects, whether grateful or ungrateful, they do not always contain the whole pungency : this relides frequently in a more fixt refinous matter, and does not rife with the oil. After the diffillation of cloves, pepper, and fome other spices, a part of their pungency is found to remain behind : a' fimple tincture of them in rectified spirit of wine is even more pungent than their pure effential oils.

The more grateful oils are frequently made use of for reconciling to the flomach medicines of themfelves difguttful. It has been cuftomary

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tomary to employ them as correctors for the refinous purgatives; an ufe to which they do not feem to be well adapted. All the fervice they can here be of, is to make the refin fit eafier at first on the stomach : far from abating the irritating quality upon which the viralence of its operation depends, these pungent oils superadd a fresh stimulus. See the article Cathartics.

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Effential oils are never given alone, on account of their extreme heat and pungency; which in fome is fo great, that a fingle drop, let fall upon the tongue, produces a gangrenous eschar. They are readily imbibed by pure dry fugar, and in this form may be conveniently exhibited. Ground with eight or ten times their weight of the fugar, they become foluble in aqueous liquors, and thus may be diluted to any affigned degree. Mucilages also render them mifcible with water into an uniform milky liquor. They diffolve likewife 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 folutions may be either taken on fugar, or mixed with fyrups, or the like : on mixing them with water, the liquor grows milky, and the oil feparates.

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-ach is sometimes relieved by a drop of these almost caustic oils, received on cotton, and cautiously introduced into the hollow tooth.

OLEUM ABSINTHII ESSEN-TIALE.

Effential oil of the leaves of worm-

wood. L. E.

This is one of the more ungrateful oils: it fmells ftrongly of the wormwood, and contains its particular nauseous taste ; but has little or nothing of its bitternefs, this remaining entire in the decoction left after the diffillation. Its colour, when drawn from the fresh herb, is a dark green; from the dry, a brownish yellow. This oil is recommended by Hoffman as a mild anodyne, in spasmodic contractions : for this purpose, he directs a dram of it to be diffolved in an ounce of rectified spirit of wine, and seven or eight drops of the mixture taken for a dole in any convenient vehicle. Boerhaave greatly commends, in tertian fevers, a medicated liquor composed of about feven grains of the oil, ground first with a dram of fugar, then with two drams of the falt of wormwood, and afterwards diffolved in fix ounces of the diftilled water of the fame 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 thefe means, he fays, all cafes of this kind are generally cured with eafe and fafety, provided there is no fchirrofity or suppuration. With us, the oil of wormwood is employed chieffy as a vermifuge, and for this purpole 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. Effential oil of dill feeds. Lond.

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This is a very warm oil; of a flavour not very agreeable, lefs fo than that of the feeds. It is fometimes given as a carminative, in flatulencies, colicky pains, hiccups, and the like, from one to three or four drops.

OLEUM SEMINUM ANISI ESSENTIALE. Effential oil of anifeeds. L. E.

This oil poffeffes the taffe and fmell of the anifeeds 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 to far as half this number. Its fmell is extremely durable and diffusive. Milk drawn from the breaft, after taking it, is found impregnated with its odour ; and possibly this may be, in part, the foundation of the pectoral virtues ufually afcribed to it. In flatulencies and colics, it is faid by fome to be less effectual than the feeds themfelves.

It is remarkable of this oil, that it congeals, even when the air is not fenfibly cold, into a butyraceous confiftence: and hence, in the diffillation of it, the operator ought not to be over-folicitous in keeping the water in the refrigeratory too cool : it behoves him rather to let it grow fomewhat hot, particularly towards the end of the process; otherwife the oil congealing, may fo ftop up the worm, as to endanger blowing off the head of the ftill ; at leaft a confiderable quantity of oil will remain in it.

OLEUM SEMINUM CARUI ESSENTIALE. Effential oil of caraway feeds.

The flavour of this exactly refembles that of the caraway. It is a very hot and pungent oil; a fingle drop is a moderate dofe, and five or fix a very large one. 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.

OLEUM CARYOPHYLLO-RUM AROMATICORUM ESSENTIALE. Effential oil of cloves.

L. E.

This oil is fo ponderous as to fink in water, and is not eafily elevated in diffillation : if the water which comes over be returned on the remaining cloves, and the diffillation repeated, fome more oil will generally be obtained, though much inferior in quality to the first. The oil of cloves is usually described as being " in tafte excellively hot and fiery, and of a gold yellow colour." (Boerb. proceff. 27.) 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 fafety (duly diluted) to the quantity of ten or twelve drops or more. Nor is its colour at all yellow, unlefs it has been long and carelessly kept, or diffilled by too violent a fire. When in perfection, it is limpid and colourless, of a pleasant, moderately warm and pungent tafte, and a very agreeable fmell, much refembling that of the fpice itfelf. The Dutch oil of cloves contains a large quantity of expressed oil, as evidently appears upon examining it by diffillation. This however cannot be the addition to which it owes its acrimony. A fmall proportion of a refinous extract of cloves communicates to a large one of oil a deep colour, and a great degree of acrimony. OLEUM

362 Pharmaceutical Preparations. OLEUM FLORUM CHAMÆ-MELI ESSENTIALE. Effential oil of camomile flowers. Lond. Determine the state of t

This is a very pungent oil, of a ftrong not ungrateful fmell, refembling that of the flowers. Its colour is yellow, with a caft of greenifh or brown. It is fometimes given in the dofe of a few drops, as a carminative, in hysteric diforders, and likewife as a vermifuge. It may be conveniently made into pills with crumb of bread.

The oil above defcribed is that obtained from the common garden camomile, which is the only fort directed in our difpenfatories (fee the foregoing part, page 124.) There is another fpecies, more frequent in corn-fields than in our gardens (chamemælum vulgare Ger: Raii fynopf. ed. 3.288.) which yields a beautiful blue oil : this colour, if the oil be carefully kept, remains for many years : but if the air be not perfectly excluded, foon degenerates into a yellow like that of the foregoing.

OLEUM CINNAMOMI. Oil of cinnamon. L. E.

This valuable oil is extremely hot and pungent, of a moft agreeble flavour, like that of the cinnamon itself. In cold languid cases, and debilities of the nervous fyftem, it is one of the moft immediate cordials and reftoratives. The dofe is one, two, or three drops : which must always be carefully diluted by the mediation of fugar, &c. for fo great is the pungency of this oil, that a fingle drop let fall upon the tongue, undiluted, produces, as Boerhaave obferves, a gangrenous efchar. In the diffillation of this oil, a smart fire is required ; and the low head, with a channel round it, before recom-

mended for the diffillation of the lefs volatile oils, is particularly neceffary for this, which is one of the leaft volatile, and which is afforded by the fpice in exceeding fmall quantity. The diffilled water retains no fmall portion of the oil; but this oil being very ponderous, great part of it fubfides, from the water, on fianding for two or three weeks in a cool place.

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OLEUM SEMINUM CYMINI ESSENTIALE. Effential oil of cummin feeds. Lond.

This is one of the warmer and lefs pleafant oils. It is employed chiefly in cold, flatulent, hyfteric complaints, in dofes of two or three drops. It gives its fmell ftrong to the urine, and is fuppofed peculiarly ferviceable for promoting its difcharge.

OLEUM SEMINUM FŒNI-CULI ESSENTIALE. Effential oil of fennel feeds. Edinb.

The oil obtained from fweet fennel feeds is much more elegant and agreeable than that of the common fennel. It is one of the mildeft of thefe preparations. It is nearly of the fame degree of warmth with that of anifeeds ; to which it is likewife fimilar in flavour, though far more grateful. It is given from two or three drops to ten or twelve, as a carminative, in cold indifpofitions of the flomach ; and in fome kinds of coughs, for promoting expectoration.

OLEUM foliorum HYSSOPI ESSEN-

TIALE.

Effential oil of byfop leaves.

The oil of hyffop is moderately acrid, of a firong not very agreeable fmell, exactly refembling the original herb. Its colour is yellowifh,

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ish, with a flight caft of green ; which, in keeping, changes to a brownish colour. It is commended in humoural afthmas, for promoting expectoration, &c. from one to two or three drops ; but it is rarely made use of, and not often kept in the fhops; for which reafon, it is now omitted both by the London and Edinburgh colleges.

OLEUM baccarum JUNIPERI ESSENTIALE. Essential oil of juniper berries. L. E.

This oil is a very warm and pungent one, of a ftrong flavour, not unlike that of the berries. In the dole of a drop or two, it proves a ferviceable carminative and flomachic. In one of fix, eight, or more, a stimulating, detergent, diuretic and emmenagogue. It feems to have fomewhat of the nature of the turpentines, or their diffilled oil; like which it communicates a violet fmell to the urine.

The oil of these berries resides partly in vehicles foread through the substance of the fruit, and partly in little cells contained in the feeds ; when the berry is dry, and the oil hardened into a refinous fubitance, it becomes vilible, upon breaking the feeds, in form of little transparent drops. In order therefore to obtain this oil to advantage, we externally. ought, previoufly to the diffillation, to bruife the berry thoroughly; fo | ESSENTIA LIMONUM [L.] as to break the feeds, and entirely lay open the oily receptacles.

OLEUM florum LAVENDULÆ ESSENTIALE. Effential oil of lavender flowers.

L. E.

This oil, when in perfection, is very limpid, of a pleafant yellowish colour, extremely fragrant, poffeffing in an aminent degree the peculiar fmell generally admired in the flowers. It is a medicine of great ule, both externally and internally, in paralytic and lethargic complaints, rheumatic pains, and debilities of the nervous fystem. The dose is from one drop to five or fix.

Lavender flowers yield the most fragrant oil, and in confiderably the largest quantity, when they are ready to fall off fpontaneoufly, and the feeds begin to shew themselves; the leaves give out extremely little. The flowers may be feparated from the reft of the plant, by drying it a little, and then gently beating it : they fhould be immediately committed to distillation, and the procefs conducted with a well-regulated gentle heat: too great heat would not only change the colour of the oil, but likewise make a dilagreeable alteration in its fmell.

OLEUM baccarum LAURI ESSEN-TIALE.

Effential oil of bayberries.

The oil of bayberries is thin and limpid, moderately pungent, of a firong and tolerably grateful fmell. It is given in flatulent colics, hyfteric complaints, and for allaying the pains confequent upon delivery; the dofe, from two drops to five or fix. It is likewife made an ingredient in carminative glysters ; and in some hysteric cases, is applied

OLEUM corticum LIMONUM E.]

Effence of lemons, or the effential oil of lemon-peel.

THIS is a pleafant oil, of a fine fmell, very near as agreeable as that of the fresh peel; it is one of the lightest and most volatile effential oils we have, perfectly limpid, and almost colourless. It is taken in doles of two or three drops, as a cordial,

cordial, in weakness of the ftomach, &c. though more frequently used as a perfume. It gives a fine flavour to the officinal spiritus volatilis aromaticus, and occasions the foap pills to fit eafy on the itomach.

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OLEUM MACIS ESSENTIALE. Estential oil of mace.

The effential oil of mace is moderately pungent, very fubtile and volatile, of a ftrong aromatic fmell, like that of the fpice itfelf : it is thin and limpid, of a pale yellowish colour, with a portion of thicker and darker-coloured oil at the bot-This oil is celebrated in votom. miting, hiccups, colicky pains, &c. both given internally from one to four drops, and applied externally to the flomach and umbilical region. It is however but rarely made use of, and not often met with in the shops.

OLEUM MARJORANÆ ESSENTIALE.

Effential oil of marjoram leaves. Lond.

This oil is very hot and penetrating, in flavour not near fo agreable as the marjoram itfelf : when in perfection, it is of a pale yellow colour ; by long keeping, it turns reddifh : if diffilled with too great a heat, it arifes of this colour at first. It is supposed to be peculiarly ferviceable in relaxations, obstructions, and mucous discharges of the uterus : the dofe is one or two drops.

OLEUM MENTHÆ ESSEN'TIALE.

Effential oil of the leaves of common mint.

L. E.

This oil fmells and taltes ftrongly of the mint, but is in both refpects

fomewhat lefs agreable than the herb itself. It is an useful ftomachic medicine ; and not unfrequently exhibited in want of appetite, weaknefs of the ftomach, reachings to vomit, and fimilar diforders, when not accompanied with heat or inflammation : two or three drops, or more, are given for a dofe. It is likewife employed externally for the fame purpofes; and is an excellent ingredient in the flomachic plaster of the shops.

OLEUM MENTHÆ PIPERI-TIDIS ESSENTIALE.

Effential oil of the leaves of peppermint.

Lond.

This poffeffes the fmell, tafte, and virtues of the peppermint in perfection ; the colour is a pale greenith yellow. It is a medicine of great pungency and fubtility ; and diffuses, almost as soon as taken, a glowing warmth through the whole fystem. In colics, accompanied with great coldness, and in fome hysteric complaints, it is of excellent fervice. A drop or two are in general a sufficient dose.

OLEUM NUCIS MOSCHATÆ ESSENTIALE.

Effential oil of nutmegs. L. E.

The effential oil of nutmegs poffeffies the flavour and aromatic virtues of the fpice in an eminent de-It is fimilar in quality to gree. the oil of mace, but fomewhat lefs grateful.

OLEUM ORIGANI ESSEN-TIALE.

Esfential oil of the leaves of origa-

num. L. E.

This oil has a very Fungent acrimonious tafte, and a penetrating imeh.

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fmell. It has been chiefly employed externally as an errhine, and for eafing pains of the teeth.

OLEUM ESSENTIALE PIPE-RIS JAMAICENSIS. Effential oil of Jamaica pepper.

Eljentiat oli 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 agreable 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 PULEGH ESSEN-TIALE. '

Essential oil of the leaves of pennyroyal.

L. E.

This oil, in fmell and tafte, refembles the original plant; the virtues of which it likewife poffeffes. It is given in hyfleric cafes, from one to four or five drops.

OLEUM RORISMARINI ES-SENTIALE.

Esfential oil of rofemary. L. E.

The oil of rolemary 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 fo agreable as the rolemary itself. It is recommended, in the dose of a few drops, in nervous and hysteric complaints. Boerhaave holds it in great effeem against epileps, and suppressions of the uterine purgations, occasioned by weakness and inactivity.

OLEUM LIGNI RHODII ES-SENTIALE. Effential oil of rhodium. L. E.

This oil is extremely odoriferous, and principally employed as a perfume in fcenting pomatums, and the like. Cuftom has not as yet received any preparation of this elegant aromatic wood into internal ufe.

OLEUM RUTÆ ESSENTIALE. Essential oil of rue leaves. L. E.

The oil of rue has a very acrid tafte, and a penetrating finell, refembling that of the herb, but rather more unpleafant. It is fometimes made use of in hysteric diforders, and as an anthelmintic; as also in epilepsies proceeding from a relaxed state of the nerves.

Rue yields its oil very fparingly. The largest quantity is obtained from it when the flowers are ready to fall off, and the feeds begin to shew themfelves. Suitable maceration, previous to the distillation, is here extremely necessary.

OLEUM SABINÆ ESSEN-TIALE. Effential oil of favin leaves. L. E.

Savin is one of the plants which, in former editions of the Edinburgh pharmacopœia, were directed to be lightly fermented before the diftillation : this, however, is not very neceffary : for favin yields, without any fermentation, and even without much maceration, a very large quantity of oil : the foregoing herb flands more in need of a treatment of this kind. The oil of favin is a celebrated uterine and emmenagogue : in cold phlegmatic habits, it is undoubtedly a medicine of good fervice, though not capable

capable of performing what it has been ufually reprefented to do. The dofe is, two or three drops or more.

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OLEUM SASSAFRAS ESSEN-TIALE. Effential oil of faffafras. L. E.

This is the most ponderous of all the known effential oils, but rifes in distillation with fufficient eafe: it appears limpid as water, has a moderately pungent taste, a very fragrant smell, exactly refembling that of the fassafras. It stands greatly commended as a sudorific, and for purifying the blood and juices: it is likewise supposed to be of service in humoural assass and coughs. The dose is from one drop to eight or ten; though Geoffroy goes as far as twenty.

The decoction remaining after the diffillation of the oil, affords by infpiffation (fee chap. vi.) an ufeful extract, of a mild, bitterifh, fubaftringent tafte. Hoffman fays, he has given it with great benefit, in dofes of a fcruple, as a corroborant in cachectic cafes, in the decline of intermitting fevers, and for abating hypochondriacal fpafms.

OLEUM TEREBINTHINÆ. Oil of turpentine. L. E.

This is diffilled in the fame manner as the foregoing oils, and is itrictly an effential one, though not ufually ranked in this clafs. It is commonly, but improperly, as the college obferve, called fpirit of turpentine. It is employed in large quantities for fome mechanic purpofes, and hence the diffillation of it is become a particular bufinefs. This oil is a very hot ftimulating medicine (fee page 240). It is fometimes given as a fudorific and diuretic, in the dofe of two or

three drops : in larger doses, it is apt greatly to heat the body, occalion pain of the head, and effufion of the femen and liquor of the profrate glands. It has nevertheless been taken in considerable doses (along with honey or other convenient vehicles) against the sciatica; and, as is faid, with good fuccels. Some have recommended it against venereal runnings: but here it has produced mischievous confequences, inflaming the parts and aggravating the diforder. Externally it is not unfrequently employed against rheumatic pains, aches, sprains, for discussing cold tumours, and reftraining hæmorrhages.

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After the diffillation of the turpentine, there remains in the ftill, a brittle refinous fubflance, of a yellow colour, called *refina flava*, yellow refin [L.]

The only use of this is in external applications, for giving confistence to plasters, and the like purposes.

Mosr of the foregoing oils are drawn by our chemifts, and eafily 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 the heat, the turpentine will be betrayed by its fmell. But the more fubtle artifts have contrived other methods of fophiftication, which elude all trials of this kind.

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Some have looked upon the fpecific gravity of oils as a certain criterion of their genuineness; and accordingly we have given a table of the gravity of feveral in page 38. This however is not to be abfolutely depended on : for the genuine oils, obtained from the fame fubjects, oftentimes differ in gravity as much as those drawn from different ones. Cinnamon and cloves, whofe oils ufually fink in water, yield, if flowly and warily diffilled, an oil of great fragrancy, which is neverthelefs specifically lighter than the aqueous fluid employed in the diftillation of it; whilft, on the other hand, the laft runnings of fome of the lighter oils prove fometimes fo ponderous as to fink in water.

As all effential oils agree in the general properties of folubility in fpirit of wine, indiffolubility in water, mifcibility with water by the intervention of certain intermedia. volatility in the heat of boiling water, &c. it is plain that they may be varioully mixed with one another, or the dearer fophifficated with the cheaper, without any possibility of difcovering the abufe 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 genuinenels of every individual oil. It is of as much importance, that they be good, as that they be genuine ; for I have often feen genuine oils, from incurious diffillation, and long and carelefs keeping, weaker both in fmell and tafte than the common lophifticated ones.

The fmell and taffe feem to be the only certain tells that the nature of the thing will admit of. If a bark fhould have in every refpect the appearance of good cinnamon, and fhould be proved indifputably 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 cafe is the fame with the oil. It is only from ufe and habit, or comparifons with fpecimens of known quality, that we can judge of the goodnefs, either of the drugs themfelves, or of their oils.

Most of the effential oils, indeed, are too hot and pungent to be tailed with fafety; and the fmell of the fubject is fo much concentrated in them, that a fmall variation in this refpect is not eafily diffinguished. But we can readily dilute them to any affignable degree. A drop of the oil may be diffolved in fpirit of wine ; or received on a bit of fugar, and diffolved 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.

I shall here fubjoin some expeririments, of the quantity of effential oil obtained f. om different vegetables, reduced into the form of a table. The first column contains the names of the respective vegetable subflances, the fecond the quantity of each which was jubmitted to the diffillation, 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 onuces is meant : but these experiments having been all made by a pound of lixteen ounces, it was thought expedient to fet down the matter of fact in the original weights; efpecially as the feveral materials, in the large quantity commonly required for the diffiliation

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diffillation of oils, are purchafed by weights of the fame kind. But to remove any ambiguity which might arife hence, and enable the reader to judge more readily of the yield, a reduction of the weights is given in the next column; which flews the number of parts of each of the fubjects, from which one part of oil was obtained. To each article is affixed the author's name from whom the experiment is taken: those to which no name is added,

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are experiments of my own. The different diffillations of one fubject, feveral of which are inferted in the table, fhew how variable the yield of oil is, and that the exotic fpices, as well as our indigenous plants, do not always contain the fame proportion of this active principle : though it must be observed, alfo, that part of the differences may probably arife from the operation itself having been more or lefs carefully performed.

Table of the quantity of effential oil obtained from different vegetables.

Cummin

and stated a second state		- 4.		IN CONTRACTOR
Chap. 5. Effent	tial (Dils.		369
Cummin seed I bus	h.7	f21 oun.	2	5 . 5-7
Dictamnus Creticus I lb.	and the second	30 gra.		1 206
Dill feed 4 1b.	100 M	2 oun.		256
Elecampane root 2 lb.	the second second	31 ferup.		32 N
Elemi 1 lb.	Carl an	I oun.		245 Neum. 16 Neum.
Fennel feed, common - 2 our	1.	I ferup.		
Fennel feed, fweet I bufh	1.	18 oun.		48 Neum.
Galangal root I lb.	and the second s	I dra.	1 in	128 Carth.
Garlick root, fresh 2 lb.	2	30 gra.	-	25t Neum.
. Ginger I lb.	-	I dra.		128 Neum.
Horferadish root, fresh - 8 oun		15 gra.	1	256 Neum.
Hyflop leaves 2 lb.	11 12	IIdra.	1.00	237 Neum.
Hyllop leaves I lb.	a fra	Idra.	-	85 Garib.
Hyffop leaves I lb.	1	2 dra.		64 Carth.
Hyflop leaves, fresh 2 cwt	. 19	6 oun.		597
Hyflop leaves, fresh 10 lb.	4 . Ta 15	3 dra.	-	427
Hyflop leaves, fresh 30 lb.	in the second	9 dra,	-	427
Juniper berries 8 lb.	1	3 oun.	E	423 Hoff.
Juniper berries 1 lb.		3 dra.	from	42 Carth.
Lavender in flower, fresh -48 lb.	1.	Iz oun.		64
Lavender in flower, fresh - 30 lb.	2	630un	ne	72
Lavender in flower, fresh - 13 cwt	. 1 .	60 oun.	tai	403
Lavender flowers, fresh - 2 lb.		4 dra.	10	64 Hoff.
Lavender flowers, dried - 4 lb.	estential	2 oun.	was obtained	32
Lavender flowers, dried - 2 lb.	Fe	I oun.	A.	32 Hoff.
Lavender flowers, dried - 4 lb.		3 oun.	i.	211 Hoff.
Broad-leaved Lavender 7 - 4 1b.	Jo	I oun.		64 Hoff.
flowers, dry	ded	2 dra.	rt of	64 Carth.
Lovage root I lb.	eld	I dra	pai	128 Carth.
Mace 1 lb.	yield	5 dra.		253 Neum.
Mace 1 lb.	1.	6 dra.	that one	21 Carth.
Marjoram in flower, fresh - 81 lb.	1 1-	3 ³ oun.	at	347
Marjoram in flower, fresh - 1321b.	10.5	3 ¹ / ₂ dra.	th	493
Marjoram in flower, fresh - 34 lb.	1.1.2	1 Joun.	5	362
Marjoram leaves, fresh - 1812lb.	1 Section	4 dra.		592
Marjoram leaves, dried - 4 lb.	in and	I oun.		64 Hoff:
Malterwort root I lb.	1 Alter	30 gra.		256 Neum.
Milfoil flowers, dried -14 lb.	1.1.1	4 dra.	ale -	448
Mint in flower, fresh - 6 lb.	1 ton	42dra.	-	177
Mint leaves, dried 4 lb.	1224	J ^I zoun.	N.	423 Hoff.
Peppermint, fresh 4 lb.	100	3 dra.	Limbe	1703
Myrrh I lb.	1	2 dra.	1200	64 Hoff.
Myrrh 1 lb.	1 1	3 dra.	1	427 Neum.
Nutmegs 1 lb.	1.12	I oun.	2 2 2 4 4	16 Hoff.
Nutmegs I lb.		I oun,		16 Geoff.
Nutmegs I lb.	See.	4 dra.	-	.32 Neum.
Nutmegs I lb.		6 dra.	-	21 Sala
Nutmegs I lb.	18.2	5 dra.		253 Carth.
Parfley feeds 2 lb.		1 dra.		256
Parfley leaves, fresh 2381b.	Sart	2 oun.		1904
Parinep feeds 8 lb.	No.	2 dra.	1	512
		Bb -	1995	Penny-

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Pennyroyal in flower, fresh 13 lb.	$\begin{bmatrix} 6 & dra. \\ 6 & dra. \end{bmatrix} \begin{bmatrix} 277 \\ 42\frac{2}{3} \end{bmatrix}$
Black pepper 2 lb.	0 17
Black pepper I lb.	12 unas
Black pepper I lb.	4 ferup 90 Cartb. 1 dra. 128 Heister
Black pepper 1 lb.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Black pepper 6 lb.	1 6 1
Pimento I oun.	J 0 0 1 1 1 2 N
Rhodium wood 1 lb.	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Rhodium wood I lb.	3 dra. $42\frac{2}{3}Sala$
Rhodium wood I lb. Rhodium wood I lb.	3 dra. 423 Carth.
Kuoulum wood	4 dra. 132 Carth.
Knoulunt wood	8 oun. 224
Rolemary in none.	La dra Li 64 Sala
Rolemary leaves	2 dra. $E \qquad 42\frac{2}{3} \text{ Sala}$
Rolemary leaves	3 ¹ / ₆ dra. ⁴ / ₁₂₁ Neum.
Kolemary leaves	
Rolemary leaves	1 dra. $1\frac{1}{2}$ dra. 5 oun. $1\frac{1}{2}$ dra. $1\frac{1}{2}$ dra. 1
Rolemary leaves	5 oun. 5 224
Rolemary leaves, ment	
Rofes 100 lb.	1 oun. ≈ 1600 Homb. ≥ 768 Hoff.
Koles - The R	30 gra. \$ 768 Hoff.
Rofes 12 15.	2 dra. 5 640 Hoff.
Rue I to the Cu	1 1 1 1 1 1 1 17 17
Nuc I II C	i den i l'El2
Rue in flower 60 lb. Rue with the feeds 72 lb.	$1 dra. tr 512 2\frac{1}{2} oun. tr 507$
Rue with the feeds 72 lb.	2 000 204
Saffron I lb.	
Sage leaves I lb.	5 fcrup 77 Garth.
Sage in flower, freih 34 10.	1 ¹ / ₂ oun. 4 544
Sage of virtue in flower - 27 lb.	0 dra. 0 15/0
Sage of virtue in flower - 8 10.	12 ura.
Saffafras 0 ID.	13 oun. 55 Hoff.
Saffafras 0 10.	2 oun. 48 Neum.
Savin 2 1D.	5 oun. 6_3^2 Hoff. 2 dra. 6_4 Carth.
Saunders, vellow I ID.	
Smallage feeds I ID.	
Stechas in flower, freih 54 1D.	
Thyme in flower, freth - 2 cwt.	
Thyme in flower, dry - 32 10.	6
Lemon thymein Hower, trein 51.10.	$\begin{bmatrix} 1\frac{3}{4} & \text{oun.} \\ 2\frac{1}{5} & \text{oun.} \end{bmatrix} \begin{bmatrix} 053 \\ 627 \end{bmatrix}$
Lemon thymein flower, trein 98 10.	3 oun. 555
Lemon thyme, dried a little 104 10.	1 oun. 64
	1 ³ oun. 192
W UT III W OUG TOUT OUT	31 oun 114
Worldwood rearrows of the	1 dra.] [128 Neum.
Zedoary 110.5	and the second second second second

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Simple distilled Waters.

SECT. II.

Simple distilled Waters.

THE effluvia which exhale in the air from many vegetables, particularly from those of the odorous kind, confift apparently of principles of great fubtility and activity, capable of ftrongly and fuddenly affecting the brain and nervous fystem, especially in those whofe nerves are of great fenfibility; and likewife of operating, in a flower manner, upon the fystem of groffer veffels. Thus Boerhaave observes that in hysterical and hypochondriacal perfons, the fragrant odour of the Indian hyacinth excites firange spaims, which the ftrong fcent of rue relieves : that the effluvia of the walnut-tree occafion head-achs, and make the body coffive : that those of poppies procure fleep : and that the fmell of bean-bloffoms, long continued, diforders the fenfes. Lemery relates, from his own knowledge, that feveral perfons were purged, by staying long in a room where damask roses were drying.

Some of the chemists have indulged themfelves in the pleafing furvey of these prefiding spirits, as they are called, of vegetables; their peculiar nature in the different species of plants ; their exhalation into the atmosphere by the fun's heat, and difpersion by winds ; their rendering the air of particular places medicinal, or otherwife, according to the nature of the plants that abound. They have contrived alfo different means for collecting thefe fugitive emanations, and concentrating and condenfing 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 procefs which has been judged most analagous to that of nature is the following. The fubject fresh gathered, at the feafon of its greateft vigour, with the morning dew upon it, is laid lightly and unbruifed in a shallow vessel, to which is adapted a low head with a recipient. Under the vessel, a live coal is placed, and occafionally renewed, fo 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 arifes, very flowly, an invifible vapour, which condenfes in the head into dewy drops and falls down into the receiver, and which has been fuppofed to be the very fubftance that the plant would have fpontaneoufly emitted in the open air.

But on fubmitting to this procefs 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 fmell, and no remarkable tafte. It appeared that a heat, equal to that of the atmosphere, is incapable of raifing in close veffels those parts of vegetables which they emit in the open air. It may therefore be prefumed, that in this laft cafe, fome other caufe concurs to the effect : that it is not the fun's heat alone, which raifes, and impregnates the air with, the odorous principles of vegetables, but that Bb 2

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372 the air itfelf, or the watery humidity with which it abounds, acting as a true diffolvent, extracts and imbibes them ; fo 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 damafk role, and the aftringency of the walnut-tree, which, as above observed, are in some meafure communicated to the air, may be totally extracted by infusion both in watery and fpirituous menstrua, but never rife in distillation with any degree of heat : and the volatile odours of aromatic herbs, which are diffused through the atmosphere in the loweft warmth, cannot be made to diffil without a heat much greater than is ever found to obtain in a fhaded air.

The above procefs therefore, and the theory on which it is built, appear to be faulty in two points; (1.) in fuppofing that all those principles, which naturally exhale from vegetables, may be collected by diftillation; whereas there are many which the air extracts in virtue of its diffolving power, and which are artificially separable alfo by diffolvents only; (2) in employing a degree of heat infufficient for separating even those parts which are truly exhalable by heat.

THE foregoing method of diffillation is commonly called diffillation by the cold still; but those, who have practifed it, have generally employed a confiderable heat. A shallow leaden veffel is filled with the fresh herbs, flowers, &c. which are heaped above it, fo that when the head is fitted on, this alfo may be filled a confiderable way. A little fire is made under the veffel, fufficient to make the bottom much hotter than the hand can bear, care being taken only not to heat it fo far as to endanger fcorching any

part of the fubject. If the bottom of the veffel be not made to hot as to have this effect on the part contiguous to it, it is not to be feared that the heat communicated to the reft of the included matter will be great enough to do it any injury. By this management, the volatile parts of feveral odorous plants, as mint, are effectually forced over ; and if the process have been skilfully managed, the diffilled liquor proves richly impregnated with the native colour and flavour of the fubject, without having received any kind of difagreeable impression from the heat made use of.

This process has been chiefly practifed in private families; the flowness of the distillation, and the attendance and care necessary for preventing the fcorching of some part of the plant, so as to communicate an ungrateful burnt flavour to the liquor, rendering it inconfistent with the dispatch requisite in the larger way of business.

ANOTHER method has therefore been used, that by the common ftill, called, in diffinction 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, fo that the vapour rifes plentifully into the head, and paffing thence into a fpiral pipe or worm placed in a vefiel of cold water, is there condenfed, and runs out in drops quickly fucceeding one another, or in a continued fiream. The additional water does not at all weaken the produce : for the most volatile parts of the jubject rife firft, and impregnate the liquor that first diffils ; as foon as the plant has given over its virtue fufficiently, which is known by examining from time to time the liquor that runs from the noie of

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the worm, the diffillation is to be ftopt.

This is the method of diffillation commonly practifed for the officinal waters. It is accompanied with one imperfection, affecting chiefly those waters, whose principal value confifts in the delicacy of their flavour ; this being not a little injured by the boiling heat ufually employed, and by the agitation of the odorous particles of the fubject with the water. Sometimes alfo a part of the plant flicks to the fides of the still, and is fo far fcorched as to give an ungrateful taint to the liquor.

THERE is another method of managing this operation, which I have already recommended for the diftillation of the more volatile effential 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 ftill, and the herbs or flowers placed in a basket over it, there can be no poffibility of burning; the water may be made to boil, but fo as not to rife up into the balket, which would defeat the intention of this contrivance. The hot vapour of the water palling lightly through all the interffices of the fubject, imbibes and carries over the volatile parts unaltered in their native flavour. By these means the diffilled waters of all those fubftances, whofe oils are of the more volatile kind, are obtained in the utmost perfection, and with fufficient difpatch ; for which last intention the still may be filled quite up to the head.

In the diffillation of effential oils, the water, as observed in the foregoing fection, imbibes always

a part of the oil. The diffilled liquors, here treated of, are no other than water thus impregnated with the effential oil of the fubject; whatever smell, taste, or virtue, is here communicated to water, or obtained in the form of a watery liquor, being found in a concentrated flate in the oil. The effential oil, or fome part of it, more attenuated and fubtilized than the reft, is the direct principle, on which the title of spiritus rector, or prefiding fpirit, has been bestowed.

All those vegetables therefore which contain an effential oil, will give over fome virtue to water by diffillation : but the degree of the impregnation of the water, or the quantity of water which a plant is capable of fatiating with its virtue, are by no means in proportion to the quantity of its oil. The oil fatiates only the water that comes over at the fame time with it. If there be more oil than is fafficient for this fatiation, the furplus feparates, and concretes in its proper form, not miscible with the water that arifes afterwards. Some odoriferous flowers, whose oil is in so little quantity, that fcarcely any vifible mark of it appears, unleis fifty or an hundred pounds or more are diffilled at once, give neverthelefs as ftrong an impregnation to water, as those plants which abound most with oil.

MANY have been of opinion, that diffilled waters may be more and more impregnated with the virtues of the jubject, and their firength increased to any affigned degree, by cobobation, that is, by re-diffilling them a number of times from freih parcels of the plant. Experience, however, thews the contrary ; a water skilfully drawn in the first diftillation, proves on every repeated one, not ftronger, but more difagreeable. Bb3

agreeable. 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 diffillations. The oftener the process is repeated, the ungrateful imprefiion, 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 ftrong, are not proper subjects for this process, fince their virtue may be obtained much more advantageoufly by others.

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General rules for the distillation of the officinal simple waters.

Plants and their parts ought to be fresh gathered [E.]

Where they are directed fresh, fuch only must be employed; but fome are allowed to be used dry, as being easily procurable in this fitate at all times of the year, though rather more elegant waters might be obtained from them whilst green [L.]

п.

Having bruifed the fubject a little, pour thereon thrice its quantity of fpring water. This quantity is to be diminished or increased, according as the plants are more or lefs juicy than ordinary [E.]

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. The diffillation may be performed in an alembic with a refrigeratory, the junctures being luted [E.]

IV.

The diffillation is to be continued as long as the water which comes over is perceived to have any fmell or tafte of the plant [E.]

Plants differ fo much, according to the foil and feafon of which they are the produce, and likewife according to their own age, that it is impofible to fix the quantity of water to be drawn from a certain weight of them, to any invariable ftandard. The diftillation may always be continued as long as the liquor runs well flavoured of the fubject, and no longer.

If the herbs be of prime goodnefs, they muft be taken in the weights prefcribed. But when fresh ones are substituted to dry, or when the plants themselves are the produce of unfavourable feasons, and weaker than ordinary, the quantities are to be varied according to the difcretion of the artift [L.]

After the odorous water, alone intended for use, has come over, an acidulous liquor arises, which has sometimes extracted fo 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, fome vegetables were ordered to be flightly fermented with the addition of yeaft, previoufly to the diffillation.

The principle, on which this management is founded, is certainly

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tainly just; for the fermentation and stomach: few are depended on, fomewhat opens and unlocks their texture, fo as to make them part with more in the fubfequent diffillation than could be drawn over from them without fome affiftance 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 proceffes.

VI.

If any drops of oil fwim on the furface of the water, they are to be carefully taken off [E.]

VII.

That the waters may keep the better, about one-twentieth part of their weight of proof fpirit may be added to each, after they are distilled [L.]

A great number of diffilled waters was formerly kept in the fhops, and are still retained in foreign pharmacopœias. The faculty of Paris direct, in a late edition of their codex medicamentarius, no leis than one hundred and twenty-five different waters, and one hundred and thirty different ingredients in one fingle water. Near one half of these preparations have scarcely any virtue or flavour from the fubject, and many of the others are infignificant.

The colleges of London and Edinburgh have rejected thefe oftentatious superfluities ; and given an elegant and compendious let of waters, fufficient for answering such purpofes as thefe kinds of preparations are applied to in practice. Distilled waters are employed chiefly as grateful diluents, as fuitable vehicles for medicines of greater efficacy, or for rendering difguftful ones more acceptable to the palate

in any intentions of confequence, by themfelves.

AQUA ALEXETERIA SIMPLEX. Simple alexeterial water. Lond.

Take of

Spearmint leaves, fresh, a pound and a half;

Sea wormwood tops, fresh,

- Angelica leaves, fresh, each one pound ;
- Water, as much as is fufficient to prevent an empyreuma.

Draw off by distillation three gallons.

Edinb.

Take of

- Elder flowers, moderately dried, twop unds:
- Angelica leaves, fresh gathered, one p und ;

Water, a sufficient quantity. Distil off three gallons.

THESE waters are fufficiently elegant with regard to tafte and fmell; though few expect from them fuch virtues as their title feems to imply. They are used occasionally for vehicles of alexipharmic medicines, or in juleps to be drunk after them, as coinciding with the intention; but in general are not fuppoied to be themfelves of any confiderable efficacy.

AQUA SEMINUM ANETHI. Dill-feed water. Lond.

Take of

Dill-feeds, a pound and a half; Water, as much as is sufficient to prevent an empyreuma.

Draw off by diffillation one gallon.

THIS water, which turns out pretty ftrong of the dill-feeds, is Bb4 fometimes

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fometimes employed as the bafis of carminative juleps. It is fimilar in flavour to a water drawn from caraway feeds, but lefs agreeable.

> AQUA ANGELICÆ. Angelica water.

Take of

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Angelica leaves, fresh, any quantity;

Water, three times as much.

Diftil as long as the liquor runs well flavoured of the plant.

THIS water is among us very rarely made use of. It fmells and tastes confiderably of the angelica, but does not prove so agreeable as might be expected.

AQUA CORTICUM AURANTIORUM SIMPLEX. Simple orange peel water. Lond.

Take of

Yellow peel of Seville oranges, dried, four ounces;

Water, as much as is fufficient to prevent burning. Distil off one gallon.

THIS water proves very weak of the orange-peel. It is defigned for a diluter, in fevers, and other diforders where the flomach and palate are fubject to receive quick difguit; in which cafes (as the committee observe) cordial waters, efpecially if their ufe be to be long continued, ought to be but lightly impregnated with any flavour, however agreeable.

AQUA CARDUI BENEDICTI. Carduus water.

This is prepared from the leaves of carduus benedictus, after the fame manner as directed in the Vth general rule, p. 174.

THIS water has been looked up-

on as a fudorific and alexipharmic; and in this intention is itill frequently prefcribed by foreign phyficians, in juleps and draughts. Among us, it has been long difuied, and held entirely infignificant; this plant, however opened by fermentation, giving nothing valuable over the helm. The decoction which remains after the diffillation, duly depurated and infpifiated, proves a medicine of fome ufe : it is a moderately strong bitter, fimilar to the extract of carduus ; fee chap. vi. In keeping, a confiderable quantity of effential falt fometimes fhoots in it.

- AQUA CASTOREI.

Castor water. Lond.

Take of

Ruffia caftor, one ounce ;

Water, as much as will prevent burning.

Draw off two pints.

CASTOR yields almost all its flayour in distillation to water; but treated in the fame manner with fpirit of wine, gives over nothing. The fpirit of castor, formerly kept in the shops, had none of the smell or virtues of the drug; whils the water here directed proves, when fresh drawn, very strong of it.

It is remarkable, that the virtues of this animal fubflance refide in a volatile oil, analogous to the effential oils of vegetables. Some are reported to have obtained, in diftilling large quantities of the drug, a fmall portion of oil, which fmelt extremely flrong of the caftor, and diffufed its ungrateful fcent to a great diffance.

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

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expect from it. It loses much of its flavour in keeping.

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AQUA CERASORUM NIGRORUM. Black cherry water.

Let any quantity of black cherries be bruifed, fo as that the ftones may be broken, and then diftilled according to art, with only a fmall proportion of water.

THIS is a very grateful water, and has long maintained a place in the fhops. It has frequently been employed by phyficians as a vehicle, in preference to the other diftilled waters: and among nurfes, and others who have the care of young children, has been the first remedy against the convulsive diforders to which children are so often subject.

This water has nevertheless of late been brought into difrepute, and by fome looked upon as poifonous. They observe, that it receives its flavour principally from the cherry flones; and that thefe kernels, like many others, bear a resemblance in taste to the leaves of the lauro-cerafus, which have been discovered to yield, by infufion or diffillation, the most fudden poifon known. Some phylicians of Worcester have found, by trial purpofely made, that a diffilled water very ftrongly impregnated with the flavour of the cherry kernels (no more than two pints being diffilled from fourteen pounds of the cherry ftones) proved in like manner poifonous to brutes : the committee of the London college repeated the fame 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 fome other things, which poifon only when taken in too great a quantity; the water from the very laurel leaves is harmlefs when duly diluted ; and even spirit of wine proves a poilon of a kind not greatly different, if drunk to a certain degree of excels. Nor can it be concluded, from the trials with the firong black cherry water on dogs, &c. that even this will have the fame effects in the human body; the kernels of many forts of fruits being in substance poilonous to brutes, though innocent to man.

It is possible, however, that this water in any degree of ftrength may not be altogether fafe to the tender age of infants, where the principles of life are but just beginning as it were to move ; it is poffible, that it may there have had pernicious effects, without being fuspected; the fymptoms it would produce, if it thould prove hurtful, being fuch as children are often thrown into from the difease which it is imagined to relieve. On these confiderations, both the London and Edinburgh colleges have chofen to lay it afide ; more especially as it has been too often counterfeited with a water diffilled from bitter almonds, which are known to communicate a poifonous quality.

AQUA CINNAMOMI SIMPLEX. Simple cinnamon water. Lond.

Take of

Cinnamon, one pound ;

Water, as much as will prevent burning.

Distil off one gallon.

AQUA CINNAMOMI SINE VINO.

Cinnamon water without wine. Edinb.

Take of

Cinnamon, one pound :

Water

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Water, a gallon and a half. Steep them together for two days; and then diffil off the water, till it ceafes to run milky.

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THIS is a very grateful and ufeful water, poffeffing in an eminent degree the fragrance and aromatic cordial virtues of the fpice. Great care fhould be had, in the choice of the cinnamon, to avoid the too common impofition of fubfituting cafia in its room. This latter yields a water much lefs agreeable than that of cinnamon, and whofe flavour is manifeftly empyreumatic. The two drugs may be eafily diffinguifhed from one another by the marks laid down under the refpective articles in the fecond part of this work.

The virtues of all these waters depend upon their containing a portion of the oil of the fubject. The oil of cinnamon is very ponderous, and arifes more difficultly than that of any of the other vegetable matters from which fimple waters are ordered to be drawn. This observation directs us, in the diftillation of this water, to make ufe of a quick fire and a low veffel. For the fame reason, the water does not keep to well as might be withed ; the ponderous oil, parting from it in time, and falling to the bottom, when the liquor lofes its milky hue, its fragrant fmell, and aromatic taste. Some recommend a small proportion of fugar to be added, in order to keep the oil united with the water.

AQUA CHAMÆMELI. Chamomile water. Edinb.

Take any quantity of chamomile flowers, and fo much water as will prevent burning. Diftil off the water fo long as it proves fufficiently ftrong of the flavour of the flowers.

CHAMOMILE flowers were ordered in former editions to be fermented previoufly to the diffillation, a treatment of which they ftand little in need ; for they give over, without any fermentation, as much as that process is capable of enabling them to do. In either cafe, the fmell and peculiar flavour of the flowers arife, without any thing of the bitterness; this remaining behind in the decoction : which, if duly depurated and infpifiated, yields an extract fimilar to that prepared from the flowers in the common manner. The diffilled water has been used in flatulent colics, and the like, but is at prefent held in no great effeem.

AQUA FENICULI. Fennel water. Lond.

Take of

Sweet fennel feeds, one pound ; Water, as much as is fufficient to

prevent an empyreuma. Diftil off one gallon.

Edinb.

Take of

Fennel leaves, fresh, any quantity;

Water, three times as much.

Diffil as long as the water runs well flavoured.

THE first of these waters is a fufficiently grateful one, and the other is not unpleafant. The leaves should be taken before the plant has run into flower; for after this time, they are much weaker and less agreeable. Some have obferved, that the upper leaves and tops, before the flowers appear, yield a more elegant water, and a remarkably finer effential oil, than the lower ones; and that the oil obtained from the one fwims on water, whils that of the other finks.

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finks. No part of the herb, however, is equal in flavour to the feeds.

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AQUA HYSSOPI. Hyfjop water. Edinb.

This is distilled from the fresh leaves of hystop, after the same manner as the water of fennel leaves.

Hyssop water has been held by fome in confiderable effeem, as an uterine and a pectoral medicine. It was directed in a late edition of the Edinburgh pharmacopœia, for making up the black pectoral troches, but is now exchanged for common water. Few at prefent expect any fingular virtues from it, nor is it often made use of, or met with in the fhops.

AQUA MELISSÆ. Balm water. Edinb.

This is prepared by diffilling the green leaves of balm, as in the foregoing process.

IN former editions of the Edinburgh pharmacopœia, this water was ordered to be cohobated, or rediffilled from fresh quantities of the herb. This management leems to have been taken from Boerhaave, who has a very high opinion of the water thus prepared. He fays, he has experienced, in himfelf, extraordinary effects from it, taken on an empty flomach; that it has fcarce its equal in hypochondriacal and hysterical cases, the chlorofis, and palpitation of the heart, as often as their difeafes proceed from a diforder of the fpirits 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 liquors; 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 sufject, and render it very rich. The impregnation here is almost unlimited; but in distilled waters, it is far otherwise.

AQUA MENTHÆ. Mint water. Edinb.

Take of

Spearmint leaves, fresh, any quantity;

Water, three times as much.

Diffil as long as the liquor which comes over has any taffe or fmell of the mint.

AQUA MENTHÆ VULGA-RIS SIMPLEX. Simple spearmint water. Lond.

Take of

Spearmint leaves, dried, a pound and a half;

Water, as much as is fufficient to prevent burning.

Draw off by diffillation one gallon.

THESE waters fmell and tafte very flrong of the mint; and prove, in many cafes, ufeful flomachics. Boerhaave commends them (cohobated) as a prefent and incomparable remedy, for flrengthening a weak flomach, and curing vomiting proceeding from cold vifcous phlegm; as alfo in lienteries.

AQUA MENTHÆ PIPERI-TIDIS SIMPLEX.

Simple

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Simple pepper mint water. L. E.

Take of

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Peppermint leaves, dry, a pound and a half;

Water, as much as will prevent an empyreuma.

Draw off by diffillation one gallon.

THIS is a very elegant and ufeful water. It has a warm, pungent tafte, exactly refembling that of the pepper-mint itfelf. A fpoonful or two, taken at a time, warm the flomach, and give great relief in cold, flatulent colics. Some have fubflituted a plain infusion of the dried leaves of the plant, which is not greatly different in virtue from the diffilled water.

AQUA PETROSELINI. Parfley water.

This is diffilled from the fresh leaves of parsley, after the fame manner as the aqua mentha.

THIS water is fcarce ever called for, or kept in the fhops. Parfley yields little virtue in diffillation; and the leaves are not the part that yield moft. The feeds give a confiderable fhare of flavour, which is not difagreeable.

AQUA PIPERIS JAMAICEN-SIS. Water of Jamaica pepper. Lond.

Take of

Jamaica pepper, half a pound; Water, as much as will prevent burning. Diftil off one gallon.

THIS diffilled water is a very elegant one, and has come pretty much into ufe. The hospitals employ it as a succedaneum to the more costly spice waters. It is, however, inferior in gratefulness to

the spiritous water of the fame spice hereafter directed.

AQUA PULEGII SIMPLEX. Simple penny-royal water. Lond.

Take of

- Penny-royal leaves, dry, a pound and an half;
- Water, as much as will prevent burning.
- Draw off by diffillation one gallon.

AQUA PULEGII. Water of penny-royal. Edinb.

Take of

Penny-royal leaves, fresh, any quantity;

Water, three times as much.

Diftil as long as the water comes off well flavoured of the herb.

THESE waters posses, in a confiderable degree, the fmell, taste, and virtues of the penny-royal. They are frequently taken in hysteric cases, and not without good effects.

AQUA ROSARUM DAMAS-CENARUM. Damajk rofe water.

Lond.

Take of

Damask roses, fresh gathered, fix pounds;

Water, as much as will keep them from burning.

Diftil off a gallon of the water.

Edinb.

Take three parts of water to one of the fresh roles; and distil as long as the water which comes over has any smell of the flowers.

THIS water is principally valued on account of its fine flavour, which approaches to that generally admired in the rofe itfelf. The purgative virtue of the rofes remains

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mains entire in the liquor left in the ftill, which has therefore been generally employed for making the folutive honey and fyrup, inftead of a decoction or infution of freth roles prepared on purpose : and this piece of frugality the college have now admitted. A diftilled water of red roles has been fometimes called for in the fhops : and fupplied by that of damafk roles, diluted with common water. This is a very venial fubstitution; for the water drawn from the red role has no quality which that of the damafk does not possels in a far superior degree; neither the purgative virtue of the one, nor the aftringency of the other, arifing in diffillation.

AQUA RUTE. Rue water.

This is to be diffilled from the fresh leaves of rue, and cohobated on fresh parcels of them, after the fame manner as the aqua meliste.

RUE gives over in this process the whole of its fmell, and great part of its pungency. The distilled water stands recommended in epileptic cafes, the hysteric passion, for promoting perspiration, and other natural secretions.

AQUA SABINE. Savin water.

This is diffilled from the fresh leaves of favin, after the fame manner as aqua angelica.

THIS water is by fome held in confiderable effeem for the fame purpofes as the diffilled oil of favin. Boerhaave relates, that he has found it (when prepared by cohobation) to give an almost incredible motion to the whole nervous fystem, and that, when properly used, it proves eminently ferviceable for promoting the menses and the hazmorrhoidal flux.

AQUA SAMBUCI.

Elder-flower Water.

This is diffilled from fresh elderflowers, after the same manner as the aqua angelicæ.

THIS water fmells confiderably of the flowers; but is rarely made use of.

SECT. III.

Spirituous distilled waters and spirits.

THE flavour and virtues of diffilled waters are owing, as obferved in the preceding fection, to their being impregnated with a portion of the effential oil of the fubject from which they are drawn. Spirit of wine, confidered as a vehicle for thefe oils, has this advantage above water, that it is their proper menftruum, and keeps all the oil, that rifes with it, perfectly diffolved into an uniform limpid liquor. Neverthelefs, many fubftances, which, on being diffilled with water, impart to it their virtues in great perfection; if treated in the fame manner with fpirit of wine, fcarce give over to it any fmell or tafte. This difference proceeds hence: that fpirit is not fufceptible of fo 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 fuftaining:

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taining : now, if the extent of heat between freezing and boiling water, as meafured by thermometers, be taken for a flandard, fpirit of wine will be found to boil with lefs than four-fifths of that heat, or above one-fifth lefs than the heat of boiling water. It is obvious therefore, that fubflances may be volatile enough to rife with the heat of boiling water, but not with that of boiling fpirit.

Thus if cinnamon, for inflance, be committed to diffillation with a mixture of fpirit of wine and water, or with a pure proof fpirit, which is no other than a mixture of about equal parts of the two: the fpirit will arife firft, clear, colourlefs, and transparent, and almost without any taste of the fpice; but as soon as the more ponderous watery fluid begins to arife, the oil comes freely over with it, so as to render the liquor highly odorous, fapid, and of a milky hue.

The proof fpirits usually met with in the thops are accompanied with a degree of ill flavour ; which, though concealed by means of certain additions, plainly discovers itfelf in distillation. This nauseous relish does not begin to arife, till after the purer spirituous part has come over; which is the very time that the virtues of the ingredients begin, alio, most plentifully to diftil: and hence the liquor receives an ungrateful taint. To this caufe principally is owing the general complaint, that the cordials of the apothecary are lefs agreeable than those of the same kind prepared by the diffiller; the latter being extremely curious in rectifying or purifying the fpirits (when defigned for what he calls fine goods) from all ill flavour.

SPIRITUS VINI RECTIFICA-TUS.

Rectified spirit of wine. Edinb.

Take any quantity of French brandy, and with a very gentle heat diffil it to one half.

- This rectified fpirit, being digefted for two days with one-fourth its quantity of dry falt of tartar in powder, and then diffilled in a glafs cucurbit, with a very gentle heat, becomes ALCO-HOL.
- Spirits diffilled from malt liquors, or other fermented fubftances, after being rectified in the above method, require further purification; namely, repeated diffillation from an equal quantity of fpring water.

FRENCH brandy is rather too dear an article in this country, for diftillation; nor is the fpirit obtained from it any ways preferable to one procurable from cheaper liquors. The coarfer inflammable fpirits may be rendered perfectly pure, and fit for the niceft purpofes, by the following method.

If the fpirit be exceedingly foul, mix it with about an equal quantity of water, and diffil with a flow fire; difcontinuing the operation as foon as the liquor begins to run milky, and difcovers, by its naufeous tafte, that the impure and phlegmatic part is arifing. By this treatment, the fpirit leaves a confiderable portion of its foul oily matter behind it in the water. which now appears milky and turbid, and proves highly difagreeable in tafte. If the fpirit was not very foul at first, this ablution is not neceffary; if extremely fo, it will be needful to repeat it once, twice, or oftener.

As vinous fpirits arife with a lefs degree of fire than watery liquors, we are hence directed to employ, in the diftillation of them, a heat lefs than Distilled Spirits.

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than that in which water boils : and if due regard be had to this circumitance, very weak fpirits may, by one or two wary diffillations, be tolerably well freed from their aqueous phlegm; especially if the diftilling veffels be of fuch a height, that the spirit, by the heat of a water-bath, may but just pass over them. In fuch cafe, the phlegmatic vapours which arife for a little way along with the fpirit, will condenfe and fall back again before they can come to the head. Very pompous inftruments have been contrived for this purpole, and carried in a fpiral or ferpentine form to an extraordinary height. The fpirit, afcending through thefe, was to leave all the watery parts it contained, in its passage, and come over perfectly pure and free from phelgm. But these instruments are built upon erroneous principles, their extravagant height defeating the end it was defigned to answer. If the liquor be made to boil, a confiderable quantity of mere phlegm will come over along with the fpirit; and if the heat be not raifed to this pitch, neither phlegm nor fpirit will diftil. The most convenient instrument is the common still, betwixt the body of which, and its head, an adopter or copper tube may, be fixed.

The fpirit being washed, as above directed, from its foul oil, and freed from the greatest part of the phlegm; by gentle distillation in a water bath; add to every gallon of it, a pound or two of pure, dry, fixt alkaline falt. Upon digesting these togther 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 difagreeable unctuous matter as

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may still be left in the spirit, and fink with them to the bottom of the veffel. If the fpirit be now again gently drawn over, it will arife entirely free from its phlegm and naufeous flavour ; but fome particles of the alkaline falt are apt to be carried up with it, and give what the workmen call an urinous relifh. This may be prevented by adding, previoufly to the last distillation, a fmall proportion of calcined vitriol, alum, or fal catharticus amarus; the acid of thefe falts will unite with, and neutralize the alkali, and effectually prevent it from arifing ; while no more of the acid of the falts is extricated than what the alkali abforbs.

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 strength of the seventees of th

If the rectified fpirit be diffilled afresh from dry alkaline falt, with a quick fire, it brings over a confiderable quantity of the falt, and in this state is supposed to be a more powerful menstruum, for certain substances, than the pure spirit. This alkalized spirit is called TAR-TARIZED SPIRIT OF WINE.

The general virtues of vinous fpirits have been already mentioned in the preceding part. The fpirits 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

Part III.

ARTICLE I.

AQUA MELISSÆ COMPOSITA. Compound balm-water, commonly calied Eau de carmes.

Take of

- Balm in flower, fresh gathered and cleared from the stalks, two pounds;
- Lemon-peel, fresh, as foon as pared from the fruit, four ounces;

Coriander seeds, eight ounces ; Nutmegs,

Cloves,

- Cinnamon, each, bruifed, two ounces;
- Angelica roots, dried and bruifed, one ounce;
- Spirit of wine, highly rectified, ten pints.
- Steep the feveral ingredients in the fpirit, four or five days; and then draw off, in the heat of a water-bath, ten pints. Rectify the diffilled liquor by a fecond diffillation in a waterbath, drawing off only about eight pints and three quarters.

THIS process is taken from the Elemens de pharmacie of M. Beaume, who observes, that all the aromatic spirits ought to be prepared in the fame manner. When the common fpirits of this kind are rubbed on the hands, &c. they leave, after the more volatile parts have exhaled, a difagreeable empyreumatic fmell; and when diluted with water, and taken medicinally, they leave in like manner a naufeous flavour in the mouth. To remedy these imperfections, he made many experiments, which shewed, that in order to obtain these liquors of the defirable qualities, the fpirit must not only be perfectly pure at first, but that the liquor ought also to be rectified

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Distilled Spirits.

after it has been diffilled from the fubjects. In this rectification, only the more volatile, fubtile, and aromatic parts of the ingredients arife. There remains behind a white liquor, acrid, bitter, loaded only with the groffer oil, and deprived of all the specific flavour of the subjects. Indeed the very imperfection complained of, naturally points out this fecond diffillation for the remedy; as it fhews the fpirit to contain a grateful and ungrateful matter, the former of which exhales, while the other is left behind. The author fays, that when the aqua meliffæ is prepared as above directed, it has fomething in it more perfect than any of the odoriferous fpirits whole excellence is cried up, and which have the reputation of being the beft.

Aromatic fpirituous waters have in general lefs fmell, when newly diffilled, than after they have been kept about fix months. M. Beaumé fufpects that the preparations of this kind, which have been most in vogue, were fuch as had been thus improved by keeping; and found that the good effects of age might be produced in a fhort time by means of cold. He plunges quart bottles of the liquor into a mixture of pounded ice and fea falt. The spirit after having fuffered, for fix or eight hours, the cold hence refulting, proves as grateful as that which has been kept for feveral years. Simple waters also, after being frozen, prove far more agreeable than they were before, though they are always lefs fo than those, which have been drawn with fpirit, and exposed to a like degree of cold. This melioration of diffilled waters by frost was taken notice of by Geoffroy, Hift. Acad. 1713. SPIRITUS

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SPIRITUS RORISMARINI. Spirit of rosemary.

Take of

Rofemary tops, fresh gathered, a pound and a half;

Proof fpirit, one gallon.

Diftil in the heat of a water-bath, till five pints are come over.

SPIRITUS RORISMARINI, vulgo AQUA REGINÆ HUNGARIÆ.

Hungary water [E.]

Take of

Rofemary flowers, just gathered, two pounds;

Rectified spirit of wine, eight pounds.

Put them together, and immediately diftil in a water-bath.

It is generally brought to us from abroad.

THIS fpirit is very fragrant, infomuch as to be in common use as a perfume. That brought from abroad is fuperior in fragrance to fuch as is generally made among us. In order to prepare it in perfection, the vinous fpirit should be extremely pure ; the rolemary tops gathered when the flowers are full blown upon them, and committed immediately to distillation, particular care being taken not to bruife or prefs them. The best method of managing the diffillation, is that formerly recommended for the diftillation of the more volatile effential oils and fimple waters, viz. first to place the fpirit in the ftill, and then fet in, above the liquor, either an iron hoop, with a hair cloth firetched over it, upon which the flowers are to be lightly fpread, or rather a bafket, fupported on three pins, reaching down to the bottom. A gentle heat being applied, just fufficient to raife the fpirit, its vapour, lightly percolating through the flowers, will imbibe their finer

parts, without making that difagreeable alteration, which liquors applied to fuch tender fubjects, in their groffer form, generally do. Probably the fuperiority of the French Hungary water, to that prepared among us, is owing to fome fkilful management of this kind, or to that recommended for the foregoing preparation, and employing a perfectly pure spirit.

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In the Wirtemberg pharmacopœia, fome fage 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 rolemary.

SPIRITUS LAVENDULÆ SIMPLEX. Simple Spirit of lavender. Lond.

Take of

Lavender flowers, fresh gathered, a pound and a half;

Proof spirit, one gallon.

Draw off, by the heat of a waterbath, five pints.

THE fame cautions are to be observed here, as in the distillation of the foregoing fpirit. 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 likewife taken internally, to the quantity of a tea-spoonful, as warm cordials.

SPIRITUS LAVENDULÆ COMPOSITUS. Compound spirit of lavender. Lond.

Take of

Simple spirit of lavender, three pints ;

Spirit of rolemary, one pint; Cinnamon,

Nutmegs, each half an ounce ; Cc

Red

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Red faunders, three drams. Digest them together, and then strain out the spirit for use.

The compound fpirit of lavender of a former London pharmacopœia is as follows.

'Take of

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Lavender flowers, one gallon; Sage flowers, Rofemary flowers,

Betony flowers, each one handful; Borage flowers,

Buglois flowers,

T'l' C the welle

Lilies of the valley,

Cowflips, each two handfuls;

Balm leaves,

Feverfew leaves,

Orange tree leaves,

Orange flowers,

Stæchas flowers,

Bay berries, each one ounce; French brandy, four gallons.

Pour the brandy on the other ingredients fresh gathered, and, after fuitable digestion, draw off in a water-bath two gallons and a half. To this spirit add the following ingredients :

Citron peel,

Yellow faunders, each fix drams; Cinnamon,

Nutmegs,

Mace,

Leffer cardamom feeds,

Cubebs, each half an ounce ; Aloes wood, one dram.

Digeft thefe together for twentyfour hours; then filter the fpirit, and fufpend in it the following ingredients (where they are judged proper) tied up in a thin linen cloth; viz. of

Mulk,

Ambergris,

Saffron, each half a scruple;

Red rofes dried,

Red faunders, each half an ounce.

IN a former edition of the Edin-

burgh pharmacopœia, this spirit is thus directed.

- Take of the diffilled oils of Lavender, an ounce and a half; Rofemary, an ounce; Marjoram, fix drams; Lemon-peel, half an ounce; Nutmegs, three drams; Cloves, two drams; Cinnamon, one dram.
- Gradually drop thefe oils into three gallons of French brandy, occafionally flirring them together. Diffil the mixture in balneo mariæ to two-thirds; and in the fpirit which comes over, fuspend the following ingredients, tied up in a linen cloth ; viz. of Red faunders, two ounces ; English faffron,

Cochineal, each half an ounce; To which if you would have the

fpirit perfumed, add of Ambergris, two fcruples; Mufk, one fcruple.

In the prefent pharmacopœia of Edinburgh, this medicine stands as follows.

Take of

The fimple spirit of lavender, three pounds;

Spirit of rofemary, one pound ;

Cinnamon, one ounce;

Cloves, two drams;

Nutmeg, half an ounce ;

Red faunders, three drams. Macerate for feven days, and ftrain

off the fpirit.

THE red faunders is of no further use in these compositions, than as a colouring ingredient. If a yellow spirit were liked, the yellow faunders would be an excellent article, as it not only communicates a fine colour, but likewise a confiderable share of medicinal virtue. A spirit distilled from the flowers of lavender and fage, in due proportion, and digested in the cold for a little time with some cinnamon, nutmegs, and

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and yellow faunders, proves a very elegant and grateful one. Where effential oils are employed, as in the third of the above proceffes, 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.

All these spirits are grateful reviving cordials. The first, though confiderably the most fimple, is not inferior in elegancy to either of the This medicine has long others. been held in great efteem, under the name of PALSY DROPS, in all kinds of languors, weakness of the nerves, and decays of age; for which reason, we have given the different forms of preparing it that have been followed for fome time paft. It may be conveniently taken upon fugar, from ten to eighty, or a hundred drops.

AQUA ODORIFERA. An odoriferous spirit, called sweet honey water.

Take of

Coriander seeds,

Honey, each one pound ; Cloves, an ounce and a half ; Nutmegs,

Benzoine,

Storax, each an ounce; Vanelloes, in number four; Yellow rind of three lemons;

French brandy, one gallon. Digeft thefe ingredients together for forty-eight hours; and then diftil off the fpirit in balneo mariæ. To one gallon of this fpirit, add

Orange flower water,

Rofe water, of each one pound and a half;

Ambergris,

Musk, of each five grains.

First grind the musk and amber-

gris with fome of the water, and afterwards put all together, in a large matrafs : fhake them well, and let them circulate for three days and nights in a gentle heat ; then fuffer them to cool, filter the liquor, and keep it close ftopt up for ufe.

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Another.

Take of

Coriander feeds, one pound; Lemon peel, fresh, Nutmegs, each four ounces; Ambergris,

Mulk, each five grains ;

Clean melasses fpirit, two gallons.

Bruife the nutmegs and coriander feeds, and put them, with the lemon peel and the fpirit, into a fmall ftill placed in balneo mariæ: tie a thin cloth over the mouth, and fprinkle thereon the ambergris and mufk, reduced into fine powder; lute on the head, let the whole ftand in digeftion for twelve hours, and then diftil as much as a boiling heat of the bath can force over.

To this add, of

Rofe water, one pint ; Orange flower water, half a pint.

THESE compositions are defigned rather as perfumes than as medicines; though, for fuch as can bear their fragrance, they might be used to advantage. The mulk and ambergris do not communicate fo much of their fmell as might be expected; and ferve chiefly to height ! en the flavour of the other ingredients; which these perfumes excellently do, when employed in very fmall proportion, to all the odoriferous fimples, without imparting any thing perceptible of their own. Both the foregoing fpirits are very agreeable; a few drops of either give a fine flavour to a large quan-Cc 2 tity

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tity of other liquor. Mr. Wilfon, 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 pleafant fcents that can be fmelt. The other is formed on the fame plan, by omitting fuch articles as appeared fuperfluous.

SPIRITUS COCHLEARIÆ. Spirit of fcurvygrafs. Edinb.

Take of

- Fresh scurvygrafs, bruised, ten pounds;
- Rectified spirit of wine, five pints.
- Steep the herb in the fpirit for twelve hours; then, with the heat of a water-bath, diftil off five pints.

THIS fpirit is very firong of the fcurvygrafs, and may be given in those cases where the use of this herb is proper, from twenty to one hundred drops. The virtues of fcurvygrafs 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 fo.

The makers of this fpirit have frequently added to the fcurvygrafs a quantity of horferadifh root, and fometimes fubfituted for it one drawn entirely from the horferadifh : the flavour of thefe two fimples being fo much alike, that their diftilled fpirits are fcarce diftinguifhable from one another. Here it may be obferved, that though arum and dracunculus are ufually ranked in the fame clafs with the two foregoing vegetables, and locked upon as fimilar to them;

this procefs difcovers a remarkable difference : whilit the former yield all their pungency in diftillation both to water and fpirit, the latter give over nothing to either, and yet their virtues are deftroyed in the operation.

SPIRITUS COCHLEARIÆ AUREUS. Golden, or purging spirit of scurvygras.

Take of

Spirit of scurvygrafs, one pound. Gamboge, one ounce.

- Diffolve the gamboge in the fpirit, and if any fediment fall to the bottom, carefully decant the tinged liquor from it.
- This fpirit is otherwife made with feammony, or refin of jalap, inftead of gamboge.

THIS has been in great effecm among the common people, and ftrongly recommended by the venders, in all kinds of fcorbutic diforders. It is neverthelefs a very indifferent medicine, and little deferves the pompous title given it. It may be taken from twenty to fixty drops, either upon fugar or mixed with fyrup.

AQUA ANHALTINA. Anhalt water.

Take of Turpentine, fix ounces ; Olibanum, one ounce ; Aloes wood, three ounces ; Cloves, Cinnamon, Cubebs, Rofemary flowers, Galangal, Maftich, Nutmegs, each fix drams ; Saffron, two drams and a half ; Eay berries, Fennel feeds, each half an ounce; Spirit of wine, five pints.

Pulverize those ingredients which require

Chap. 5. Distilled Spirituous Waters.

require fuch treatment, and digeft the whole with the fpirit for fix days; then diffil with an exceedingly gentle heat, in balneo mariæ : the liquor which runs clear is to be feparated from the turbid, and kept by itfelf.

Where the addition of musk is required, fifteen grains thereof are to be tied in a bag, and fuspended in the head of the still.

WE have inferted this composition from the Brandenburgh pharmacopœia, on account of its being held, in some places, in great efteem. 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 fufficiently numerous, and in confiderable quantity, not giving over near enough to cover the ftrong flavour of the turpentine; there are not many of them, indeed, that give over any thing confiderable at all. A more elegant fpirit of this kind might be prepared from turpentine, rolemary, lavender and fage flowers; or by diffilling the spirit first from the turpentine alone, and then diffolying in it a proper quantity of any fuitable essential oils.

ARTICLE II. Distilled Spirituous Waters.

By distilled spirits are understood fuch as are drawn with a spirit that has been previoully rectified, or which is reduced nearly to that ftrength in the operation ; by fpirituous waters, those in which the fpirit is only of the proof strength, or contains an admixture of about an equal measure of water. These laft have been ufually called compound waters, even when distilled from one ingredient only; as those, on the other hand, which are drawn by common water, though from a number of ingredients, are named fimple; the title fimplex, here, relating not to limplicity in refpect of composition, but to the vehicle's being plain water. The Edinburgh pharmacopæia denominates those waters fimple which are drawn from a fingle ingredient, whether the vehicle be common water, or spirituous water, and all those compounds which are distilled from more than one.

General rules for the distillation of spirituous waters; from the Edinburgh Pharmacopæia.

T.

The plants and their parts ought to be moderately and newly dried, except fuch as are ordered to be fresh gathered.

II.

After the ingredients have been fteeped in the fpirit for the time prefcribed, add as much water as will be fufficient 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 posses the virtues of the plant entire; which is a circum-C c 3 fance

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ftance to be more regarded than their fineness or fightliness.

If the diffillation 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 fufficiently bright and fine : fome of them, which look turbid just after they are drawn, will, on ftanding for a few days, become clear and tranfparent. The practice here forbidden, of faving fome of the first runnings apart, is certainly very injurious to the composition ; the water being not only robbed by it of fome of the more volatile parts of the ingredients, but likewife rendered permanently milky, as wanting the fpirit which, by diffolving 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 feparating from the liquor what it had before gained from the ingredients.

IV.

In the diffillation 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 fpirits, even that of wine itfelf, are made use of. All vinous spirits receive fome 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 divefted without feparating the phlegm, and reducing them to a rectified ftate.

AQUA ABSINTHII COMPOSITA. Compound wormwood water.

Take of Calamus aromaticus, Orange peel, frefh, Cinnamon, each four ounces ; Roman wormwood, half a pound; Mint, three ounces ; Leffer cardamoms, Mace, each one ounce ; French brandy, two gallons. Having bruifed the feeds and fpices,

and cut the other ingredients, pour on them the brandy, and after fleeping them together for the fpace of four days, diftil off two gallons.

THIS water was formerly prefcribed as a ftomachic, along with bitter infusions; and for this purpose it is the least unfit (as being the most elegant and least unpleafant) of all the wormwood waters with which the fhops were furnished. It is nevertheless too ungrateful an addition to the fine bitters of our new pharmacopœias; and cannot be fupposed to contribute any thing to their virtue, which more agreeable spirituous waters would not equally do. Some have expected wormwood water to be itfelf a bitter ; but only the fmell and flavour of the wormwood arife in this procefs, those parts in which its bitternefs refides remaining behind in the ftill.

In former editions of the London pharmacopœia there were two wormwood waters, which by fome are still held in esteem, and were proposed by the committee of the college to be continued at a late revisal, with fome amendments.

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	AQUA ABSINTHII MINUS COM-	Angelica leaves, fresh,
	POSITA.	Sea wormwood tops, fresh, each
	Wormwood water less compounded.	four ounces;
	Take of	Proof fpirit, one gallon ;
	Common wormwood leaves, dri-	Water, as much as will prevent
	ed, two pounds;	burning. Diftil off one gallon.
	Leffer cardamom feeds, two	Dinit on one ganon.
	Coriander feeds, half a pound ;	THIS is a tolerably pleafant wa-
	French brandy, four gallons.	ter. It is looked upon as an alexi-
	Let them fleep together for fome	pharmac and stomachic, and in
	time, and then diftil off four	these intentions is not unfrequent-
	gallons.	ly made use of in juleps, &c.
		AQUA ALEXETERIA
	AQUA ABSINTHII MACIS COM-	SPIRITUOSA cum ACETO.
	Wormwood water more compounded.	Spirituous alexeterial water with
	Take of	vinegar.
	Sea wormwood,	Lond.
	Common wormwood, each dried,	Take of
	one pound ;	Spearmint leaves,
	Sage,	Angelica leaves, each half a
	Mint,	pound;
	Balm, each dried, two handfuls;	Sea wormwood tops, four ounces;
Y	Galangal,	Water, as much as is fufficient
	Ginger, Calamus aromaticus,	to prevent burning.
	Elecampane roots,	Vinegar, one pint.
	Sweet fennel seeds,	Diftil the fresh herbs with the spi-
	Coriander feeds, each three	rit and water, drawing off one
	drams ;	gallon ; to which add the vine-
	Cinnamon,	gar.
	Cloves,	ANGELICA, after trial of fundry
	Nutmegs, each two drams ; Leffer cardamom feeds,	other materials, has been found the
	Cubebs, each one dram ;	most effectually to remove the dif-
	French brandy, twelve pints.	agreeable flavour which the vinegar
	Having cut or bruifed the ingre-	would otherwife communicate, and
	dients, which require that treat-	therefore this plant is ordered in a
	ment, steep them for fome time	larger proportion here than in the
	in the brandy, and afterwards	other alexeterial waters. Perhaps
-	draw off by distillation twelve	it would be more eligible to add the vinegar occafionally; for when
	pints.	mixed with the liquor at first, it is
	AQUA ALEXETERIA SPI-	apt to throw down, upon keeping,
	RITUOSA.	fome of the more valuable parts
	Spirituous alexeterial water.	which the water received from the
	Lond.	herbs.
	Take of	This was to store to she soon
	Spearmint leaves, fresh, half a	This water is given in the room
	pound;	of the AQUA THERIACALIS, OF

T . Rharmaceutical Preparations.

treacle water, a medicine of fome importance, which in a former Edinburgh pharmacopœia is thus directed. Take of

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Butterbur roots, one pound ; Angelica roots, Mailerwort roots, each half a pound ; Zedoary, four ounces ; Scordium leaves, Rue leaves, each fix ounces ; Theriaca, one pound ; French brandy, three gallons ; Diftilled vinegar, half a gallon. Let the roots, leaves, and theriaca be fteeped in the fpirit for four days ; then diftil off two gallons and a half ; to which add the diftilled vinegar.

THIS water is ordered not to be drawn fo low as the other diffilled waters, and with great judgment; for the addition of the vinegar confiderably weakens it, and if drawn low, renders it very unfightly. It is left to the choice of the operator, to employ either Andromachus's or the Edinburgh treacle. The latter is the better of the two, but neither of them are proper fubjects for distillation; for besides that three parts in four are honey, which yields nothing, they contain feveral other ingredients that afford as little.

The AQUA THERIACALIS of a former London pharmacopœia is as follows.

Take of

Juice of green walnuts, four pints; Rue, three pints;

Carduus,

Balm, each two pints ; Butterbur roots, fresh, a pound and a half ;

Burdock roots, fresh, one pound; Angelica roots,

Masterwort roots, fresh, each half a pound Scordium, fresh, four handfuls; Venice treacle, and

Mithridate, kept for fome time, each eight ounces;

Lemon juice, two pints;

- French brandy, a gallon and a half.
- Draw off by diffillation three gallons and a half, then add half a gallon of diffilled vinegar.

THE predominant flavour of this water is from the rue and angelica; the reft contribute only to render the whole more offenfive. What qualities it can receive from the numerous ingredients of the all-powerful theriaca may be estimated by this, that the whole species of that electary, employed in half an ounce of the water, its usual dose, amounts not to a fingle grain ; the mithridate, with which our pharmacopœia, by the advice of Sir Theodore Mayerne, had the honour of enriching the composition, being also just of the fame importance.

THE college of Edinburgh has given the following amendment of this water, under the title of

AQUA EPIDEMIA. Plague water. Edinb.

Take of

Mafterwort roots, a pound and a half;

Angelica feed,

Elder flowers, each half a pound; French brandy, three gallons.

Digest for two days, then distil off two gallons and a half; to which add half a gallon of distilled vinegar.

THE foregoing compositions are the only distilled waters in which the heat of the spirit is tempered by the addition of vinegar, an ingredient which renders them ferviceable

Distilled Spirituous Waters.

viceable in many cafes where fpirituous liquors alone would be improper. The treacle water has long been held in great effeem as a fudorific and alexipharmac; and thofe which the London and Edinburgh colleges have now directed in the room of it, though far more fimple and elegant, are not inferior in efficacy.

AQUA SEMINUM ANISI COMPOSITA. Compound anifeed water. Lond.

Take of

Chap. 5.

Anifeeds,

Angelica feeds, each half a pound;

Proof fpirit, one gallon ;

Water, as much as is fufficient to prevent burning.

Draw off by distillation one gallon,

THIS is a very elegant anifeed water, the angelica feeds greatly improving the flavour of the anife. It is apt to turn out milky, if drawn fo low as here ordered.

AQUA CORTICUM AURAN-TIORUM SPIRITUOSA. Spirituous orange peel water. Lond.

Take of

Outer rind of Seville orange peel, dried, half a pound;

Proof fpirit, one gallon;

Water, as much as is fufficient to prevent an empyreuma.

Diffil off one gallon.

THIS is confiderably ftronger of the orange peel than the fimple water. It is used as a cordial, stomachic, and carminative.

AQUA BRYONIÆ COMPOSITA. Compound bryony water.

Take of

Bryony roots, one pound ;

Wild valerian root, four ounces; Pennyroyal, Rue, each half a pound ; Mugwort leaves, Feverfew flowers, Savin tops, each one ounce; Orange peel, frefh, Lovage feed, each two ounces; French brandy, two gallons and a half.

Having cut or bruifed those ingredients which require fuch treatment, steep them in the brandy four days; then draw off by distillation two gallons and a half of liquor.

THIS composition, defigned as an antihysteric, is liable to confiderable objections, not only in regard to its particular ingredients, but to the medicinal intention of the whole. Many, by the use of this and fimilar waters, under the notion of medicines, have been betrayed into the pernicious habit of drinking drams: whereas, however fpirituous liquors may give a temporary relief to the languors of hysterical and hypochondriacal perfons, none fuffer to foon the ill effects attending the conftant use of them. The unpleafant flavour of this water renders it exceptionable also as a vehicle of other antihyfteric medicines, which in general are of themselves fufficiently ungrateful. A fmall augmentation in the dofe of the medicines themfelves (as the London committee observe) would abundantly compenfate any affistance to be expected from this water, and leave room for the use of a more agreeable vehicle.

The college of London has therefore wholly omitted this water, without giving any thing of fimilar intention in its place. That of Edinburgh ftill retains it, but has improved the composition, and rendered it more fimple, by the rejection of the more exceptionable ingredients.

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ingredients. The bryony root, from which the water receives its name, is the most exceptionable of them all. This being therefore now omitted, the water is diffinguished by the name of another of its ingredients, and is " use. It contains the flavour of the directed as follows.

AQUA VALERIANÆ COM-POSITA. Compound valerian water. Edinb.

Take of

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Wild valerian root, a pound and a half;

Lovage feed, half a pound ; Pennyroyal leaves, four ounces; Savin tops, two ounces;

French brandy, two gallons.

Digeft for two days, and then draw off by distillation two gallons.

AQUA SEMINUM CARDA-MOMI. Cardamom Jeed water. Lond.

Take of

Leffer cardamom feeds, freed from the hufks, four ounces;

Proof fpirit, one gallon ; Water, as much as is fufficient to

prevent burning. Distil off one gallon.

THIS water is a grateful cordial and carminative, the cardamom feeds giving over in this process the whole of their flavour. It is not perhaps very necessary to be at the trouble of feparating the hufks, for these communicate nothing difagreeable. The only difference is, that if employed unhusked, a proportionably larger quantity of them must be taken.

AQUA SEMINUM CARUI. Caraway water. Lond.

Take of

Caraway feeds, half a pound;

Proof fpirit, one gallon; Water, as much as will prevent

Diftil off one gallon.

burning.

THIS is a cordial in common caraway feeds in perfection.

AQUA CINNAMOMI SPIRI-TUOSA. Spirituous cinnamon water. Lond.

Take of

Cinnamon, a pound ;

Proof fpirit, a gallon;

Water, fo much as will prevent burning.

Draw off by distillation one gallon.

AQUA CINNAMOMI CUM VINO.

Cinnamon water with wine. Edinb.

Take of

Cinnamon, one pound ;

French brandy, one gallon.

Let them fleep together for two days, and then diffil off one gallon.

This is a very agreeable and useful cordial water, but not fo firong of the cinnamon as might be expected; for very little of the virtues of the fpice arifes till after the pure spirituous part has diffilled. Hence, in former editions of the London pharmacopœia, the diffillation was ordered to be protracted till two pints more, than here directed, were come over. By thefe means the whole virtue of the cinnamon was more frugally than judiciously obtained, for the difagreeable flavour of the feints of proof fpirits, and the acidulous liquor arising from cinnamon as well as other vegetables, when their diffillation is long continued, gave an ill relish to the whole; at the fame time that the oil which was extracted

extracted from the fpice, was by this acid thrown down.

In the pharmacopœia reformata, it is propofed to make this water, by mixing the *aqua cinnamoni fimplex* with fomewhat lefs than an equal quantity of rectified fpirit. On fhaking them together, the liquor lofes its milky hue, foon becomes clear, and more elegant than the water diftilled as above. It is equally ftrong of the cinnamon, and free from the naufeous taint with which the common proof fpirits are impregnated.

AQUA JUNIPERI COMPO-SITA.

Compound juniper water. Lond.

Take of

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Juniper berries, one pound ;

Sweet fennel feeds,

Caraway feeds, each an ounce and a half;

Proof fpirit, one gallon ;

Water, as much as is fufficient to prevent burning.

Distil off one gallon.

THIS water, mixed with about an equal quantity of the rob of juniper berries, proves an ufeful medicine in catarrhs, debility of the ftomach and inteffines, and difficulty of urine. The water by itfelf is a good cordial and carminative. The fervice which this and other fpirituous waters do in thefe intentions, is too commonly known; though the ill confequences that follow their conftant ufe, be too little regarded.

AQUA MENTHÆ PIPERITI-DIS SPIRITUOSA. Spirituous peppermint water. Lond.

Take of Pepper-mint leaves, dry, a pound and a half; Proof fpirit, a gallon; Water, as much as is fufficient to prevent an empyreuma.

Draw off by distillation one gallon.

THIS water is made use of in flatulent colics and fimilar diforders; in which it oftentimes gives immediate relief. It smells and tastes strongly of the peppermint.

AQUA MENTHÆ, VULGA-RIS SPIRITUOSA. Spirituous Spearmint water. Lond.

Take of

Spearmint leaves, dry, a pound and a half;

Proof spirit, a gallon;

Water, as much as will prevent burning.

Diftil off one gallon.

THIS water, if the fpirit be good, turns out a very elegant one, and preferable, in weaknefs of the ftomach, reaching to vomit, and the like, to many more elaborate preparations. Where the diforder is not accompanied with heat or inflammation, half an ounce of this water may be given diluted with fome agreeable aqueous liquor.

AQUA MIRABILIS.

Take of

Cinnamon, two ounces; Lemon peel, one ounce; Angelica feeds, Leffer cardamom feeds, Mace, each half an ounce; Cubebs, two drams; Balm leaves, fix ounces; French brandy, one gallon.

Pour the brandy on the other ingredients bruifed; and after digesting them for four days, draw off by distillation one gallon.

THE above composition of this celebrated water is that which was formerly followed. At a late reformation

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formation it has received a confiderable improvement; the cardamoms, cubebs, and balm, are omitted, and an addition of pepper-mint introduced. The formula at prefent is as follows.

AQUA AROMATICA, vulgo MIRABILIS.

Aromatic water, commonly called aqua mirabilis. Edinb.

Take of

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Cinnamon, two ounces;

Fresh yellow rind of lemons,

Angelica feeds, each one ounce; Mace, half an ounce;

wate, nan an ounce,

Pepper-mint, three ounces ;

French brandy, one gallon.

Digeft for two days, and then diftil off one gallon.

THIS water is very rich of the fpices; and proves a pleafant, warm cordial and carminative. In those who have not, by frequent use, deprived themselves of the beness of these kinds of liquors, it often gives present relief in languors, flatulencies, colicky pains, and similar complaints.

The fpices in thefe two compolitions being rather too dear for the purpoles of a common cordial water, the wholefale dealers, as I have been informed, generally fubflitute for them a cheaper fpice from our own plantations, Jamaica pepper. A very elegant water is prepared alfo from that fpice by itfelf, in the following proportions.

AQUA PIPERIS JAMAICENSIS SPIRITUOSA.

Spirituous Jamaica pepper water. Take of

Jamaica pepper, half a pound ; Proof fpirit, three gallons ; Water, a fufficient quantity to

prevent an empyreuma.

Draw off by diffillation three gallons.

Part III.

THIS water is far more agreeable than a fimple water drawn from the fame fpice; and has long had a place among the cordials both of the diffiller and apothecary; though it has not yet been received into any public pharmacopœia.

AQUA NUCIS MOSCHATÆ.

Nutmeg water. Lond.

Take of

Nutmegs, two ounces; Proof fpirit, a gallon;

Water, as much as will prevent burning.

Draw off by distillation one gallon.

This water (with the addition only of fome hawthorn flowers, an article of very little fignificance) was formerly celebrated in nephritic diforders, under the name of AQUA NEPHRITICA. At prefent, it is regarded only as an agreeable fpirituous liquor, lightly impregnated with the nutmeg flavour.

AQUA POEONIÆ COMPOSITA. Compound peony water.

Take of

Peony roots, two ounces;

Wild valerian roots, an ounce and a half;

White dittany root, one ounce;

Peony feeds, fix drams;

Lilies of the valley, fresh, four ounces;

Lavender flowers,

Rofemary flowers, each two ounces;

Betony,

Marjoram,

Rue,

Sage, tops of each, one ounce;

French brandy, a gallon and a half.

Cut or bruife those materials that require such treatment, steep them four days in the brandy, and and then diftil over a gallon and a half of liquor.

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THIS water was formerly diftinguished by the title of AQUA ANTIEPILEPTICA; and recommended in all kinds of epilepfies and nervous complaints. For fome time past, it has had little regard paid to it, having rarely been prefcribed any otherwife than as a vehicle, and as fuch not often. The ingredients from which it receives its name, the peony roots and feeds, communicate little or nothing to the water; whatever virtues these are possessed of, remain behind in the decoction; nor are thefe the only exceptionable articles; the dittany, betony, and fome others, though of the aromatic kind, afford fo little, as not to deferve a place among more powerful materials.

The above formula is taken from a former edition of the Edinburgh pharmacopœia. It is here inferted for the fake of thofe who may still have fome regard for forms fo long received; and for the fame reason, the peony water of a late London pharmacopœia is also subjoined. The committee endeavoured to amend it at a late reformation, by retaining only those ingredients to which a star is affixed. Take of

Lilies of the valley *, frefh gathered, one pound; Lime flowers *, half a pound; Peony flowers *, four ounces; Male peony root *, two ounces and a half; White dittany root, Long birthwort, each half an ounce; Mifletoe of the oak, Rue *, each two handfuls; Peony feeds, hufked, ten drams; Rue feeds, three drams and a half; Ruffia caftor, Cubebs *,

Mace *, each two drams;

Cinnamon *, an ounce and a half;

Rolemary flowers, fix pugils; Stæchas flowers,

Lavendar flowers, each four pu-

gils;

Betony flowers,

Clove-july-flowers,

Cowflips, each eight pugils;

Juice of black cherries, four pints;

French brandy*, two gallons and a half.

After proper maceration, diftil off four gallons.

AQUA PULEGII SPIRITUOSA. Spirituous penny-royal water. Lond.

Take of

Penny-royal leaves, dry, a pound and a half;

Proof fpirit, a gallon;

Water, as much as will prevent burning.

Distil off one gallon.

THIS water has a good fhare of the flavour of the penny-royal, and is pretty much in use as a carminative and antihysteric.

AQUA RAPHANI COMPO-SITA.

Compound horferadish water. Lond.

Take of

Garden fcurvygrafs leaves, frefh, four pounds;

Horferadish root, fresh,

Orange peel, fresh, each two pounds;

Nutmegs, nine ounces;

Proof fpirit, two gallons;

Water, fufficient quantity to prevent burning.

Draw off by diffillation two gallons.

Edinb.

Take of Horferadifh root,

Garden

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Garden fcurvygrafs, frefh, each three pounds; Orange peel, frefh, Juniper berries, Canella alba, each four ounces; French brandy, three gallons.

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Steep the juniper berries and canella alba in the fpirit, for two days; then add the other ingredients, and draw off three gallons.

BOTH thefe waters are very elegant ones, and as well adapted for the purpofes of an antifcorbutic, as any thing that can well be contrived in this form. The committee of the London college observe, with regard to the first, that the horferadish and fcurvygrafs join very well together, giving a fimilar flavour, though not a little difagreeable; that the nutmeg fupprefles this flavour very fuccefsfully, without superadding any of its own; and to this, orange peel (no incongruous ingredient to the intention of the medicine) adds a flavour very agreeable. Arum root has generally had a place in this water, but is here defervedly thrown out; for it gives nothing of its pungency over the helm, notwithflanding what is afferted, by fome difpenfatory-writers, to the contrary. Muftard feed, though not hitherto, that I know, employed in these kinds of compositions, seems to be an excellent ingredient. It gives over the whole of its pungency, and is likewife lefs perifhable than most of the other fubitances of this clais. This feed wants no addition, unless fome aromatic material to furnish an agreeable flavour.

AQUA VULNERARIA, seu AQUA CATAPULTARUM. Arquebusade water. Pharm. Argent. Take of Comfrey, leaves and roots, Sage,

Mugwort, Buglofs, each four handfuls ; Betony, Sanicle, Ox-eye daify, Common daify, Greater figwort, Plantane, Agrimony, Vervain, Wormwood, Fennel, each two handfuls: St. John's wort, Long birthwort, Orpine, Veronica, Lesser centaury, Milfoil, Tobacco, Moufe-ear, Mint, Hyflop, each one handful; Wine, twenty-four pounds. Having cut and bruifed the

herbs, pour on them the wine, and let them fland together in digeftion, in horfedung, or any other equivalent heat, for three days. Afterwards diftil in an alembic with a moderate fire.

THIS celebrated water has been for fome time held in great efteem, in contusions, for refolving coagulated blood, difcuffing the tumours that arife on fractures and diflocations, for preventing the progress of gangrenes, and cleanfing and healing ulcers and wounds, particularly gun-fhot wounds. Mr. Lemery has been at the pains of writing a whole treatile on it; in which he confiders each of the ingredients fingly, and fuppofes the water to poffeis their united virtues. In this, however, he miftakes; for the virtues of most of the herbs, admitting them to be as great as he would have them, refide in fuch parts as are not capable of being elevated in this process.

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CHAPTER VI.

Concentration of the medicinal parts of juices and infusions by evaporation.

7HEN vegetable juices, or watery or fpirituous decoctions or infufions, are exposed to a continued heat ; the fluid gradually evaporating, carries off with it fuch volatile matters as it was impregnated with, and leaves the more fixed united together into one mass. As the object of the preceding chapter was the collection of the volatile principle which exhales along with the fluid, that of the prefent is this re-union and concentration of the fixt matter. The mafs which remains from the evaporation of the expressed juice of a plant, is called an *in/pistated juice*; from watery decoctions or infusions, an *extract*; from spirituous tinctures, a *refin*, or *estimate extract*. The term *extract* is frequently used also as a general appellation of all the three kinds. Inspissated juices and watery decoctions, particularly the former, when evaporated no further than to the consistence of oil or honey, are called *rob* or *sapa*; and spirituous tinctures, reduced to a like consistence, are called *balfam*.

SECT. I.

Inspissated juices.

7 HAT relates to the exprefiion of juices, has already been delivered in chap. ii. with the most effectual means of preferving them in their liquid itate, and a general account of what fubftances do, or do not, give out their virtues with their juices. In the infpiffation of juices, there is further to be confidered the volatility or fixity of their medicinal parts. If a plant lose its virtue, or part of its virtue, in being dried, it is obvious that the juice must lose as much in being inspiffated to drynefs ; how gentle foever the heat be, with which the infpiffation is performed. It is likewife to be observed, that the medicinal parts of fome juices are kept in a

ftate of perfect folution by the watery fluid, fo as to be completely retained by it after the liquor has been made fine by fettling, ftraining, or other means; while the medicinal parts of others, not diffoluble by watery menftrua, are only diffufed through the liquor in the fame manner as the feculencies are, and feparate along with thefe on ftanding.

ROB BACCARUM SAMBUCI. Rob of elder-berries.

Lond.

Let the depurated juice of elderberries be infpiffated with a gentle heat.

Edinb.

Part III.

Edinb.

Take two quarts of the juice of ripe elder-berries, and half a pound of white fugar. Evaporate over a gentle fire, or in a water-bath, to the confiftence of honey.

THIS preparation, made with or without fugar, keeps well, and proves a medicine of confiderable importance, as an aperient, generally promoting the natural excretions by flool, urine or fweat. The dofe is, from a dram or two, to an ounce or more. A fpoonful, diluted with water, is usefully taken, in common colds, at bed-time.

SUCCUS PRUNORUM SIL-VESTRIUM, five ACACIA GERMANICA. Inspissated juice of floes, or German acacia. Edinb.

Let any quantity of the juice of unripe floes be infpiffated over a gentle fire.

THIS juice is infpiffated nearly to drynefs, care being taken to prevent its burning, as directed in the following fection for making extracts with water. It is a moderately flrong aftringent, fimilar to the Egyptian acacia, for which it has been commonly fubfituted in the fhops. (See page 73.) It is given, in fluxes and other diforders where flyptic medicines are indicated, from a fcruple to a dram.

EXTRACTUM PLANTAGI-NIS.

Extract of plantane. Edinb.

Let any quantity of the juice of plantane leaves be depurated; either by fuffering it to fettle,

and then decanting off the clear liquor; or by firaining; or clarification with whites of eggs. Afterwards evaporate the juice in a fand-heat, to the confiftence of honey.

After the fame manner, extracts may be made from all acid, cooling, ftyptic, juicy plants.

THIS is a method of treating plants very little practifed, but which promifes, if duly profecuted, to afford medicines of confiderable power. There are many common and neglected herbs, as plantane, chickweed, chervil, &c. whole juices in their dilute state, as well as the herbs in fubitance, feem to be altogether infignificant, but which, when the juice is well depurated from the feculent matter, and concentrated by the evaporation of the fluid, yield extracts, which difcover to the tafte no fmall activity. These extracts, like those prepared from the juices of most of the fummer fruits, if inspisiated to drynefs, grow moist again in the air.

EXTRACTUM CICUT Æ. Extract of bemlock.

Take fresh hemlock leaves, gathered just before the plant begins to flower; which it commonly does in July, or about the latter end of June. Press out the juice; and immediately, without suffering it to settle, put it into a schallow glazed earthen pan, over a very gentle fire; keeping it continually firring, to prevent its burning, till it is reduced to a thick greenish brown mass. This mass may be formed into pills with a little of the powder of the dried leaves of the plant.

THIS is the preparation of hemlock lately published at Vienna by Dr.

Chap. 6. Inspissated Juices.

Dr. Storck; who recommends it as a high refolvent in many obstinate diforders, where the common remedies avail nothing. He obferves, that fmall dofes fhould always be begun with, as two grains, made into a pill, twice a day; and that, by gradually increasing the dole, it may be given to two, three, or even four drams a day, and continued in fuch quantities for feveral weeks : that it may be used with fafety, in infancy, old age, and pregnancy : that it neither accelerates nor diffurbs the circulation; neither heats nor cools; nor affects the animal functions ; that it encreases the secretions, and renders the mouth moift ; feldom purges; very rarely vomits; fometimes augments perspiration ; often produces a copious discharge of viscid urine ; but, in many patients, does not increase any of the sensible evacuations: that it removes obftructions and their confequences; relieves rheumatic pains, though of long continuance ; discusses schirrous tumours, both internal and external; and cures dropfies and confumptions proceeding from fchirrofities : that it often diffolves cataracts, or flops their progrefs, and has fometimes removed the gutta ferena : that inveterate cutaneous eruptions, fcald heads, malignant ulcers, cancers, the malignant fluor albus and gonorrhea of long ftanding, obflinate remains of the venereal difease, and caries of the bones, generally yield to it: that for the most part it is necessary to continue this medicine for a very confiderable time, before the cure is effected, or much benefit perceived from it : that in fome cafes it failed of giving any relief, and that he met with fome perfons who could not bear its effects ; and that confequently there must be some latent difference in the habit, the 401

diagnoftic figns of which are at prefent unknown : that though it is by no means infallible, any more than other medicines in their refpective intentions, yet the great number of deplorable cafes that have been happily cured by it, is fufficient to recommend it to further trials. The efficacy of this medicine is confirmed by many eminent practitioners abroad ; tho' the trials hitherto made of it in this country have not been attended with much fuccefs. Somewhat perhaps may depend upon the time of the plant's being gathered, and the manner of the preparation of the extract. Dr. Storck himself takes notice of some mistakes committed in this respect. Some have left the herb in a heap for feveral days, whence part of it withered, part rotted, and the juice became thick and mucilaginous. Others have taken a very large quantity of the juice, and boiled it down in copper vefiels with a great heat, by which means a ftrong fetor was diffufed to a confiderable diftance, and the most efficacious parts diffipated. Others, with officious care, have clarified the juice, and thus obtained a black tenacious extract, retaining but a fmall degree of the fpecific fmeil of the plant. The extract duly prepared, according to the above prefcription, is of a greenish brown colour, and a very difagreeable fmell, like that of mice. But though there is reafon to believe that much of the extract ufed here had been ill prepared, we can by no means admit that its general inefficacy was owing to this cause; for though there are few inflances of its difcovering any valuable medicinal powers, there are feveral of its having activity enough, even in fmall doses, to produce alarming fymptoms.

Dd

After

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402 be made of (blue wolffbane. Aconitum, or deadly night-Belladonna, shade. henbane, &c. Hyofciamus, J

ELATERIUM. Lond.

Slit ripe wild cucumbers, and having very lightly prefied out the juices, pafs it through a fine hair fiève into a glazed earthen veffel. After flanding for fome 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 exposed to the fun, or other gentle heat, till grown thoroughly dry

WHAT happens in part in the foregoing preparation, happens in this comepletely, the fpontaneous feparation of the medicinal matter of the juice on standing for a little time : and the cafe is the fame with the juices of feveral other vegetables, as those of arum, iris, and bryony roots. Preparations of this kind have been commonly called FOECU-L.E. The filtration above directed for draining off fuch part of the watery fluid as cannot be feparated by decantation, is not the common filtration through paper, for this does not fucceed here : the groffer parts of the juice, falling to the bottom, form a viscid cake upon the paper, through which the liquid cannot pafs. The feparation is to be attempted in another manner, fo as to drain the fluid from the top. This is effected by placing one end of fome moistened strips of woollen cloth, fkains of cotton, or the like,

After the same manner, extracts may in the juice, and laying the other end over the edge of the veffel, fo as to hang down lower than the furface of the liquor. By this management the feparation fucceeds in perfection.

> The Edinburgh pharmacopœia directs the wild cucumbers to be gathered before they have grown fully ripe; and no more of the juice to be taken, than that which iffues fpontaneoufly upon flitting them. After fettling, the fluid part is ordered to be poured away; and the thick refiduum, without any further draining or filtration, to be exficcated in the fun.

THE juice of the unripe fruit is faid to operate with greater violence than of that which is ripe. The foregoing prescriptions do not perhaps differ fo much in regard to the degree of maturity, as in the manner of expreffing it; both feeming to intend the fruit to be taken just before it was grown fo thoroughly ripe, as to burft and shed its juice on being touched. If any preffure be used, it should be exceeding gentle, otherwife fome of the inactive pulpy matter of the fruit will be forced out with the juice, and render the firength of the elaterium precarious; a point of primary confequence to be avoided, in a medicine of fuch powerful operation, and limited to fo fmall a dofe.

Elaterium is a firong irritating cathartic, and oftentimes operates also as an emetic. It is never to be ventured on but in indolent phlegmatic habits, as in dropfies, in which it is by fome particularly recommended. Two or three grains are in general a fufficient dofe.

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SECT. II.

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Extracts with Water.

THESE extracts are prepared, by boiling the fubject in water, and evaporating the strained decoction to a thick confistence.

This process affords us some of the more active parts of the plants, free from the useless, indiffoluble, earthy matter, which makes the largest share of their bulk. There is a great difference in vegetable fubstances, with regard to their fitnels for this operation; some yielding to it all their virtues, and others fcarce any. Those parts in which the fweet, glutinous, emollient, cooling, bitter, austere, aftringent virtues relide, are for the most part totally extracted by the boiling water, and remain almost entire upon evaporating it : whilft those which contain the peculiar

odour, flavour, and aromatic quality, are either not extracted at all, or exhale along with the menftruum. Thus gentian root, which is almost fimply bitter, yields an extract poffeffing, in a fmall volume, the whole taffe and virtues of the root : wormwood, which has a degree of warmth and ftrong flavour joined to the bitter, lofes the two first in the evaporation, and gives an extract not greatly different from the foregoing : the aromatic quality of cinnamon is diffipated by this treatment, its aftringency remaining ; whilit an extract made from the flowers of lavender and rolemary, discovers nothing either of the tafte, fmell, or virtues of the flowers.

General Rules for making Extracts with Water.

1. It is indifferent, in regard to the medicine, whether the fubject be used fresh or dry: fince nothing that can be preferved in this procefs, will be lost by drying. In regard to the facility of extraction, there is a very confiderable difference; vegetables in general giving out their virtues more readily, when moderately dried, than when fresh.

2. Very compact dry fubstances fhould be reduced into exceeding fmall parts, previous to the effusion of the menstruum.

3. The quantity of water ought to be no greater than is neceffary for extracting the virtues of the fubject. A difference herein will fometimes occasion a variation in the quality of the product; the larger the quantity of liquor, the longer fire will be requifite for evaporating it, and confequently more of the volatile parts of the fubject will be diffipated. A long continued heat likewife makes a confiderable alteration in the matter which is not volatile : fweet fubftances, by long boiling with water, become naufeous; and the draftic purgatives lofe their virulence; though without any remarkable feparation of their parts,

4. The decoctions are to be depurated by colature; and, afterwards, fuffered to ftand for a day or two, when a confiderable quantity of fediment is ufually found at the bottom. If the liquor, poured off clear, be boiled down a little, and afterwards fuffered to cool again, it D d z will will deposit a fresh sediment, from which it may be decanted before you proceed to finish the evaporation. The decoctions of very refinous substances do not require this treatment, and are rather injured by it; the resin subsiding along with the inactive dregs.

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5. The evaporation is most conveniently performed in broad shallow vessels; the larger the furface 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 neceffary to prevent its burning. This accident, almost unavoidable if the quantity be large, and the fire applied as ufual, under the evaporating pan, may be effectually prevented, by carrying on the infpiffation, after the common manner, no further than to the confiltence of a fyrup, 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 foon reduce it to any degree of confistence required. This may likewise be done, and more fecurely, in balneo mariæ, by fetting the evaporating veffel in boiling water; but the evaporation is here exceedingly flow and tedious.

7. Extracts are to be fprinkled with a little fpirit of wine, to prevent their growing mouldy [L.]They fhould be kept in bladders moiftened with fweet oil. [E.]

EXTRACTUM ABSINTHII. Extract of wormwood. Edinb.

Boil dried wormwood leaves in water, fupplying fresh water occasionally, till the herb have given out all its virtues to the

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liquor. Strain the decoction through a woollen cloth, and evaporate it, in a fand-heat, to the confiftence of honey.

THIS extract is almost fimply bitter; the peculiar flavour of the wormwood being diffipated in the evaporation. The chemists ufually prepare the extract of wormwood from the decoction which remains in the still after the distillation of the effential oil: and, provided the still has been perfectly clean, and the liquor not flood too long in it after the distillation, this piece of frugality is not to be difapproved of; fince, whether we catch the exhaling vapour, or fuffer it to be diffipated in the air, the remaining extract will be the fame.

EXTRACTUM CENTAURII MINORIS. Extract of leffer centaury. Edinb.

This is directed to be prepared in the fame manner as the preceding. It is the oldeft extract we have any account of : its preparation is very accurately and circumftantially fet down, in a book ufually afcribed to Galen, de virtute centaurea. The author of that treatife recommends. the extract as a medicine of excellent fervice in many cates; and looks upon centaury as a specific against the bite of a mad dog and other venomous animals. It is doubtless an useful bitter, posseffing the general virtues of the fubftances of that class; but cannot well be supposed to have any others.

EXTRACTUM CHAMÆMELI Extract of chamomile. Edinb.

This extract is prepared from the flowers of chamomile, in the fame manner as those of the leaves of the two

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two preceding plants. Nor is it greatly different from those extracts in quality; the specific flavour of the chamomile exhaling in the evaporation. The chemists commonly prepare it, like that of wormwood, from the decoction remaining after the distillation of the effential oil.

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EXTRACTUM ENULÆ CAMPANÆ. Extract of elecampane. Lond.

Boil the roots of elecampane in water, prefs and firain the decoftion, and fet it by to fettle; then pour off the clear liquor, and boil it down to a pilular confiftence; taking care, towards the end, to prevent its burning to the veffel.

THIS extract retains a confiderable fhare of the virtues of the root. Its tafte is fomewhat warm, and not ungratefally bitterifh. It is given, from a fcruple to a dram, in a lax flate of the fibres of the ftomach, and in fome diforders of the breaft.

EXTRACTUM GENTIANÆ. Extract of gentian. L. E.

This extract is prepared from the roots of gentian, in the fame manner as the foregoing extracts. It is of a reddifh brown colour, and an intenfely bitter taffe, being one of the ftrongeft of the vegetable bitters.

EXTRACTUM GLY-CYRRHIZÆ. Extract of liquorice. Lond.

Lightly boil fresh liquorice roots in water, press the decoction through, astrainer, and, aster the feces have subsided, evaporate it until it no longer sticks to the fingers; taking care, towards the end of the operation, to prevent an empyreuma.

IT is convenient, before boiling the root, to cut it transversely into imall pieces, that it may more readily give out its virtues by light coction. If the boiling be long continued, the rich fweet tafte, for which this preparation is valued, will be greatly injured. For the fame reaion, the quantity of water ought to be no larger than is abfolutely necessary to extract the virtues of the root : a quart, or at the most three pints, will be fully fufficient for a pound of liquorice. It would be of confiderable advantage to the preparation, and probably (when made in quantity) lefs expensive to the preparer, to use, instead of the decoction, juice of liquorice, prefied out betwixt iron rollers, after the manner practifed abroad for obtaining the juice of the fugar-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 fhops in perfection; the makers of this commodity, both at home and abroad, being either very flovenly in its preparation, or defignedly mixing it with fand, and other impurities. When made with care, it is exceedingly fweet, not at all bitterish or nauseous, more agreeable in tafte than the root itfelf, of a pleafant smell, a reddifh brown colour, and, when drawn out into strings, of a bright golden colour; totally foluble in water, without depositing any feces.

This preparation would be very convenient for many purposes in the fhops, if kept in a somewhat softer confistence than that of an extract. The only inconvenience attending this soft form is, its be-D d 3 ing

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ing apt in a fhort time to grow mouldy : this may be effectually prevented, by the addition of a fmall portion of fpirit of wine.

EXTRACTUM HELLEBORI NIGRI. Extract of black hellebore. L. E.

This extract is prepared from the roots of black hellebore, in the fame manner as that of elecampane roots above defcribed. It purges with confiderably lefs violence than the hellebore in fubftance; and appears to be one of the beft preparations of that root when intended to act only as a cathartic. The dofe is from eight or ten grains to fifteen or more.

EXTRACTUM LIGNI CAM-PECHENSIS. Extract of logwood. Lond.

Take of logwood, reduced to powder, one pound. Boil it in a gallon of water till half the liquor be confumed, repeating the coction with fresh water four times or oftener. The feveral decoctions are to be mixed together, passed through a strainer, and evaporated to a due consistence.

THIS wood very difficultly yields its virtue to watery menftrua, and hence the reducing it into fine powder is extremely neceffary. The Edinburgh difpenfatory directs fpirit of wine to be called in aid; fee the following fection.

The extract of logwood has been used for a confiderable time in fome of our hospitals, but is now received into the pharmacopœia. It has an agreeable sweet taste, with fome degree of astringency; and hence becomes ferviceable in diarrhœas, for blunting the acrimony

of the juices, and moderately confiringing the inteffines and orifices of the imaller veffels; it may be given from a fcruple to half a dram, and repeated five or fix times a day to advantage. During the ufe of this medicine, the flools are frequently tinged red by it, which has occafioned fome to be alarmed, as if the colour proceeded from blood : the prefcriber thereof ought to caution the patient against any furprize of this kind.

EXTRACTUM CORTICIS PERUVIANI, molle et durum.

Extract of Peruvian bark, foft and bard.

Lond.

Boil a pound of powdered bark in five or fix quarts of water, for an hour or two, and pour off the liquor, which, whilft hot, will be red and transparent, but on growing cold becomes yellow and turbid. The remaining bark is to be boiled again in the fame quantity of water as before, and this procefs repeated till the liquor remains transparent when cold. All the decoctions, ftrained and mixed together, are to be evaporated over a very gentle fire to a due confistence, care being taken to prevent the matter from burning.

This extract is directed to be kept in the fhops, both in a foft and hard form. The first of a proper confistence, for making into pills; the other fit for being reduced into powder.

PERUVIAN bark is a refinous drug: the refin melts out by the heat, but is not perfectly diffolved by the water; hence, in cooling, it feparates, renders the liquor turbid, and in part falls to the bottom, as appears manifestly upon examining the

Extracts with Water.

the fediment by fpirit of wine, (fee the account of this article in p. 197.) This extract might be made to better advantage by the affiftance of fpirit of wine, after the fame manner as that of jalap; and this method the Edinburgh college have directed. But, as the committee obferve, all the fpirits which can be expected to be employed for this procefs among us, are accompanied with fome degree of a bad flavour. This adheres most strongly to the phlegmatic part of the fpirit, which evaporating laft, must communicate this ill flavour to the extract ; a circumitance of very great confequence; as this medicine is defigned for flomachs too weak to bear a due quantity of bark in fubstance. Ten or twelve grains of the hard extract are reckoned equivalent to about half a dram of the bark itfelf.

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EXTRACTUM ligni GUAIACI, molle et durum.

Extract of guaiacum wood, foft and hard.

Lond.

Boil a pound of fhavings of guaiacum in a gallon of water, till half the liquor be wasted, repeating the operation four times, or oftener, with the fame quantities of fresh water. The feveral decoctions, paffed through a ftrainer, are to be mixed and infpiffated together ; when the aqueous parts are almost entirely exhaled, a little rectified spirit of wine is to be added, that the whole may be reduced into an uniform and tenacious mais. This extract is to be prepared, as the foregoing, in a foft and hard form.

HERE the refinous parts of the wood, which were hoiled out with the water, are apt to feparate to-

wards the end of the infpissation : hence an addition of fpirit becomes necessary, to keep them united with the reft of the matter. The extract agrees in virtue with the wood.

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EXTRACTUM RUTÆ. Extract of rue. Lond.

This is prepared from the leaves of rue, in the fame manner as the extract of elecampane roots already defcribed. It retains a confiderable fhare of the warmth and pungency of the rue; for though the principal virtues of rue refide in an effential oil, yet the oil of this plant, as formerly obferved under the head of those preparations, is not of a very volatile kind.

EXTRACTUM SABINÆ. Extract of favin. Lond.

This extract is prepared from the leaves of favin, in the fame manner as the preceding. It does not retain fo much, as that extract does, of the virtues of its fubject, the oil of favin being more volatile than that of rue.

GUMMI et RESINA ALOES. Gum and refin of aloes. Lond.

Boil four ounces of Socotorine aloes in two pints of water, till as much as poffible of the aloes be diffolved. The folution fuffered to reft for a night, will deposit the refin to the bottom of the veffel: after which, the remaining liquor, ftrained, if needful, is to be evaporated, that the gum may be left.

THE gum of aloes is fomewhat lefs purgative, and confiderably lefs difagreeable than the crude juice. This alteration is not owing, as might be fuppofed, to the fepara-D d 4

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tion of the refin ; for the pure refin of aloes is fill lef difagreeable, and lefs purgative, even than the gum ; fome have denied that it has any purgative virtue at all, and others ascribe to it an astringent quality. I have exhibited this refin, divided by trituration with the teffaceous powders, in the dose of a scruple, without observing any effect from it. The gum feems to be the only part here intended for medicinal use. If the refin be required, it ought to be further purified by folution in spirit of wine ; for as it is obtained by precipitation from an aqueous folution of impure aloes, all the impurities of the drug, that are not foluble in water, will precipitate along with it.

PILULÆ, feu EXTRACTUM, RUDII. The pills or extract of Rudius.

Edinb.

Take of

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Black hellebore roots,

Colocynth,

Socotorine aloes, each two ounces;

Scammony, one ounce ;

Vitriolated tartar, two drams ;

Diffilled oil of cloves, one dram. Bruife the colocynth and hellebore, pour on them two quarts of water, and boil to the confumption of half the liquor : pafs the decoction through a firainer, and evaporate it to the confiftence of honey, adding the aloes and fcammony, reduced into fine powder.

The stalley

When the mafs is taken from the fire, mix into it the vitriolated tartar, and diffilled oil.

THIS preparation is a medicine of great importance as a cathartic, fimilar to one defcribed hereafter, under the title of *Extractum cathar*ticum. Water appears to be a better menftruum, than fpirituous liquors, both for the colocynth and the hellebore; the watery extracts being much lefs irritating than the fpirituous, though not perhaps lefs effectual purgatives.

ROB BACCARUM JUNIPERI. Rob of juniper berries.

Let juniper berries, thoroughly bruifed, be boiled in a fufficient quantity of water, the liquor firained, and infpiffated to the confiftence of honey.

THIS preparation may be made alfo from the decoction that remains after the diffillation of the effential oil of the berries. It has a fweet balfamic tafte, accompanied with a greater or lefs bitternefs, according as the feeds of the berry were more or lefs thoroughly bruifed. This elegant preparation, though not received in our pharmacoposias, feems not unworthy of a place in the thops. Hoffman has a great opinion of it in debilities of the flomach and intellines, and in the difficulties of urine, familiar to perfons of an advanced age.

In hearing and so it was suited

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Extracts with rectified Spirit.

D ECTIFIED spirit of wine diffolves the effential oils and refins of vegetables, and does not readily carry off the oil in its exhalation; the heat fufficient to exhale pure spirit, being much less than that in which water confiderably evaporates, or most effential oils diffil. Hence a refinous or spirituous extract of wormwood, contrary to that made with water, contains the warmth and flavour, as well as bitternefs, of the herb ; one made from cinnamon possesies its aromatic virtue, as well as its altringency; and one from lavender and rolemary 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 fpirit employed for this purpole mould 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 diffolving power, but likewile, evaporating towards the end of the infpisiation, would promote the diffipation of the volatile parts of the fubject. Hence alfo the fubject itfelf ought always to be dry. Those substances, which lofe their virtue by drying, lofe it equally on being fubmitted to this treatment with the pureft fpirit.

The infpiffation fhould be performed, from the beginning, in the gentle heat of a water-bath. It is not needful to fuffer the fpirit to evaporate in the air. Greatest part of it may be recovered by collecting the vapour in the common di-

ftilling veffels. (See chap. v.) If the diffilled fpirit be found to have brought over any flavour from the fubject, it may be advantageoufly referved for the fame purposes again.

It is observable, that though rectified spirit be the proper menstruum of the pure volatile oils, and of the groffer refinous matter of vegetables, and water of the mucilaginous and faline ; yet thefe principles are, in almost all plants, fo intimately combined together, that whichever of these liquors be applied at first, it will take up a portion of what is directly foluble only in the other. Hence fundry vegetables, extremely refinous, and whofe virtues confift chiefly in their refin, afford neverthelefs very ufeful extracts with water, though not equal to those which may be obtained by a prudent application of fpirit. Hence, alfo, the extracts made from most vegetables by pure spirit are not mere refins; a part of the gummy matter, if the fubject contained any fuch, being taken up along with the refin, an admixture of great advantage to it in a medicinal view. The fpirituous extracts of feveral vegetable fubstances, as mint-leaves, rhubarb, faffron, diffolve in water as well as in fpirit.

Pure refins are prepared by mixing, with fpirituous tincture of very refinous vegetables, a quantity of water. The refin, incapable of remaining diffolved in the watery liquor, feparates and falls to the bottom; leaving in the menstruum fuch other principles of the

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the plant as the fpirit might have extracted at first along with it.

RESINA JALAPPÆ. Refin of jalap. Edinb.

Take any quantity of jalap root very well bruifed. Pour upon it fo much rectified spirit of wine as will cover it to the height of four fingers ; and digest them together in a fand-heat, that the fpirit may extract the virtue of the root. Filter the tincture through paper, put it into a glafs cucurbit, and diffil off one half of the fpirit. Add to the remainder a proper quantity of water, and the refin will precipitate to the bottom. Divide it into little cakes, and dry it with a very gentle heat.

THIS preparation is a pure refin ; fuch gummy parts as the fpirit might have taken up, remaining fuspended in the liquor. Its indiffolubility in any aqueous fluid, and its tenacious quality, by which it adheres to the coats of the inteftines, and occasions great irritation and gripes, forbid its being ever given by itfelf. It is fitted for ufe, by thoroughly triturating it with teftaceous powders ; by grinding it with almonds or powdered gum, and making the compound into an emulfion with water ; or by diffolving it in spirit of wine, and mixing the folution with a proper quantity of fyrup, or of mucilage. Six or eight grains, managed in either of these ways, prove powerfully cathartic, and generally without griping or greatly difordering the body.

It has been faid, that refin of jalap is frequently adulterated with common refin; and that this abufe may be difcovered by fpirit of wine, which diffolves the former, without

touching the latter. This criterion, however, is not to be relied on; for there are many cheap refins which are foluble in fpirit of wine as well as that of jalap; and there is not any one which may not be artfully rendered fo.

RESINA SCAMMONII. Refin of feammony. Edinb.

This refin is prepared in the fame manner as the preceding; with which it agrees alfo in its general qualities; occafioning vehement gripes if taken by itfelf, and operating generally with fufficient fafety when properly divided. Scammony is doubtlefs a valuable purgative; but what advantage there is in thus feparating the purgative refin from its natural corrector, the gummy part, is not fo clear.

RESINA GUAIACI. Refin of guaiacum. Edinb.

This refin is prepared in the fame 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 confifts wholly in its refin ; and the refin of the wood, and of the gum fo called, is perfectly one and the fame; 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, to as to fland greatly in need of this method of purification. Sixteen ounces of the beft gum guaiacum do not yield above twelve ounces of pure refin. The fame quantity of the wood yields about three ounces,

more

more or lefs, according to its goodnefs. The bark is fomewhat lefs refinous than the wood.

RESINA CORTICIS PERU-VIANI. Refin of Peruvian bark. Edinb.

This refin is made in the fame manner as the foregoing, and proves an elegant preparation of the bark, much stronger in taste than the watery extract defcribed in the preceding fection. It is nearly equivalent to about ten times its quantity of the bark in fubftance. There does not, however, appear to be any advantage in feparating the pure refin 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 fpirituous menftrua; and accordingly the Edinburgh college has received a preparation of this kind, which is defcribed in the following fection.

Extract of faffron. Pharm. Brandenburg.

Digeft faffron 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 balfam.

THIS is a general procefs, for the preparation of extracts from aromatic and other odorous fubftances;

which extracts have been commonly diftinguished by the name of effential, for the fame reafon that the volatile oils are fo called, their retaining the specific odour and flavour of the fubjects. In making the extracts of this class, the inspissation fhould never be carried much lower than the confiftence above directed ; for when the matter has become thick, the fpirit exhales more difficultly than before, and is more apt to carry off with it fome of the volatile parts. If the preparation be wanted in a folid or confiftent form, it is more advisable to mix with it a fuitable quantity of any appropriated powdery matters, than to hazard the lofs of its virtue by a further evaporation. If any addition be wanted for giving confiftence to the extract of faffron, faffron in fubstance appears to be the beft.

The effential extract of faffron is an elegant and high cordial. Boerhaave fays, it poffeiles fuch exhilarating virtues, that if used a little too freely, it occasions an almost perpetual and indecent laughing : he observes, that it tinges the urine of a red colour; and that it mingles with water, fpirit, and oils, but is most conveniently taken in a glafs of Canary or other rich wine. A few drops are a sufficient The diffilled ipirit contains dose. alfo fome fhare of the virtue of the faffron, though far lefs than the extract. It is faid to have an advantage above most other cordial spirits, of disposing the patient to fweat. It may be taken, properly diluted, from a dram to half an ounce.

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SECT. IV.

Extracts with Spirit and Water.

THERE are fundry vegetables, particularly those of a refinous nature, which are treated, to better advantage, with a mixture of water and spirit, than with either of them fingly. The virtues of refinous woods, barks, and roots, may indeed be in great part extracted by long boiling in fresh portions of water; but at the fame time they fuffer a confiderable injury from the continued heat necessary for the extraction, and for the subsequent evaporation of fo large a quantity of the fluid. Rectified spirit of wine is not liable to this incohvenience. But the extracts obtained by it, from the substances here intended, being almost purely refinous, are lefs adapted to general ufe than in those in which the refin is divided by an admixture of the gummy matter, of which water is the direct menstruum.

There are two ways of obtaining thefe compound or gummy-refinous extracts : one, by using proof spirit, that is, a mixture of about equal parts of fpirit and water, for the menstruum; the other, by digesting the fubject first in pure spirit and then in water, and afterwards uniting into one mais the parts which the two mensirua have separately extracted. In fome cafes, where a fufficiency of gummy matter is wanting in the fubject, it may be artificially supplied, by inspissing the fpirituous tincture to the confiftence of a balfam, then thoroughly mixing with it a thick folution of any fimple gum, as mucilage of gum Arabic, and exficcating the

compound with a gentle heat. By this method are obtained elegant gummy refins, extemporaneoufly mifcible with water into milky liquors.

EXTRACTUM JALAPII. Extract of jalap. Lond.

Upon powdered jalap pour fome rectified fpirit of wine, and, with a gentle heat, extract a tincture : boil the remaining jalap in frefh parcels of water. Strain the first tincture, and draw off the spirit, till what remains begins to grow thick. Boil the strained decoction alfo to a like thickness : then mix both the inspissated matters together, and with a gentle fire reduce the whole to a pilular confishence.

Edinb.

Take of

Jalap root, one pound;

Rectified spirit of wine, four pounds.

Digeft 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 pafs it through a firainer, and evaporate to the confiftence of a thin honey. Diftil off the fpirit from the tincture, till the remainder be of the fame confiftence. Then mix the two infpiffated liquors well together; and evaporate to the confiftence of an extract.

THIS extract is an useful purgative, preferable to the crude root, as

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as being of more uniform ftrength, 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 inspiffated by itfelf, it would afford a refinous mass, which, unless thoroughly divided by proper admixtures, occasions violent griping, and yet does not prove fufficiently cathartic ; the watery decoctions yield an extract, which operates exceeding weakly : both joined together, as in this preparation, compose an effectual and fafe purge. This method of making extracts might be advantageoufly applied to fundry other refinous fubstances, as the dry woods, roots, barks, &c. A fmall quantity of spirit takes up the refin, and much lefs water than would otherwife be neceffary, extracts all the other foluble parts.

In a former edition of the Edinburgh pharmacopœia, a little fixt alkaline falt was ordered to be added to the water in which the jalap is boiled after the action of fpirit; on a supposition, that this would enable the water to extract more from the root than it could by itfelf. But, fo far as the quantity of the alkaline falt could go, it had the oppofite effect ; impeding the action of the water. The refinous parts of the jalap are diffolved by the fpirit; 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 falt, the falt will render the water incapable of diffolving the gum. If the gum be diffolved firit, the addition of any alkaline falt will precipitate it.

EXTRACTUM CORTICIS PERUVIANI. Extract of Peruvian bark. Edinb. The college of Edinburgh has

directed the extract of bark to be made with water and fpirit, in the fame manner as the preceding. In the bark we may diffinguish two kinds of taftes, an aftringent and a bitter one; the former of which feems to refide in the refinous matter, and the latter chiefly in the gummy. The watery extract is moderately ftrong in point of bitternefs, but of the aftringency it has only a fmall degree. The pure refin, on the other hand, is ftrong in affringency, and weak in bitternefs. Both qualities are united in the prefent extract ; which appears to be the best preparation of this kind that can be obtained from this valuable drug.

EXTRACTUM LIGNI CAM-PECHENSIS. Extract of logwood. Edinb.

This extract is directed in the Edinburgh pharmacopœia to be prepared as the foregoing; and the fame treatment is judiciously ordered for all the refinous drugs in general.

EXTRACTUM CATHARTI-CUM.

Cathartic extract. Lond.

Take of

Socotorine aloes, an ounce and a half;

Colocynth, fix drams;

Scammony,

Leffer cardamoms, hufked, each half an ounce;

Proof spirit, one pint.

Having cut the colocynth fmall, and bruifed the feeds, pour on them the vinous fpirit, and digeft with a gentle heat for four days. Prefs out the tincture, and diffolve therein the aloes and feammony, first feparately reduced to powder. Then draw off

off the fpirit, and infpiffate the remaining mais to a pilular confiftence.

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THIS composition answers very effectually the intention expressed in its title, fo as to be relied on in cafes where the patient's life depends on its taking place. The dofe is from fifteen grains to half a dram. The proof fpirit is a very proper menftruum for the purgative materials; diffolving nearly the whole fubftance of the aloes and fcammony, except the impurities ; and extracting from the colocynth, not only the irritating refin, but great part of the gummy matter. The purgative virtue of this last article appears indeed to be fufficiently got out by water; and the watery extract to operate with greater mildnefs than that with proof spirit, though in general effectually: the Edinburgh college have accordingly preferred water, in making a preparation, of the fame intention with this. In our former pharmacopœias, three fpices were employed in this composition, cinnamon, mace, and cloves : the cardamom feeds, now introduced, are preferable, on account of their aromatic matter being of a lefs volatile nature ; though a confiderable part of the flavour, even of thefe, is diffipated during the evaporation of the phlegmatic part of the proof ipirit.

CONFECTIO CARDIACA. Cordial confection. Lond.

Take of

Rolemary tops, fresh,

Juniper berries, each one pound; Lefier cardamom feeds, hufked, Zedoary,

Saffron, each half a pound.

Extract a tincture from these ingredients with about a gallon and a half of proof spirit : let the tincture be ftrained off, and reduced by a gentle heat to the weight of about two pounds and a half; then add the following ingredients, very finely pulverized, and make the whole into an electary.

Part III.

Compound powder of crabs claws, fixteen ounces; Cinnamon,

Nutmegs, each two ounces; Cloves, one ounce;

Double-refined fugar, two pounds.

THIS confection is composed of the more unexceptionable ingredients of a composition formerly held in great effeem, and which was called, from its author, CONFEC-TIO RALEIGHANA. The committee, appointed for reforming the London pharmacopœia, observe, that the original confection is composed of no less than five and twenty particulars; each of which they examined apart, except one, ros folis; the flower of which is too fmall to be gathered in fufficient quantitity for the general use of the medicine, and the plant is possesfied of hurtful qualities, as is experienced in cattle that feed where it grows. In this examination, many of the extracts came out fo very naufeous, that it was impossible to retain them, confistent with any due regard to the taile of the composition. But fome few, of equal efficacy with any of the reft, being of a tolerable tafte and flavour, were compounded in different proportions; and when, after many trials, a composition was approved, the quantity of each material, that would yield the proportion of extract which entered that composition, was calculated, and thence the proportions collected, as now fet down; after which the compound extract was made, and found to answer expectation.

The confection, as now reformed, is a fufficiently grateful, and mo-

Extracts by long Digestion.

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 confiderable fhare of the flavour and virtue of the ingredients, though not near fo much as if a rectified spirit had been employed. The operator should be particularly careful to extract as much from the ingredients as the fpirit will take up; otherwise the inspisated matter turns out fo thin, and of fo little tenacity, that the powders are apt to separate and subfide from it in keeping. The crabs-claw powder does not appear to be very necessary, and is inferted rather in compli-

Chap. 6.

ance with the original, than from its contributing any thing to the intention of the medicine.

ELECTARIUM CARDIACUM vel CONFECTIO CARDIACA. Cordial Confection. Edinb.

Take of

- Conferve of orange-peel, three ounces;
- Candied nutmegs, one ounce and a half;
- Candied ginger, fix drams;
- Cinnamon, powdered, half an ounce;

SECT. V.

Extracts by long Digestion.

TN the foregoing part of this chapter, it has been obferved, that the virtues of vegetable decoctions are altered by long boiling. Decoctions or infusions of draffic vegetables, by long continued boiling or digeftion, lofe more and more of their virulence; and at the fame time deposit more and more of a grofs fediment, refulting probably from the decomposition of their active parts. On this foundation it has been attempted to obtain fafe and mild preparations from fundry virulent drugs; and fome of the chemifts have ftrongly recommended the process, though without specifying, or giving any intimation of, the continuance of boiling requifite for producing the due mildness in different subjects. M. Baume, in his Elemens 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 fo much of the opium as is diffoluble in water may be got out. Evaporate the strained decoctions to about fix quarts; which being put into a tin cucurbit, placed in a fand bath, keep up fuch a fire as may make the liquor nearly boil, for three months together, if the fire be continued day and night, and for fix months, if it be intermitted in the night : filling up the velfel with water in proportion to the evaporation ; and fcraping, the bottom with a wooden spatula from time to time, to get off the fediment which begins to precipitate after some days digettion.

Syrup of orange-peel, as much as is fufficient to make an electary, according to art.

geftion. The fediment 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 confisience for being formed into pills.

THE author observes, that by keeping the liquor ftrongly boiling, the tedious procefs may be confiderably expedited, and the fix months digestion reduced to four months : that in the beginning of the digeftion, a thick, vifcous, oily matter rifes to the top, and forms a tenacious fkin as the liquor cools ; this is fuppofed to be analogous to effential oils, though wanting their volatility: that the oil begins to difappear about the end of the first month, but still continues fensible till the end of the third, forming oily clouds as often as the liquor cools : that the refin at the fame time fettles to the bottom in cooling, preferving for a long while its refinous form, but by degrees becoming powdery, and incapable of being any longer foftened, or made to cohere by the heat: that when the process is finished, part of it still continues a perfect refin, diffoluble in spirit of wine, and part an indiffoluble powder : that when the digefted liquor is evaporated to about a quart, and fet in the cold till next day, it yields a brownish earthy-faline matter, called the effential falt of opium, in figure nearly like the fedative falt obtained from borax, intermingled with fmall needled crystals. He gives an account of his having made this preparation fix or feven times. The veffel 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 digeftion. Out of fixty-four ounces of opium, feventeen ounces remained undiffolved in the water : the quantity of refinous matter, precipitated during the digeftion, was twelve ounces : from the liquor, evaporated to a quart, he obtained a dram of effential falt, and might, he fays, have feparated more ; the liquor being then further evaporated to a pilular confiftence, the weight of the extract was thirty-one ounces.

It is fupposed, that the narcotic virtue of opium refides in the oily and refinous parts; and that the gummy extract, prepared by the above process, is endowed with the calming, fedative, or anodyne powers of the opium, divested of the narcotic quality as it is of the fmell, and no longer productive of the diforders, which opium itfelf, and the other preparations of it, frequently occasion. A cafe 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 fhare it posselies of the proper virtues of opium, is not fo clear; for the cure of convulfive motions of the flomach and vomitings, which at length happened after the extract had been continued daily in the above doles for feveral years (piusieurs années) cannot perhaps be afcribed 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 refinous 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.

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Extracts by long Digestion.

months. The feparation will alfo be as complete, in regard to the remaining gum, though fome part of the gum will in this method be loft, a little of it being taken up by the fpirit along with the other principles.

In what particular part of opium its peculiar virtues refide, has not perhaps been incontestably afcertained; but thus much feems clear from experiment, that the pure gum, freed from all that fpirit can

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diffolve, has little, or rather nothing of its foporific power.

There are grounds alfo to prefume, that by whatever means we deftroy or diminifh what is called the narcotic, foporific, virulent quality of opium, we fhall deftroy or diminifh likewife its falutary operation. For the ill effects, which it produces in certain cafes, feem to be only the neceffary confequences of the fame power, by which it proves fo beneficial in others.

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CHAPTER VII.

Empyreumatic Oils.

Rances, and mineral bitumens, on being urged with a red heat, have their original properties deftroyed, and are refolved or changed into products of a different nature from what pre-exifted in the fubject. By burning them in the open air, a part is changed into ashes, a part into foot, and a part is diffolved 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 refolved into fetid oils, and different kinds of faline fubitances, which rife into the receiver ; and a black coal, which remains behind, and which, though no further alterable in close veffels, on admitting air, burns into white athes. The oils. called from their fetid burnt fmell, empyreumatic, are the objects of the prefent chapter. Some of these however, being obtained in the fame process with certain faline bodies of more importance than themfelves, are referred to the head of Saline Preparations.

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OLEUM BUXI. Oil of box. Lond.

Diftil pieces of box wood in a retort, with a fand-heat gradually increafed. The oil will come over along with an acid fpirit, which is to be feparated by a funnel.

OLEUM GUAIACI. Oil of guaiacum. Edinb.

Put any quantity of chips of guaiacum into an earthen long-neck, or a glafs retort, and diffil either in a fand bath or an open fire, increafing 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 finks through the other liquors to the bottom of the receiver.

Oils may be obtained after the fame manner from every kind of wood.

THE retort may be filled almost up to the neck with chips or fmall pieces of bex or guaiacum, the refuse of the turner. Lute on a glafs receiver with a paste made of linfeed meal and water : fet the retort on the bottom of a deep iron pot, with a little fand under it; and fill up the space, betwixt it and the fides of the pot, with more fand. Apply at first a gentle fire, and gradually increase it to the utmost that the furnace is capable of giving. Particular care muit be had not to raife the heat too fait 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 burk the veffels. When

Empyreumatic Oils.

Chap. 7.

When the diffillation is finished, and the veffels grown cool, unlute the receiver, and feparate the oil from the acid liquor. The method of performing this by the funnel, as directed in the first of the above proceffes, is as follows : Pour the feveral liquors into a glass funnel, whofe ftem is ftopt by the finger. The ponderous black oil finks lowermost ; fuffer this to run out ; then clofe the ftem again, and afterwards feparate the acid liquor from the lighter oil, in the same manner. They are more perfectly feparated, by pouring them into a hollow cone of filtering paper, moiltened with water, and placed in a funnel: the acid liquor paffes through, and the oil remains on the paper.

The oils obtained by this treatment from different woods and plants, are nearly of the fame qualities: they have all a very difagreeable acrid tafte, and a burnt flinking fmell; without any thing of the peculiar flavour, tafte, or virtues of the subject which afforded them. The prefent practice rar ly employs those oils any otherwise than for external purpoles, as the cleanfing of foul bones, for the tooth-ach, against fome kinds of cutaneous eruptions, old pains and aches, and the like; and for these not very often.

OLEUM LATERITIUM. Oil of bricks. Lond.

Heat bricks red hot, and quench them in oil olive, till they have foaked up all the oil: then break them into pieces fmall enough to be conveniently put into a retort; and diffil with a fand-heat gradually increased. An oil will arife, together with a fpirit, which is to be feparated from it as in the foregoing process.

THIS preparation has had a place in most dispensatories, under the pompous names of oleum philofophorum, fanctum, divinum, benedictum, and others, as improper as that under which it stands above. It is really oil olive, rendered ftrongly empyreumatic by heat. The fpirit, fo called, is no more than phlegm, or water, tainted with the burnt flavour of the oil. It has been celebrated for fundry external purpofes, particularly against gouty and rheumatic pains, deafnels and tingling of the ears, &c. and has fometimes been given inwardly. But common practice seems to have now entirely rejected this loathfome remedy; and the college of Edinburgh have expunged it from their book.

OLEUM PETROLEI BARBA-DENSIS. Oil of Barbadoes tar. Lond.

Distil Barbadoes tar with a fandheat. An oil will arife, together with a fpirit, which is to be feparated from it.

Dr. Pemberton observes, that this oil will be more or lefs thin. according to the continuance of the distillation ; that the tar will at last be reduced to a black coa? and then the oil will be pretty deep in colour, though perfectly fluid ; that this oil has a property fimilar 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 fomewhat lefs difagreeable than the foregoing oils, though very acrid and ftimulating. OLEUM

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OLEUM TEREBINTHINÆ ÆTHEREUM; et empyreumaticum five BALSAMUM.

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The ethereal oil of turpentine, and the empyreumatic oil or balfam. Lond.

- Diffil the effential oil of turpentine in a retort, with a very gentle fire, until what remains has acquired the confiftence of a balfam.
- Balfam of turpentine may likewife be obtained from the yellow refin left after the diffillation of the effential oil. Upon diffilling this in a retort, at first a portion of thin oil arifes, which is to be kept by itfelf, and afterwards a thick balfam. There remains in the retort a blackish refin, called colophony.

Edinb.

Melt any quanity of turpentine, over a gentle fire, and pour it into a glafs retort, of which it may fill one half : then lute on a receiver, and diffil in a fandbath. Apply at first a gentle heat, upon which an acid fpirit will come over; and on gradually increasing the fire, a limpid oil, commonly called ethereal fpirit of turpentine; at length a yellow oil will arife. In the bottom of the retort, there remains a refinous mass, called colophony: which if still further urged with fucceflive degrees of heat to the highest, gives first a red oil, and afterwards a darker coloured one, which finks through the other liquors to the bottom of the receiver.

THESE proceffes are tedious, and accompanied with a good deal of danger; for unlefs the luting be very clofe, fome of the vapour will be apt to get through, which if it

catch fire, will infallibly burft the veffels. The oil here called ethereal, does not confiderably differ in fpecific gravity, fmell, tafte, or medical qualities, from the cheaper one obtained by the addition of water in the common fill : nor are the empyreumatic thin oil and balfam of any great effeem in practice.

OLEUM COPAIVÆ COMPO-SITUM.

Compound oil of balfam of copaiva. Lond.

Take two pounds of balfam of copaiva, and four ounces of gum guaiacum. Diftil them in a retort, continuing the operation till a pint of oil come over.

THIS mixture, undifiilled, proves a medicine of confiderable efficacy in rheumatic cafes, &c. -In diftillation, the gualacum gives over little, ferving chiefly for the fame purpose that bricks do in the oleum lateritium. The baliam diffilled in a retort, with or without the gum, yields first a light coloured oil, fmelling confiderably of the subject; this is immediately followed by a darker coloured oil, and afterwards by a blue one, both which have little other fmell than the empyreumatic one that diffinguishes the oils of this class : their tafte is very pungent and acrimo-This ballam diffilled with nious. water, yields as much effential oil, as above of empyreumatic.

OLEUM CERÆ. Oil of wax. Edinb.

Melt yellow bees wax with twice its quantity of fand, and diftil in a retort placed in a fand furnace. At first an acid liquor arifes, and afterwards a thick oil, which flicks in the neck of the retort, unlefs it be heated by applying a live coal. This may be rectified

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fied into a thin oil, by diffilling it feveral times, without addition, in a fand-heat.

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BOERHAAVE directs the wax, cut in pieces, to be put into the retort first, fo as to fill one half of it; when as much fand may be poured thereon as will fill the remaining -half. This is a neater, and much leis troublefome way, than melting the wax, and mixing it with the fand, before they are put into the retort. Boerhaave greatly commends this oil for roughness and chaps of the fkin, and fimilar purpofes: the college of Strafburg speak also of its being given internally, and fay it is a powerful diuretic (ingens diureticum) in doles of from two to four and more drops; but its difagreeable fmell has prevented its coming into ufe among us.

OLEUM ANIMALE DIPPELII. Dippel's animal cil.

Take any quantity of the empyreumatic oil diffilled from animal fubstances, as that of hartshorn (the preparation of which is defcribed along with that of the volatile falt and fpirit, in the following chapter). Put it into a glais retort, and having fitted on a receiver, distil in a fand-heat The oil will arife paler coloured and lefs fetid ; and a black coaly matter will remain behind. Repeat the diftillation in fresh retorts, till the oil ceafe to leave any feces, and till it lofe its ill fmell, and acquire an agreeable one.

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 leaft, twelve times; and frequently the requifite fubtilization will fcarcely be obtained with lefs than twenty diffillations. It is faid, that the effect may be expedited, by mixing the oil with quicklime into a foft pafte; the lime keeping down more of the grofs matter, than would remain without fuch an addition.

Animal oils thus recified, are thin and limpid, of a fubtile, penetrating, not difagreeable fmell and tafte. They are ftrongly recommended as anodynes and antifpalmodics, in doles of from fifteen to thirty drops. Hoffman reports, that they procure a calm and iweet fleep, which continues often for twenty hours, without being followed by any languor or debility, but rather leaving the patient more alert and chearful than before: that they procure likewife a gentle iweat, without increasing the heat of the blood : that given to twenty drops or more, on an empty flomach, fix hours before the accession of an intermittent fever. they frequently remove the diforder : and that they are likewife a very generous remedy in inveterate and chronical epilepfies, and in convultive motions, especially if given before the usual time of the attack, and preceded by proper evacuations.

The empyreumatic oils of vegetables, rectified in the fame manner by repeated distillations, fuffer a like change with the animal; lofing their dark colour and offenfive fmell, and becoming limpid, penetrating, and agreeable. In this state they are supposed, like the animal oils, to be anodyne, antispaimodic, and diaphoretic, or fudorific. It is observable, that all the empyreumatic oils diffolve in fpirit of wine, and that the oftener they are rectified or rediffilled, they Ee 3 diffolve

diffolve the more readily: a circumftance in which they differ remarkably from effential oils, which, by repeated diffillations, become more and more difficult of folution.

How far these preparations real-Jy possible the virtues, that have been ascribed to them, has not yet been sufficiently determined by experience; the tediousness and trouble of the rectification having prevented their coming into gene. ral ufe, or being often made. They are liable alfo to a more material inconvenience in regard to their medicinal ufe, precarioufnets in their quality: for how perfectly foever they be rectified, they gradually lofe, in keeping, the qualities they had received from that process, and return more and more towards their original fetidnefs.

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CHAPTER VIII.

Salts and Saline Preparations.

SECT. I.

Fixt alkaline Salts.

THE afhes of most vegetables, steeped or boiled in water, give out to it a faline fubstance, feparable in a folid form by evaporating the water. This kind of falt never pre-exists in the vegetable, but is always generated during the burning. It is called fixt alkaline falt.

SAL TARTARI, Salt of tartar, Lond.

Let any kind of tartar be wrapt up in ftrong brown paper, first made wet, or included in a proper veffel, and exposed to the fire, that its oil may be burnt out: then boil it in water, filter the folution, and evaporate it, till there remain a dry falt; which is to be kept in a veffel clofely ftopt.

Edinb.

Wrap up any quantity of white tarter in wetted paper, and calcine it in a reverberatory furnace till it become exceedingly white. Then diffolve it in warm water, filter the folution, and evaporate it in a clean iron veffel, till a falt be left behind, perfectly dry, and white as fnow; obferving towards the end of the operation to keep the matter continually flirring with an iron ladle, to prevent its flicking to the bottom of the veffel. If a fironger falt of tartar be required, let the white falt be melted in a crucible, with the most intense degree of heat, and reverberated for some hours, till it have acquired a greenish or blue colour.

THE white and red forts of tartar are equally fit for the purpole of making fixt falt; the only difference is, that the white affords a fomewhat larger quantity than the other; from fixteen ounces of this fort, upwards of four ounces of fixt alkaline falt may be obtained. The ufe of the paper is to prevent the fmaller pieces of the tartar from dropping down into the afh-hole; through the interflices of the coals, upon first injecting it into the furnace.

The calcination of the falt (if the tartar was infliciently burnt at first) does not increase its strength, fo much as is fuppofed : nor is the greenish, or blue colour, any certain mark either of its ftrength, or of its having been long exposed to a vehement fire : for if the crucible be perfectly clean, clofe covered, and has flood the fire without cracking, the falt will turn out white, though kept melted and reverberated ever fo long; whilit, on the other hand, a flight crack happening in the crucible, or a spark of coal falling in, shall in a few minutes Ee4

minutes give the falt the colour admired. The colour, in effect, is a mark rather of its containing fome inflammable matter, than of its ftrength.

THIS falt has a pungent fiery tafte; and occasions in the mouth a kind of urinous flavour, probably from a refolution which it produces in the faliva. It readily diffolves in water, and deliquiates in the air, but is not acted upon by pure vinous fpirits. Inftead of being diffolved by vinous spirits, if a faturated folution of it in water be dropt into the pure fpirit, it will not mix therewith, but fall diffinct to the bottom; if water be mixed with the fpirit, the addition of fixt alkaline falt will imbibe the water, and form with it, as in the other cafe, a diffinct fluid at the bottom. This property affords a commodious method of dephlegmating vinous fpirits, or feparating their watery part, as we have already feen.

Salt of tartar, or folutions of it in water, raife an effervescence on the admixture of acid liquors, and deftroy their acidity, the alkali and acid uniting together into a compound of new qualities, called neutral. Earthy fubftances, and most metallic bodies, previoufly diffolyed in the acid, are precipitated from it by the alkali. The alkaline falt changes the colours of the blue flowers of plants, or their infutions, to a green. It has the fame 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 fuch change.

Solutions of this falt 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 foap; and diffolve fulphur into a red liquor; especially if affifted by a boiling heat, and mingled with quicklime, which greatly promotes their activity. On pure earths and ftones, theie liquors have no fenfible action; but if the earth or flones be mixed with four or five times the weight of the dry falt, and urged with a ftrong fire, they melt along with it, and become afterwards perfectly foluble both in water and by the moisture of the air. With a fmaller proportion of the falt, as an equal weight, they run into an indiffoluble glaffy matter.

The medical virtues of this falt are, to attenuate the juices, refolve obstructions, and promote the natural fecretions. A dilute folution of it, drunk warm in bed, generally excites fweat. If that evacuation be not favoured, its fenfible operation is by urine. It is an excellent remedy in coffive 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 falt abforbs the acid, and unites with it, into a mild aperient neutral falt. 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 fourvies, and in all putrid diforders in general, this medicine is improper. The common dole of the falt is from two or three grains to a fcruple; in fome circumstances it has been extended to a dram, in which cafe it most always be largely diluted with watery liquors.

Chap. 8. Fixe SAL ABSINTHII. Salt of wormwood. Edinb.

Let any quantity of wormwood, either fresh gathered or moderately dried, be put into an iron pan, and with a gentle fire, reduced into white ashes. Boil these with a fufficient quantity of spring water, filter the liquor, and evaporate it till a dry falt be left behind. This proves of a brown colour: by repeated solution, filtration, and inspissation, it becomes at length pure and white,

It is generally expected of a brown colour in the fhops, and diftinguifhed by this mark from the purer alkali of tartar. If required to be white, the means above recommended will fcarcely render it fo; the remains of the oil of the plant, on which the brown colour depends, not being effectually feparable without flrong calcination. If the afhes have been fully calcined before the affufion of water, the falt will turn out white at once,

Lond.

- Let the afhes of wormwood [with which the fhops are ufually fupplied from the country] be put into an iron pot, or any other convenient veffel, and kept redhot over the fire for fome hours, often flirring them that what oily matter remains may be burnt out; then boil the afhes in water, filter the ley through paper, and evaporate it till a dry falt remains; which is to be kept in a veffel clofe ftopt.
- After the fame manner a fixt alkaline falt may be prepared from all those vegetables which yield this kind of falt [L.] as beanstalks, broom, &c. [E.]

THESE falts are obtained to greater advantage from dry plants than

from green ones; they must not however be too dry or too old; for in fuch case they afford but a small quantity of falt. The fire should be formanaged, as that the subject may burn freely, yet not burst into violent flame. This last circumflance would greatly lessen the yield of the falt; and a very close smothering heat would have this effect in a greater degree. Hence the assess of charcoal scarce yield any falt, whils the wood it was made from, if burnt at first in the open air, affords a large quantity.

If the ashes be not calcined after the burning, a confiderable portion of the oil of the fubject remains in them unconfumed : and hence the falt turns out impure, of a brown colour, and fomewhat faponaceous. Tacheneus, Boerhaave, and others, have entertained a very high opinion of these oily falts, and endeavour as much as poffible to retain the oil in them. They are nevertheless liable to a great inconvenience, uncertainty in point of firength, without promifing any advantage to counterbalance it. If the common alkalies be required to be made milder and lefs acrimonious (which is the only point aimed at in the making of these medicated falts, as they are called) they may be occasionally rendered to by fuitable additions. Pure alkalies, united with a certain quantity of expressed oil, compose (as we shall fee hereafter) a perfect foap, in which the pungent tafte of the alkaline falt is totally suppressed. It is obvious, therefore, that on the fame principle the pungency may be covered in part, and this proportionably to the quantity of oily matter combined. But we may obtain more elegantly, by a proceis described in page 427 (under the title of Sal alkalinus salis marini) a perfectly pure white alkaline

falt,

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fait, of all the mildness that can be wished.

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The thops were formerly burthened with a great number of these falts, which are now very judicioully rejected; those here retained being abundantly fufficient to anfiver all the ufeful purpoles that can be expected from these kinds of preparations. All fixt alkaline falts, from whatever vegetable they may be obtained (those of certain marine plants excepted, which partake of lea fait or its alkali) are nearly one and the fame thing, and not diffinguishable from each other, at least in their effect as medicines ; and hence the college of London, in most of the compositions wherein these forts of falts are ingredients, allow any fixt alkaline falt to be used.

Some differences indeed are obferved in them as ufually prepared; but these depend upon the manner in which the process for obtaining them is conducted, or on fome faline matters of a different kind, which either pre-exifted in the vegetable, or were produced in the process, remaining mixed with the alkali. A variation in the heat by which the plant is burnt or calcined, occasions a difference in the acrimony of the produce : the more vehement and lafting the fire (to a certain degree) the more acrid is the falt. The circumflances of using the afhes fresh burnt, or after they have been long exposed to the air, and of applying the water hot or cold to the afhes, likewife make a confiderable variation. By long expolure to the air, even the alkalies that have been made cauffic by quicklime, lofe all the adventitious acrimony which they had received from that treatment ; the chemifts affirm, that they imbibe also from the air, in a length of time, a portion of vitriolic acid, by which a

part of them is converted into a neutral falt, the fame with the tartarus vitriolatus of the fhops; and it is certain, that fuch a falt is often found among the afhes of vegetables; though it does not, perhaps, arife from that origin. Boiling water takes up this neutral falt from the afhes; whilft cold water extracts from them only the pure alkaline fait, unlefs it be used in too large a quantity, or fuffered to fland too long upon them. Boiling water difiolves also more than cold, of the oily parts of the fubject, if any remained unconfumed.

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 hiffing noife, happens on each injection. The whole quantity being thus deflagrated, continue the fire firong for half an hour.

NITRE is composed of the common vegetable fixt alkaline falt, and a peculiar acid. In this procefs, the acid is deftroyed or changed to another nature; and the remaining falt proves merely alkaline, not different in quality from the fal tartari, except that a very minute portion of the nitre gene. rally remains unchanged; the falt is purified by folution in water, filtration, and evaporation. It may be observed, that the falt receives no fensible addition from the vegetable coal employed for the deflagration ; for the alhes of charcoal have very little faline matter ; and the quantity of charcoal above directed, yields only a grain or two of afhes. SAL

Chap. 8.

SAL ALKALINUS SALIS MARINI. The alkaline falt of fea falt. Take of

Cubical nitre (prepared as hereafter described in sect. vi. of this chapter) four ounces;

Charcoal, five drams.

Mix and deflagrate as in the preceding process.

CUBICAL nitre is composed of the nitrous acid united with the alkaline basis of fea falt : the acid being here leparated in the deflagration, that alkali remains nearly pure. It posses the general properties of the foregoing preparation ; changing blue flowers, green ; diffolving oils, falts, and fulphur; bringing earths and stones into fufion, and forming with them, according to its quantity, either a vitreous, or foluble compound ; effervelcing with acids, precipitating earths, and metals diffolved in them, and uniting with the acid into a neutral falt. It differs from the foregoing alkalies, in being much milder in talte ; not fo readily difiolving in water; not at all deliquiating in the air ; eatily affuming, like neutral falts, a cryftailine form; and yielding, with each of the common acids, compounds very lenfibly different, both in their form and qualities, from those which result from the coalition of the vegetable alkalies with the respective acids. The crystals of this falt itfelf are prifmatic, greatly relembling those of the falt called fal mirabiles (See the fection of neutral falts.) Exposed to a warm air, they fall into a porous, friable mais, and lofe above twothirds of their weight.

How far this falt differs in medical virtue from the other alkalies, is not well known. It apparently poffeffes the fame general virtues;

and, as it is far milder, may be given in more confiderable dofes.

A falt of the fame nature with this, but lefs pure, as containing an admixture of the common vegetable alkali, is prepared at Alicant, and fome other places, from the afhes of certain marine plants, called *kali*; which plants are fuppofed to have given rife to the name *alkali*. The falt of the kali plants is called *foda* or *bariglia*: it has been long ufed medicinally in France, and is now introduced into practice in this country; but the above pure alkali extracted from fea falt, is doubtlefs preferable to it.

LIXIVIUM TARTARI [L.] Liquamen falis tartari, vulgo Oleum tartari per deliquium [E.]

Ley of tartar.

Or oil of tartar per deliquium. Lond.

Let tartar, calcined to whitenefs, be fet in a moift place, that it may liquefy.

Edinb.

Put any quantity of falt of tartar in a flat glafs difh, and expose it to the air, for fome days, in a moift place. It will run into a liquor, which is either to be filtered through paper, or feparated from the feces by decantation.— The higher the falt has been calcined, the more readily will it relent in the air.

THE folutions of fixt alkaline falts, effected by exposing them to a moift air, are generally looked upon as being purer than those made by applying water directly : for though the falt be repeatedly diffolved in water, filtered and exficcated ; yet, on being liquefied by the humidity of the air, it will fill deposit

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deposit a portion of earthy matter : but it must be observed, that the exficcated falt leaves always an earthy matter on being diffolved in water, as well as on being deliquiated in the air. Whether it leaves more in one circumstance than in the other, I have not examined. The deliquiated lixivium is faid to contain nearly one part of alkaline falt to three of an aqueous fluid. It is indifferent, in regard to the lixivium itself, whether the white ashes of tartar, or the falt extracted from them be used: but, as the athes leave a much greater quantity of earth, the feparation of the ley proves more troubleiome.

LIXIVIUM SAPONARIUM. Soap leys. Lond.

Take of

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Ruffia pot-afh,

Quicklime, each equal weights. Gradually fprinkle on them as much water as will flake the lime; then pour on more water, flirring the whole together, that the falt may be diffolved : let the lev fettle, pour it off into another vefiel, and, if there be occasion, filter it. A wine pint of this ley, measured with the greatest exactnefs, ought to weigh juft fixteen ounces troy. If it prove heavier, for every dram that it exceeds this weight, add to each pint of the liquor an ounce and a half of water by measure : if lighter, boil it till the like quantity be wasted, or pour it upon fresh lime and athes.

QUICKLIME greatly increases the itrength of alkaline falts; and hence this ley is much more acrimonious, and acts more powerfully as a menstruum on oils, fats, &c. than a folution of the pot-ash alone. The lime should be used fresh from

the kiln; by long keeping, even in clofe veifels, it lofes much of its ftrength: fuch fhould be made choice of as is thoroughly burnt or calcined, which may be known by its comparative lightnefs.

All the inftruments employed in this procefs, fhould be either of wood, earthen ware, or glafs. The common metallic ones would be corroded by the ley, fo as either to difcolour, or communicate difagreeable qualities to it. If it fhould be needful to filter or ftrain the liquor, care must be taken that the filter or ftrainer must be of vegetable matter : woollen, filk, and that fort of filtering paper which is made of animal fubitances, are quickly corroded and diffolved by it.

The liquor is most conveniently weighed in a narrow-necked glass bottle, of fuch a fize, that the meafure of a wine pint may arife fome height into its neck ; the place to which it reaches being marked with a diamond. A pint of the common leys of our fost foapmakers weighs more than fixteen ounces. It has been found that their foapley will be reduced to the standard here proposed, by mixing it with fomething less than an equal meafure of water.

LAPIS SEPTICUS, seu CAUTE-RIUM POTENTIALE. The septic stone, or potential

cautery. Edinb.

Take of Pot-ash, Quicklime, each equal parts;

Water, three times the weight of both.

Macerate for two days, occafionally flirring them, then filter the ley, and evaporate it to drynefs. Put the dry mafs into a crucible, and urge it with a flrong fire, till it flow like oil: then pour it out upon upon a flat plate made hot; and, while the matter continues foft, cut it into pieces of a proper fize and figure, which are to be kept in a glafs veffel clofely ftopt.

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THIS preparation is a ftrong and fudden cauftic. It has an inconvenience of being apt to liquefy too much upon the part to which it is applied, fo that it is not eafily confined within the limits in which it is intended to operate : and indeed the fuddennefs of its action depends on this difpofition to liquefy.

CAUSTICUM COMMUNE FORTIUS. The ftronger common caustic. Lond.

Boil any quantity of the foap leys before defcribed, to one-fourth part; then, whilft it continues boiling, fome lime, that has been kept for feveral months in a glafs veffel flopt with a cork, is to be fprinkled in by little and little, till it has abforbed all the liquor, fo as to form a kind of pafte; which keep for ufe in a veffel very clofely flopt.

HERE the addition of lime in fubftance renders the preparation lefs apt to liquefy than the foregoing, and confequently more eafaly confinable within the intended limits, but proportionably flower in its operation. The defign of keeping the lime is, that its acrimony may be fomewhat abated.

It is obfervable, that both thefe cauftics, and the foap leys, that is, alkaline falts increafed in their power by quicklime, do not effervefce or emit air bubbles, at leaft in any confiderable degree, on the admixture of acids; though this effervefcence has been commonly reckoned one of the principal diftinguishing characters of alkaline falts. Expofed long to the air, they gradually refume their power of effervefcence, and lofe proportionably the additional activity which the quicklime had produced in them.

CAUSTICUM COMMUNE MITIUS. The milder common caustic. Lond.

Take

Fresh quicklime,

Soft foap, of each equal parts. Mix them well together, at the time of using.

THIS caultic, notwithftanding the lime be used fresh, proves much milder than the former; the acrimony of the falt being here covered by the oil and tallow, by which it is reduced into soap.

SECT. II.

Volatile alkaline Salts.

A S fixt alkalies are produced in the burning of vegetables, and remain behind in the afhes; volatile ones are produced by a like degree of heat from animal fubftances, and rife in diffillation along with the other volatile principles; the admiffion of air, neceffary for the production of the former, is not needful for the latter. Thefe falts are obtainable alfo from fome vegetable matters; and from vegetable and animal foot. Though a ftrong fire be requifite for their production, yet, when once completely formed, they are diffipated by

by the gentleft warmth : in diftillation, they rife fooner 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.

SPIRITUS, SAL, et OLEUM CORNU CERVI.

Spirit, falt, and oil of hartsborn. Lond.

Distil pieces of hartshorn by a fire gradually raised almost to the highest; a spirit, falt, and oil will ascend.

If the oil be feparated, and the fpirit and falt diffilled again together, with a very gentle heat, they will both rife more pure. If this be carefully repeated feveral times, the falt will become exceedingly white, the fpirit limpid as water, and of a grateful odour.

The falt, feparated from the fpirit, and fublimed first from an equal weight of pure chalk, and afterwards from a little rectified fpirit of wine, becomes the fooner pure.

Calcined hartfhorn is generally made by burning the horns left after this diffillation.

After the fame manner, a fpirit, falt, and oil, may be obtained from every kind of animal fubftance.

Edinb.

Put pieces of hartfhorn into a large iron pot furnished with an earthen head; and having fitted on a capacious receiver, and luted the junctures, distil in an open fire gradually increased. At first a phlegm arises, then a spirit, and afterwards a volatile salt, accompanied with an oil. The oil that comes over first is of a yellowish colour, but, on protracting the distillation, there succeeds a reddist one verging to black. In the bottom of the iron pot there remains a black coal, which, being burnt to whitenefs in the open air, is called calcined hartfhorn.

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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 feparates from the phlegm and ipirit in filtration : the two latter will pais through, and the oil remain on the filter. The phlegm may be feparated from the fpirit by dillillation in a tall veffel, with a gentle heat: the fpirit will come over into the recipient, and the phlegm remain at the bottom of the diffilling veffel.

The spirit may be divided into a volatile falt and phlegm, by distilling it in a very tall and narrow cocurbit; the falt will arife, and adhere to the head in a dry form; the phlegm remaining behind.

The falt may be freed from the oil, by fubliming it from twice its quantity of pot-afh; for the oil is kept down by the pot-afh, whilft the falt rifes.

The fpirit also is rendered purer, by adding, to every pint, two ounces of pot-ath, and diftilling in a glafs retort.

The remaining pot-afh may be again purified for ufe, by calcining it in an open fire, fo as to burn out the oil it had abforbed from the falt or fpirit.

A fpirit, falt, and oil, may be obtained in the fame manner from all the folid parts of animals.

THE wholefale dealers have very large pots for the diffillation of hartfhorn, with earthen heads almost like those of the common still. For receivers, they use a couple of oil

oil jars, the mouths of which are luted together; the pipe that comes from the head enters the lowermoft jar, through a hole made on purpofe in its bottom. When a large quantity of the fubject is to be diftilled, it is cuftomary to continue the operation for feveral days fucceffively; only unluting the head occafionally, to put in frefh materials.

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When only a fmall quantity of fpirit or falt is wanted, a common iron pot, fuch as is ufually fixed in fand furnaces, may be employed; an iron head being fitted to it. The receiver ought to be large, and a glafs, or rather tin adopter, inferted betwixt it and the pipe of the head.

The diffilling veffel being charged with pieces of the horn, a moderate fire is applied, which is flowly increased, and raised at length almost to the utmost degree. At first, a phlegmatic liquor arifes; the quantity of which will be lefs or greater; according as the horns were more or lefs dry : this is fucceeded by the falt and oil. The falt at first diffolves, as it comes over, in the phlegm, and thus forms what is called fpirit. When the phlegm is faturated, the remainder of the falt concretes in a folid form to the fides of the recipient. If it be required to have the whole of the falt folid and undiffolved, the phlegm fhould be removed as foon as the falt begins to amife, which may be known by the appearance of white fumes : and, that this may be done the more commodioufly, the receiver fhould be left unluted, till this first part of the process be finished. The white vapours which now arife, fometimes come with fuch vehemence, as to throw off or burft the receiver. To prevent this accident, it is convenient to have a small hole in the

luting; which may be occafionally ftopt with a wooden peg, or opened, as the operator fhall find proper. After the falt has all arifen, a thick, dark coloured oil comes over: the procefs is now to be difcontinued, and the vefiels, when grown cold, unluted.

All the liquid matters being poured out of the receiver, the falt which remains adhering to its fides is to be wafhed out with a little water, and added to the reft. It is convenient to let the whole fland for a few hours, that the oil may the better difengage itfelf from the liquor, fo as to be first feparated by a funnel, and afterwards more perfectly by filtration through wetted paper. The falt and fpirits are then to be further purified, as before directed.

The fpirit of hartfhorn met with in the fhops, is extremely precarious in point of strength ; the quantity of falt contained in it (on which its efficacy depends) varying according as the diffillation, in rectifying it, is continued for a longer or fhorter time. If, after the volatile falt has arisen, so much of the phlegm or watery part be driven over after it, as is just fufficient to diffolve it, the fpirit will be fully faturated, and as ftrong as it can be made. If the process be not at this instant flopt, the phlegm, continuing to arife, must render the spirit continually weaker and weaker. The diffillation therefore ought to be difcontinued at this period, or rather whilft fome of the falt ftill remains undiffolved. The spirit will thus prove always equal, and the buyer be furnished with a certain criterion of its ftrength. 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

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the fpirit is cafily judged of from its clearnefs and grateful odour.

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VOLATILE alkaline falts, and their folutions called fpirits, agree, in many respects, with fixt alkalies and their folutions or leys; as in changing the colour of blue flowers to a green ; effervefcing with and neutralifing acids; liquefying the animal juices, and corroding the fleshy parts, fo as, when applied to the fkin, and prevented from exhaling by a proper covering, to act as cauffics ; and diffolving oils, and fulphur, though lefs readily than the fixed alkalies, on account, probably, of their not being able to bear any confiderable heat, by which their activity might be promoted. Their principal difference from the other alkalies feems to confift in their volatility. They exhale or emit pungent vapours, in the coldeft flate of the atmosphere ; and by their flimulating fmell they prove ferviceable in languors and faintings. Taken internally, they difcover a greater colliquating as well as flimulating 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 likewife more disposed to operate by perspiration, and to act on the nervous fystem. They are particularly ufeful in lethargic cafes ; in hysterical and hypochondriacal diforders, and in the languors, headachs, inflations of the ftomach, flatulent colics, and other fymptoms which attend them. They are generally found more ferviceable to aged perfons, and in phlegmatic habits, than in the opposite circumstances. In some fevers, particularly those of the low kind, accompanied with a cough, hoarfenefs, redundance of phlegm, and fizinels of the blood, they are of

great utility ; liquefying the vifcid juices, raifing the vis vitæ, and exciting a falutary diaphorefis; but in putrid fevers, scurvies, and wherever the mafs of blood be thin and acrimonious, they do harm. As they are more powerful than the fixt falts, in liquefying fizy blood and tenacious humours; fo they prove more hurtful, where the fluids are already in a colliquated ftate. In vernal intermittents, particularly those of the flow kind, and where the blood is denfe or fizy, they are often the most efficacious remedy. Mr. Biffet obferves, in his Effay on the medical conftitution of Great Britain, that, though many cafes occur which will yield to no other medicine than the bark, he has met with many that were only fupprefied from time to time by the bark, but were completely cured by alkaline fpirits : that thefe fpirits will often carry off vernal intermittents, without any previous evacuation; but that they are generally more effectual, if a purge be premifed ; and in plethoric or inflammatory cafes, or where the fever perfonates a remittent, venefection.

These falts 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 faturated solution, are reckoned to contain about a grain of the falt. In intermittents, fifteen or twenty drops of the spirit are given in a tea-cup full of cold spring water, and repeated five or fix times in each intermission.

THE volatile falts and fpirits prepared from different animal fubflances, have been fuppofed capable of producing different effects upon

Volatile alkaline Salts.

upon the human body, and to receive specific virtues from the fubject. The falt of vipers has been efteemed particularly ferviceable in the diforders occasioned by the bite of that animal; and a falt drawn from the human fcull, in difeases of the head. But modern practice acknowledges no fuch different effects from these preparations, and chemical experiments have fhewn their identity. There is indeed, when not fufficiently purified, a very perceptible difference in the imell, tafte, degree of pungency, and volatility of these falts; and in this flate their medicinal virtues vary confiderably enough to deferve notice : but this difference they have in common, according as they are more or lefs loaded with oil, not as they are produced from this or that animal substance. As first diftilled, they may be looked upon as a kind of volatile foap, 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 diffillations, and fuch other operations as difengage the oil from the falt; for, by these means, they lose their faponaceous quality, and acquiring greater degrees of acrimony, become medicines of a different clafs. These preparations, therefore, do not differ near fo much from one another, as they do from themselves in different flates of purity. To which may be added, that, when we confider them as loaded with oil. the virtues of a diffilled animal oil itfelf are likewife to be brought-into the account.

Chap. 8.

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 fufficient to raife a copious fweat. By repeated rectifications they lofe their offenfiveness, and at the fame time become mild in their medicinal operation. The rectified oils may be given to the quantity of twenty or thirty drops, and are faid. to be anodyne and antifpafmodic, to procure a calm fleep and gentle fweat, without heating or exagitating the body. It is obvious, therefore, that the falts and fpirits 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 falts and fpirits, 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 feparating the oil, it renders them fimilar to the pure falt and spirit of fal ammoniac. which are procurable at an eafier rate. But this is by no means the cafe. The intention is not to purify them wholly from the oil, but to separate the groffer part, and to fubtilize the reft, fo as to bring it towards the fame ftate as when the oil is rectified by itfelf. I have repeated the rectification of spirit of hartfhorn twenty times fucceflively, 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 falts and fpirits alfo, however carefully rectified, fuffer, in length of time, the fame change, refuming their original brown colour and ill fmell; F f a proof

a proof that the rectification is far from having diverted them of oil.

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SPIRITUS, SAL, et OLEUM FULIGINIS: Spirit, falt, and oil of foot.

Diftil foot after the fame manner as directed before for hartfhorn : but here more labour is required to render the fpirit and falt pure.

THE volatile falt and fpirit of foot are, when fufficiently purified, not different in quality from those of animal fubftances; though fome have preferred them in nervous complaints, particularly in epileptic cafes.

SPIRITUS et SAL VOLATILIS SALIS AMMONIACI. The volatile falt and fpirit of fal ammoniac. Lond.

Take a pound and a half of any fixt alkaline falt, a pound of fal ammoniac, and four pints of water. Diftil off, with a gentle heat, two pints of spirit.

The volatile falt is made from a pound of fal ammoniac mixed with two pounds of pure chalk, and fet to fublime in a retort, with a ftrong fire.

Edinb.

Take equal parts of fal ammoniac and falt of tartar : grind them feparately to powder, then mix, and put them into a glafs retort, pouring on gradually as much water as will diffolve the falts. Diftil, with a gradual fire, in a fand-bath : the falt rifes firft, and concretes in the receiver. If the falt be wanted in a dry form, remove the receiver, before any water come over. If a fpirit be wanted, continue the diffillation, till fo much water have arifen as

is fufficient to diffolve the falt, taking care to protract it no longer.

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SAL ammoniac is a neutral falt, 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 fet at liberty.

The fixt alkali begins to act upon the fal ammoniac, and extricates a pungent urinous odour, as foon as they are mixed. Hence it is most convenient not to mix them till put into the distilling veffel : the two falts may be disfolved feparately in water, the folutions poured into a retort, and a receiver immediately fitted on. An equal weight of the fixt falt is fully, perhaps more than, fufficient, to extricate all the volatile.

Chalk does not begin to act upon the fal ammoniac, till a confiderable 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 furface of the mixture may be covered with a little more powdered chalk, to preyent fuch particles of the fal ammoniac, as may happen to lie uppermoft, from fubliming unchanged. Though the fire must here be much greater than when fixt alkaline falt is used, it must not be too flrong, nor too fuddenly raifed; for, if it be a part of the chalk (though of itfelf not capable of being elevated by any degree of heat) it will be carried up along with the volatile falt. M. du Hamel experienced the justnefs of this observation : he relates, in the Memoirs of the French academy of sciences for the year 1735. that he frequently found his volatile falt, when a very strong fire was made use of in the fublimation, amount to more, fometimes one half more,

Volatile alkaline Salts.

more, than the weight of the crude fal ammoniac employed; and that, though it be certain that not threefourths of this concrete are pure volatile falt, the fixt earthy matter, thus once volatilized by the alkali, arofe along with it again upon the gentleft refublimation, diffolved with it in water, and exhaled with it in the air.

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When all the falt has fublimed, and the receiver grown cool, it may be taken off, and luted to another retort charged with frefh materials. This process may be repeated, till the recipient appear lined with volatile falt to a confiderable thickness. The vessel must then be broken in order to get out the falt.

The volatile falt and fpirit of fal ammoniac are the pureft of all the medicines of this kind. They are fomewhat more acrimonious than those produced directly from animal fubitances, which always contain a portion of the oil of the fubject, and receive thence fome degree of a faponaceous quality. These last may be reduced to the fame degree of purity, by combining them with acids into ammoniacal falts ; and afterwards recovering the volatile alkali from these compounds by the proceffes before directed.

The matter which remains in the retort, after the distillation of the fpirit, and fublimation of the talt, of fal ammoniac, is found to confift of marine acid united with the fixt alkali or chalk employed. When fixt alkaline falt has been ufed as the intermedium, the refiduum, or caput mortuum, as it is called, yields, on folution and crystallization, a falt exactly fimilar to the spiritus falis marini coagulatus hereafter defcribed ; and hence we may judge of the extraordinary virtues formerly attributed to this falt, under the names of fal antibyftericum, antihypothondriacum, febrifugum, digestivum sylvii, &c.

The caput mortuum of the volatile falt, where chalk is employed as an intermedium, exposed to a moift air, runs into a pungent liquor, which proves nearly the fame with a folution of chalk made directly in the marine acid. It is called by fome, oleum tretæ. oil of chalk. If calcined thells or other animal limes be mingled with fal ammoniac, a mais will be obtained, which likewife runs in the air, and forms a liquor of the fame kind. This liquor feems to be the fecret of fome pretenders to a difiolvent of the calculus.

SPIRITUS VOLATILIS CAUSTI-CUS.

Volatile caustic spirit.

Take of fal ammoniac, one pound; Quicklime, a pound and a half; Water, four pints.

Quench the lime in the water; and, having put this mixture into a retort, add to it the powdered falt. Immediately adapt a recipient, and with a very gentle heat draw off two pints.

THIS fpirit is commonly called, from the intermedium, spirit of fal ammoniac with quicklime. The effect of the quicklime on the fal ammoniac, is very different from that of the chalk and fixt alkali in the foregoing process. Immediately on mixture, a very penetrating vapour exhales; and, in diffillation, the whole of the volatile fait arifes in a liquid form ; no part of it appearing in a concrete state, how gently foever the liquor be redistilled. This fpirit is far more pungent than the other, both in fmell and taffe ; and, like fixt alkalies rendered cauftic by the fame intermedium, it raifes no effervefcence on the admixture of acids.

Ff2

This

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430 Pharmaceutical This fpirit is held too acrimonious for internal ufe, and has therefore been chiefly employed for fmelling to in faintings, &c. though, when properly diluted, it may be given inwardly with fafety. It is an excellent menftruum for fome vegetable fubftances, as Peruvian bark, from which the other fpirit extracts little.

Some have mixed a quantity of this with the officinal (pirits both of fal ammoniac and of hartfhorn : which thus become more pungent, fo as to bear an addition of a confiderable quantity of water, without any danger of difcovery from the tafte or fmell. This abufe would be prevented, if what has been formerly laid down as a mark of the ftrength of thefe fpirits (fome of the volatile falt remaining undiffolved in them) were complied with. It may be detected by adding to a little of the fufpected fpirit about

one-fourth its quantity or more of rectified fpirit of wine; which, if the volatile fpirit be genuine, will precipitate a part of its volatile falt, but occafions no visible feparation or change in the caustic fpirit, or in those which are fophisticated with it.

Others have fubfituted for the fpirit of fal ammoniac, a folution of crude fal ammoniac and fixt alkaline falt mixed together. This mixture deposits a faline matter on the addition of fpirit of wine, like the genuine spirit ; from which however it may be diffinguished, as the falt, thus separated, is not a volatile alkaline, but a fixt neutral falt. The abufe may be more readily detected by a drop or two of folution of filver made in aqua-fortis; which will produce no change in the appearance of the true fpirit, but will render the counterfeit turbid and milky.

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Combination of Alkalies with Oils and inflammable Spirits.

1.

SAPO AMYGDALINUS. Almond foap. Lond.

TAKE any quantity of fresh-drawn oil of almonds, and thrice its quantity by measure of the foregoing foap leys. Digeft them together in fuch a heat, that they may but just boil or fimmer, and in a few hours they will unite : after which, the liquor in boiling will foon become ropy, and in good measure transparent : a little of it fuffered to cool, will appear like jelly. When this happens, throw in by little and little fome common falt, till the boiling liquor lofe its ropinefs; and continue the section, till, on receiving fome drops on a tile, the foap is found to coagulate, and the water freely feparates from it. The fire being then removed, the foap will gradually rife to the furface 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 foap, and fet it by till fufficiently dried.

After the fame manner, a foap may likewife be made with oil olive; but the pureft oil muft be ufed, that the foap may be as little ungrateful as possible either to the palate or fromach.

THIS process is fo fully described, as to render any further directions unnecessary.

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unneceffary. The general virtues of foaps have been already delivered. That prepared after this manner is not different in quality from the hard fort before mentioned. The firength of foaps varies confiderably with their age, and the manner in which they have been kept. Fresh foap, though apparently of a good confiftence, loles, upon being thoroughly dried, near one-third of its weight ; the whole of which lofs is mere water; a circumftance to be particularly attended to, in the exhibition of this medicine.

Soap is decompounded (or the alkaline falt and oil, of which it is composed, separated from one another) by all acids; and hence it does not lather with waters that contain any acid unneutralized. In pure water, it diffolves 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 foap rifes to the furface, its alkali uniting with the acid, and forming faline concretions at the bottom. The oil, carefully collected, proves remarkably purer than when it first entered the compolition of the loap; and, like the effential oils of vegetables, difiolves in fpirit of wine : it may pollibly be applicable to fome ufeful purpofes, as it feems to be freed from its groffer matter, extremely pure, and is void of the pungency of effential oils.

It follows from the above experiments, that no kind of acid ought to be used along with foap; all acids abforbing the alkaline falt of the foap from the oil. Neutral falts have not this effect, their acid being already fatiated with an alkali : but falts composed of an acid and an earthy or metallic body, as the purging bitter falt, vitriol, &c. decompound the foap equally with pure acids; acids quitting an earth or metal, to unite with an alkali brought in contact with them.

Soap diffolves likewife, but in fmall quantity, in pure fpirit of wine : it is obfervable of this folution, that, if exposed to a degree of cold, a very little greater than that in which water begins to freeze, it congeals into a folid pellucid mass.

The menftruum which diffolves foap most perfectly, and in greatest quantity, is a pure proof fpirit. The common proof fpirits have a flight acidity, not indeed diffinguishable by the tafte or by the. ufual ways of trial, but fufficient to give fomewhat of a milky hue to folutions of foap made in them. This may be corrected by the addition of a little alkaline falt. Mr. Geoffroy observes, in the Memoirs of the French academy, that twenty-eight parts of good proof fpirit, with the addition of one part of falt of kali, will diffolve ten parts of good hard foap into a periectly limpid liquor. The common alkaline falts, as that of tartar, anfwer equally in this respect with that of kali ; but the latter, being much lefs acrimonious, feems preferable, where the folution is intended for medicinal use.

This facility of the decompolition of foap by acids, renders it an ufeful criterion of low degrees, of unneutralized acidity in waters, &c. The limpid folution' of foap in proof fpirit, dropt into any liquor that contains either a pure acid, or a falt composed of an acid, with an earth or metal, renders the liquor immediately milky, more or lefs, in proportion to the quantities with which it is impregnated.

SAPO PURIFICATUS. Purified Joap.

Slice one pound of dry, hard, Ge-Ff 3 noa,

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noa, Alicant, or any other oilfoap, into a clean pewter veffel, and pour upon it two gallons of rectified spirit of wine. Place the veffel in a water-bath, and apply fuch a degree of heat as may make the fpirit boil, when it will foon difiolve the foap. Let the veffel ftand clofe covered, in a warm place, till the liquor grow perfectly clear; if any oily matter fwim upon the furface, carefully fcum it off. Then decant the limpid liquor from the feces, and diffil off from it all the fpirit that will arife in the heat of a water-bath. Expose the remainder to a dry air for a few days, and it will become a white, opake, and fomewhat friable mafs. Pract. chem.

SOAP thus purified has little or no fmell, and proves, upon examination, not in any degree acrimonious, but quite mild and foft, and confequently well fitted for medicinal purpofes.

SAPO TARTAREUS. Scap of tartar.

Take any quantity of falt of tartar, very well calcined, and reduced into powder whilft hot. Immediately pour upon it, in a broad glass veffel, twice its quantity of oil of turpentine : and let them ftand together in a cellar for fome weeks, till the oil has penetrated the falt : then add more oil by degrees, till the falt have abforbed thrice its own quantity, and both appear united into a foap; which, if the matter be every day ftirred, will happen in a month or two. The effect fucceeds fooner, if the containing veffel be fixed to the fail 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 circumitance which our chemists, and the pharmaceutical writers, have in general overlooked ; and which many have fuppofed to be a means even of preventing fuccels. If the oil be poured upon the pulverized falt whilft very hot, they will immediately unite, with a hiffing noife; and, by rubbing for a few minutes in a hot mortar, form a truly faponaceous mais, the medicine here intended. If the falt be fuffered to grow cold before the addition of the oil, it is fcarce poffible to unite them, as the committee of the London college obferves, without the addition of a little water, which in this cafe promotes the effect. The regular, uniform motion above recommended, does not aniwer io well as agitation or rubbing in a mortar; the different degrees of centrifugal force which the oil and falt acquire when moved circularly, tending to keep them apart. The falt does not retain fo much of the oil as might be expected ; far the greateft part of this volatile fluid being diffipated in the process. Mr. Baume relates, in his Manuel as chemie, that experiments have convinced him the foap confitts of only the refinous part of the oil united with the alkali; that the more fluid and well rectified the oil is, the lefs foap is obtained ; and that, by adding a little turpentine in substance to the mixture, the preparation is confiderably accelerated.

This medicine has been greatly celebrated as a diuretic, in nephritic complaints, and as a corrector of certain vegetable fubfiances, particularly opium; it was for fome time a great fecret in the hands of

its

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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 role water, three quarters of a pint;

- Oil olive, one quarter of a pint; Ley of tartar, half an ounce by meafure.
- Grind the ley of tartar and the oil together, until they unite; then gradually add the rofe water.

THIS is defigned 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 SAPONA-CEUM.

Saponaceous liniment.

Take of

- Spirit of rolemary, one pint ; Hard Spanish soap, three ounces; Camphor, one ounce.
- Digest the foap in the spirit of rosemary, until it is diffolved ; then add the camphor.

BALSAMUM SAPONACEUM, vulgo OPPODELDOCH.

Saponaceous balfam, commonly called opodeldoc.

Edinb. Take of

Spanish foap, ten ounces ;

Camphor, two ounces;

Effential oil of rolemary,

- Effential oil of origanum, each half an ounce;
- Rectified spirit of wine, four pints.
- Digest the foap in the spirit of wine, with a gentle heat, till it be diffolved; 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 folid one of a plaster.

BALSAMUM ANODYNUM, vulgo BATEANUM.

Anodyne balfam, commonly called Bates's balfam. Edinb.

Take of

White foap, two ounces ;

Crude opium, half an ounce ;

Camphor, fix drams;

- Effential oil of rofemary, one dram;
- Rectified spirit of wine, eighteen ounces.
- Digeft the fpirit with the foap and opium, in a gentle fand-heat, for three days: then ftrain the liquor, and add to it the camphor and effential oil.

THIS composition is greatly commended for allaying pains, and is faid to have been fometimes used with benefit even in the gout; a cloth dipt in it being laid on the part. It is fometimes likewife directed to be taken inwardly, in the fame diforder, as also in nervous colics, jaundices, &c. from twenty Ff4

to fifty drops or more; though furely, in gouty cafes, the use of opiate medicines requires great caution. One grain of opium is contained in about ninety drops of the balfam.

LINIMENTUM VOLATILE. Volatile liniment. Lond.

Take of

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Oil of almonds, one ounce by measure;

Spirit of fal ammoniac, two drams by weight.

Stir them together in a widemouthed phial, until they perfectly unite.

EPITHEMA VOLATILE. Volatile epithem. Lond.

Take of

Common turpentine,

Spirit of fal ammoniac, each equal weights.

Stir the turpentine in a mortar, gradually dropping in the fpirit, until they unite into a white mafs.

EMPLASTRUM VOLATILE. Volatile plaster. Edinb.

Take of

Venice turpentine,

Spirit of Sal ammoniac, each one ounce.

Pour the spirit gradually into the turpentine, flirring them diligently together in a mortar.

THE three foregoing are very acrid, ftimulating compositions, and are principally applied against rheumatic and ischiadic pains. The epithem or plaster was formerly made of a stiffer consistence, and more adhesive, by an addition of tacamahaca; which is here judi-

cioufly omitted, fince it prevented the application from being fo expeditioufly got off from the part, as its great irritating power made fometimes necefiary.

SPIRITUS SALIS AMMONI-ACI DULCIS. Dulcified spirit of fal ammoniac. Lond.

Take half a pound of any fixt alkaline falt, four ounces of fal ammoniac, and three pints of proof fpirit of wine. Diftil off, with a gentle heat, a pint and a half.

THIS spirit has come much into efteem, both as a medicine and a menstruum. It is a folution of volatile falt in rectified spirit of wine; for though proof spirit be made use of, its phlegmatic part does not arife in the diffillation, and ferves only to facilitate the action of the pure fpirit upon the ammoniacal falt, Rectified spirit of wine does not diffolve volatile alkaline falts by fimple mixture : on the contrary, it precipitates them, as has been already observed, when they are previoufly diffolved in water : but by the prefent process, a confiderable proportion of the volatile alkali is combined with the fpirit. It might perhaps, for some purposes, be more advisable, to use in this intention the volatile fpirit made with quicklime: for this may be mixed at once with rectified fpirit of wine, in any proportions, without the least danger of any separation of the volatile alkali.

SPIRITUS VOLATILIS FŒTIDUS. The volatile fetid spirit. Lond.

Take of

Any fixt alkaline falt, a pound and a half;

Sal ammoniac, one pound ; Afafœtida,

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Afafœtida, four ounces; Proof fpirit of wine, fix pints. Draw off, with a gentle heat, five pints.

THIS fpirit is defigned as an antihyfteric, and is undoubtedly a very elegant one. Volatile fpirits, impregnated for thefe purpôfes with different fetids, have been ufually kept in the fhops. The ingredient here made choice of, is the best calculated of any for general use, and equivalent in virtue to them all. The fpirit is pale when newly diftilled, but acquires a confiderable tinge in keeping.

SPIRITUS VOLATILIS AROMATICUS.

Volatile aromatic Spirit. Lond.

Take of

Effential oil of nutmegs,

Effence of lemons, each two drams;

Effential oil of cloves, half a dram;

Dulcified spirit of fal ammoniac, one quart.

Distil them with a very gentle fire.

SPIRITUS VOLATILIS OLEO-SUS, vulgo SALINUS AROMATICUS.

Volatile oily Spirit, commonly called Saline aromatic Spirit.

Edinb.

Take of Dulcified spirit of fal ammoniac, eight ounces;

Effential oil of rofemary, one dram and an half;

Effence of lemon-peel, one dram. Mix them together, that the oils may be diffolved.

VOLATILE falts, thus united with aromatics, are not only more

agreeable in flavour, but likewife more acceptable to the flomach, and lefs acrimonious, than in their pureflate. Both the foregoing compositions turn out excellent ones, provided the oils be good, and the diffillation skilfully performed. The dose is from five or fix drops to fixty or more.

Medicines of this kind might be prepared extemporaneoufly, by dropping any proper effential oil into the dulcified fpirit of fal ammoniac, which will readily diffolve the oil without the affiftance of diftillation, as in the following compolitions; in which Jamaica pepper is chosen for the aromatic material, as being a cheap and fufficiently elegant one, and very well adapted to general use.

SPIRITUS VOLATILIS OLEOSUS. EXTEMPORANEUS.

Extemporaneous volatile oily spirit.

Take of

Dulcified spirit of fal ammoniac, one pint ;

Essential oil of Jamaica pepper, two drams.

Mix them together, that the oil may be diffolved.

Or,

Take of

Spirit of wine, highly rectified, Spirit of fal ammoniac, each half a pint;

Effential oil of Jamaica pepper, two drams.

Diffolve the oil in the fpirit of wine, and mix this folution with the fpirit of fal ammoniac : a white coagulum will be immediately formed, which, in a warm place, foon refolves into a transparent liquor, depositing a quantity of a volatile oily falt.

By either of these methods, a volatile oily spirit may be made occasionally, and adapted, at pleasure, to particular purposes, by chusing an

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an effential oil proper for the intention. Thus in hysterical diforders, where the uterine purgations are deficient, a preparation of this kind made with the oils of rue, favin, penny-royal, or fimilar plants, proves an uleful remedy: for weaknefs of the ftomach, oil of mint may be taken ; where a cephalic is required, oil of majoram, lavender, or rofemary; in coldnefs and faintings, oil of cinnamon ; in cafes of flatulencies, the oils of anifeeds and fweet fennel feeds. Thefe lait greatly cover the pungency of the volatile spirit, and render it fupportable to the palate. The fpirits thus made by fimple mixture, are no wife inferior, in medicinal efficacy, to those prepared by diftillation, though the tinge, which they receive from the oil, may render them to fome perfons leis fightly.

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SPIRITIS VOLATILIS SUCCINA-

TUS.

Succinated volatile spirit. Take of

- Rectified oil of amber, from twelve to fixty drops;
- Rectified spirit of wine, one ounce;
- Volatile spirit of fal ammoniac prepared with quicklime, twelve ounces.
- Mix them together, and distil in a retort with a moderate fire.

THIS composition is extremely penetrating, and has come into effeem, particularly for fmelling to in lowneffes and faintings, under the name of *Eau de luce*. It has been hitherto brought from France. It is not quite limpid, for the oil of amber diffolves only imperfectly in the fpirit. If the volatile fpirit be not exceedingly firong, fcarcely any of the oil will be imbibed.

SECT. IV.

Acid Spirits.

SPIRITUS VITRIOLI tenuis, et fortis (oleum dictus E.) atque COLCOTHAR,

Weak Spirit, and Strong Spirit or oil, of vitriol, and colcothar. Lond.

ET calcined vitriol be diffilled in earthen veffels, with a reverberatory fire, for three days without intermiffion. What remains in the veffels is called colcothar of vitriol.

Put the diffilled liquor into a glafs retort, and place it in a fand furnace. The weak fpirit will come over, the firong (improperly called oil of vitriol) remaining behind.

Edinb.

Take any quantity of green vitriol,

calcined to a flight yellow colour, and reduced into powder. Fill therewith one half of an earthen retort, place it in a reverberatory furnace, fit on a very large receiver, and lute well the junctures. Then proceed to diftillation, gradually increasing the fire to the utmost degree, which is to be kept up as long as any vapours arife.

The phlegm, fpirit, and oil improperly fo called, may be feparated from each other, by committing the whole to diffillation in a retort placed in a fand furnace. The The phlegin (which will be in little quantity if the vitriol have been duly calcined) will arife with a fmall degree of heat, and the fpirit with a ftronger, leaving the oil behind.

THE vitriol fhould be calcined till it acquire a yellowish colour inclining to red. If calcined only to whitenefs, as has been commonly directed, it will change in the diftilling vesiels into a hard compact mais, from which the due quantity of acid can never be obtained, though urged with the most vehement fire for a great length of time. A retort is an inconvenient instrument for performing the diffillation. It requires an extraordinary expence of fuel and time to elevate the ponderous acid of vitriol, fo high as the figure of this veffel demands. The veffels utually employed are fo contrived, that the vapour palles out laterally, without any aicent; thefe are called long-necks : the junctures of them with the receivers may be luted with Windfor loam, moiftened with a folution of any fixt alkaline falt, and then beaten up with a small quantity of horfe dung. If the fire be fufficiently ftrong, the diffillation will be finished in much less than three days, though vapours will not ceafe to appear long after this period. When the procefs has been continued for a certain time, which Boerhaave limits to eighteen hours, the fpirit that arifes will not pay the expence. Regard however must be had herein to the fize of the furnace, the quantity of vitriol in each diffilling veffel, and the degree of heat employed. Those who make this commodity in quantity, continue the operation no longer than till the fumes which iffue from the long-necks, at the greatest diftance from the fire, begin to leffen,

and the recipients grow fomewhat clear.

This procefs is not practicable to advantage without a very large apparatus. Hence it is become a diffinct branch of the chemical bufinefs; and confiderable works have been erected for it, in fuch parts of the kingdom as fuel can be most easily procured in ; some of the furnaces are io large as to contain a hundred earthen long-necks. or diffilling vefiels, at once. The metallic part of the vitrioi, or colcothar, which remains after the diffillation, is ground down in mills, edulcorated with water, and employed as a pigment. In medical virtue, it is not different from fome of the calces of iron, to be fpoken of hereafter.

The acid fpirit, as it arifes in the first distillation, appears of a dark or blackish colour, and contains a confiderable portion of phlegm. In the fecond diffillation, the phlegmatic parts arife first, together with the lighter acid, which are kept apart, under the name of weak ipirit. At the lame time, the remaining ftrong spirit, or oil as it is called, lofes its black colour, and becomes clear; and this is the ufual mark for difcontinuing the distillation. Methods of further purifying this acid for the nicer ules, are described in Practical Chemistry.

The fpirit of vitriol is the moft ponderous of all the liquids we are acquainted with; and the moft powerful of the acids. If any other acid be united with a fixt alkaline falt or earth; upon the addition of the vitriolic, fuch acid will be diflodged, and arife on applying a moderate heat, leaving the vitriolic in pofferfion of the alkali; though without this addition, it would not yield to the moft vehement fire. Mixt with water,

water, it inftantly conceives great heat, infomuch that glafs veffels are apt to crack from the mixture, unlefs it be very flowly performed. Exposed to the air, it imbibes moisture, and soon acquires a notable increase of weight. In medicine, it is employed chiefly as fubservient to other preparations. It is likewife not unfrequently mixed with juleps and the like, in fuch quantity as will be fufficient to give the liquor an agreeable tartness in the intentions of a cooling antifeptic, reffrigent, and ftomachic.

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SPIRITUS SULPHURIS per campanam.

Spirit (commonly called Oil) of fulphur by the bell.

Lond.

Let the fulphur be fet on fire, under a glafs veffel fitted for this ufe, called a bell : and let the acid fpirit, which trickles down from the fides of the bell, be received in a glafs difh placed underneath.

Edinb.

Take any quantity of fulphur; melt it in an earthen difh, and dip into it twifted strips of linen, fo as to form a fulphurated match. Fasten this in the mouth of a vial, which is to be fet in the bottom of a glafs or earthen difh, in a moist place screened from the wind. Then kindle the fulphur with a red hot iron ; and hang over it a glais bell, at fuch a diffance that the flame may not touch it. The vapour of the fulphur will condense in the bell by the cold, and drop down from its fides, like water, into the veffel placed underneath.

THE glafs usually employed for this purpose by the chemists differs confiderably from the bell shape. Its belly is spherical, and has a rim

at the bottom turned inwards a little; the upper part ends in a long open ftem : a large receiver, with a hole cut in its bottom, and a long tube inferted into its mouth, would answer as well. If the fulphur happen to burn dull, the glafs is taken off, and the matter flirred with an iron wire, or clean tobacco-pipe : as it confumes, fresh quantities are supplied, till all the fulphur defigned for this use be burnt. The condensation of the fumes depends in great measure upon their imbibing aqueous moisture: hence in wet weather, or a damp place, the operation fucceeds beft. In dry weather, it is cuftomary to moisten the bell, by fuspending it for a little time over the fleam of boiling water.

This procefs is fufficiently troublefome, and the yield of acid fpirit obtained by it extremely fmall; greateft part of the fumes efcaping into the air, partly at the bottom, and partly through the upper aperture of the bell.

Several contrivances have been made for preventing these inconveniences. One of the best commonly known, is that defcribed in vol. 5. art. 14. of the Edinburgh effays. Instead of the bell, a large retort is employed, having a tubulated receiver (with the pipe turned uppermost) adapted to its neck. Initead of the large aperture in the bottom of the bell, a fmall one is made in the bottom of the retort : and thus by diminishing the aperture, enlarging the capacity of the yeffels, and lengthening the paffage of the fume, a confiderably larger quantity of the fumes are detained than in the common inftruments.

This apparatus may be greatly improved, by cutting the hole in the fide of the retort, and pouring into the bottom an ounce or two of warm

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warm water, in the middle of which is placed a shallow stone cup containing the fulphur. The heat of the burning fulphur is foon communicated to the water, fo as to keep it continually rifing in fteam. With this aqueous vapour, the fumes of the brimitone are effectually blended as they afcend; and detained in confiderable quantity, in a much lefs proportion of phlegm than when the common methods are purfued : for here, the bufinefs of rectification or dephlegmation is carrying on, at the fame time that the acid is collecting.

This affair is capable of being much further improved. In the common method by the bell, in the most favourable circumstances, fcarce above two drams of acid spirit are obtained from fixteen ounces of fulphur: by the fecond apparatus, an ounce may be obtained from the fame quantity; and by the other, about two ounces. It appears however, from experiments related by Stahl and others, that out of fixteen ounces of fulphur, at least fifteen ounces are pure acid, of fuch ftrength as to require being diluted with above an equal weight of water, to reduce it to the pitch of common spirit of fulphur. It follows, therefore, that if we could contrive a method of burning fulphur, fo as to preferve all the fumes, we might obtain from it much more than its own weight, of an acid of the ordinary ftrength.

The acid obtained from fulphur is in all refpects fimilar to that of vitriol. The acid of fulphur, united with iron or copper, forms a true vitriol; and the acid of vitriol, combined with inflammable matters, produces fulphur, not diftinguifhable from pure common brimftone. The identity of thefe acids is well known to fome parti-

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cular perfons, who fupply us with almost all that is now fold under the name of oil of vitriol, prepared from the fumes of burning fulphur. The method by which they obtain the acid fo plentifully, and at fo cheap a rate, from this concrete, which has hitherto yielded it fo fparingly, differs from the proceffes above described. Instead of an open bell, or a retort with the mouth open, they use, for burning the fulphur, very large fpherical glafs veffels blown on purpofe. of the fize of a hoghead or more. with only one aperture, through which the fulphur is introduced. and 'which is afterwards immediately closed, till the fumes have fubfided and incorporated with the vapour of the warm water placed in the lower part of the veffel.

AQUA SULPHURATA. Sulphurated water, ufually called gas fulphuris. Lond.

Take a quart of water, and half a pound of fulphur. Let part of the fulphur be fet on fire in an iron ladle, and fufpended over the water in a clofe veffel. As foon as the fumes fubfide, fome more of the fulphur is to be fired in the fame manner; and this repeated till the whole quantity be burnt.

A convenient way of managing this process is, to put the water into a glass receiver, placed on its fide; and to have the ladle, containing the burned fulphur, fixed to a plug, made to go freely into the neck of the vessel. The use of the plug is to keep the ladle from dipping into the water. The fumes which issue betwixt it and the glass may be confined by a cloth thrown round the neck.

The

The water is impregnated, in this process, with a fubtile volatile acid, different in many respects from the foregoing spirits of fulphur and of vitriol. The acid may likewife be obtained in the fame volatile state, both from vitriol and fulphur, without water. If the retort or long neck, during the diffillation of oil of vitriol, happen to crack in the fire, all the acid that rifes afterwards is found to be thus volatilized. If cloths, moistened with a folution of fixt alkaline falt, be fuspended over burning brimftone, the acid fumes will be imbibed by the alkali, and form with it a neutral falt. If this neutral falt be rubbed off from the cloths, and fome common oil of vitriol poured upon it, the volatile acid it had imbibed from the fulphur will be immediately extricated again, and may be collected by diffillation. The acid proves in all thefe cafes fo volatile, as to diffil in a heat fcarcely greater than that which the hand can fupport. It has a pungent fuffocating fmell, like that of the fumes of burning brimftone, but difcovers to the talte very little acidity or corrofivenefs. Exposed for fome time to the air, it loses these properties, and becomes a fixt acid, and corrolive, like common oil of vitriol.

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The aqua fulphurata is liable to great uncertainty in point of ftrength; partly on account of the water's being impregnated with a greater or lefs quantity of the fumes, according as the procefs is more or lefs fkilfully managed; and partly on account of the above change of the acid from a volatile to a fixt flate. When newly prepared, it is highly volatile and pungent, fmelling like burning brimftone, but in tafte rather bitterifh and auftere than acid: in keeping, the volatility and fmell are loft, and

the liquor (fooner or later, according as the air is more or lefs admitted to it) becomes in all refpects the fame as water acidulated with a little common oil of vitriol.

This preparation is faid to give relief in fits of the convultive afthma. It is taken to the quantity of a fpoonful or half an ounce, two or three times a day, in any fuitable vehicle.

SPIRITUS NITRI Glauberi. Glauber's spirit of nitre. Lond.

Take three pounds of nitre, and one pound of the ftrong fpirit, or oil of vitriol. Mix them cautioufly and gradually together, under a chimney; and then diffil, at first with a gentle, and afterwards with a ftronger heat.

Edinb.

Put two pounds of nitre into a glafs retort ; and add by degrees one pound of oil of vitriol diluted with an equal quantity of warm water. Diftil in a fand heat, gradually increafed, till the matter remains dry.

This fpirit is rectified by a fecond diffillation, with the heat of a water-bath, in a glafs cucurbit, with its head and receiver. The phlegm arifes, leaving the fpirit behind.

HERE the vitriolic acid expels that of the nitre, in red corrofive vapours, which begin to iffue immediately upon mixture, and which the operator ought cautioufly to avoid. A pound of oil of vitriol is fufficient to expel all the acid from about two pounds of nitre, not from more. Some direct equal parts of the two. The fpirit, in either cafe, is in quality the fame; the difference in this refpect affecting only the refiduum. When two parts

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parts of nitre are taken to one of oil of vitriol, the remaining alkaline balis of the nitre is completely faturated with the vitriolic acid, and the refult is a neutral falt, the fame with vitriolated tartar; as we shall see hereafter. If more nitre be used, a part of the nitre in substance will remain blended with this vitriolated falt: if lefs nitre, it cannot afford alkali enough to faturate the vitriolic acid, and the refiduum will be not a neutral falt, but a very acid one. In this last cafe there is one convenience; the acid falt being readily diffoluble in water, fo as to be got out without breaking the retort, which the others are not.

The acid of nitre is next in ftrength to the vitriolic, and diflodges all but that from alkaline falts or earths. It differs from all the other acids in deflagrating with inflammable matters. If a folution of any inflammable fubftance, as hartshorn, &c. in this acid be fet to evaporate ; as foon as the matter approaches to dryneis, a violent detonation enfues. The chief use of this acid is as a menftruum for certain minerals, and as the bafis of fome particular preparations; of which hereafter. It has been given likewife diluted with any convenient vehicle, as a diuretic, from ten to fifty drops.

SPIRITUS SALIS MARINI Glauberi. Glauber's fpirit of fea falt. Lond.

Take two pounds of fea falt, and the fame quantity of ftrong fpirit or oil of vitriol. Dilute the acid fpirit with a pint of water, and pour this mixture, by little and little, on the falt under a chimney; then diffil, at first with a gentle, and afterwards with a ftronger fire.

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Put into a glass retort two pounds of fea falt decrepitated (that is, dried over the fire till it ceafes to crackle), and pour thereon, by little and little, one pound of oil of vitriol diluted with an equal quantity of warm water. Place the retort in fand; and, with a fire gradually increased, distil to drynefs. This spirit is rectified by a fecond diffillation, in a glafs cucurbit, with a head and receiver adapted to it; by the heat of a water-bath the phlegm will arife, leaving the fpirit behind.

THE marine acid arifes, not in red fumes like the nitrous, but in white ones. The addition of water is more neceffary here than in the foregoing process. The marine vapours being fo volatile, as fcarce to condenfe without fome adventitious humidity; and hence the rectification, directed in the fecond procefs, does not fucceed fo well as that of the nitrous acid, a part of the marine spirit arising along with the phlegm. The oil of vitriol is most conveniently mixed with the water in an earthen or stone-ware vessel : for unless the mixture be made very flowly, it grows to hot as to endanger breaking a glafs one.

The fpirit of fea falt is the weakeft of the mineral acids, but ftronger than any of the vegetable. It requires a greater fire to diffil it than that of nitre, yet is more readily diffipated by the action of the air. It is ufed chiefly as a menftruum for the making of other preparations. Sometimes likewife it is given, properly diluted, as an antiphlogiftic, aperient, and diuretic, from ten to fixty or feventy drops.

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SPIRITUS SALIS. Spirit of Salt.

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Take a pound of fea falt thoroughly dried, and three pounds of powdered bricks. Mix, and put them into an earthen retort, of fuch a fize that these may fill only one half of it. Place the retort in a reverberatory furnace, adapt to it a large receiver, and lute well the junctures. Let the fire be applied at first very fparingly, and afterwards increafed by degrees, until all the fpirits be driven over in the form of clouds. When the veffels are grown cold, pour out the diffilled liquor into a glafs cucurbit, and gently abstract from it thephlegm, which will leave the fpirit pure.

INSTEAD of brickduft, fome have used bolar earths and clays. It has been fupposed, that these substances act by difcontinuing and dividing the particles of the falt, fo as to enable the fire to expel the fpirit. If this were true, glafs or fand would prove equally ferviceable, and the fame intermedium would answer as well. for a number of times as at first ; the reverse of which, experiments thew to be true. Brick-earth, and other fubstances of this kind, contain a fmall quantity of vitriolic acid, whofe known property it is to difengage the acid of fea falt, and which is the only part of them of use in this process. The quantity of spirit, therefore, obtained by thefe intermedia, is only in proportion to that of the acid contained in them, which is extremely fmall. This has occasioned fome to make use of vitriol, as containing a larger quantity of the vitriolic acid. But, though vitriol be in this refpect greatly preferable to brickduit, or the argillaceous earths; yet, in another, it is found lefs eligible. Its metallic part fo ftrongly adheres

to the marine acid; as to keep it down after it is feparated from its bafis, or elfe arifes along with it, and defiles the product. Thefe methods therefore of extracting the fpirit of falt have been for fome time laid afide; the foregoing, in which the pure vitriolic acid itfelf is ufed, being in all refpects more convenient and advantageous.

AQUA FORTIS.

Take of

Nitre, no a prett die

Green vitriol uncalcined, each three pounds;

The fame vitriol calcined, one pound and a half.

Mix them well together, and diftil with a very firong fire, as long as any red vapour arifes.

AQUA FORTIS SIMPLEX. Single aquafortis. Edinb.

Take two parts of vitriol calcined to whitenefs, and one part of powdered nitre. Mix them very well together, and fill therewith an earthen retort to two-thirds; then fit on a large receiver, and proceed to distillation; which is to be performed in the fame manner as directed for fpirit of falt.

THE vitriol here is not liable to the inconvenience mentioned in the foregoing remark; it only occations a greater heat to be neceffary than when the pure vitriolic acid is ufed, for the acid of the vitriol must be extricated before it can act on the nitre; the fire, however, must not be extremely firong, otherwife fome of the metallic parts of the vitriol will be forced over along with the nitrous acid. The direction of thoroughly mixing the ingredients ought to be well attended

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ed to, for if this be neglected, or but flightly performed, the due quantity of acid will not be obtained. The produce of these processes is a spirit of nitre containing as much more phlegm, or watery moisture, than Glauber's spirit, as the vitriol employed in its preparation does more than an equivalent quantity of oil of vitriol.

AQUA FORTIS DUPLEX. Double aquafortis. Edinb.

Take of

Green vitriol calcined to whiteneis.

Clay dried and powdered,

Powdered nitre, of each equal parts.

Mix them well together, and diftil in an earthen retort as above.

THIS process is an unartful one. The clay appears to be of very little use, though the contrivers of the process feem, from the reduction of the vitriol, to have laid confiderable strefs on it. All it can do is to hinder the melting of the falts. It would doubtlefs be better to omit the clay, and increase the quantity of the vitriol ; which, in order to make the aquafortis of the ftrength here intended, fhould undergo a further degree of calcination.

The great demand which there is in fundry bulineffes for aquafortis has occasioned the preparation of it to become a trade by itfelf. Hence larger and lefs expensive instruments than those mentioned before, have been contrived. The common diffilling veffel is a large iron pot, with an earthen, or ftoneware ftill-head, to which is adapted a large glais globe, or elfe a jar made of the fame kind of clay as the head. The workmen are not at the trouble either of drying the

vitriol, or pounding the nitre, but throw them both promifcuoufly into the pot, where the fire foon liquefies, and mixes them together. The aquafortis; prepared after this manner, is extremely impure, and utterly unfit for many purpoles, fuch in particular are the folution of mercury and of filver : the violence of the fire, employed in the operation, never fails to elevate fome of the metallic parts of the vitriol ; the nitre is used rough or unrefined, which containing a portion of fea falt, fends over fome of the marine along with the nitrous acid; nor are the ingredients free from bits of wood, or other vegetable matters, which, burning in the process, foul the spirit with an empyreumatic oil, giving it, at the fame time, an high colour. If therefore common aquafortis be employed in any medicinal preparation, it ought to be previoufly purified ; the most effectual method of doing which is the following.

AQUA FORTIS PURIFICATA. Purified aquafortis.

Drop into the aquafortis a drop or two of folution of filver. If it become milky or cloudy, drop in a little more of the folution, till a fresh addition occasions no further change; allowing proper intervals for the white matter to fettle, that the effect of a new addition may be the better perceived. Then pour the liquor into a glais retort, and diffil in a fand-heat to dryneis.

THE milkiness produced by the folution of filver is a certain mark of marine or vitriolic acid in the aquafortis; the filver abforbing those acids, and forming with them a concrete which the liquor is incapable of holding diffolved. If the aquafortis be not made at all cloudy Gg by

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by this folution, we may be certain of its having been previoufly free from the leaft admixture of those heterogeneous acids; and, when it ceafes to become milky from a fresh addition, we may be equally certain. that how much soever it might have contained of them at first, they are now perfectly separated.

The folution of filver is to be made in aquafortis already purified. Where this cannot be had, the little quantity generally fufficient for the prefent purpose, may be made in the common impure fort of aquafortis, which will be purified during the diffolution itfelf. Put a thin bit of filver into a little of the aquafortis, and fet the vial in a fand-heat. If the aquafortis be pure, numerous minute bubbles will iffue from the filver on all fides, and the metal will gradually diffolve without altering the transparency of the liquor. But, if the aquafortis contain marine or vitriolic acid, it will quickly become milky, those acids uniting with the filver, as in the above process, as faft as the nitrous acid difiolves it. As the white matter precipitates upon, and adheres to, the furface of the filver, fo as to impede the further action of the menftruum ; the liquor muft be filtered and treated in the fame manner with a bit of fresh filver. If any milkinefs ftill enfue, the operation muft be repeated with another piece of the metal, till all the foreign acids be feparated, and the filver is found to diffolve clear. Good aquafortis takes up about half its own weight of filver.

The filver may be recovered from the white fettlings, without any confiderable lofs, by the following method.

Let the matter be thoroughly dried, then mixed with a little potash, and the mixture made into a patter with oil. Put this patter into a crucible, furrounding it every where with a little more potath. Set the crucible in a proper furnace, and gradually raife the fire fo as to bring the whole into fufion. When the crucible is grown cold, a lump of fine filver will be found in the bottom.

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AQUA FORTIS COMPOSITA Compound aquafortis.

Take fixteen ounces of aquafortis, and one dram of fea falt. Diffil them to drynefs.

THIS is defigned as a menfruum for quickfilver, for the preparation of the red mercurial corrofive, or red precipitate, as it is called; which the marine acid in this compound liquor renders of a more fparkling appearance, and more beautiful to the eye, than when made with the nitrous acid alone.

AQUA REGIA. Edinb.

Put an ounce of powdered fal ammoniac into a large cucurbit, and add to it, by little and little at a time, four ounces of fpirit of nitre, or double aquafortis. Let them ftand together in a fandheat, till the falt be entirely diffolved.

THE glafs in which the mixture is made fhould be placed under a chimney (to carry up the offenfive vapour) and its orifice by no means flopt till the falt is perfectly diffolved, and the fumes ceafe to arife with impetuofity. These cautions are extremely necessary, if the process be conducted according to the former directions. But if the fal ammoniac, finely powdered, be gradually

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gradually added to the acid fpirit (which ought to be of a middle degree of ftrength between fingle aquafortis and ftrong fpirit of nitre) the folution will proceed without any inconvenience; and may be finished in a reasonable compass of time, provided the mixture be now and then ftirred—The only use of aqua regia and the aqua fortis, is as menstrua for certain mineral fubftances.

Acid Spirits.

ACETUM DISTILLATUM, vel SPIRITUS ACETI. Distilled vinegar, or spirit of vinegar.

Lond.

Let vinegar be distilled with a gentle heat as long as the drops fall free from an empyreuma.

If fome part of the fpirit which comes over first be thrown away, the rest will be the stronger.

Edinb.

Put any quantity of the best vinegar into a large, shallow, glass vessel, and with a gentle heat, in a fand-bath, evaporate about one-fourth part of it: then diftil the remainder in an alembic, with a glass head, gradually increasing the fire, as long as the spirit comes off clear.

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 sine 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 dif-

pofes it to receive a difagreeable 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 fand but a little way up its fides, and when fomewhat 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 fupplied at each time being previoufly 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 likewife be occasionally fupplied with fresh vinegar, in proportion as the spirit runs off; and this continued, until the process can be conveniently carried no further. The diffilled spirit must be rectified by a fecond diffillation in a retort, or glafs alembic; for though the head and receiver be of glafs or ftone-ware, the acid will contract a metallic taint from the pewter worm.

The refiduum of this process is commonly thrown away as ufeleis, 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 fand, and committed to diffillation in a retort, with a wellregulated fire, it yields an exceeding ftrong, acid fpirit; together with an empyreumatic oil, which taints the fpirit with a dilagreeable odour. This acid is; neverthelefs, without any rectification, better forfome purposes (as a little of it will go a great way) than the pure fpi-T10 # Gg2

rit; particularly for making the fal diurcticus of the London difpenfatory; for there the oily matter, on which its ill flavour depends, is burnt out by the calcination.

The fpirit of vinegar is a purer and fironger acid than vinegar itfelf, with which it agrees in other refpects. The medical virtues of thefe liquors may be feen in the fection of acids, and under the article ACETUM. Their principal dif-

ference from the mineral acids confifts in their being milder, lefs flimulating, lefs disposed to affect the kidneys, and promote the urinary fecretions, or to coagulate the animal juices. The matter, left after the distillation in glass vessels, though not used in medicine, would doubtless prove a ferviceable detergent, faponaceous acid ; and in this light it stands recommended by Boerhaave.

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Combination of Acid with vinous Spirits.

A LL the mineral acids, on being mixed with spirit of wine, raife a great ebullition and heat. If the acid be in small quantity, it unites intimately with the vinous spirit, fo as to arife 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 VITRIOLI DULCIS. Dulcified spirit of vitriol. Lond.

Take of the flrong fpirit or oil of vitriol, one pound; of rectified fpirit of wine, one pint. Cautioufly mix them together by little and little at a time, and diftil the mixture, with a very gentle heat, till a black froth begins to arife. Then immediately remove the whole from the fire, left this froth fhould pafs over into the recipient, and frustrate the operation.

Edinb.

Take of

The ethereal vitriolic liquor hereafter given, one part ; Rectified spirit of wine, two parts.

Mix them together.

THE different proportions of the acid fpirit to the vinous in thefe proceffes, make no variation in the quality of the produce, provided the diffillation be duly conducted; all the redundant acid being left in the refiduum.

A good deal of caution is requifite in mixing the two liquors. Some direct the fpirit of wine to be put first into the retort, and the oil of vitriol to be poured upon it all at once ; a method of procedure by no means advisable, as a violent heat and ebullition always enfue, which not only diffipate a part of the mixture, but hazard alfo the breaking of the veffel, to the great danger of the operator. Others put the oil of vitriol into the retort first, then by means of a funnel, with a long pipe that may reach down just to the furface of the acid, pour in the fpirit of wine. If this be done with fufficient caution, the vincus spirit spreads itself on the surface of the oil of vitriol, and the two liquors appear diffinct ; on ftanding tor

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for a week or two, the vinous spirit is gradually imbibed, without any commotion, and the veffel may be then fafely shaken, to complete the mixture. But if the fpirit be poured in too hallily at first, or if the veffel be moved before the two liquors have in fome degree incorporated, the fame effect enfues as in the foregoing cafe. The only fecure way is, to add the oil of vitriol to the fpirit of wine by a little quantity at a time, waiting till the first addition is incorporated before another quantity is put in ; by this management, the heat that enfues is inconfiderable, and the mixture is effected without any inconvenience.

The diffillation should be performed with an equable and very gentle heat, and not continued fo long as till a black froth begins to appear : for, before this time, a liquor will arife of a very different nature from the fpirit here intended. The feveral products are most commodioufly kept apart by using a tubulated receiver, fo placed, that its pipe may convey the matter which shall come over, into a vial fet underneath : the juncture of the retort and recipient is to be luted with a paste made of linseed meal, and further fecured by a piece of wet bladder: the lower juncture may be closed only with fome foft wax, that the vial may be occafionally removed with eafe.

The true dulcified spirit arifes in thin lubtile vapours, which condenfe upon the fides of the recipient in straight striæ. It is colourles as water, very volatile, inflammable, of an extremely fragrant fmell, in tafte fomewhat aromatic.

After the fire has been kept up for fome time, white fumes arife, which either form irregular ftriæ, or are collected into large round drops like oil. On the first appearance of these, the vial (or the re-

ceiver, if a common one be made use of) must be taken away. If another be fubflituted, and the diftillation continued, an acid liquor comes over, of an exceeding pungent imell, like the fumes of burning brimftone. At length a black froth begins hastily to arise, and prevents our carrying the proceis further.

On the furface of the fulphureous fpirit is found fwimming a fmall quantity of oil, of a light yellow colour, a ftrong, penetrating, and very agreeable fmell This oil feems to be nearly of the fame nature with the effential oils of vegetables. It readily and totally diffolves in rectified spirit of wine, and communicates to a large quantity of that menftruum the tafte and fmell of the aromatic or dulcified fpirit.

The matter remaining after the diffillation is of a dark blackish colour, and still highly acid. Treated with fresh spirit of wine, in the fame manner as before, it yields the fame productions; till at length, all the acid that remains unvolatilized being fatiated with the inflammable oily matter of the fpirit, the compound proves a bituminous, fulphureous mais; which exposed to the fire in open veffels, readily burns, leaving a confiderable quantity of fixt alhes; in close ones, explodes with violence; and with fixt alkaline falts, forms a compound, nearly fimilar to one composed of alkalies and fulphur.

Dulcified spirit of vitricl has been for fome time greatly effected both as a menstruum and a medicine. It diffolves fome refinous and bituminous substances more readily than fpirit of wine alone, and extracts elegant tinctures from fundry vegetables: especially if rectified, as in the fecond of the above proceffes, from a little fixt alkaline falt, to feparate

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parate any redundant acidity. As a medicine, it promotes perspiration and the urinary secretion, expels flatulencies, and in many cases abates spasmodic strictures, eases pains, and procures seep. The dose is from ten to eighty or ninety drops in any convenient vehicle. It is not effentially different from the celebrated anodyne liquor of Hoffman; to which it is, by the author himself, not unfrequently directed as a fuccedaneum.

LIQUOR ANODYNUS MINERALIS HOFFMANNI.

Hoffman's mineral anodyne liquor. Into half a pound of concentrated oil of vitriol, placed in a large glafs retort, pour by little and little, through a long-flemmed funnel, one pint and a half of highly rectified spirit of wine. Stop the mouth of the retort, digest for fome days, and then diffil 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 fulphurecus, volatile, acid phlegm comes over; and at length a faveet oil of witriol, which should be immemediately feparated, left it be abforbed by the phlegm. Mix the first and fecond spirits together, and in two ounces of this mixture diffolve twelve drops of the fweet oil. If the liquor has any fulphu-eous fmell, rediffil it from a little falt of tartar. Parif.

WHETHER this be the exact preparation, fo much recommended and fo often prefcribed by Hoffman, as an anodyne and antifpafmodic, we cannot determine. We learn from his own writings, that his anodyne liquor was composed of the dulcified fpirit of vitriol, and the

aromatic oil which arifes after it; but not in what proportions he mixed them together. The college of Wirtemberg feem to think that all the oil was mixed with all the fpirit obtained in one operation, without regard to the precife quantities.

AQUA RABELLIANA. Eau de Rabel.

Take four ounces of oil of vitriol, and twelve ounces of rectified fpirit of wine. Pour the vinous fpirit gradually into the acid, and digest in a close matrafs. Parif.

THIS liquor has been greatly celebrated in France as a reftringent, and for the fame purpofes as the dulcified fpirit; from which it differs in having a confiderable acidity.

LIQUOR ÆTHEREUS VI-TRIOLICUS. The etherial vitriolic liquor. Edinb.

Take of

Rectified spirit of wine,

- Oil of vitriol, of each thirty-two ounces.
- Pour the spirit into a glass retort, that will bear the fudden heat, and pour the acid, at once, upon it. Mix them gradually and cautiously together, by gently shaking the retort; and immediately distil by a fand-heat, prepared before hand for that purpole, the recipient being placed in a veffel of fnow or water. The fire fhould be fo regulated that the liquor may boil as foon as possible, and continued to boil till fixteen ounces are diftilled, when the retort is to be removed ..

To the diffilled liquor add two drams of the ftronger common cauftic; and diffil again, from a very high retort, with a very gentle fire, the

Chap. 8. Combination of acid with vinous Spirits. 455

the recipient being placed as before in a refrigeratory. Continue the diffillation till ten ounces are drawn off.

To the acid refiduum, after the diffillation, if you pour fixteen ounces of rectified fpirit of wine, and repeat the diffillation, more etherial liquor may be obtained; and this procefs may be repeated feveral times.

The preparation of this fingular fluid has hitherto been confined to few hands ; for though feveral proceffes have been published for obtaining it, the fuccefs of most of them is precarious, and fome of them are accompanied with danger to the operator. Where the dulcified spirit only is the object, the method, as before directed for it, fucceeds to perfection : but when it is made with a view to the ether, a variation is necessary, for only a imall quantity of ether can be feparated from the fpirit fo prepared. There, the distillation is performed with an equable and gentle heat : here, the fire fhould be haftily raifed, fo as to make the liquor boil; for on this circumftance the produce of ether principally depends. (See a paper on this fubject by Dr. Morris, in the fecond volume of the Medical Observations and Inquiries.)

Ether or ethereal fpirit is the lighteft, most volatile, and inflammable, of all known liquids. It is lighter than the most highly rectified spirit of wine, in the proportion of about 7 to 8. A drop, let fall on the hand, evaporates almost in an instant, fearcely rendering the part moss. It does not mix, or only in a small quantity, with water, spirit of wine, alkaline lixivia, volatile alkaline spirits, or acids; but is a powerful diffolvent for oils, balfams, refins, and other

analogous fubitances. It has a fragrant odour, which in confequence of the volatility of the fluid, is diffuled through a large space. Its medical effects are not as yet much known, though it is not to be doubted that a fluid of fo much fubtilty must have considerable effects. It has often been found to give eafe 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, with benefit, in whooping coughs, and hysterical cafes, from two or three drops to five and twenty, in a glafs of wine or water; which fhould be fwallowed as quick as poffible, as the ether fo fpeedily exhales.

SPIRITUS NITRI DULCIS. Dulcified spirit of nitre. Land.

Take a quart of rectified fpirit of wine, and half a pound of Glauber's fpirit of nitre. Mix them, by pouring the nitrous fpirit into the other; and diftil with a gentle heat, as long as the liquor which comes over does not raife any effervescence with lixivial falts.

Edinb.

Take of

Rectified fpirit 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 show, as long as any spirit arises. Pharmaceutical Preparations. Part III.

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 enfue, and the matter be difperfed in highly noxious red fumes. The most convenient and fafe method of performing the mixture feems 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 glais funnel, in very fmall quantities at a time ; fhaking the veffel as foon as the effervelcence enfuing 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 fpirits upon one another, the veffel should be lightly covered ; if close stept, it will burft : and, if left entirely open, fome of the more valuable parts will exhale. Lemery directs the mixture to be made in an open vefiel : by which unfcientifical procedure he ufually loft, as he himfelf observes, half his liquor : and we may prefume that the remainder was not the medicine here intended.

The liquors, mixed together, thould be fuffered to reft for at least twelve hours, that the fumes may entirely fubfide, and the union be in fome measure completed. The distillation should be performed with a very flow and well regulated fire ; otherwife the vapour will expand with fo much force as to burft the veffels. Willon feems to have experienced the justness of this obfervation ; and hence directs the juncture of the retort and receiver not to be luted, or but flightly. If a tubulated recipient, with its ppright long pipe, be made use of,

and the diffillation performed with the heat of a water-bath, the veffels may be luted without any danger. This method has likewife another advantage, as it afcertains the time when the operation is finifhed. Examining the diffilled fpirit every now and then with alkaline falts, as directed before, is fufficiently troublefome : whilft in a waterbath, we may fafelv draw over all that will arife, for this heat will elevate no more of the acid than what is dulcified by the vinous fpirit.

Dulcified spirit of nitre has been long held, and not undefervedly, in great efteem. It quenches thirst, promotes the natural fecretions, expels flatulencies, and moderately ftrengthens the ftomach. It may be given from twenty drops to a dram, in any convenient vehicle. Mixed with a small quantity of fpirit 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 cafes, where fuch a falutary evacuation is wanted. A fmall proportion of this fpirit, added to malt fpirits, gives them a flavour approaching to that of French brandy.

SPIRITUS SALIS DULCIS. Dulcified spirit of falt. Edinb.

This is made with fpirit of falt, after the fame manner as dulcified fpirit of nitre.

THE dulcification of the fpirit of falt does not fucceed fo perfectly, as that of the two foregoing acids, only a minute portion of it uniting with the fpirit of wine, and, unlefs the procefs be fkilfully managed, fcarce any. Some have held

Chap. 8.

indigeftion, and the like, following the fhops,

held this fpirit in great effeem from hard drinking; at prefent it against weakness of the ftomach, is not often made use of or kept in

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SECT. VI.

Neutral Salts.

WHEN any acid and alkaline falts are mixed together, in fuch 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 fo ftrongly retained by one another, that they are not to be difunited by any degree of fire. How volatile foever the acid were by itfelf, 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 alfo volatile, fubliming in its whole fubftance, without any feparation of its parts. There are, however, means of procuring this difunion, by the intervention of other bodies, as we have already feen in the feparation of the volatile alkali of fal ammoniac, and of the acids of nitre and fea falt. But, in all cafes of this kind, only one of the ingredients of the neutral falt can possibly be obtained by itfelf, the feparation of this happening folely in virtue of the fuperadded body's uniting with the other.

There is another kind of compound falts, formed by the coalition of acids with earthy and metallic bodies. These falts differ from the true neutral ones in feveral obvious properties; fome of them change blue vegetable juices to a green like alkalies, and others to a red like acids, while neutral falts make no change in the colour : mixed with boiling milk, they coagulate it, while neutral falts rather prevent its coagulation. From most of them, the acid is difunited by fire, without the intervention of any additional matter, of which we have feen an inftance in the diffillation of the acid of vitriol. But the most diftinguishing, and universal, character of these falts is, that folutions 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 fome particular name to the falts of this clafs, to prevent their being confounded, which feveral of them have often been, with the perfect neutral falts_

COMMON

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E Constant	VITRIOLIC	NITROUS	MARINE	ACETOUS
	ACID.	ACID.	ACID.	ACID.
COMMON FIXT	Vitriolated	Common	Regenerated	Sal diure-
ALKALI.	tartar.	nitre.	fea falt.	ticus.
ALKALI OF	Glauber's	Cubical	Sea falt.	A falt fimilar
SEA SALT.	falt.	nitre.		to fal diuret.
VOLATILE	Philofophic	Volatile	Sal ammo-	Spiritus
ALKALI.	fal ammon.	nitre.	niac.	Mindereri.
CALCAREOUS EARTH.	Selenites.	Calcareous nitre.	Calcareous muriatic falt	
MAGNESIA.	Sal catharti- cus amarus.	00		
Soluble earth of CLAY.	Alum.	Aftringent falts, not diffinguished by any particular name.		

The preceding table exhibits, at one view, the feveral compound falts refulting from the union of each of the pure acids with each of the common alkalies and foluble earths; the acids being placed on the top, the alkalies and earths on the left hand, and the compound faits in the nefpective interfections ; and is thus to be underflood. In the upright columns, under each of the acids, are feen the feveral compound falts refulting from the union of that acid with the respective alkalies and earths on the left fide. In the transverie columns, opposite to each particular alkali and earth, are feen the compound falts refulting from the union of that alkali or earth with the respective acids on the top; and converfely, of each of the compound falts expreffed in the table, the component parts are found on the top of the upright column, and on the left fide of the transverse column, in whole interlection that particular falt is placed. Some of these falts have been already treated of in the Materia medica; but it was thought proper to unite them here into one view, for the greater peripicuity in regard to their composition, and the different properties which their

at dow

component parts affume in different combinations.

Cryfallization of falts.

This is a general operation on neutral and most of the other compound falts. It depends upon these principles : that water, of a certain degree of heat, diffolves, of any particular falt, only a certain determinate quantity : that, on increafing the heat, it diffolves more and more (except only in one inftance, common falt) till it comes to boil, at which time both its heat and diffolving 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 diffolve : that, independently of any increase or diminution of heat, a gradual evaporation of the fluid itfelf will occafion a proportional feparation of the falt : and that the particles of the falt, in this feparation from the water, unlefs too haftily forced together by fudden cooling, or ftrong evaporation, or diffurbed by external caules, generally concrete into transparent and regularly figured maffes, called cryftals. The feveral faits affume, in crystallization, figures figures peculiar to each. Thus the crystals of nitre are hexagonal prifms; those of sea falt, cubes; those of alum, octohedral masses; while sal ammoniac shoots into thin fibrous plates like feathers.

The use of preparing falts in a crystalline form is not merely in regard to their elegance, but as a mark of, and the means of fecuring, their purity and perfection. From fubiliances not diffoluble in water, they are purified by the previous folution, and filtration : by crystallization, one falt is purified from an admixture of fuch other faline bodies as difiolve either more eafily or with more difficulty than itfelf. For, if two or more falts be diffolved together in a certain quantity of hot water, the falt, which requires the greatest heat for its folution in that quantity of water, will first begin to separate in cooling : and, if the water be kept evaporating, in an uniform heat, the falt which requires most water in that heat will be the first in cryftallizing. In all cafes of this kind, if the process be duly managed, the first shootings are generally well figured and pure. The fucceeding ones, fooner or later, according to the quantity of the other falts in the liquor, retain an admixture of those falts, which they betray by their fmalinefs and figure.

In order to the crystallization of faline folutions, it is cufternary to boil down the liquor, till fo much of the fluid have exhaled, as that the falt begins to concrete from it even while hot, forming a pellicle upon the furface exposed to the ait. When this mark appears, the whole is removed into a cold place. This method feldom affords perfect cryftals: for, when water is thus faturated with the falt in a boiling heat, and then fuddenly cooled ; the particles of the falt run hastily and ir-

regularly together, and form only a confused semitransparent mass. It is by flow concretion that most falts affume their crystalline form in perfection. The evaporation should be gentle, and continued no longer, than till fome drops of the liquor, in a heat below boiling, being let fall upon a cold glass plate, discover crystalline filaments. The liquor is then immediately to be removed from the fire into a lefs warm, but not a cold place; and the vefiel covered with a cloth to prevent the accels of cold air, and the formation of a pellicle, which falling down through the fluid, would diffurb the regularity of the crystallization. This is the most effectual method for most falts ; though there are fome, whole crystallization is to be effected, not by an abatement of the heat, but by a continued equable evaporation of the fluid ; fuch in particular is fea falt.

Salts retain in crystallization 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 falts; dry crystals of nitre were found, on feveral careful trials, to contain about one-twentieth of their weight; those of alum, one-fixth; fea-falt, one-fourth; borax, green vitriol, and the purging falts, no lefs than one half. The fame falt appears always to retain nearly the fame quantity.

Some falts diffolve in fpirit of wine; and here alfo, as in water, the folution is limited, though the falt is not eafily recovered in a cryftalline form. Such in particular are, combinations of the nitrous acid with volatile alkalies, and with calcareous earths; of the marine acid with all the foluble earths; earths; of the acetous with fixt and volatile alkalies. Scarce any of the compound falts, whofe acid is the vitriolic, are affected by vinous fpirits.

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Salts differ greatly in their difpolition to allume and retain a cryftalline form. Many even of the compound kind imbibe humidity like fixt alkalies, fo as to cryftallize with difficulty, and, when cryftallized, or exficcated by heat, to deliquiate again in the air. Such are the combinations of the nitrous and marine acid with all the foluble earths, and of the acetous both with earths and alkalies. The vitriolic acid, on the other hand, forms, with all the fubftances it diffolves, permanent crystals; as do likewife the other mineral acids with all alkalies.

The crystallization of those falts, which are not difioluble in fpirit of wine, is generally promoted by a fmall addition of that fpirit; which abforbing the water, or weakening its diffolving power on the fait, difpofes the falt to part from The operator it more freely. must be careful however not to add too much of the fpirit, especially where the falt is composed of an earthy or metallic body united with the acid; left it abforb the acid as well as the water, and inftead of a gradual and regular cryftallization, haftily precipitate the carth or metal in a powdery form.

Mr. Roulle, of the French academy of fciences, has examined with great attention the phenomena of the cryftallization of falts, and published the refult of his obfervations in different volumes of the Memoirs of that academy. Among other curious particulars, he has given a general distribution of falts, in regard to their cryftallization, which will be of practical ntility 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 fummer's fun; mean evaporation, commencing with the fun's heat, and extending to that in which the exhaling fleam is vifible to the eye, and the liquor too hot to be endured by the hand; and frong evaporation, reaching from this period to boiling. He divides falts into fix classes; the diffinctions of which are taken from the degree of evaporation in which they crystallize most perfectly, from the figure of their crystals, their disposition to remain fingle or unite in clufters, and their receiving an increase from a continuance of the crystallization.

- I. The first class confists of falts which crystallize into fmall plates or very thin fcales. The crystals are fingle. They are, of all falts, those which cryftallize most frequently on the furface of their folutions, which retain least water in their crystals, and require most to diffolve in. They crystallize most perfectly by infensible evaporation.
- II. Salts whofe cryftals are cubes, cubes with the angles truncated, or pyramids of four or fix fides. They form fingle, and change their figure by new accretions. By infenfible evaporation they cryftallize at the bottom, by mean evaporation at the furface, and by both kinds they prove perfect and regular. By firong

evaporation,

Selenites.

viritus falis marini coagulatu

Part III.

Neutral Salts.

artar.

Green witriol.

falt.

Borax. Cubical nitre. Seignett's

Alum.

alkali.

Tartar united with wolatile

tartar.

Soluble

Tartar united with absorbent earth

Verdigris.

White witriol.

Blue vitriol.

evaporation, the liquor contracts a pellicle, and in cooling yields few cryftals, and those ill figured.

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III. Salts whofe cryftals are tetrahedral, pyramidal, parellelopipeds, rhomboidal, and rhomboidal parellelopipeds; with the angles varioufly truncated, according to different circumstances. They form fingle (except that fome few unite by the bases) and change their figure by new accretions. They crystallize at the bottom, most perfectly by infenfible evaporation : by mean and ftrong evaporation, the liquor contracts a pellicle, and in cooling the cryftals adhere to the pellicle, and prove confused and ill formed. They retain a large quantity of water.

IV. Salts whofe cryftals are flattened parallelopipeds, with the extremities terminating in two furfaces inclined to one another, fo as to form a point and acute angles with the large fides. They clufter together, uniting, by the bases, into tufts. The crystals are largest and most regular by infensible evaporation. By mean and hafty evaporation, a pellicle is formed, and in cooling the crystals prove very fmall. They retain a large quantity of water in crystallization, and require little to diffolve in. 10

V. Salts whole cryftals are very long, in form of needles, prisms, or columns of different furfaces. They fhoot at the bottom, and clufter together into tufts of regular figures. By infenfible evaporation they fcarce ever crystallize well. By mean and ftrong evaporation, they give a pellicle, and in flow cooling, if the evaporation was not carried too far, they yield perfectly well formed crystals, which at first fwim, but foon fall to the bottom. If the evaporation was too long continued, the crystals prove confuled and ill formed.

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Sal ammon. Philof. fal ammon. Nitre. Vol. nitre. Glauber's falt. Salt of amber. Vineg. united svith chalk. Volat. vitri. acid united with fixt alk.

Marine acid united with absorbent

Sal diureticus.

Nitrous acid united with abjorbent earths.

VI. Salts whole cryftals are in very fmall needles, or of other indeterminate None of them figures. crystallize by infenfible evaporation, and few of them by the mean de-They require to gree. be reduced, by ftrong evaporation, to a thick confiftence; they then contract a pellicle, and crystallize with confusion. If the cryftals be wanted regular, fpirit of wine must be used, or some other medium, if the falt be foluble in fpirit. They readily diffolve in water, and liquefy in the air.

NITRUM PURIFICATUM. Purified nitre. Lond.

Boil nitre in water till it is diffolved; filter the folution through paper; and, then, after due evaporation, Pharmaceutical Preparations.

Part III.

poration, fet it by in a cold place, that the nitre may fhoot into cryftals.

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Edinb.

The liquor, which remains after the crystallization, may be further evaporated, and fet to shoot as before; but this process must not be too long protracted.

Соммом nitre contains ufually a confiderable proportion of fea falt, which in this procefs is feparated, the fea falt remaining diffolved after greateft part of the nitre has cryftallized. The cryftals which fhoot after the first evaporation, are large, regular, and pure : but when the remaining liquor is further evaporated, and this repeated a fecond or third time, the cryftals prove at length fmall, imperfect, and tipt with little cubical glebes of fea falt.

When rough nitre, in the flate 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 diffolved by those acids. On adding alkaline lixivia, the earth is precipitated, and when thoroughly washed with water, proves infipid. If the liquor be evaporated to drynefs, a bitterifh faline matter is left, which being ftrongly calcined in a crucible, parts with the acids, and becomes, as in the other cafe, infipid.

This earth has been celebrated as an excellent purgative, in the dofe of a dram or two; and, in fmaller dofes, as an alterant in hypochondriacal and other diforders. This medicine was for fome time kept a great fecret, under the

names of magnefia alba, nitrous panacea, count Palmer's powder, il polvere albo Romano, poudre de Sentinelli, &c. till Lancin 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 in the elixation of nitre at the European nitre-works. But, though the specimens of magnelia examined by Neumann, and fome of that which has been brought hither from abroad, gave plain marks of a calcareous nature; yet the true magnefia must be an earth of a different kind, calcareous earths being rather aftringent than purgative. The earthy bais of the fal catharticus amarus is found to have the properties afcribed to the true magnefia of nitre, and appears to be the very fame species of earth. From that falt therefore this medicine is now prepared, as will be feen hereafter.

SAL AMMONIACUS PURI-FICATUS.

Purified fal ammoniac.

Lond.

This falt is purified by folution in water, filtration, and crystallization, after the manner above directed for nitre.

Edinb.

The liquor remaining after the cryftallization is to be further evaporated, and the cryftallization repeated, fo long as any falt will fhoot from it.

THE impurities of fal ammoniac are commonly fuch as will not diffolve in water : and hence the purification is effected by the folution and filtration. The very last crystals feldom betray an admixture of any other falt.

FLOS

Neutral Salts.

Chap. 8. Neutra FLOS SALIS AMMONIACI. Flowers of fal ammoniac. Edinb.

Take any convenient quantity of dry fal ammoniac in powder. Put it into an earthen cucurbit ; and, having fitted on a blindhead, fublime the falt with a fire gradually increafed.

THIS process feems to be intended with a view to the further purification of the falt. As fal ammoniac, however, carries up with it fubftances which of themfelves are not volatile, as it is originally prepared by a fimilar process, and may possibly fuffer fome alteration in its quality from repetitions of it; the fublimation does not appear to be either needful or expedient. Neumann observes, that by repeated fublimations, it acquires at length a yellowish tinge, and a particular fmell, of which it difcovered nothing at firft, and which he attributes to the extrication of the oily or inflammable matter of its volatile animal falt: for that fal ammoniac participates of an inflammable principle, appears from its deflagration with nitre.

VITRIOLUM PURIFICA-TUM, vulgo GILLA VITRIOLI.

Purified white vitriol, commonly called gilla of vitriol. Edinb.

Diffolve white vitriol in a fufficient quantity of warm water, filter the folution, and evaporate it to the confumption of two-thirds. Set the remainder in a cold place, that the falt may fhoot into cryftals upon the fides of the veffel, and afterwards dry the cryftals in the fun. The remaining liquor is to be further evaporated, and fet to cryftalhze as before; and this procefs repeated till no more falt will fhoot.

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SOLUTIONS of white vitriol depofit, on flanding, a yellow ochery fubitance ; which, if not fuffered to feparate before the liquor is exhaled and fet to fhoot, will foul the crystals. Wilson directs the vitriol to be diffolved in just as much water as will keep it from crystallizing, viz. two pounds or two pounds and a half of water to one pound of the vitriol; and the filtered folution kept warm, to fettle, for twenty-four hours. Being then evaporated to a proper pitch for crystallization, a yellow matter is fill frequently found at the bottom, from which the liquor must be decanted before it is fet by to fhoot. It may be observed, that the leparation is by far the most plentiful and speedy while the liquor boils. Solutions, which hadftood in the cold for fome days, and appeared perfectly clear, on being made to boil, became immediately turbid, and threw off a yellow ochre.

SAL VITRIOLI. Sal of vitriol. Lond.

Take of

White vitriol, one pound ; Strong fpirit (called oil) of vi-

triol, one ounce by weight; Water, as much as is fufficient.

Boil them together till the vitriol is diffolved; then filter the liquor, and after due evaporation fet it by in a cold place to cryftallize.

HERE the intention is not to feparate the ochery matter of the vitriol, but to prevent its feparating and colouring the cryftals. This is effectually anfwered by the addition of the acid, by which it is kept diffolved.

ALUMEN

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ALUMEN USTUM. Burnt allum. Lond.

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Let alum be calcined in an iron or earthen vessel, fo long as it bubbles and fwells up.

THE bubbling or bliftering proceeds from the phlegm retained in the cryftals; after that is expelled, the falt cannot be made liquid by any degree of fire. Alum is compofed of vitriolic acid and an earth: and it is remarkable, that combinations of that acid with all earths, with moft metals, and even with vegetable fixt alkalies, are unfufible.

The alum, thus deprived of its phlegm, proves confiderably fironger, and more acrid, infomuch as to be fometimes employed for confuming fungous flefh. It is faid to have the inconvenience of leaving a hardnefs upon the part.

VITRIOLUM CALCINATUM. Calcined vitriol. Lond.

Let green vitriol be calcined in an earthen veffel, with an open fire, till it become thoroughly dry. Then breaking the veffel, take out the vitriol, and fet it by for ufe, well clofed from the air. The vitriol is fufficiently calcined, if it has acquired a red colour at the fides and bottom of the veffel.

THIS process fucceeds tolerably well for small quantities, but does not answer so perfectly for larger. As the action of the fire is exerted first on the external parts of the mass, these will be calcined first, and where the quantity is large, exhibit the mark of sufficient calcination, whils the internal part remains almost unchanged. And even if the process be still further continued, the effect required will not be produced; for the outside,

growing first hard, prevents the evaporation of the aqueous parts from within.

Edinb.

Expose any quantity of powdered green vitriol, in an unglazed earthen vessel, to the action of a moderate fire, till it become white; keeping the matter 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 fufficiently troublefome : for, unlefs the heat be very gentle, and the matter fpread very thin over the bottom of a broad fhallow veffel, it is almost impossible to avoid melting it, which makes it adhere to the fides of the pan, and renders the previous pulverization an ufeles labour.

The method ufually practifed by the chemists is, to place a deep earthen pan, with fome vitriol in it, upon a gentle fire; the vitriol foon liquefies, boils up, and by degrees incrustates to the fides of the vefiel. Some more vitriol is then thrown in and fuffered to incrustate in the fame manner, and this procedure repeated till the pan is nearly full of the concreted matter, which proves of a whitish colour, except on the outfide next the pan (which must be broken, to take it out) where it appears yellowish or reddifh, according to the continuance and degree of fire. If the vitriol be defired still further dephlegmated, this may be commodioufly effected, by reducing the mafs into a grofs powder (which will now no longer melt) and then calcining it over a ftrong fire, in a shallow iron pan, till it has gained the degree of dryneis required, which 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.

TARTARUM VITRIOLATUM Vitriolated tartar. Lond.

Diffolve eight ounces of green vitriol in four pints of boiling water: and, whilft the liquor continues boiling, throw into it falt of tartar, or any other alkaline falt, till no further effervefcence arifes upon a frefh addition; which generally happens when four ounces, or a little more, of the falt have been ufed. Filter the liquor through paper, and, after due evaporation, fet it by to cryftallize.

HERE the acid of the vitriol forfakes the iron, of which it was before in possession, to unite with the alkaline falt. Particular care ought to be taken that the quantity of alkali be fufficient to fully faturate the acid, otherwife it will not depofit all the metal. It is convenient, even after the faturation feems, from the effervescence ceasing, to be completed, to throw in a little more of the alkali; for by these means the preparation is fecured from containing any metallic matter; whilft the fuperfluous quantity of alkali can do no prejudice, as it remains uncrystallized.

It is remarkable, that although the vitriolic acid and fixt alkaline falt do each readily unite with water, and firongly attract moifture even from the air; yet the neutral falt refulting from the combination of thefe two, vitriolated tartar is one of the falts most difficult of folution, very little of it being taken up by cold water. Hence fome have directed the liquor in this process to be filtered whilst very hot, fuspecting, that if it was suffered to cool, great part of the falt would be thrown off and left upon the paper. The college, however, has avoided this inconvenience, by ordering a quantity of water which is found to be fufficient for keeping the falt diffolved in the cold, or at least in a moderate warmth.

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Edinb.

Take of oil of vitriol, diluted with fix times its quantity of water, any quantity : pour it into a large glafs vefiel, and inftil, by degrees, fixed alkaline vegetable falt well purified, and diluted with fix times its quantity of water, enough to neutralize the acid. As foon as the efferve fcence ceafes, filter the liquor; and after a proper exhalation, fet it by to cryftallize.

THIS is an elegant method, and one of the leaft troublefome ways of preparing this falt. The Edinburgh college, in former editions, ordered the acid liquor to be dropt into the alkaline. By the converfe procedure, now received, it is obvioufly more eafy to fecure againft a redundance of acidity: for the greater certainty in this point, it may be expedient, as in the foregoing procefs, to drop in a little more of the alkaline ley than the ceffation of the effervefcence feems to require.

But though the manner of preparation, here directed, appears to be the most commodious, there is one imperfection in the process, a deficiency in the quantity of water. There is not near water enough to keep vitriolated tartar diffolved, and H h of

of confequence, as fait as the alkaline falt is neutralized by the acid, great part falls to the bottom in a powdery form. In the Leyden pharmacopœia, this inconvenience is judicioully provided against. The oil of vitriol is diluted with four times its quantity of water, and the alkaline ley being gradually dropt into it till the point of faturation is obtained, four times the quantity more of water is added, and the mixture boiled, that fuch part of the falt as had precipitated, may be diffolved. The liquor is then filtered while hot, and fet by to cryftallize. In order to obtain perfect and well-formed crystals, the liquor fhould not be fet in the cold, but continued in a moderate heat, fuch as the hand can fcarcely bear, that the water may flowly evaporate

Vitriolated tartar, in fmall dofes, as a fcruple or half a dram, is an nieful aperient ; in larger ones, as four or five drams, a mild cathartic, which does not passoff fo hattily as the fal catharticus amarus or fal Glauberi, and feems to extend its action further. The wholefale dealers in medicines have commonly fubflituted to it an article otherwife almost useless in their shops, the refiduum of Glauber's spirit of nitre. This may be looked upon as a venial fraud, if the fpirit has been prepared as formerly directed, and the reliduum diffolved and cryftallized; but it is a very dangerous one, if the vitriolic acid has been used in an over proportion, and the caput mortuum employed without cryftallization ; the falt in this case, instead of a mild neutral one of a moderately bitter tafle, proving highly acid. The purchafer ought therefore to infilt upon the falt's being in a crystalline form. The cryitals, when perfect, are oblong, with fix flat fides, and

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terminated at each end by a fixfided pyramid. Some appear compofed of two pyramids joined together by the bafes, and many, in the most perfect crystallizations I have feen, are very irregular. They decrepitate in the fire, fomewhat like those of fea falt, for which they have sometimes been miftaken.

NITRUM VITRIOLATUM. Vitriolated nitre.

Lond.

Difiolve in warm water the mafs which remains after the diffillation of Glauber's fpirit of nitre : filter the folution through paper, and crystallize the falt.

THIS falt is not different from the wartarum witriolatum, being composed of the vitriolic acid, and the alkaline bafis of nitre; which alkali is no other than the common vegetable fixt alkaline falt, as falt of tartar or potash. It is, in effect, from the afhes of vegetables, that the nitre prepared in Europe receives its alkaline bafis. If any unchanged nitre remain in the mafs, it is left diffolved in the water while the vitriolated alkali crystallizes.

SAL POLYCHRESTUM. Salt of many virtues. Edinb.

Take

Nitre in powder, Flowers of fulphur, of each equal parts.

Mingle them well together, and inject the mixture, by little and little at a time, into a red hot crucible. After the deflagration ceafes, keep the crucible in the fire for an hour. The falt may be purified by diffolving it in, warm water, filtering the folution, and exhaling it to drynefs ; or by crystallization.

THIS is another method of uniting the vitriolic acid with the common

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mon vegetable fixt alkali. Both the nitre and the fulphur are decompounded in the operation : the acid of the nitre, and the inflammable principle of the fulphur, detonate together, and are diffipated; while the acid of the fulphur (which, as we have already feen, is no other than the vitriolic acid) remains combined with the alkaline bafis of the nitre. The fhops, accordingly, have fubflituted to the fal polychreft the foregoing preparation.

SAL PRUNELLÆ. Edinb.

Take of

Pure nitre reduced to powder, two pounds;

Flowers of fulphur, one ounce.

Melt the nitre in a crucible, and fprinkle into it the fulphur by little at a time. When the deflagration is over, pour out the melted falt upon a clean, dry, and warm brafs plate, fo as to form it into cakes.

THOSE who prepare fal prunellæ in large quantities, make ufe of a clean iron pot, inftead of a crucible; and when the nitre is melted, and the fulphur deflagrated, take out the falt with an iron ladle, and pour it into brafs moulds kept for this purpofe. The previous pounding of the nitre, directed above, may be as well omitted, as occafioning a needlefs trouble.

This preparation was formerly in great effeem, and is fometimes fill ordered in prefcription. It is neverthelefs built upon an erroneous foundation, which fuppofed that the nitre was purified by the deflagration it undergoes upon injecting a little fulphur on it. From proper experiments it appears, that the fulphur is fo far from depurating the nitre, or tending to its improvement as a medicine, that it really alters fome part of it into a

falt, which has quite different properties. The real effect of this procefs will be eafily underftood from the preceding one : there, nearly all the nitre is decompounded, and a falt, not different from vitriolated tartar, is found in its place. Here, only about one twenty-fourth part of it fuffers this change. Boerhaave, inftead of deflagrating the nitre with fulphur, orders it to be only well purified after the common method, and then melted by itfelf and poured into moulds. The fufion here ferves to bring the falt into a lefs compais, by evaporating the aqueous moisture which had concreted with it in its cryftallization; though even in this intention it is not of much use, the quantity of water, which nitre retains, not being very confiderable.

SAL CATHARTICUS GLAU-BERI.

The cathartic falt of Glauber, commonly called fal mirabile.

Lond.

Diffolve in warm water the mafs which remains after the diffillation of fpirit of fea falt: filter the folution, and crystallize the falt.

Edinb.

If the cryftals (obtained as above) prove too fharp, diffolve them again in water, filter the liquor, and cautioufly evaporate it to fuch a pitch only as may difpofe the falt to cryftallize.

THERE is no great danger of the cryftals proving too fharp, even when the fpirit of falt is made with the largest proportion of oil of vitriol directed under that procefs. The liquor which remains after the cryftallization is indeed very acid; and with regard to this preparation, it is convenient it H h 2 fhould

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fhould be fo; for otherwife, the cryftals will be very fmall, and likewife in a little quantity. Where a fufficient proportion of oil of vitriol has not been employed in the diffillation of the fpirit, it is neceffary to add fome to the liquor, in order to promote the cryftallization of the falt.

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The title of this falt expresses its medical virtues. Taken from half an ounce to an ounce, or more, it proves a mild and ufeful purgative ; and in fmaller dofes, largely diluted, a ferviceable aperient and diuretic. The fhops frequently fubilitute toit the fal catharticus amarus, which is nearly of the fame quality, but fomewhat more unpleafant, and, as is faid, less mild in operation. 1 hey are very eafily diffinguishable from each other, by the effect of alkaline falts upon folutions of them. The folution of Glauber's falt fuffers no visible change from this addition, its own bafis being a true fixt alkali : but the folution of the fal catharticus amarus grows instantly white and turbid, its bafis, which is an earth, being extricated copioufly by the alkaline falt ; as in the following process. which

MAGNESIA ALBA. White magnefia. Edinb.

Diffolve fal catharticus amarus in a fufficient quantity of water. Filter the folution, and add to it a filtered ley of potafh, fo long as a frefh addition continues to occafion any milkinefs. A white powder will precipitate ; which, being feparated from the liquor, is to be carefully wafhed in frefh portions both of hot and cold water, and afterwards dried.

THIS powder appears to be the fame species of earth with that obtained from the mother-ley of nitre

which was for feveral years a celebrated fecret in the hands of fome particular perfons abroad. Hoffman, who defcribes the preparation of the nitrous magnefia, gives it the character of an uleful antiacid, a fafe and inoffenfive laxative in dofes of a dram or two, and a diaphoretic and diuretic when given in fmaller doses of fifteen or twenty grains. Since his time, it has had a confiderable place in the practice of foreign phyficians, and has begun to come into effeem among us, particularly in heart burns, and for preventing or removing the many diforders which children are fo frequently thrown into from a redundance of acid humours in the first paffages. It is preferred, on account of its laxative quality, to the common absorbents, which (unless gentle purgatives are given occafionally to carry them off) are apt to lodge in the body, and occafion a coftivenefs very detrimental to infants.

Though the preparation of this medicine is now commonly known, its nature and properties are very little underflood. Whillf fome fuppofe it to poffefs uncommon virtues, others affirm, that when duly edulcorated, it is in no respect different from calcined harfhorn, or any other fimple animal or vegetable earth. The following observation of its real properties will be fufficient to determine this point.

Magnefia alba, when prepared in perfection, is a white and very fubtile earth, perfectly void of fmell or tafte, of the clafs of thofe which diffolve in acids. It diffolves freely, even in the vitriolic acid; which in the common way of making folutions, takes up only an inconfiderable portion of other earths. Combined with this acid, it forms a bitter falt, very eafily foluble in water, while the common abforbents form

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Chap. 8. form with the fame acid almost infipid concretes, very difficult of folution. Solutions of magnetia in all acids are bitter and purgative; while those of the other earths are more or lefs auftere and aftringent. A large dole of the magnefia, if the ftomach contains no acid to diffolve it, does not purge or produce any fenfible effect. A moderate one, if an acid be lodged there, or if acid liquors be taken after it, procures feveral flools; whereas the common abforbents, in the fame circumstances, instead of loofening, bind the belly. It is obvious, therefore, that magnefia is fpecifically different from the other earths, and that it is applicable to uleful pur-

NITRUM CUBICUM. Cubical nitre.

pofes in medicine.

Diffolve chalk or lime in purified aquafortis, and add the folution by degrees to a folution of Glauber's falt in water, fo long as a fresh addition produces any milkiness: a white powder will precipitate; after which the liquor is to be filtered, and, after due evaporation, fet to crystallize.

In this process, both the folutions are decompounded, and two new compounds produced. The vitriolic acid of the Glauber's falt unites with the chalk, and forms with it an indifioluble felenitic concrete, which of courfe precipitates ; while the alkali of the Glauber's falt, and the nitrous acid, unite into a neutral falt, which is feparated from the liquor by crystallization. The crystals are rhomboidal, of a cooling talle, greatly refembling that of common nitre. How far this falt differs from common nitre in its medical virtue, is not known,

The process is here inferted, partly, as being a very inftructive one in regard to the transpositions which happen on the mixture of different faline bodies, and partly as affording the most convenient means of obtaining the pure alkaline bafis of fea falt. In the diffillation of spirit of falt, that balis was difunited from its own acid, and combined with the vitriolic : it is here transferred from the vitriolic to the nitrous : and we have before given a method of diffipating or deftroying the nitrous acid, and leaving the alkali, that was combined with it, pure.

SPIRITUS SALIS MARINI COAGULATUS. Spirit of fea falt coagulated. Lond.

Drop, into Glauber's fpirit of fea falt, a ley of any fixt alkaline falt, till all effervescence ceases: then evaporate the mixture to drynes.

THIS preparation is inferted, under the fame title, in the Wirtemberg pharmacopœia. It has been commonly called regenerated fea falt, though with little propriety, as it differs from that falt in its bafis; the common vegetable alkali being here fubflituted to the mineral alkali of fea falt. How far it differs from fea falt in its medical qualities, I cannot take upon me to determine. It is manifeftly fharper in taffe, and fomewhat more difficult both of folution in water and of fufion in the fire.

TARTARUS REGENERATUS. Regenerated tartar. Edinb.

Put any quantity of dry falt of tartar, powdered, into a large glafs vefiel; and pour thereon, by little and little, as much diffilled H h 3 vinegar

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vinegar as is neceffary to faturate it. Filter the the liquor, and exhale it over a very gentle fire, to drynefs, taking great care that the matter contract not an empyreuma. On the falt which remains, pour as much more fpirit of vinegar as will faturate it : then depurate the liquor again, and carefully exficcate it into a dry falt.

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IF the common alkalies be made use of for this process, they should be previously purified, by solution and crystallization, from the neutral falt 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, fince these contain a portion of the acid (the part here wanted) as well as the phlegm.

It is difficult to hit the point of faturation betwixt the acetous acid, and the alkaline falt. After about fourteen parts of strong distilled vinegar have been gradually poured upon one of the fixed falt, the addition of a little more of the acid will not occasion any further effervelcence in the cold : but, if the mixture be now ftrongly ftirred and well heated, the efferveicence will appear afresh ; upon which some more vinegar is to be added, till it again ceafes. The faturation is not as yet complete ; for, upon exhaling the aqueous parts, the remaining falt still effervesces with fresh vinegar. When fo 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 faturation of the alkali will be fecured, whilst, if the acid prevail,

the fuperfluous quantity of it will exhale.

The falt thus prepared, is of a dark brown colour, a peculiar, not ungrateful odour, a penetrating, faponaceous, faline tafte, in no wife alkaline or acid. Its brown colour, and faponaceous quality, proceed from the oily parts of the vinegar; the depuration of the falt from this oil, is not in the foregoing procefs infifted on. In the London pharmacopœia, the falt is ordered to be purified to perfect whitenefs, under the title of

SAL DIURETICUS. Diuretic falt. Lond.

Take a pound of any fixt alkaline falt, and boil it, with a very gentle heat, in four or five times its weight of diffilled vinegar. When the fermentation ceases, add more diffilled vinegar; and proceed with fresh additions thereof, until the vinegar being almost evaporated, freih vinegar will no longer raife any fermentation ; which generally happens by the time that twenty pounds of diftilled vinegar have been ufed. Then flowly exhale to drynefs. Melt the remaining impure falt for a little time, but not too long, over a gentle fire ; then diffolve it in water, and filter the folution through paper. If the melting have been duly performed, the filtered liquor will be limpid and colourless as water; but if otherwife, of a brown colour. Evaporate the limpid folution, with an exceeding gentle heat, in a fhallow glais vefiel, occafionally firring the falt as it dries, that its moifture may be the fooner exhaled. Afterwards keep it for use in a vessel very closely ftopt; for it will liquefy by the air. This

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This falt ought to be of perfect whiteness; and should totally diffolve both in water and ipirit of wine, without leaving any feces. If the falt, though ever fo white, deposit any feces in fpirit of wine; the whole of it must be disfolved in that spirit, the folution filtered, and exticcated again.

THE purification of this falt 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 fhould be occasionally taken out, and put into water: and as foon as it begins to part freely with its black colour, the whole is to be removed from the fire. In the laft drying, the heat must not be fo great as to melt it; otherwife it will not prove totally foluble. If the folution in fpirit of wine be exficcated, and the remaining falt liquefied with a very foft fire, it gains the leafy appearance which has 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 falt 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 confifts in diminishing the heat at the time that this burning is liable The process he reto happen. commends is as follows.

Diffolve a pound of falt of tartar in a fufficient quantity of cold water, filter the folution, and add by degrees as much diffilled vinegar as will faturate it, or a a little more. Set the liquor to evaporate in a flone-ware veffel, in a gentle heat not fo ftrong as to make it boil: when a pellicle appears on the furface, the reft of the process must be finished in a water-bath. The liquor acquires by degrees an oily confiftence, and a pretty deep brown colour, but the pellicle or fcum on the top looks whitish, and when taken off and cooled, appears a congeries of little brilliant filver-like plates. The matter is to be kept continually flirring, 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 falt be preferable as medicines ; obferving only, that the latter is more of a faponaceous nature, the former more acrid, though fomewhat more agreeable to the flomach. Mr. Cadet reckons the falt prepared in his method fuperior both to the brown and white forts made in the common way, as possessing both the oily quality of the one, and the agreeablenefs of the other, and as being always uniform, or of the fame power; whereas the others are liable to vary confiderably, according to the degree of heat employed in the evaporation. They are all medicines of great efficacy, and may be fo dofed and managed as to prove either mildly cathartic, or powerfully diuretic : few of the faline deobstruents come up to them in virtue. The dole is from half a fcruple to a dram or two. A bare mixture of alkaline falt and vinegar without exficcation, is not perhaps much inferior as a medicine to the more elaborate falt. I have known two drams of the alkali, faturated with vinegar, occasion ten or twelve stools, in hydropic cafes, and

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and a plentiful difcharge of urine, without any inconvenience.

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SPIRITUS MINDERERI. Spirit of Mindererus. Edinb.

Take any quantity of the volatile alkaline falt of fal ammoniac, and gradually pour upon it diftilled vinegar, till the effervefcence ceases; occasionally firring the mixture, to promote the action of the vinegar on the falt.

THIS is an excellent aperient faline liquor. Taken warm in bed, it proves commonly a powerful diaphoretic or fudorific; and, as it operates without heat, it has place in febrile and inflammatory diforders, where medicines of the warm kind, if they fail of procuring fweat, aggravate the diffemper. Its action may likewife be determined to the kidneys, by walking about in a cool air. The common dofe is half an ounce, either by itfelf, or along with other medicines adapted to the intention. Its ftrength is not a little precarious, depending in great measure on that of the vinegar; an inconvenience which cannot eafily be obviated, for the faline matter is not reducible to the form of a concrete falt.

SECT. VII.

Anomalous falts.

CRYSTALLI TARTARI. Crystals of tartar. Edinb.

ET powdered white tartar be boiled in twenty times its quantity of water, till perfectly diffolved; and the folution, whilf it continues hot, paffed through filtering paper or a woollen cloth, and received in a wooden veffel; then expose it for a night or longer to the cold air, that crystals may form themfelves, and shoot to the fides of the veffel; the water being now poured off, the crystals are to be collected and dried for use.

THE filtration of the folution of tartar through paper fucceeds very flowly, and unlefs managed with a good deal of addrefs, not at all: for, as foon as the boiling liquor begins to grow fenfibly lefs hot, it deposits much of the tartar all over the furface of the paper, which

hinders the remainder from paffing through. Zwelffer, in his animadverfions on this process in the Augustan pharmacopæia, directs the folution to be clarified with whites of eggs, and firained only through a linen cloth ; he likewife judicioully orders the veffel to be clofe covered, and the crystallization performed in a warm place : for, if the folution be fuffered to cool very faft, it is vain to expect any appearance of crystals; the tartar will inevitably be precipitated to the bottom of the veffel in the form of fand. And indeed, the bulinels of refining and crystallizing tartar is fo very troublefome, and requires to large an apparatus, that fcarce any of the apothecaries, or even of the trading chemilts, are at the trouble of it; but either import it ready refined from Holland, or purchase it from fome people here who make it their fole bufinefs. (See the article TAR-TAR)

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CREMOR TARTARI. Cream of tartar. Edinb.

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Take any quantity of folution of tartar, made as in the foregoing procefs, and paffed through a filter. Boil it over the fire, till a thick cuticle appear on the furface, which is to be taken off with a wooden fkimmer bored full of holes. Continue the boiling till a fresh cuticle arife, which is to be taken off as the foregoing, and the operation repeated till the whole quantity of liquor be thus confumed. Afterwards dry all the cuticles togegether in the fun.

THIS process feems inferted only to retain a name long familiar to the shops; for the preparation itfelf 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 soften for the faline substances of another kind.

The college of Edinburgh obferves, that both the cryftals and cream are brought to us from abroad; that they are not different in quality from one another: and that good white tartar, unrefined, is not inferior to either of them.

TARTARUM SOLUBILE. Soluble tartar. Lond.

Diffolve a pound of any fixt alkaline falt in a gallon of boiling water; and gradually throw in cryftals of tartar, as long as a fresh addition thereof raites any effervescence; which generally ceases before three pounds of the cryftals have been used. Then, filter the liquor, and after due evaporation, fet it by to crystallize; or evaporate it to drynes, and keep the remaining faline mass for use.

Edinb.

Boil cryftals of tartar, till they are perfectly diffolved, in ten times their quantity of water; and gradually drop into the folution, whilft it continues boiling, oil of tartar per deliquium, till the effervefcence ceafes. Filter the liquor whilft hot, and evaporate it till a pellicle appears on the furface, that, when removed into a cold place, it may cryftallize.

COMMON white tartar is perhaps preferable for this operation to the cryftals ufually met with (fee the article TARTAR). Its impurities can here be no objection; fince it will be fufficiently depurated by the fubfequent filtration.

The preparation of this medicine by either of the above methods is very eafy; though some chemists have rendered it fufficiently troublefome, by a nicety that is not at all wanted. They infift upon hitting the very exact point of faturation betwixt the alkaline falt and the acid of the tartar ; and caution the operator to be extremely careful, when he comes near this mark. left by imprudently adding too large a portion of either, he render the falt too acid, or too alkaline. If the liquor be fuffered to cool a little before it is committed to the filter, and then properly exhaled and crystallized, no error of this kind can happen, though the faturation should not be very exactly hit : for fince crystals of tartar are very difficultly foluble even in boiling water, and when diffolved therein, concrete again upon the liquor's growing cold ; if any more of them has been employed, than

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474 is taken up by the alkali, this fuperfluous 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 uncrystallized. The crystallization of this falt indeed cannot be effected without a good deal of trouble : it is therefore most convenient to let the acid falt prevail at first, to separate the superfluous quantity, by fuffering 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 falt required. The most proper vessel for this purpose is a stone-ware one; iron discolours the falt.

Soluble tartar, in doses of a fcruple, half a dram, or a dram, is a mild cooling aperient : two or three drams commonly loofen the belly; and an ounce proves pretty strongly purgative. Malouin fays it is equal in purgative virtue to the cathartic falt of Glauber. It is an useful addition to the purgatives of the refinous kind, as it promotes their operation, and at the fame time tends to correct their griping quality. But it must never be given in conjunction with any acid, for all acids decompound it; abforbing its alkaline falt, and precipitating the tartar.

SAL RUPELLENSIS. Sal de Seignette, or Rochel falt. Pharm. Parif.

Let the falt extracted from the afhes of the kelp or kali of Alicant be calcined till it melts, then diffolved in water, the folution filtered, and, after due evaporation, fet by, that the falt may fhoot into pure white crystals. Diffolve crystals of tartar in boiling water, and faturate the folution with the cryftals of kali. The proportions necessary

for this purpose will be about fixteen ounces of the latter to twenty of the former. Duly exhale the liquor in the heat of a water-bath, and, after filtration, fet it in the cold to crystallize.

THIS is a species of foluble tartar, made with the falt of kali or foda, which is the fame with the mineral alkali or bafis of fea falt. It crystallizes far more eafy than the preceding preparation, and does not, like it, grow moift in the air. It is also confiderably less purgative, but is equally decompounded by acids. It appears to be a very elegant falt, and has begun to come into effeem in this country, as it has long in France.

SAL ESSENTIALE ACE-TOSÆ. Effential falt of forrel. Edinb.

- Let the juice of forrel, after fettling and decantation from the feces, be evaporated, till only one-third remains, then strained through a flannel bag, and exhaled again till a pellicle appears upon the furface. Put the liquor into a glafs vessel, and, a little olive oil being poured upon the top, fet it by in a cellar till plenty of crystals are formed. These are to be gently washed with water, and afterwards dried.
- After the fame manner, effential falts are obtained from all acid, austere, aftringent, and bitterish plants that contain but a imall 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 eafily prefied out.
- The waters of these plants, which ard in vain endeavoured to be drawn

- be obtained by diffolving a fuitable quantity of their effential falts in common water.

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SOME pharmaceutical writers direct the plants to be gathered early in the morning ; but this is of very little moment. In order to make the subject yield its juice readily, it should be chopt to pieces, and well bruifed in a marble mortar, before it is committed to the preis. The magma which remains in the bag, fill containing no inconfiderable quantity of faline matter, may be advantageoufly 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 leveral times through a linen cloth. In fome cafes, the addition of a confiderable portion of water is necessary ; that the juice, thus diluted, may part the more freely from its feculencies; on the feparation of which, the fuccels of the process in great measure depends.

The evaporation should be performed either in shallow glass bafons, or in fuch earthen ones as are of a compact close texture ; fuch are those usually called itoneware. The common earthen veffels are subject to have their glazing corroded, and are fo extremely porous, as readily to imbibe and retain a good quantity of the liquor. Metallic veffels are particularly apt to be corroded by these acid kinds of juices.

The directions for the time of difcontinuing the fecond evaporation are not to eatily observed as one could wifh. These juices are fo vifcid, and abound fo much with heterogene matter, of a quite different nature from any thing faline, that a pellicle; or pure

drawn over by diffillation, may faline incrustation upon the furface, is in vain expected. Boerhaave therefore, and the more expert writers in pharmaceutical chemistry, with great judgment, direct the evaporation of the fuperfluous moisture to be continued until the matter has acquired the confiftence of cream. If it be now fuffered to fland for an hour or two in a warm place, it will, notwithstanding the former depurations, deposit a freth fediment. from which it fhould be warily decanted, before it is put into the veffel in which it is defigned to be crystallized.

> Some recommend an unglazed earthen vessel, as preferable for this purpole to a glafs one ; the fmoothnefs of the latter being fuppoled to hinder the falt from flicking thereto; whilf the juice, eafily inlinuating itself into the pores of the former, has a great advantage of thooting its faline fpicula to the Others flightly incrustate fides. the fides and bottom of whatever veffel they employ, with a certain mineral falt, which greatly disposes the juice to crystallize, to which of itself it is very averse: but as this addition is, with regard to its medical virtue, quite different from the falt here intended, we forbear to mention it.

The use of the oil is to preferve the juice uncorrupted, and to prevent it from running into fermentation or putrefaction, during the great length of time which this procefs requires. As much oil as will fully cover the furface of the liquor, is fufficient for this purpose. The wathing of the crystals is intended to cleanfe them from the mucilaginous feculencies which adhere to them. It ought to be performed with the utmolt caution, to prevent any of the falt itfelf from being diffolved. The liquor which remains

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remains after the cryftallization may be depurated by a gentle colature, and after due infpiffation fet to fhoot again ; when a further yield of cryftals will be obtained.

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The process for obtaining these falts is very tedious, infomuch as fcarce to be compleated in less than feven or eight months; and the quantity of falt which the juices afford, is extremely small. Hence they are hardly ever made or expected in the shops. The chemists have contrived several methods for expediting the process, among which the two following seem the most remarkable.

Take any quantity of wormwood, carduus benedictus, or the like plants, gently dried in the shade. Pour thereon a fuitable portion of fpirit of wine, and digeft them together with a foft heat, till the menstruum has acquired a green colour. This tincture is to be put into a glafs cucurbit, and distilled with the heat of a water-bath, till fo much of the fpirit be come over, as that the remainder may be left of the confiftence of honey. The whole being now fuffered to remain unmoved till grown perfectly cold, beautiful pyramidal crystals will be found to have fhot from the fides of the distilling vessel to-Spie/fius, in wards its center. Miscell. Berolin. continuat. 11. p. 91, 92.

This gentleman relates likewife, that having made an effence (that is, a faturated tincture) of elecampane roots, with fpirit of wine, and kept it unmoved for a year, he found a great number of cryftals fhot from the bottom of the glafs upwards, of the thicknefs of a quill, and about an inch long. The crystals obtained by this method are faid to be of the nitrous

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kind, but of a more fubtile taffe than the common nitre, imprefling only an agreeable coolnefs upon the tongue.

The fecond process is from the celebrated Dr. Stahl.

Take wormwood, brooklime, pellitory, mercury, foapwort, or any other plants of the fame kind, dried quick in a fhady place. Cut the herb fmall, and pour thereon a fufficient quantity of highly-rectified fpirit of wine :digest them together, till the menstruum becomes faturated with the oil, or refinous parts of the plant; then pour off the tinged liquor, add a fresh parcel of fpirit, and digeft as before, continuing to add more of the menstruum, till fuch time as it no longer extracts any colour from the vegetable. The plant, thus freed from its oily matter, is to be gently exficcated, and boiled in water, till the liquor has taken up its saline parts. The decoction being then paffed through a filter, afterwards evaporated to a due confistence, and fet by in a cool place, will shoot into faline crystals, which, on examination, prove manifefuly nitrous. Stablii fund. chem. pag. 68. et alibi.

THE two foregoing proceffes agree but ill with each other : how far they are adequate to the purposes intended by them, has not yet been fufficiently examined, It is certain, that spirit of wine diffolves the fubtile oils and the refins of vegetables, which prove a great impediment to the crystallization of falts; whence it should seem that the falt might afterwards be prepared by water from the refiduum to much better advantage. But it is certain alfo, that this menstruum dissolves fome fome of the native vegetable falts' themfelves ; and that, if the tincture be fufficiently loaded with the foluble parts of the fubject, the falt feparates, while the oily and refinous matter remain diffolved. Thus manna, an effential falt of the fweet kind, diffolves totally in rectified fpirit, and, however foul before, is recovered white as fnow, its oily impurities being left in the menstruum; and thus spirituous tinctures of celery, beet roots, and other plants of the fweet kind, deposit, on standing, true faccharine concretions. It is probable that one process is best adapted to fome plants, and the other to others : the first doubtless is for those of the fweet kind, and the fecond for acid herbs, as forrel and woodforrel.

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The virtues of the effential falts have not been fufficiently determined from experience. Thus much, however, is certain, that they do not, as has been fuppofed, poffeis the virtues of the fubjects entire, excepting only the acids and fweets. The others feem to be, almost all of them, nearly fimilar, from whatever plant they were obtained. In watery extracts of wormwood, carduus, chamomile, and many other vegetables, kept for fome time in a foft state, I have often observed fine faline efflorescences on the furface, which had all nearly the fame tafte, fomewhat of the nitrous kind. They are fuppofed by fome to be at bottom no more than an impure fpecies of volatile nitre (that is, a falt composed of the nitrous acid and volatile alkalies). Those which were examined by the chemifts 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. Pharm. Parif.

Take common whey of cows' milk, made with calves' rennet. Clarify it with whites of eggs; and if it be not perfectly limpid, pafs it through a filter. Then evaporate it, in a glafs veffel, in the heat of the water-bath, and fet it by in a cellar to cryftallize. The cryftals are to be wafhed with cold water.

THIS preparation has been greatly celebrated in diforders of the breaft, but is far from answering what has been expected from it. It has little fweetnefs, and is difficult of folution in water. A faline fubstance, much better deferving the name of fugar, may be obtained by evaporating new milk, particularly that of the afs, to drynefs, digefting the dry matter in water till the water has extracted its foluble parts, and then infpisfating the filtered liquor. This preparation is of great fweetnefs, though neither white nor crystalline: nor is it perhaps in the pure crystallizable parts of milk that its medicinal virtues lie.

FLORES BENZOINI.

Flowers of benzoine.

Lond.

Put fome powdered benzoine inte an earthen pot placed in fand; and, with a gentle heat, fublime the flowers into a conical paper cap fitted to the pot.

Or, the fublimation may be performed in a retort; the flowers will arife with a foft heat, into the neck.

If the flowers have any yellow tinge, mix them with tobaccopipe clay, and fublime again.

Edinb.

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The fublimation is to be performed in a glazed earthen pot, and repeated in the fame utenfils with fresh parcels of benzoine, till the paper cap becomes foul with oil.

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BENZOINE, exposed in a retort to a gentle fire, melts, and fends up into the neck white, fhining, cryftalline flowers, which are followed by an oily fubftance. On raifing 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 fubstance; this last, liquefied in boiling water, gives out to it a confiderable quantity of faline matter (feparable by filtration and proper exhalation) which appears in all respects fimilar to the flowers.

It appears therefore, that the whole quantity of flowers which benzoine is capable of yielding, cannot be obtained by the above proceffes, fince a confiderable portion arifes after the time of their being discontinued : that greatest part of the flowers arifes with a lefs degree of heat than what is neceffary to elevate the oil : but that, if the operation be haftily conducted, or if the fire be not exceeding gentle, the oil will arife along with the flowers, and render them foul. Hence, in the way of trade, it is extremely difficult to prepare them of the requifite whitenets and purity; the heat which becomes neceflary, when large quantities of the benzoine are employed, being fo great as to force over fome of the oil along with them.

In order therefore to obtain these flowers in perfection, only a fmall quantity of benzeine should be put into the vessel at a time; and, that this may not be any impediment to the requifite difpatch, a number of fhallow, flat-bottomed, earthen difhes may be employed, each fitted with another vefiel inverted over it. With thefe you may fill a fand-furnace; having frefh difhes charged in readinefs to replace thofe in the furnace, as foon as the procefs fhall appear finished in them : the refiduum of the benzoine should be foraped out of each of the vessels, before a frefh parcel is put in.

These flowers, when made in perfection, have an agreeable taffe and fragrant fmell. They totally diffolve in (pirit of wine ; and likewile, by the affiltance of heat, in water; but leparate again from the latter upon the liquor's growing cold, fhooting into faline fpicula, which unite together into irregular maffes. By the mediation of fugar they remain fuspended in cold water, and thus form an elegant baliamic fyrup. Some have held them in great effeem, as pectoral and fudorific, in the dole of half a fcruple or more. But the prefent practice rarely makes ufe of them, on account of the offenfive oil, with which, as ufually prepared, they are tainted, and from which a freth fublimation from tobacco-pipe clay does not free them fo effectually as might be wished. The observations before related, point out a method of depurating them more perfectly, viz. by folution, filtration, and cryftallization.

SAL SEDATIVUS. Salt of borax, called jedative falt.

Put eight ounces of powdered borax into a wide-necked retort; pour thereon three ounces of water; and then add three ounces of oil of vitriol. Place the retort in a proper furnace, adapt

to

to it a receiver, and increase the fire till the veffel becomes red The fedative falt will arife hot. into the neck, in form of thin fhining plates, which are to be fwept out with a feather : and a little liquor will pass into the re-When the matter in the ceiver. retort is grown cool, pour back upon it the diffilled liquor, and fublime again. Repeat this procefs fo long as the borax continues to yield any confiderable quantity of faline flowers.

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Or,

Diffolve the borax in a fufficient quantity of warm water, and add thereto the oil of vitriol. Evaporate this mixture, till thin plates begin to appear upon the furface; then fuffer the fire to decay, and let the vefiel ftand unmoved, till plenty of cryftals are formed; which are to be well rinfed with cold water, and then dried for ufe.

In the preparation of this falt by fublimation, the fire must be expeditiously raised when the matter begins to grow dry, for it is only at this period that the falt fublimes. The fublimed falt itfelf, in a perfectly dry ftate, proves fixt in the fire. If moistened with water, and then exposed to a imart heat, part of it continues to rife, till the moisture is wholly exhaled; after which, nothing more can be forced up by heat, till the falt is again moittened. Hence the ufe of returning the diffilled liquor, and repeating the fublimations. Lemery fays, he found flowers continue to rife till the thirty-fixth fublimation; 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 fublime, appears to be the fame (when the common refined borax of the shops is made use of) with the alkaline falt of the fea falt. The fedative falt, united with that alkali, recomposes borax again. The extrication of the fedative falt from the borax happens, on the fame principle as that of the marine acid from fea falt, viz. the vitriolic acid uniting with the alkali; and the refiduum is in both cafes the fame, viz. the falt called fal mirabile, or Glauber's falt. The fedative falt may be extricated alfo from borax by other acids, but most commodiously and effectually by the vitriolic.

The process by crystallization is lefs troublefome than that by fublimation; but the falt proves generally lefs white, and is apt likewife to retain a part of the Glauber's falt, especially if the evaporation be too long protracted.

The fedative falt appears to the tafte a neutral falt; but, examined with alkalies, has the properties of an acid, effervescing, uniting, and crystallizing with them, and deftroying their alkaline quality. It diffolves both in water and in fpirit 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 lymptoms, and allay spafmodic affections, whether hypochondriacal or hysterical, at least for a time. The dofe is from two to eighteen grains, in any proper liquor.

SPIRITUS, SAL, ET OLEUM SUCCINI.

Spirit, falt, and oil of amber. Lond.

Diffil amber in a fand-heat gradually increased. There will come over fouled with the oil.

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The oil distilled again by itself, is divided into a thinner oil which arifes ; and a thicker part that remains behind, called balfam of amber.

The falt is to be boiled in the diffilled spirit, or in common water, and fet to crystallize ; 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 thrice its weight of clean fand, and put them into a glais retort, of which the mixture may fill one half : then adapt a large receiver, and diffil in a fand-furnace, with a fire gradually increased. At first a spirit will come over, with fome yellow oil ; then more yellow oil, along with a little falt ; and, upon raising the heat, more of the falt, with a reddifh coloured oil.

When the diffillation is finished, empty the liquor out of the receiver; and, having collected together the falt which adheres to the fides, dry it by gentle preffure between the folds of some fpongy paper.

The oil may be separated from the fpirit by filtration : and afterwards rectified by diffilling it from brine of fea falt.

The falt is to be rectified in the following manner. Grind it well with twice its quantity of fea falt, and put the mixture into a fmall and narrow glais cucurbit. Fit on a blind-head, and proceed to fublimation in a fand-heat, taking care that the oil does not rife. When the veffels are grown cold, fweep out the falt with a feather.

In the diffillation of amber, the

over a spirit, an oil, and a salt fire must for some time be continued gentle, scarce exceeding the degree at which water boils, till the aqueous phlegm and thin oil have arisen; after which it is to be flowly increafed. If the fire were urged haitily, the amber would fwell up, and rife in its whole fubitance into the receiver, without undergoing the required decomposition or feparation of its parts. When fand or fimilar intermedia are mixed with it, it is lefs subject to this rarefaction, and the fire may be raifed fomewhat more expeditioufly; though this little advantage is perhaps more than counterbalanced by the room which the fand takes up in the retort.

Our chemists 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 fait appears, the diffillation is flopt, though it might, perhaps, be continued longer to advantage.

Mr. Pott informs us (in a curious differtation on the falt of amber, published in the ninth volume of the Memoirs of the academy of fciences of Berlin) that the Pruffian workmen, who prepare large quantities of the falt for exportation, from cuttings and fmall pieces of amber, perform the diffillation 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 diffilled : that they continue the diffillation till all that

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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 fresh portions of hot water, and evaporating and cryftallizing the filtered waters.

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The fpirit of amber fo called, is no more than a folution of a fmall portion of the falt in phlegm or water ; and therefore is very properly employed for diffolving the falt in order to its crystallization.

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 least loss, 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 moistened with oil of amber : this, he fays, detains a good deal of the oil of the fait, 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 first crystals prove tranfparent, with a flight yellowish tinge; but those which follow are brown, oily, and bitter, and are therefore to be further depurated in the fame manner. The whole quantity of crystals amounts to about one-thirtieth of the weight of the crude amber employed. By fublimation from fea falt, as directed before, the falt is more perfectly and more expeditionally purified. Mr. Pott objects to fublimation, that a part of the falt is decomposed by it, a coaly matter being left behind, even though the falt was previoufly purified by cryftallization. It may be prefumed, however, that this coal proceeds

rather from the burning of fome remains of the oily matter, than from the decomposition of any part of the true falt.

Pure falt of amber has a penetrating, subastringent, acid taste. It diffolves, both in water and in rectified fpirit ; though not readily in either, and scarcely at all in the latter without the affiftance of heat. Of cold water in fummer, it requires for its folution about twenty 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 rifes in a white fume, and concretes again in the upper part of the glafs, 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 refembling those composed of the fame alkalies and vegetable acids. Mixed with acid liquors, it makes no fenfible commotion. Ground with fixt alkaline falts, it does not exhale any urinous odour. By these characters, it is conceived, this falt may be readily diffinguished from all the other matters that have been mixed with, or vended for it. With regard to its virtue, it is accounted aperient, divretic, and, on account of its retaining fome portion of the oil, antihyfteric. Boerhaave gives it the character of diureticorum et antihystericorum princeps. Its great price, however, has prevented its coming much into ule; and perhaps its real virtues are not equal to the opinion generally entertained of them.

The rectified oil has a flrong bituminous fmell, and a pungent, acrid tafte. Given in a dole of ten or twelve drops, it heats, ftimulates, and

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482 Pharmaceutical Preparations. Part III. and promotes the fluid fecretions. and agrees with the mineral petrolea, in not being foluble, either in its rectified or unrectified flate, by

uterine purgations. Sometimes it is ufed 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 foluble, either in its rectified or unrectified flate, by fpirit of wine, fixt alkaline lixivia, or volatile alkaline fpirits; the oil, after long digeflion or agitation, feparating as freely as common oil does from water.

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CHAPTER IX.

Preparations of Sulphur.

FLORES SULPHURIS. Flowers of fulphur. Lond.

SUBLIME fulphur in proper veffels; and reduce the flowers, that concrete, into powder, either in a wooden mill, or in a marble mortar with a wooden peftle.

Edinb.

Put any quantity of yellow fulphur, großly powdered, into an earthen cucurbit placed in a fand-furnace; and, having fitted on a glaß blind-head, or inverted upon it another earthen cucurbit, begin the fublimation with a gentle heat, which may be afterwards increafed. The flowers will rife 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 ferves for the recipient.

This preparation of fulphur makes no change in its qualities; only feparating its impurities, and at the fame time reducing it into a finer powder than it can eafily be brought to by other means. At the bottom of the fubliming veffel there remains a ponderous grey-coloured mafs, composed of fand, earth, ftony, and fometimes metallic matters, with a fmall portion of fulphur that has efcaped the fubliming heat. This is ufually broken in pieces, and vended in the fhops under the name of fulphur vivum.

FLORES SULPHURIS LOTI. Washed flowers of fulphur. Lond.

Pour upon the flowers as much water as will rife to the height of four fingers above them, and boil them for fome time. Then, pouring off this water, let fome cold water be added, and thoroughly wash the flowers; after which they are to be dried for use.

As the flowers of fulphur are generally fublimed into very capacious rooms, which contain a large quantity of air, or in veffels not perfectly close; fome of those that arife at first, are apt to take fire, and thus are changed into a volatile acid vapour, which, mingling with the flowers that fublime afterwards, communicates to them a notable degree of acidity. In fuch cafe the ablution here directed is for the general use of the medicine ablolutely neceffary : for the flowers, thus tainted with acid, fometimes occafion gripes, and may, in other respects, be productive of effects different from those of pure fulphur. The Edinburgh college, as appears in the foregoing process, allow only the walhed flowers to be kept in the fhops. There are, however, fome particular combinations, to which they are supposed to be better adapted when unwafhed, as their union with mercury into Ii 2

into æthiops mineral; and accordingly for that preparation the unwashed flowers are directed by the London college.

BALSAMUM SULPHURIS SIMPLEX.

Simple balfam of fulphur.

Lond.

Boil flowers of fulphur, with four times their weight of oil olive, in a pot lightly covered, until they unite into the confiftence of a balfam.

BALSAMUM SULPHURIS CRASSUM.

Thick balfam of fulphur.

Edinb.

Take of

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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 flirring, till they come to the confiftence of a balfam.

LINSEED oil more readily diffolvesfulphur than oil olive, and the preparation made with it is reckoned somewhat less disagreeable. The vefiel they are boiled in ought to be capable of holding at least 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 rarifies very much, fo as, if not prudently removed from the fire, to run over into the furnace; and, as the matter is very fusceptible of flame, dangerous confequences may enfue, especially if the quantity be large. The operator ought therefore to be upon his guard in the management of this proceis.

BALSAMUM SULPHURIS BARBADENSE. Balfam of fulpbur with Barbadoes tar. Lond.

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This is made after the fame manner as the foregoing, by using Barbadoes tar instead of the oil.

BALSAMUM SULPHURIS TEREBINTHINATUM. Balfam of fulphur with oil of turpentine.

Edinb.

Take two ounces of washed flowers of fulphur, and fix ounces of oil of turpentine.

Digeft them together, in a fandheat, till the oil be faturated with the fulphur.

BALSAMUM SULPHURIS ANISATUM. Balfam of fulphur with oil of anifeed.

Edinb.

Take two ounces of washed flowers of fulphur; fix ounces of oil of turpentine; and four ounces of effential oil of anifeeds.

Digeft them together as in the preceding process.

THESE preparations are more conveniently and fafely made in a tall glass body, with the mouth at least an inch in diameter, than in the circulatory or close 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 rarify into a large volume, but likewife throw out impetuoully great quantities of an elastic vapour, which, if the veffels be closed, or the orifices not sufficient to allow it a free exit, infallibly burft them. Hoffman relates a very remarkable history of the effects of an accident of Preparations of Sulphur.

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 flate it fhould be kept till all the fulphur appears to be taken up.

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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 should 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 vefiel be Sixteen now and then shaken. parts of effential oil, and fix of the balfamum fulphuris craffum, compofe a balfam more elegant than those made in the foregoing manner, and which retains fo much of the flavour of the oil, as is in fome measure fufficient to cover the taile of the fulphur, and render it fupportable.

The balfams of fulphur have been strongly recommended in coughs, confumptions, and other diforders of the breaft and lungs. But the reputation which they have had, in these cafes, does not appear to have been built upon any fair trial, or experience of their virtues. They are manifeftly hot, acrimonious, and irritating; and therefore fhould be used with the utmost caution. They have frequently been found to injure the appetite, offend the flomach and vifcera, parch the body, and occafion thirst and febrile heats. The dole of the fimple balfam is from ten to forty drops : those with effential 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.

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HEPAR SULPHURIS. Liver of fulphur. Edinb.

Take three ounces of flowers of fulphur; and one ounce and a half of powdered falt of tartar. Melt the fulphur in an earthen difh, under a chimney, and add to it by degrees the falt of tartar; keeping the matter conftantly ftirring with a fpatula till it has acquired a red colour. Care muft be had to prevent its taking fire.

IT is much more convenient to melt the fulphur first by itself, and add the falt 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 cafe, the mixture will not flow fufficiently thin to be properly united by ftirring ; and the fulphur either takes fire, or fublimes in flowers, which probably has been the reafon why fo large a proportion of it has been commonly directed. Even in the prefent method a confiderable part of the falphur will be diffipated; and if it were not, the hepar would not be of its due quality : for one part of fulphur requires two of the alkaline falt, to render it perfectly foluble in water, which this preparation ought to be.

The hepar fulphuris has a fetid fmell, and a naufcous tafte. Solutions of it in water, made with fugar into a fyrup, have been recommended in the fame intentions as the balfams above-mentioned : our I i 3 pharma-

pharmacopœias neverthelefs have defervedly rejected this fyrup, as common practice has almost done the balfams. The hepar, digested in rectified spirit of wine, imparts a rich gold colour, a warm, 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.

SULPHUR PRÆCIPITATUM. Precipitated Sulphur. Lond.

Boil flowers of fulphur in water, with thrice their weight of quicklime, till the fulphur be diffolved. Filter the folution, and drop into it fome of the weak fpirit of vitriol: this will throw down a precipitate, which is to be wafhed in fresh portions of water, till it become infipid.

LAC SULPHURIS. Edinb.

Boil the hepar fulphuris, reduced to powder, in four times its quantity of water, for three hours; adding more water if there be occafion. Then filter the folution whilft hot, and drop into it fpirit of vitriol, till the effervescence ceases; a powder will be precipitated to the bottom, which is to be washed with hot water, and afterwards dried for use.

THE method of preparing this lac, as it is called, with hepar fulphuris, is the most expeditious, and least troublesome, provided the hepar be well made : and on the other hand, quicklime gives the preparation a more faleable whiteness. Some have been accustomed to add to the quicklime a portion of alkaline falt, with a view to promote its dificilving power.

The medicine is nearly the fame in both cafes. It would be exactly

the fame, if the precipitation were performed with any other acid than the vitriolic : for this acid forms with the diffolved lime a felenitic concrete, which precipitates along with the fulphur, and is not afterwards feparable by any ablution ; whilft the neutral falt, which the acid forms with the fixt alkali of the hepar, may be totally diffolved, and washed off by repeated ablution with hot water; and the combinations of all the other acids, both with the lime and alkali, are feparated by cold water. It is probably to the admixture of the white felenitic matter, refulting from the vitriolic acid and lime, that the finer colour of the preparation made with lime is owing.

Pure lac fulphuris is not different in quality from pure fulphur itfelf ; to which it is preferred, in unguents, &c. only on account of its colour. The whiteness does not proceed from the fulphur's having loft any of its parts in the operation, or from any new matter fuperadded : for, if common fulphur be ground with alkaline falts, and fet 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 fulphur again.

It may be observed, that the name lac fulpburis, or milk of fulphur, 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 VOLA-TILIS:

Volatile tindure of Sulphur. Take of

Flowers of fulphur, fix ounces; Sal ammoniac, one pound;

Quicklime, a pound and a half. Sprinkle fome water on the lime, and

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Preparations of Sulphur.

and when flaked and fallen into powder, grind it first with the fulphur, and afterwards with the fal 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.

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THIS liquor has a ftrong offenfive fmell, fomewhat fimilar to that which arifes in the precipitation of *lac fulpburis*. The vapour in both cafes fpreads to a confiderable diftance, changes filver or copper utenfils to a brown or blackifh colour, and produces difagreeable alterations in many medicinal preparations. To this circumftance therefore due regard ought to be had in the performance of that procefs, and in the keeping of this uncture. If a piece of paper, writ-

ten upon with a faturated folution 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 unftopt orifice of the bottle containing this tincture, the vapour will quickly reach it, and change the colourlefs writing to a legible black.

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Hoffman has a great opinion of the virtues of this preparation. He fays, a mixture of one part of the tincture with three parts of fpirit of wine, in a dofe 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.

Chief of the marine

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Pharmaceutical Preparations. Part III.

CHAPTER X.

Metallic Preparations.

Preparations of Gold.

OLD is the most ponderous I and perfect of the metals : it abides fixt and unaltered in the ftrongest fire ; and is not acted upon by alkaline, or any fimple acid menstruum. It diffolves in aqua regia alone, into a yellow transparent fluid : this folution flains the fkin, &c. purple : the ethereal fpirit of wine, and fome effential oils, take up the gold from it : alkalies precipitate the metal in form of a yellowish mud, which, exficcated, and exposed to a fmall heat, violently explodes.

As to the medical virtues of this metal, experience has fufficiently shewn, that it is not possessed of any valuable ones. In its metallic form, however finely comminuted, 'it proves inactive ; when fatiated with acid, corrofive ; and in the intermediate states, either infignificant or unsafe.

AURUM POTABILE. Potable gold.

Diffolve with a moderate heat, half a dram of fine gold, in two ounces of aqua regia; and add to the folution one ounce of the effential oil of rofemary. Shake them together, and then fuffer them to reft : the acid lofes its gold yellow colour ; and the oil, which arifes to the furface, becomes richly impregnated therecantation, and add to it four or five ounces of rectified spirit of wine : digeft this mixture for a month, and it will acquire a purplifh colour.

THERE have been many preparations of this kind contrived by the defigning pretenders to alchemy, and imposed upon the credulous and unwary, as cordials and diaphoretics of ineftimable value. The above feems to be one of the beit and fafeft of them; though it would be equally ferviceable as a medicine, if made without the ingredient from which it receives its name. The gold is indeed taken up from the acid, and kept for a time diffolved by the oil; but on ftanding it totally separates, in form of fine yellow films, like leaf-gold, The effect is the fame, whether the oil or the vinous spirit be mixed with the folution of the gold in aqua regia: the only difference is, that the gold is thrown off from the oil to the fides of the glafs; while the fpirit revives it into fuch fubtile films, as to float upon the furface of the liquor. No means have yet been found of permanently combining gold with either oils or vinous ipirits.

AURUM FULMINANS. Fulminating gold. Parif.

with. Separate the oil by de- Put a dram of filings of gold, with half an ounce of aqua regia newly

Chap. 10. Preparations of Silver.

newly made, into a matrais, placed in fand. When the menftruum ceafes to act, pour off the folution; and, if any of the gold be left, add as much more aqua regia as shall be fufficient to diffolve it. Dilute the folution with ten times its quantity of warm water; and then drop in oil of tartar per deliquium till the effervescence and precipitation ceafe. The whole being now fuffered to fettle, the clear liquor is to be poured off, and the precipitated matter walhed with warm water till it becomes infipid, and afterwards exficcated.

THIS powder requires to be exficcated with the utmost precaution; for in a fmall heat it explodes with great violence. The fame effect enfues likewife upon ftrongly rubbing it. This property has given name to the preparation ; and is the only one on account of which it is at prefent taken any notice of. It has been recommended, indeed, in fevers, as a diaphoretic, in the dole of a few grains: its more certain effect, however, is to operate downwards, and that not always with fafety. Konig and Ludovici relate, that in fome febrile cafes, it has occasioned almost mortal diarrhœas; and Stahl (de proexeucrifi medica, fect. viii.) reports. that the intestines have been found eroded by it. The more thoroughly it is washed and edulcorated, the lefs corrofive it is in the human body, and the lefs violently it fulminates when heated.

SECT. II.

Preparations of Silver.

SILVER is the most permanent in the fire of all the metals, after gold. It diffolves in the pure nitrous acid, into a colourles, tranfparent 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.

CAUSTICUM LUNARE. The lunar caustic. Lond.

Let pure filver be diffolved in about twice its weight of aquafortis, upon warm fand : then gently increafe the heat, until a dry mafs be left. Melt this in a crucible, that it may be poured into proper moulds, carefully avoiding overmuch heat, left the matter fhould grow too thick.

CAUSTICUM LUNARE, feu LAPIS INFERNALIS,

The lunar canftic, or infernal stone. Edinb.

Take any quantity of well-cupelled filver, flatted into plates and cut in pieces. Diffolve it by the heat of a fand-bath, in three times its weight of fpirit of nitre. Evaporate the folution to dryneis, and put the remaining calk in a large crucible. Let the fire at first be gentle, and augment it by degrees, until the mais flow like oil, and ceafe to fume: then pour it into iron pipes made for this purpose, previously heated and greafed : laftly, let it be dried, and kept for use in a glass veffel close itopt.

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STRONG spirit of nitre will diffolve fomewhat more than half its weight of pure filver; and the weaker of the aquæ fortes, formerly defcribed, proportionably lefs, according to their quantity of pure nitrous acid. Sometimes this fpirit contains a portion of the vitriolic or marine acids; which, however minute, renders it unfit for diffolving this metal, and fhould therefore be carefully feparated before the folution is attempted. The method which the refiners employ, for examining the purity of their aquafortis, and purifying it if neceffary, is, to let fall into it a few drops of a perfect folution of filver already made. If the liquor remain clear, and grow not in the leaft turbid or whitish, it is fit for their ule ; otherwife, they add a fmall quantity more of the folution, which immediately turns the whole of a milkwhite colour : the mixture being then fuffered to reft for fome time, deposits a white fediment; from which it is warily decanted, examined afreih, and, if need be, further purified, by a fresh addition of the folution.

The filver, flatted into thin plates, as directed in the fecond of the above proceffes, needs not be cut in pieces : the folution will go on the more speedily, if they be only turned round into fpiral circumvolutions, fo as to be conveniently got into the glafs, with care that the feveral furfaces do not touch one another. By this management, a greater extent of the face is exposed to the action of the menftruum, than when the plates are cut in pieces and laid above one another. Good aquafortis will diffolve about half its weight of filver, and it is not advisable to ule a greater quantity of the menftruum than is fufficient for effecting the folution ; for all the fur-

plus must be evaporated in the fubfequent fusion.

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The crucible ought to be large enough to hold five or fix times the quantity of the dry matter; for it bubbles and fwells up greatly, fo as otherwife to be apt to run over. During this time, alfo, little drops are now and then fpirted up, whofe caufficity 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 ceafes, and till the matter becomes confistent 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 ceafe to appear; for when this happens, the preparation proves not only too thick to run freely into the mould, but likewife lefs corrofive than it is expected to be.

In want of a proper iron mould, one may be formed of tempered tobacco-pipe clay, not too moift, by making in a lump of it, with a imooth flick first greafed, 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 greafe; and wrapt up in dry foft paper, not only to keep the air from acting upon them, but likewife to prevent their corroding or discolouring the fingers in handling.

This preparation is a ftrong cauftic, and frequently employed as fuch, for confuming warts and other flefhy excrefcences, keeping down fungous flefh in wounds or ulcers, and fimilar ufes. It is rarely applied where a deep efchar is required, as in the laying open of impofthumations and tumours; for

Chap. 10.

Preparations of Iron.

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.

Diffolve pure filver in aquafortis, as in the foregoing procefs, and, after due evaporation, fet the liquor to cryftallize. Let the cryftals be again diffolved in common water, and mingled with a folution of equal their weight of nitre. Evaporate this mixture to drynefs, and continue the exficcation with a gentle heat, keeping the matter conftantly flirring, till no more fumes arife.

HERE it is necessary to continue the fire till the fumes entirely cease, as more of the acid is required to be diffipated, than in the preceding

process. The preparation is, neverthelefs, in tafte very fharp, intenfely bitter and nauseous; applied to ulcers, it acts as a cauftic, but much milder than the foregoing. Boerhaave, Boyle, and others, greatly commend it in hydropic cafes. The former affures us, that two grains of it made into a pill, with crumb of bread and a little fugar, and taken on an empty ftomach (fome warm water, iweetened 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 diforders. He neverthelefs cautions against using it too freely, or in too large a dofe; and obferves, that it always proves corrofive and weakening, especially to the flomach.

SECT. III.

Preparations of Iron.

I RON 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 diffimilar to a combination of the metal with vitriolic acid. All acids diffolve 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 fame manner (but with different degrees of power), by confiringing the fibres. In all thefe flates, it promotes, or reftrains fecretions, where the deficiency or excess progeed from a laxity and debility of the veffels; and, in general, raifes the pulfe, and quickens the circulation. The calces feem to be the leaft active preparations; the crude metal, duly comminuted, is more eafily foluble in the animal fluids, and if acefcent juices be lodged in the primæ viæ, foon manifefts its operation by nidorous eructations, and the black colour of the alvine feces; if previoufly combined with faline bodies, it fcarce ever fails of taking effect.

As the calces of iron are fcarcely diffoluble in acids, it has been concluded that they are not foluble in the human body, and that therefore they are to be looked upon no otherwife than as a mere inactive earth. But admitting the abfolute indiffolu-

indiffolubility of iron while it continues a calx, it must be observed, that the calces of this metal are remarkably eafy of revival into their metallic state. Mr. Baume relates, that calx of iron, digested for an hour or two in oil olive, refumes its perfect metallic nature, fo as to be attracted by the magnet, and totally foluble in acids; whence he infers, that a like revival of the metal happens in the human body. It is matter of common obfervation, that calces of iron tinge the excrements black, a fure mark of their taking effect : though their effect appears to be neither fo fpeedy nor fo great as that of iron in fome other forms.

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CHALYBIS RUBIGO PRÆ-PARATA. Ruft of steel prepared. Lond.

Expose filings of steel to the air, frequently moistening them with vinegar or water, until they change into ruft; then grind them in a mortar, and pouring on water, wash over the more fubtile powder. The remainder is to be exposed as at first, then triturated and washed again, and the powders that have been washed over, dried, and kept for use.

MARTIS LIMATURA PRÆ-PARATA. Filings of iron prepared. Edinb.

Set filings of iron, first cleansed by the magnet, in a moist place, that they may turn to rust, which is to be ground into an impalpable powder.

They may likewife be prepared by moistening them with vinegar.

The cleaning of iron filings by

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means of a magnet is very tedious, and does not answer fo well as might be expected; for if they be rufty, they will not be attracted by it, or not fufficiently : nor will they, by these means, be entirely freed from brafs, copper, or other metallic fubstances which may adhere to them. It appears from the experiments of Henckel (Pyritolog. cap. vom eifem im kiefs) that if iron be mixed by fufion with even its own weight of any of the other metals, regulus of antimony alone excepted, the compound will be vigoroufly attracted by the loadftone .- The ruft of iron is to be procured at a moderate rate from the dealers in iron, free from any impurities, except fuch as may be washed off by water.

The ruft 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 fuccess, in obflinate chlorotic cafes, accompanied with exceffive headachs, and other violent symptoms : and that he ufually joined with it pimpinella, arum root, and falt of tartar, with a little cinnamon and fugar. The dofe is from four or five grains to twenty or thirty : fome have gone as far as a dram ; but all the preparations of this metal answer best in small dofes, which should rather be often repeated than enlarged.

ÆTHIOPS MARTIALIS. Martial ethiops.

Put filings of fteel into an unglazed earthen veffel, with fo much water as will ftand above them about four inches; the whole is to be well ftirred every day, and more water fupplied, as that in the veffel exhales, fo that the filings may remain always covered: continue this procedure for feveral months, till they lofe their Chap. 10.

their metallic aspect, and are reduced to a fine powder of an inky blackness.

THIS preparation is defcribed by Lemery in the Memoirs of the French academy. It is faid, that if the filings be left unftirred for fome days, they unite together fo firmly, that the mass is scarcely to be beaten into powder by blows of a hammer ; if they be left for a little while uncovered with water, the deep black colour does not fucceed, a part of them changing into ruft. Mr. Malouin observes, that this ethiops is better fitted for general use, than any other preparation of iron; that the metal is here in as fubtile a flate as in the croci of iron; and that it is no more decompounded, or changed in its nature, than the crude filings are. He therefore recommends fublituting it to the filings of croci, in doles of from four grains to eighteen. The tediousness of the procefs, however, has prevented its coming into use ; especially as it does not promife any advantage, above the common chalybeate preparations, to counterbalance that inconvenience.

CHALYBS CUM SULPHURE PRÆPARATUS. Steel prepared with fulphur. Lond.

Heat the fleel with a very fierce fire to a firong white heat; and in this flate apply it to a roll of fulphur held over a veffel of water: the fleel will melt, and fall down in drops, which are to be picked out from the fulphur that runs down with them, and ground into an impalpable powder.

IT has been fupposed by many, that this preparation is no other than common brimstone, and that

it contains nothing of the fteel. If the fteel indeed be not made extremely hot, it will not melt on applying it to the fulphur, and the latter will run into the water by itfelf : but if the metal be heated to the degree above directed, it will readily melt and fall down in drops of a brown colour ; whilft the fulphur runs into long yellow ftrings.

The heat requisite for this purpole, is not easily procurable in the common furnaces of the apothecary ; and even if the fleel be fufficiently heated at first, it will foon become too cool to be corroded by the fulphur. For this reason, and on account of the offenfive fumes which arife very copioully, and which are not avoidable by the operator, this proceis has been long neglected. The fhops have been generally fupplied with a preparation of iteel with fulphur, made at an ealier rate, in the following manner.

MARS SULPHURATUS. Sulphurated iron. Edinb.

Mix filings of iron with twice their weight of powdered fulphur, and as much water as is fufficient to make them into a pafte; which, on flanding at reft for fix hours, will fwell up. The matter is then to be pulverized, put by degrees into a hot crucible to deflagrate, and kept continually flirring with an iron fpatula till it falls into a deep black powder.

IF the quantity of this mixture be confiderable, and ftrongly prefied down, it will not only fwell on ftanding for fome hours, but will heave up very weighty obflacles, and burit out into flame.

CROCUS MARTIS APERIENS. Opening crocus of iron.

This is made by keeping the fore-

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going preparation longer over the fire, till it affumes a red colour.

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CROCUS MARTIS ASTRIN-GENS. Aftringent 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 differ from one another in virtue; though the difference is not of fuch a kind as the titles, they have been ufually diffinguished by, import. All the preparations of steel act by an attringent quality; that above, denominated *astringent*, seems to have the least effect. They may be given in form of bolus, electary, or pill, from fix grains to a fcruple.

In fome foreign pharmacopœias, the croci of iron are prepared from pure green vitriol. This flrongly calcined (or the colcothar remaining after the diffillation of oil of vitriol) is the aftringent crocus; when lefs calcined, it is called aperient. These preparations differ little, if at all, from those above diffinguissed by the fame appellations; and, accordingly, the Edinburgh college has now allowed the fubstitution of colcothar of vitriol to both the croci.

MARS SOLUBILIS, feu CHALYBS TARTARIZATUS. Soluble, or tartarized steel.

Edinb.

Mix equal parts of iron filings, and cryftals of tartar, with as much water as is fufficient to reduce them into a mafs: this mafs is to be dried in a fand heat; then

and of

powdered, moiftened, and dried again; and this procefs repeated, till fuch time as the matter will eafily grind into an impalpable powder.

THIS is a very elegant and ufeful preparation of fteel, and will in many cafes take effect after all the foregoing ones have failed ; the falt here joined rendering the metal fufficiently foluble in the animal fluids. It may be given either in a liquid form, or in that of a bolus, &c. in dofes of four or five grains, or half a scruple. Dr. Willis is faid to have been the inventor of this preparation, and by his name it has been ufually diffinguished in the fhops. The chemifts have received another method of preparing iron with tartar; which is as follows.

MARS SOLUBILIS ALCALIZATUS Alkalized foluble freel.

Take equal quantities of filings of iron, and of white tartar. Grind them together, and put them into a crucible, which is to be fet in a fire ftrong enough to make the materials red hot ; in this fate, let them continue for fome time. When grown cold, powder the matter in a mortar; and the part which will not pais through a fine fieve, heat and pulverize again ; repeating this, until the whole be paffed through. Mix the feveral fiftings together, and keep them in a vefiel clofe ftopt from the air.

THIS preparation is foluble like the foregoing. Exposed to the air, it deliquiates like alkaline falts (the tartar being converted into an alkali by the fire) and therefore it is not to be prefcribed in any dry form. It is very rarely used.

FLORES

FLORES MARTIALES. Martial flowers. Lond.

Take of

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Colcothar of green vitriol wafhed, or filings of iron, one pound;

Sal ammoniac, two pounds.

Mix and fublime in a retort. Grind the flowers with the matter which remains in the bottom of the retort, and repeat the fublimation until the flowers arife of a beautiful yellowifh colour.

To the refiduum you may add half a pound of fresh fal ammoniac, and sublime as before; repeating this as long as the flowers arife well coloured.

THE fuccess of this process depends principally upon the fire's being hastily raifed; that the fal ammoniac may not fublime before the heat is become ftrong enough to enable it to carry up a fufficient quantity of the iron. Hence glafs veffels are not fo proper as earthen or iron ones; for when the former are made use of, the fire cannot be raifed quick enough, without endangering the breaking of them. The most convenient veffel is an iron pot : to which may be luted an inverted earthen jar, having a fmall hole in its bottom, to fuffer the elaftic vapours, which arife 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 pulverization, humectation, and exficcation, two or three times, or oftener. If this method be followed, the fal ammoniac may be increafed to three times the quantity of the iron, or further ; and a fingle fublimation will often be fufficient to raile flowers of a very deep orange colour.

This preparation is fuppofed to be highly aperient and attenuating; though no otherwife fo than the reft of the chalybeates, or at most, only by virtue of the faline matter joined to the iron. It has been found of good fervice in hysterical and hypochondriacal cafes, and in diftempers proceeding from a laxity and weakness of the folids, as the rickets. It may be conveniently taken in the form of a bolus, from two or three grains to ten. It is naufeous in a liquid form (unlefs in fpirituous tincture) and occafions pills to fwell and crumble, except fach as are made of the gums.

LIXIVIUM MARTIS.

Ley of iron. Lond.

Let the matter, which remains after the fublimation of the martial flowers, be fet by in a moift place. It will run into a liquor, which is to be kept for use.

THIS liquor feems greatly to refemble a faturated folution of iron made in fpirit of falt. Its tafte is highly aftringent, and fomewhat fweetifh. It may be given in dofes of a drop or two in any convenient vehicle, for the fame intentions as the other chalybeates. It is called by fome of the chemical writers, oleum martis per deliquium, and effentia martis.

SAL MARTIS. Salt of steel. Lond.

Take of

Strong fpirit or oil of vitriol, eight ounces;

Iron filings, four ounces;

Water, two pints.

Mix them together; and, after the ebullition ceafes, let the mixture ftand for fome time upon warm fand; then pour off and filter the

the liquor; and, after proper exhalation, fet it by to crystallize.

VITRIOLUM MARTIS, feu SAL CHALYBIS. Vitriol of iron, or falt of fleel. Edinb.

Take of

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Oil of vitriol diluted with an equal quantity of warm water, four ounces;

Filings of iron, three ounces.

Cautioully mix them together, and digest in a cucurbit for twelve hours, that the metal may be Filter the folution diffolved. whilft hot, then evaporate it till a pellicle appears on the furface, and fet it in a cold place, until the vitriol has crystallized at the bottom of the vefiel. The liquor poured off from the crystals is to be again evaporated till a pellicle forms on the top, and fet to shoot as before. Collect all the cryftals together, and dry them on a paper in the fhade.

DURING the diffolution of the iron, a ftrong fulphureous vapour arifes, which on the approach of flame, catches fire, and explodes, fo as fometimes to burft the veffel. To this particular, therefore, the operator ought to have due regard.

The chemists are feldom at the trouble of preparing this falt according to the directions just given : but in its stead substitute common green vitriol, purified by folution in water, filtration, and cryttalli-The only difference bezation. twixt the two is, that the common vitriol contains fomewhat more metal in proportion to the acid ; and hence in keeping, its green colour is much fooner debased by a rufly brownith caft. The fuperfluous quantity of metal may be eafily feparated, by fuffering the folution of the vitriol to fland for fome time in a cold place, when a brownifh vellow ochery fediment will fall to the bottom ; or it may be perfectly diffolved, and kept fuspended, by a fuitable addition of oil of vitriol. 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 vitriels do), the addition of fome bright iron wire to the folution will both discover, and effectually feparate that metal : for the acid quits the copper to diffolve a proportionable quantity of the iron; and the copper, in its feparation from the acid, adheres to the undiffolved iron, and forms a fkin of a true copper colour upon its furface. 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 fo much ftronger a dispolition to unite with iron than with copper, that it totally rejects the latter upon prefenting the former for it to act upon; the operator may, neverthelefs, give a dangerous impregnation of copper to the pureft and most faturated folution of iron in the vitriolic acid, by the use of copper veffels. If the martial folution be boiled in a copper vefiel, it never fails to diffolve a part of the copper, diffinguishable by its giving a cupreous stain to a piece of bright iron immerfed in it. By the addition of the iron, the copper is feparated; by boiling it again without iron, more of the copper is diffolved. And this may in like manner be feparated by adding more iron.

The falt of fteel is one of the most efficacious preparations of this metal; and not unfrequently made use.

Part IJI.

Chap. 10. Preparations of Copper.

ufe of, in cachectic and chlorotic cafes, for exciting the uterine purgations, firengthening the tone of the vifcera, and deftroying worms. It may be conveniently taken in a liquid form, largely diluted with aqueous fluids. Boerhaave directs it to be diffolved in an hundred times its quantity of water, and the folution to be taken in the dole of twelve ounces, on an empty flomach, walking gently after it. Thus managed, he fays, it opens the body, purges, proves diuretic, kills and expels worms, tinges the excrements black, or forms them into a matter like clay, ftrengthens the fibres, and thus cures many different distempers. The quantity of vitriol in the above dole of the folution is fifty-feven grains and a half : but in common practice, fuch large dofes of this chalybeate are never ventured on. Four or five grains, and in many cafes half a grain, are fufficient, for the intentions in which chalybeate medicines are given. Very dilute folutions, as that of a grain of the falt in a pint of water, may be used as fuccedanea to the natural chalybeate waters, and will in many cafes produce similar effects.

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Preparations of Copper.

OPPER is lefs eafy of folution , than iron ; and, in its metallic flate, does not appear to be acted on by the animal fluids, or to have any confiderable effect in the body. Dissolved, it proves exterhally an efcharotic ; internally, a violent purgative and emetic. Acids of every kind diffolve it, and likewife volatile alkalies. With the vegetable and marine acids, it forms a green folution; with the vitriolic acid, and volatile alkalies, a blue.

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Es USTUM.

Let thin copper plates be ftratified in a crucible with fulphur ; and calcined with a firong fire until they become pulverable.

PREPARATIONS of this kind, made with fulphur, nitre, and common falt, or mixtures of these, or by calcining the copper without addition, have been sometimes used in external applications, for drying and cleaning ulcers, and preventing the growth of fungous field ;

and fometimes likewife internally. They are still retained in some foreign pharmacopœias, but have not for a long time been taken notice of among us, for any medicinal intention.

CRYSTALLI VENERIS. Cryftals of copper.

Diffolve pure copper in thrice its weight of aquafortis, adding the metal to the acid by little and little at a time. Evaporate the liquor by a gentle heat, till one half of it be wasted; then fet the remainder in a cool place to crystallize: afterwards dry the cryitals, and keep them in a vial close-stopt from the air.

THESE crystals are ftrongly cauflic; fimilar to the caufficum lundre; but are fo much disposed to liquety, that they are fcarce ever made ule of, and cannot eafily be preferved.

TINCTURA VENERIS VOLATILIS. Volatile tincture of copper. Take of

Copper filings, one dram ; KK

Spirit

Spirit of fal ammoniac, twelve drams.

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Let them fland together in a clofe veffel, frequently flaking it, until the liquor is tinged of a beautiful violet colour.

THIS tincture, or folution, of copper has been given internally, in the dole of a few drops, as a diuretic. Boerhaave directs at first three drops to be taken in a morning falting, with a glafs of mead, and this dofe to be daily doubled till it comes to twenty-four drops ; which last quantity is to be continued for fome days. He fays, that by these means, he cured an hydropic perfon labouring under a confirmed afcites; and that the medicine procured furprifing discharges of urine; that neverthelefs, on trying it in another cafe of the fame kind, it did not answer. See the article CUPRUM.

ENS VENERIS. Edinb.

Take of

- Colcothar of green vitriol well edulcorated with water, and afterwards dried,
- Sal ammoniac, of each equal parts.

Reduce them feparately into powder; then mix, and put them into an earthen cucurbit, fo as to fill two-thirds of it. Place the cucurbit in an open fire, and, having adapted to it a glafs blindhead, apply at first a gentle heat, which is to be increased by degrees, and continued as long as the flowers arife of a yellow colour inclining to red. When the vessels are grown cold, let the flowers be carefully fwept out with a feather.

IF the blue vitriol be perfectly good, this process will not succeed

in the manner here fet down. Where it does fucceed, that is, where the flowers prove of a reddiff yellow colour (ex luteo rubentes) it is to be prefumed, that the fuccess is owing to the vitriol's partaking largely of iron, and that the preparation is not greatly different from the flores martiales of the preceding fection. The colour of blue vitriol is undoubtedly owing to copper : but most of the common vitriols of this kind contain, allo, no inconfiderable quantity of iron ; and a reddith yellow colour of the flowers may be looked upon as a mark, that it is chiefly or folely the iron that the fal ammoniac has carried up. For this is the colour which iron always gives in its fublimates with fal ammoniac ; whereas copper, in all its folutions, or foluble combinations with fal ammoniac, or other faline bodies, gives a blue or green, or a colour compounded of these two.

The process is originally taken from Mr. Boyle, who tells us, that he and a chemift, endeavouring to imitate Butler's flone by a preparation of calcined vitriol, and finding the medicine upon trial, though far fhort of what Helmont afcribes to his, yet no ordinary one, they called it, for the mineral's fake it was made of, ens primum veneris.

The composition of vitriols was at that time but imperfectly known: and this is not the only inflance of an effect's being afcribed to the cupreous part of a vitriol, which was owing to the ferrugineous. Though Boyle looked on the preparation as proceeding from copper, and accordingly directs a good venereal vitriol to be used; yet, in the Goslarian and Dantzick vitriol, which he recommends as being very fit for the purpose, iron is the prevailing metal, the quantity of copper being very inconfiderable; and

Chap. 10. Preparations of Lead.

it appears from his own words, that fometimes, at least, he used the Englifh vitriol, which is fearcely ever found to contain any metallic matter befides iron. The yellow or reddifh colour which he afcribes to his fublimate, and its property of turning to an inky blackness with infusion of galls, are marks of its having been truly a chalybeate preparation.

In a preceding edition of the London pharmacopœia, agreeably to Boyle's opinion of the production of the fublimate, the procefs was inferted with blue vitriol; and the pharmacopœias of Edinburgh and Paris followed the example. The London college, at the laft revifal of their book, have corrected this error, and ordered green vitriol, or filings of iron itfelf, to be used ; but the mistake is still continued in the other pharmacopœias.

From good blue vitriol, or pure vitriol of copper, the fublimate here required cannot be obtained : and, although it may be prepared from the common blue vitriol of the shops, as I have on trial found that it may ; yet it is forely imprudent to endanger impregnating the preparation with that noxious metal; more especially as pure vitriols of iron are procurable at a much cheaper rate than the others. Those mixed vitriols in which the copper greatly prevails, give first a green or blue cupreous fublimate, and afterwards a yellow or reddifh ferrugineous one; and those in which iron abounds most, give first the ferrugineous, and afterwards the cupreous flowers; though possibly neither sublimate is entirely free from an admixture of the other.

SECT. V.

Preparations of Lead. in third, the shirt is

T EAD readily melts in the fire, , and calcines into a dufky powder : which, if the flame be reverberated on it, becomes at firit yellow, then red, and at length melts into a vitreous mass. This metal diffolves eafily in the nitrous acid, difficultly in the vitriolic, and in fmall quantity in the vegetable acids; it is alfo foluble in expressed oil, especially when calcined.

Lead, and its calces, whilft undiffolved, have no confiderable effects as medicines. Diffolved in oils, they are supposed to be (when externally applied) anti-inflammatory and deficcative. Combined with vegetable acids, they are notably fo; and taken internally

prove a powerful but dangerous ftyptic.

PLUMBUM USTUM.

Burnt lead. Edinb. anter inanna

Melt lead with a gentle fire, and keep it continually firring, with an iron spatula, till it change into powder. ato tot tot

MINIUM. Red lead. Edinb.

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Let any quantity of lead be melted in an unglazed earthen veffel, and kept flirring with an iron fpatula, till it fall into a powder, at first blackish, afterwards yellow, and at length of a deep K k z Ind

red colour, in which last flate it is called minium; taking care not to raife the fire fo high as to run the calx into a vitreous mafs.

THE preparation of red lead is fo troublesome and tedious, as fcarce 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 diffinct branch of bufineis. The makers melt large quantities of lead at once, upon the bottom of a reverberatory furnace built for this purpole, and fo contrived, that the flame acts upon a large furface of the metal, which is continually changed by the means of iron rakes drawn backwards and forwards, till the fluidity of the lead be deftroyed ; after which, the calx is only now and then turned. By barely ftirring the calx, as before directed, in a veffel over the fire, it acquires no rednefs; the reverberation of name upon the furface being abfolutely neceffary for this effect. It is faid, that twenty pounds of lead gain, in this process, five pounds ; and that the calx, being reduced into lead again, is found one pound lefs than the original weight of the metal.

Thefe calces are employed in external applications, for abating in-Hammations, cleanfing and healing alcers, and the like. Their effects, however, are not very confiderable; nor are they perhaps of much further real ufe, than as they give confidence to the platter, unguent, &c.

CERUSSA. Cerufe, or white lead. Edinb.

- Put some vinegar into the bottom

girth to to it guarded

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pend over the vinegar very thin plates of lead, in fuch a manner that the vapour which arifes from the acid, may circulate about the plates. Set the containing veffel in the heat of horfe-dung, for three weeks. If, at the end of this time, the plates be not totally calcined, forape off the white powder, and expose them again to the fteam of vinegar, till all the lead be thus corroded into powder.

Part III.

THE making of white lead alfo is become a trade by itfelf, and confined to a few perfons, who have large conveniencies for this purpofe. The general method which they follow, is nearly the fame with that before defcribed. See the Philofophical Tranfactions, N° 137.

In this preparation, the lead is fo far opened by the acid, as to difcover, when taken internally, the malignant quality of the metal; and to prove externally, when fprinkled on running fores, or ulcers, moderately cooling, drying, and aftrictive.

SACCHARUM SATURNI. Sugar of lead. Lond.

Boil cerufe with diffilled vinegar, in a leaden veffel, until the vinegar become fufficiently fweet: then filter the vinegar through paper, and, after due evaporation, fet it to cryftallize.

Edinb.

Put any quantity of cerufe into a cucurbit, and pour thereon diftilled vinegar to the height of four inches. Digeft them together for fome days in a fand-heat, till the vinegar has acquired a fweetift tafte, when it is to be fuffered to fettle, and then poured off. Add fresh vinegar to the remainder,

remainder, and repeat this procefs till the menstruum no longer extracts any fweet tafte. Let all the impregnated liquors reft for fome time : and, after they have been poured from the feces, evaporate them, in a glafs veffel, to the confidence of thin honey; fo that, upon being fet in a cool place, the fugar may fhoot into cryftals, which are afterwards to be dried in the shade. Exhale the remaining liquor to a pellicle, fet it again in the cold, and more crystals will shoot. Repeat this operation till no crystals can be any longer obtained.

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CERUSE (especially that fort called flake lead, which is not, like the others, fubject to adulteration) is much preferable either to minium or litharge, for making the fugar of lead : because the corrosion, which it has already undergone from the fleam of vinegar, difpofes it to diffolve more readily. It should be finely powdered before the vinegar is put to it, and during the digeftion, or boiling, every now and then firred up with a wooden fpatula, to promote its diffolution, and prevent its concreting into a hard mais at the bottom. The ftrong 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 fmall quantity of rectified spirit of wine be prudently added to the folution as foon as it is duly exhaled, and the mixture fuffered to grow cold by flow degrees, the fugar will concrete into very large and transparent crystals, which are fearcely to be obtained by any other method.

The fugar of lead is much more efficacious than the foregoing preparations, in the feveral intentions to which they are applied. Some have ventured upon it internally, in doles of a few grains, as a ftyptic, in hæmorrhages, profuse colliquative sweats, feminal fluxes, the fluor albus, &c. nor has it failed their expectations. It very powerfully reitrains 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 fometimes fatal. Violent pains in the bowels, or through the whole body, and obstinate constipations, fometimes immediately follow, efpecially if the dofe has been confiderable. Cramps, tremors, and weakness of the nerves, generally, fooner or later, enfue.

Boerhaave is of opinion, that this preparation proves malignant only fo far as its acid happens to be abforbed in the body; for in uch cafe, he fays, " it returns again into ce-" rufe, which is violently poifon-" ous." On this principle it would follow, that in habits where acidities abound, the fugar of lead would be innocent. But this is far from being the cafe. Lead and its, preparations act in the body only to far as they are combined with acid. Ceruse possesses the qualities of the faccharum only in a low degree ; and either of them, freed from the acid, has little, if any effect at all,

SECT. VI.

Preparations of Tin.

IN eafily melts in the fire, and calcines into a dufky 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, fo 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 alfo may be made to diffolve it entirely, and the vegetable ones in fmall quantity. It crystallizes 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 antihyfteric, antihectic, &c. At prefent it is chiefly ufed as an anthelmintic.

STANNUM PULVERATUM. Powdered tin.

Land.

Melt the tin, and pour it into a wooden box rubbed in the infide with chalk. Then immediately let the box be nimbly fhaken, and a part of the tin will fall into powder. The remainder is to be melted a fecond time, and treated in the fame manner, till the whole of the metal be thus reduced into powder.

THIS preparation has been used for fome time as a remedy against worms, particularly the flat kinds, which too often elude the force of other medicines. The general dose is from a foruple to a dram; fome

confine it to a few grains. But Dr. Alfton affures us, in the Edinburgh effays, that its fuccefs chiefly depends upon its being given in much larger quantities. He gives an ounce of the powder on an empty flomach, mixed with four ounces of melaffes ; next day, half an ounce ; and the day following, half an ounce more : after which a cathartic is administered. He fays the worms are usually voided during the operation of the purge, but that pains in the flomach occafioned by them are removed almost immediately upon taking the first dofe of the tin. The experiments on tin, related before in this work, account sufficiently for its being deftructive to these animals ; though not for its being fafe to the patient.

CALX JOVIS.

Calx of tin.

Edinb.

Melt any quantity of tin in an unglazed earthen veffel, and keep it continually flirring with an iron fpatula, until it falls into a calx.

THIS process is not here intended to be carried fo far as the pharmaceutical writers in general direct. It must be discontinued as foon as the metal is reduced into a dusky powder : if calcined to whiteness, the following operation would not well succeed. As to the virtues of the calx, they do not seem to be greatly different from those of the foregoing preparation.

SAL

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Preparations of Tin.

SAL JOVIS. Salt of tin. Edinb.

Take one pound of the foregoing calx of tin ; and four ounces of aqua regia, diluted with fix times its quantity of fpring water. Digeft them together in a fandheat for two days : then thake the veffel ; and, after the more ponderous parts of the calx have fublided, pour off the turbid liquor, and evaporate it almost to drynefs; the further exficcation of the matter is to be performed on bibulous paper. On the calx which is left, pour half as much of the diffolvent as was employed at first; and proceed in the fame manner as before.

In former editions, the menstruum, after digestion upon the calx of tin, was ordered to be filtered, then evaporated till a pellicle appeared upon the furface, and fet by to crystallize. But the crystallization succeeded very ill; and fuch crystalline matter, as was with difficulty obtained, proved to be little other than a nitrous ammoniacal falt afforded by the aqua regia; for this mentruum does not diffolve, or diffolves only an inconfiderable quantity of, the calx of tin. The process is now rendered more practicable, by allowing the finer parts of the calx to be mixed with the liquor in an undiffolved state, and the whole to be infpiffated and exficcated together. It is probable, however, that the preparation here intended might be obtained in a manner ftill more commodious.

I cannot apprehend what advantage there is in calcining the tin. Tin, in its metallic flate, diffolves freely in aqua regia, but calcinations render it almost indiffoluble

in that menftruum; the further it is calcined, the more does it lofe of its folubility. If tin and its calx were of equal folubility, it could fcarcely be fufpected that the folutions of the two would be different in quality; for the phlogifton, or inflammable principle, which fire expels from metals in their calcination, is equally extricated by acids in their diffolution. A falt of tin with aqua regia may therefore be more advantageoufly prepared in the following manner:

Let melted tin be poured in fmall ftreams into a veffel of cold water, that it may be reduced into grains. Drop thefe by little and little, as a grain at a time, into aqua regia, that the diffolution may go on flowly, without effervescence or the discharge of fumes. When the metal is no longer acted on, pour off the folution, and evaporate it in a fand-heat, till a dry falt is left.

THIS preparation feems intended chiefly for external ufe, as a mild efcharotic and detergent. It is not fo corrofive as might be expected, nor much difpofed to liquefy in the air, though it is not eafily made to affume a cryftalline form. A perfect cryftalline falt may be obtained from tin by the vitriolic acid, in the following manner:

Take two ounces of tin, reduced into grains or filings; and five ounces of oil of vitriol. Put them into a wide-necked glafs, in a fand-heat, and increase the fire till the liquid boils and evaporates, and the matter remains almost dry. Then remove the vessel from the fire, and, when the faline residuum has concret-K k 4 ed,

ed, add a proper quantity of water, which, by the affiftance of a moderate heat, will diffolve nearly the whole. Filter the folution, and, after due evaporation, fet it to cryftallize.

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SALT of tin for internal ufe, has been commonly directed to be prepared with diffilled vinegar; by digefting the vinegar on calcined tin, and then evaporating and cryftallizing. Several of the chemifts have denied that any cryftals would by thefe means be obtained, or that the diffilled vinegar would diffolve any part of the calx : and indeed when the tin is but moderately calcined, as above directed, it does not appear that any folution happens.

There are two flates in which tin is confiderably acted upon by vegetable acids : its perfect metallic ftate, and that of a perfect calx. Plates of pure tin, put into common vinegar, are in a few hours corroded : by degrees the liquor becomes quite opake and turbid, and deposits great part of the corroded tin to the bottom in form of a whitish powder ; but still retains a part exquisitely divided ; for, after standing many days, and after paffing through a filter, fo much remained fulpended, as to give a whitishness and opacity to the fluid. Acid juices of fruits, fubflituted for vinegar, exhibited the fame phænomena. Thefe experiments, though they do not fhew that the tin is thus fufficiently diffolved to afford a perfect crystalline falt, prove, neverthelefs, what is of more importance to be known, that tin or tinned veffels, however pure the tin be, will give a metalline impregnation to light vegetable acids fuffered to fland in them for a few hours.

In order to the obtaining of a perfect folution of tin for crystallization, the metal must be highly calcined; for, though its folution in mineral acids be prevented by calcination, it is otherwife in regard to the vegetable. Some take the common calx of tin, and having fpread it thinly over the bottom of a proper veffel, continue the calcination in a gentle heat, frequently ftirring the powder, for three or four days, in a furnace where the air may pais freely over the furface. Others mix the common calx or filings of tin with twice their weight of nitre, and inject the mixture by degrees into a vefiel strongly heated, over which are fitted a number of aludels, or earthen pots with holes in their bottoms. The lowermost of these veffels has a hole alfo in the fide, through which the matter is thrown in : during the deflagration which happens on each injection, a part of the tin is volatilized, and adheres to the pots in form of a fine white powder, which is fwept out and washed with water. Others obtain a calx of tin, perhaps not leis perfect, more expeditioufly and with lefs trouble : by diffolving the metal in aqua regia (which, as already observed, has, in this refpect, nearly the fame effect as fire) and by afterwards recovering the calx, by diluting the folution with about four times its quantity of water, and gradually adding to it fpirit of fal ammoniac till the effervescence ceases; a white curdly matter precipitates, which is to be washed with water and dried.

Take of calx of tin, prepared in either of the above methods, one pound; of diffilled vinegar, one gallon. Digeft them together, occasionally flirring up the matter

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matter from the bottom, till the vinegar has acquired a rough fweetish taste then evaporate the liquor to the confistence of a fyrup, add to it about onetwentieth its weight of rectified spirit of wine, and fuffer the heat flowly to decrease, that the falt may crystallize.

THE cryftals obtained by this method are hard, folid, colourlefs, transparent, void of acrimony. They have been recommended, in the dose of a few grains, in uterine diforders: but it does not appear that experience has warranted the virtues attributed to them; nor are any of these falts at prefent made use of in common practice, or kept in the shops.

The powder precipitated from aqua regis, either by volatile alkalies, or by water alone, is fometimes employed as a cofmetic, under the name of MAGISTERY OFTIN. A whiter, and more elegant preparation of this kind might be obtained, by diffolving the metal in the vitriolic acid, and precipitating with volatile fpirits.

AURUM MUSIVUM. Mofaic gold. Lond.

Take of

Tin, one pound ;

Flowers of fulphur, feven ounces; Sal ammoniac,

Purified quickfilver, of each half a pound.

Melt the tin by itfelf, add to it the quickfilver, and, when the mixture is grown cold, reduce it into powder. Mix this with the fulphur and fal ammoniac, and fublime in a matrafs. The mofaic gold will be found under the fublimed matter, with fome drofs at the bottom.

THE management of this procefs, fo as to give to the preparation the beautiful colour and appearance for which' it is admired, has been held as a fecret. The chemists seem greatly divided as to the proportions which the ingredients ought to bear to each other, and in this fome make the chief difficulty to confift; while others make the due regulation of the fire to be the principal point. There does not however appear to be any very great nicety. in either respect. I have found the procefs to fucceed equally with very different proportions of the materials; by mixing them thoroughly together; putting them into a wide-necked matrafs upon a little fand in an iron pot; applying a gentle fire for fome time, till the white fumes, which arofe copioully at first, and passed out at the neck of the glass, began to abate; then gradually increasing the fire till the fand became redhot, and keeping it up in this state for a confiderable while, according to the quantity of the mixture.

The mofaic gold is chiefly valued, and receives its name from its sparkling gold-like hue. As a medicine, it is at prefent little regarded : though formerly held in confiderable efteem, in hysterical and hypochondriacal complaints, malignant fevers, and venereal diforders. In these last it has been recommended, from a supposition of its being a mercurial; but, on confidering the circumstances of the process, and the phænomena that occur in it, there will appear little probability of any of the mercury's being retained in the preparation.

The matrafs being broken when the procefs is finished, the mosaic gold is found in the bottom; and

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the fublimed fubltance, above it, confifts partly of fal ammoniac, partly of fulphur, and partly of a cinnabar refulting from the combination of part of the fulphur and mercury. The aurum mofaicum is found to weigh more than the tin employed; but pure tin, in being calcined by itfelf, gains very nearly as much as it does in this proceefs: the golden colour is probably owing to a minute portion of fulphur adhering to the tin. On roafting the aurum over a gentle fire, it fmokes a little, and foon changes its gold-

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en hue to a dirty-coloured one, not unlike that of tin lightly calcined. Being then mixed with a proper flux, and melted in a crucible, it yields a lump of tin, not far fhort of the original weight of the metal.

The college of Edinburgh, tho' they formerly divided this preparation into two proceffes, one for amalgamating the tin with the mercury, the other for the fublimation with the fulphur and fal ammoniac, have now entirely rejected it.

SECT. VII.

Preparations of Mercury.

IVIERCURY, or quickfilver, is a ponderous metallic fluid, totally volatile in a ftrong fire, and calcinable by a weaker one (though very difficultly) into a red powdery fubstance. It disfolves in the nitrous acid, is corroded by the vitriolic, but not acted on by the marine in its liquid flate. It neverthelefs may be combined with this laft, if skilfully applied in the form of fume. Quickfilver unites, by trituration, with earthy, unctuous, refinous, and fimilar fubitances, fo as to lofe its fluidity : triturated with fulphur, it forms a black mais, which by fublimation changes into a beautiful red one.

The general virtues of the mercurial preparations are, to fuse the juices, however viscid, in the minutest and remotest vessels; by these means they prove eminently ferviceable in inveterate chronical diforders, proceeding from a thickness and sluggistness of the humours, and obstinate obstructions of the glands. Crude mercury has no effect this way. Resolved into

fume, or divided into minute particles, and prevented from re-uniting by the interpolition of other fubftances, it operates very powerfully; unlefs the dividing body be fulphur, which reftrains its action. Combined with a fmall quantity of the mineral acids, it acts effectually, though in general mildly: with a larger, it proves violently corrofive.

ARGENTI VIVI PURIFI-CATIO.

Purification of quickfilver. L. E.

Diftil quickfilver in a retort; and afterwards wash it with water and common falt, or with vinegar.

IF a glafs 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, fo as to allow the elevated mercury a guick defcent. The receiver should be filled almost to the neck of the retort with water; the use of this is not

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not to condense, but to cool, the diffilling quickfilver, left 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 fhould be raifed no higher than is fufficient to elevate the mercury; for certain mineral fubfiances, which are faid to be fometimes mixed with it, prove in part volatile in a degree of heat not much greater than that in which mercury diftils. Mr. Boyle relates, that he has known quickfilver carry up with it a portion even of lead, fo as to have its weight very fenfibly increafed thereby; and this happened, though only a moderate fire was ufed.

MERCURIUS ALCALIZATUS. Alkalized mercury.

Take of

Pure quickfilver, three drams ;...

Prepared crabs-eyes, five drams. Grind them together in a glafs mortar, till the mercurial globules difappear.

THIS preparation, which has never been received into the London pharmacopœia, and is now rejected from that of Edinburgh, is inferted here on account of its being ftill now and then called for, and held by fome in confiderable efteem. It has never come much into common practice, the labour of making it having been a temptation to a grievous abufe in its preparation, viz. the addition of an intermedium, which facilitates the union of the mercury with the crabs eyes, but greatly abates its medical powers. The medicine, when duly prepared, is an uleful alterative ; and may be given, in cutaneous or venereal cafes, from two or three grains to a scruple,

MERCURIUS SACCHA-RATUS.

Sugare mercury. Edinb.

Take of

Pure quickfilver,

Brown fugar-candy, of each half an ounce ;

- Effential oil of juniper berries, finteen drops.
- Grind them together in a glafs mortar, until the mercury ceafes to appear.

THE effential oil, here added, is faid to be a very afeful ingredient; not only promoting the extinction of the guickfilver (which however is ftill not a little difficult and tedious) but likewife improving the medicine. The intention, in this and the foregoing process, is only to divide the mercury by the interpoficion of other bodies; for when thus managed (as already observed) it has very powerful effects; though whilft undivided it feems to be altogether inactive. Sugar alone apparently answers this intention; but, on the commixture of aqueous fluids, the fugar diffolves by itfelf, leaving the mercury to run together again in its original form. The addition of the oil is faid in great measure to prevent this inconvenience. The dole of this medicine, as an alterative, is from two or three grains to a fcruple.

ÆTHIOPS MINERALIS. Ethiops mineral. Lond.

Take of

Purified quickfilver,

Flowers of fulphur, unwalhed, of each equal weights.

Grind them together, in a glass or fione mortar, until they are united.

Edinb.

Take of

Purified quickfilver,

Flowers

Flowers of fulphur washed, each equal weights.

- Grind them together in a glafs mortar, with a glafs pefile, till the mercurial globules totally difappear.
- An ethiops is made alfo with a double quantity of mercury.

THE union of the mercury and fulphur might be greatly facilitated by the affiftance of a little warmth. Some are accuftomed to make this preparation in a very expeditious manner, by melting the fulphur in an iron ladle, then adding the quickfilver, and ftirring them together till the mixture be completed. The small degree of heat here fufficient, cannot reasonably be supposed to do any injury to fubflances, which have already undergone much greater fires, not only in the extraction from their ores, but likewife in the purifications of them directed in the pharmacopœia. In the following process, they are expoled in conjunction to a ftrong 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 beltowed upon them. From the ethiops prepared by triture, part of the mercury is apt to be fpued out on making it into an electary or pills. From that made by fire, no feparation is observed to happen.

Ethiops mineral is one of the moft inactive of the mercurial preparations. Some practitioners have boldly afferted its poffeffing extraordinary virtues; and moft people imagine it a medicine of fome efficacy. But what benefit is to be expected from it in the common dofes of eight or ten grains, or a fcruple, may be judged hence, that it has been taken in dofes of feveral

drams, and continued for a confiderable time, without producing any remarkable effect. Sulphur eminently abates the power of all the more active minerals, and feems to be at the fame time reftrained by them from operating in the body itself. Boerhaave, who is in general fufficiently liberal in the commendation of medicines, difapproves the ethiops in very ftrong temns. " It cannot enter the ab-" forbent veffels, the lacteals or " lymphatics ; but paffes directly " through the intestinal tube, " where it may happen to deftroy " worms, if it operate luckily. " They are deceived who expect " any other effects from it ; at leaft " I could never find them. I am " afraid, it is unwarily given, in " fuch large quantities, to children " and perfons of tender conffitu-" tions. As being a foreign mafs, " unconquerable by the body, it is " the more to be fufpected, fince it " there continues long, fluggifh " and inactive. It does not raife " a falivation, because it cannot " come into the blood. Who " knows the effects of a fub-" ftance, which, fo long as it re-" mains compounded, feems no " more active than any ponderous " infipid earth ?" The ethiops, 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.

Part III.

CINNABARIS FACTITIA, Artificial cinnabar,

Lond.

Take of

Purified quickfilver, twenty-five ounces.

Sulphur, feven ounces.

Melt

Preparations of Mercury.

Melt the fulphur, and mix into it the quickfilver. If the mixture happen to catch flame, extinguish it by covering the vefiel. The matter is afterwards to be reduced into powder and fublimed.

Take of

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Purified quickfilver, three pounds and a half;

Flowers of fulphur, washed, one pound.

Melt the fulphur in a large iron veffel, over a gentle fire, and add to it by degrees the quickfilver previoufly heated, flirring them conftantly together with an iron fpatula, that they may be perfectly mixed. Immediately fit upon the veffel a wooden cover, to prevent the mixture from taking fire. Before the matter is grown cold, grind it into powder, and fublime according to art.

IT has been customary to order a larger quantity of fulphur than here directed ; but these fmaller proportions answer better; for the less fulphur, the finer coloured is the cinnabar.

As foon as the mercury and fulphur begin to unite, a confiderable explosion frequently happens, and the mixture is very apt to take fire, efpecially 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 confistent. As soon as this happens, the veffel mult be immediately close covered.

During the fublimation, care must be taken that the matter rife not into the neck of the vessel for as to block up and burst the glais. To prevent this, a wide-necked bolthead, or rather an oval earthen jar, coated, should be chosen for the

fubliming vefiel. If the former be employed, it will be convenient to introduce, at times, an iron wire, fomewhat heated, in order to be the better affured that the paffage is not blocking up; the danger of which may be prevented, by cautioufly raifing the veffel higher from the fire.

If the ingredients were pure, no feces will remain. In fuch cafe, the fublimation may be known to be over, by introducing a wire as before, and feeling the bottom of the veffel, which will then be perfectly fmooth. If any roughnefs or inequalities be perceived, either the mixture was impure, or the fublimation is not completed ; if the latter be the cafe, the wire will foon be covered with the rifing cinnabar.

The preparers of cinnabar in large quantity, employ earthen jars, which in fhape pretty much refemble an egg. These are of different fizes, according to the quantity intended to be made at one fublimation, which fometimes amounts to two hundred weight. The jar is ufually coated from the fmall end, almost to the middle, to prevent its breaking, from the vehemence or irregularity of the fire. The greater part, which is placed uppermoft, not being received within the furnace, has no occasion for this defence. The whole fecret, with regard to this process, is (1) the management of the fire, which should be fo ffrong as to keep the matter continually fubliming 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 fubliming vesiel only imall quantities of the mixture at a time.

A method is mentioned in the practical chemistry of making cinnabar without fublimation, by agitating or digesting mercury in the volatile

Edinb.

volatile tincture of fulphur, already defcribed. I have found a fulphureous liquor, more eafily preparable, to have a like effect. The folution for *lac fulpburis* will, with fome addrefs, fucceed.

The principal use of cinnabar is as a pigment. It was formerly held in great effeem as a medicine, in cutaneous foulnefles, gouty and rheumatic pains, epileptic cafes, &c. but, of late, it has loft much of its reputation. It appears to be nearly fimilar to the ethiops, already fpoken of. Cartheuser relates, that having given cinnabar in large quantities to a dog, it produced no fenfible effect, but was partly voided along with the feces unaltered, and partly found entire in the ftomach and inteffines upon opening the animal. The celebrated Frederick Hoffman, after bestowing high encomiums on this preparation, as having, in many inftances within his own knowledge, perfectly cured epilepfies and vertigoes from contutions of the head (where it is probable, however, that the cure did not fo much depend upon the cinnabar, as on the fpontaneous recovery of the parts from the external injury), observes, that the large repeated doles necessary for having any effect, can be borne only where the first passages are strong ; and that if the fibres of the flomach and inteffines be lax and flaccid, the cinnabar, accumulated and concreting with the mucous matter of the parts, occasions great opprefhon ; which feems to be an acknowledgment that the cinnabar is not fubdued by the powers of digeflion, and has no proper medicinal activity. There are indeed iome inflances of the daily use of cinnabar's having brought on a falivation : perhaps becaufe the cinnabar, made ule of in those cases, contained a less proportion of fulphur than the forts

commonly met with. The regulus of antimony, and even white arfenic, when combined with a certain quantity of common fulphur, feem to have their deleterious power deftroyed : on feparating more and more of the fulphur, they exert more and more of their proper virulence. It does not feem unreasonable to prefume, that mercury may have its activity varied in like manner; that when perfectly fatiated with fulphur, it may be inert; and that when the quantity of fulphur is more and more leffened, the compound may have greater and greater degrees of the proper efficacy of mercurials.

Cinnabar is fometimes 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 falivation. 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 fulphur; but mercury resolved into fume, and blended in part with the volatile vitriolic acid; in either of which circumflances, this mineral, as already obferved, has very powerful effects.

MERCURIUS CALCINATUS, Calcined mercury. Lond.

Put purified quickfilver into a broad-bottomed glafs veffel, having a fmall hole open to the air; and keep it in a conftant heat, in a fand-furnace, for feveral months, until it is calcined into a red powder.

THIS tedious procefs might, in all probability, be greatly expedited, by employing, inftead of a veffel with a fmall aperture, a very wide-mouthed, flat-bottomed glafs body, of fuch a height that the mercury

mercury may not elcape. By these means, the air, which is effentially neceffary to the calcination of all metallic fubstances, will be more freely admitted. A vessel might be fo contrived, as to occasion a continual flux of air over the furface of the mercury.

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This preparation is by fome highly effeemed in venereal cafes, and fuppofed to be the most efficacious and certain of all the mercurials. It may be advantageoufly given in conjunction 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 fome 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 doles, as four or five grains, it proves a rough emetic and cathartic.

MERCURII SOLUTIO. Solution of mercury. Edinb.

Take equal quantities of pure quickfilver, and double aquafortis. Digeft them together, in a phial placed in a fand-furnace, that a limpid folution may be made.

AQUAFORTIS diffolves mercury more eafily, and in larger quantity, than any other acid. Sixteen ounces, if the menftruum be very firong and pure, will take up eleven or twelve. As the liquor grows cold, a confiderable part concretes, at the bottom of the veffel, into a cryftalline form. If the whole be wanted to remain fufpended, a proper quantity of water fhould be added after the folution is completed.

This process is given only as pre-

paratory to fome of the following ones. The folution is highly cauftic, foas fcarce to be fafely touched. It flains the fkin purple or black.

CALX MERCURII. Calx of mercury. Edinb.

Take any quantity of the folution of mercury, and evaporate it over a gentle fire, till a white dry mafs remains.

THIS calx, or rather falt, of mercury, is violently corrofive. It is rarely made use of any otherwise than for the following preparation and the corrofive fublimate.

MERCURIUS CALCINATUS,

vulgo PRÆCIPITATUS RUBER. Red calx of mercury, commonly called red precipitate. Edinb.

Take any quantity of the calx of mercury, and reverberate it in a crucible, with fucceffive degrees of heat. Its white colour will change first into a brown, and afterwards a yellow. At length, upon increasing the fire, it passes into a deep red.

MERCURIUS CORROSIVUS RUBER. The red mercurial corrofive. Lond.

Take of

Purified quickfilver,

Compound aquafortis, already defcribed, of each equal weights. Mix, and fet them in a broadbottomed veffel, in a fand-heat, till all the humidity is exhaled, and the mafs has acquired a red colour.

THE marine acid in the compound menstruum, ordered in this last last process, disposes the mercurial calx to affume the bright fparkling look admired in it; which, though perhaps no advantage to it as a medicine, ought neverthelefs to be infifted on by the buyer as a mark of its goodnels and ftrength. As foon as the matter has gained this appearance, it should be immediately removed from the fire, otherwife it will foon lofe it again. The preparation of this red precipitate, as it is called, in perfection, is supposed by some to be a fecret not known to our chemists; fo that we are under a necessity of importing it from abroad. This reflection feems to be founded on mifinformation. We fometimes indeed receive confiderable quantities from Holland; but this depends upon the ingredients being commonly cheaper there than with us, and not upon any fecret in the manner of the preparation.

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This precipitate is, as its title imports, an elcharotic, and in this intention is frequently employed by the furgeons, with bafilicum, and other dreffings, for confuming fungous fielh in ulcers, and the like purpofes. It is subject to great uncertainty in point of ftrength ; more or lefs of the acid exhaling, according to the degree and continuance of the fire. The best criterion of its itrength, as already observed, is its brilliant appearance; which is alfo the mark of its genuinenels. If mixed with minium, which it is fometimes faid to be, the duller hue will difcover the abufe. 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, fcrophulous, and other obtlinate chronic diforders, in doles of two

Preparations.

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 confequences, which the best management can fcarcely prevent this corrofive preparation from fometimes doing. The chemifts have contrived many methods of correcting and rendering it milder, by divefting it of a portion of the acid; but to no very good purpole, as they either leave the medicine still too corrofive, or render it fimilar to others which are procurable at an eafier rate.

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MERCURIUS CORALLINUS. Coralline mercury. Lond.

Pour on the red mercurial corrofive about thrice its weight of rectified fpirit of wine, and digeft them together, with a gentle heat, for two or three days, frequently fhaking the veffel. Then fet fire to the fpirit, keeping the powder continually flirring till all the fpirit 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 digeftion in spirit of wine : the acid being dulcified, or in part abforbed by the fpirit. This evil dently happens in fome cafes, where the proportion of acid is large, or fufficient to render the compound foluble in water : but that it happens equally in others, I cannot affirm. Thus much is certain, that the mercurius corallinus, whether from this caufe, or barely from fome of the acid's being diffipated by the heat of the burning Ipirit, proves confiderably milder than the corrolive

corrofive was at first. It is still, however, a medicine of great activity, and feems to be fcarce fuffici- folutio mercurii above described. ently safe for internal use. A few grains of it generally prove cathartic or emetic, and fometimes occafion violent fymptoms.

ARCANUM CORALLINUM. The coralline secret.

Take five ounces of the red mercurial corrofive, and eight ounces of spirit of nitre. Distil off the fpirit in a retort. Return it with four ounces of fresh spirit of nitre upon the refiduum, and draw it off again as before. Repeat this process with four ounces of new spirit; and at last keep the fire up very ftrong, for at least two hours. The powder, which remains in the retort, is to be put into a crucible, and kept of a worm-red heat for feven or eight minutes : then boil it for half an hour, in three pints of pure water : distil from it twelve ounces of tartarized fpirit of wine, cohobating the fpirit twice : digest it for fortyeight hours in a fand-heat, with the fame quantity of fresh tartarized fpirit; raifing the fire towards the end, fo as to make the spirit fimmer a little : afterwards fuffer the whole to cool, decant off the fpirit, and dry the powder for use.

THIS preparation, notwithftanding its pompous name, is a very unthrifty and injudicious one. The cohobation of fpirit of nitre upon the corrofive, answers no useful purpole; for, whatever the acid communicates, is afterwards diffolved and feparated by the water. If the direction of keeping up a ftrong fire for fome time, after the last distillation, is not strictly complied with, all the mercury will

diffolve in the water, and the folution will prove fimilar to the

PULVIS PRINCIPIS. Prince's powder.

Grind eight ounces of the red mercurial corrofive into a fine powder; and digeft it with two quarts of water, in an almost boiling heat, for twelve hours, occafionally flirring up the powder from the bottom : then pour off the liquor, and digest the powder in fresh water as before : repeating this process a third The last water being time. poured off, grind the powder with double its weight of fixt alkaline falt, and digest it as at first, in fresh waters, till it becomes infipid. Afterwards boil it in fpirit of wine; and, laftly, pouring off the fpirit, dry the powder for ufe.

PANACEA MERCURII RUBRA. Red panacea of mercury.

Digeft the red mercurial corrofive with eight times its weight of water, for twenty-four hours, shaking the veffel three or four times : pour off the water, dry the powder, and digest it with eight times its weight of fpirit of wine, for fifteen days. The fpirit being then decanted off, burn upon the calx twice its weight of tincture of fulphur: afterwards digeft it two or three days longer in fresh spirit of wine; and in the last place, exficcate it for use.

THE three foregoing preparations have been kept in particular hands as fecrets. At bottom they are all nearly the fame, and much too trivial to deferve the pains taken about them. They are perhaps further divefied of acid than the LI

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the mercurius corallinus of the fhops; but have this difadvantage, that the quantity of acid feparated in the troublefome digeftions, &c. must vary according to different circumstances in the operation. All the four stand recommended in small doses, two grains for instance, as excellent alterants and diaphoretics: in larger ones, they prove emetic and cathartic.

MERCURIUS CORROSIVUS SUBLIMATUS, vel ALBUS. The white mercurial corrofive, or corrofive mercury fublimate. Lond.

Take of

Purified quickfilver, forty ounces; Sea falt, thirty-three ounces; Nitre, twenty-eight ounces; Calcined green vitriol, fixty-fix ounces.

Grind the quickfilver, in a wooden or stone mortar, with an ounce or more of corrofive mercury fublimate already made, until the quickfilver be divided into fmall grains : this mixture is to be ground with the nitre, and afterwards with the fea falt. Then add the calcined vitriol, continuing the triture only for a little time longer, left the quickfilver should run together again. Lastly, proceed to fublimation, in a glafs matrafs; to which you may adapt a head, in order to fave a little fpirit that will come over.

It has been fuppofed, that corrofive fublimate participates of all the ingredients employed in this procefs; though it is certain, that it confifts only of mercury and the acid of the fea falt united together. The materials being mixed and exposed to the fire, first the vitriol parts with its acid; which, diflodging those of the nitre and marine falt, takes their place. The ma-

rine acid, refolved into fume and affisted by the nitrous, diffolves the mercury now alfo ftrongly heated. This acid, though it very difficultly acts on mercury, yet when thus once united with it, is more ftrongly retained thereby than any other acid. The nitrous fpirit, therefore, having nothing to retain it (for its own bafis, and that of the fea falt are both occupied by the vitriolic; and that which the vitriolic forfook to unite with thefe, is now fcarcely combinable with it), arifes; leaving the mercury and marine acid to fublime together, when the heat fhall be ftrong enough to elevate them. Some fmall portion of the marine fpirit arifes along with the nitrous; and hence this compound acid has been ufually employed, inftead of the aquafertis composita, to which it is fimilar, for making the red corrofive.

It appears, therefore, that the vitriol, and the bases of the nitre and sea falt, 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 ferve to afford a support for the sublimate to reft upon, which thus assumes the form it is expected in, that of a placenta or cake. The design of adding a little sublimate already made is to facilitate the extinction of the mercury, or its mixture with the other materials.

THERE are fundry other ways of making this preparation, or of combining mercury with the marine acid. If mercury corroded by the vitriolic acid into a white mafs (as for making the yellow mercurial emetic or turpeth mineral defcribed hereafter) be mixed with an equal quantity of fea falt and fet to fublime; the vitriolic acid will quit the

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the mercury to unite with the bafis of the fea falt; and the acid of the fea falt, now fet at liberty, will unite with the mercury, and fublime with it into the compound required. The difcovery of this method is generally attributed to Boulduc; though it is found alfo in Kunckel's laboratorium chymicum.

If the mercury be corroded by the nitrous acid inftead of the vitriolic, the event will be the fame; that acid equally quitting the mercury, and fetting loofe the marine. This method the college of Edinburgh have received.

Edinb.

Take

- Calx of mercury (that is, a folution of mercury in aquafortis, evaporated to a dry white mafs),
- Decrepitated sea falt, of each equal quantities.

Powder, and mix thefe well together; and put them into a matrafs, of which they may nearly fill one half. Place the veffel in a fand-furnace, and proceed to fublimation; applying at firft a gentle heat, and afterwards increafing it, till all the fublimate has arifen, in a white cryftalline mafs, to the upper part of the matrafs. Separate this from the red fcoria, and purify it, if needful, by a fecond fublimation.

THE fublimate made by this method is the fame with the foregoing; but as the quantity of fixt matter is fmall, it difficultly affumes the form of a cake. It requires indeed fome fkill in the operator, to give it this appearance when either procefs 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 flould 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.

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Our apothecaries rarely, and few even of the chemist, 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 moistened with 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 these trials, yet these differences were neither fo conftant. nor to ftrongly marked, as to be laid down, universally, for criteria of the prefence or absence of arienic. Different specimens of fublimate, known to be pure, differed confiderably in this respect; probably from their holding a little more or lefs mercury in proportion to the acid, or from their retaining fome fmall portion of those acids 1 2 which

Part III.

which were employed in the preparation as intermedia.

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Some chemists deny the practicability of this adulteration. There is a proceis common in books of chemistry, wherein sublimate and arfenic being mixed together and fet to fublime, they do not arife in one mals, 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 confiltence; while the mercury, thus freed from the acid, diffils in its running form : if the quantity of arfenic be infufficient to decompound the whole of the fublimate, the remainder of the fublimate concretes diffinct from the arfenical butter. Whence they conclude, that arfenic and fublimate cannot be united together into a crystalline 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 process, it is possible they may by fome other management. It will therefore (though I have never found any reason to suspect that the abuse is practifed) be proper to point out means for the fatif. faction of those, who may be defirous of convincing themselves 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 thavings of iron : put the mixture into a crucible capable of holding four or five times as much ; give a gradual fire till the ebullition ceates, and then haitily increase it to a white heat. If no fumes of the garlic fmell can be perceived during the process; and if the particles of iron retain their form,

without any of them being melted; I think we may be fecure that the mixture contained no arfenic.

SUBLIMATE is a most violent corrosive, presently corrupting and destroying all the parts of the body it touches. A folution of it in water, in the proportion of about a dram to a quart, is made use of for keeping down proud sheft, and cleansing foul ulcers, and a more dilute folution 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 neverthelefs ventured to give it internally, in the dofe of one-tenth or one-eighth of a grain. Boerhaave relates, that if a grain of it be diffolved in an ounce or more of water, and a dram of this folution, foftened with fyrup of violets, taken twice or thrice a day, it will perform wonders in many reputed incurable diftempers; but particularly cautions us not to venture upon it, unlefs the method of managing it be well known.

Sublimate diffolved in vinous fpirits has of late been given internally in larger dofes; 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 feveral trials of it have been made in this kingdom alfo with fuccefs. Eight grains of the fublimate are diffolyed in fixteen ounces of rectified fpirit of wine or proof fpirit ; the rectified spirit diffolves it more perfectly, and feems to make the medicine milder in its operation, than the proof spirit of the original prefcription of Van Swieten. Of this folution, doles from one to two fpoonfuls, that is, from half Chap. 10. Preparations of Mercury.

an ounce to an ounce, are given twice a day, and continued till all the fymptoms are removed; obferving to use a low diet, with plentiful dilution, otherwise the fublimate is apt to purge, and gripe feverely. It generally purges more or lefs at the beginning, but afterwards feems to operate chiefly by urine and perfpiration.

Sublimate confilts of mercury united with a large quantity of marine acid. There are two general methods of deftroying its corrofive quality, and rendering it mild; combining with it fo much fresh mercury as the acid is capable of taking up, and separating a part of the acid by means of alkaline falts, and the like. On the first principle, mercurius dulcis is formed; on the latter, white precipitate.

MERCURIUS DULCIS SUB-LIMATUS. Dulcified mercury fublimate. Lond.

Take of

- Corrofive mercury fublimate, one pound ;
- Purified quickfilver, nine ounces, Having powdered the fublimate, add to it the quickfilver, and digeft them together in a matrais, with a gentle heat of fand, until they unite ; then, increasing the heat, let the mixture be fub-The fublimed matter, limed. freed from the acrimonious part at top and fuch mercurial globules as happen to appear diftinct in it, is to be reduced into powder, and fublimed again; and this fublimation repeated fix times.

Edinb.

Take of

Corrofive mercury fublimate, reduced to powder in a glafs mortar, four ounces; Pure quickfilver, three ounces and an half.

Mix them well together, by long trituration in a glafs or marble mortar, until the quickfilver ceases to appear; taking care to avoid the finer powder that flies off. Put the powder into an oblong phial, of fuch a fize, that only one third of it may be filled; and fet the glass in a fand furnace, fo as that the fand may reach up to one half its height. By degrees of fire fucceflively applied, almost all the mercury will fublime, and adhere to the upper part of the veffel. The glais being then broken; and the red powder which is found in its bottom, with the whitish one that flicks about the neck, being thrown away, let the white mercury be fublimed again three or four times.

THE trituration of corrofive fublimate with quickfilver is a very noxious operation. For it is almost impossible, by any care, to prevent the lighter particles of the former from arising, to as to affect the operator's eyes and mouth. It is nevertheless of the utmost confequence, that the ingredients be perfectly united before the fublimation is begun ; this may be most commodioufly effected, by the digeilion ordered in the first of the above proceffes. It is indeed fill necessary to pulverize the fublimate, before the mercury is added to it; but this may be fafely performed, with a little caution ; efpecially, if during the pulverization, the matter be now and then fprinkled with a little spirit of wine. This addition does not at all impede the union of the ingredients, or prejudice the fublimation : it will be convenient not to L13 clofe

clofe the top of the fubliming veffel with a cap of paper at first (as is ufually practifed) but to defer this till the mixture begins to fublime, that the fpirit may escape.

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The rationale of this process deferves particular attention ; and the more fo, as a miftaken theory herein has been productive of feveral errors with regard to the operation of mercurials in general. It is supposed, that the dulcification, as it is called, of the mercurius corrofivus, is owing to the fpiculæ or fharp points, on which its corrofiveness depends, being broken and worn off by the frequent fublimations. If this opinion were just, the corrofive would become mild, without any addition, barely by repeating the fublimation; but this is contrary to all experience. The abatement of the corrofive quality of the fublimate is entirely owing to the combination of io much fresh mercury with it, as is capable of being united ; and by whatever means this combination is effected, the preparation will be fufficiently dulcified. Triture and digeftion promote the union of the two, whilft fublimation tends rather to difunite them. The prudent operator, therefore, will not be folicitous about feparating fuch mercurial globules as appear diffinct after the first fublimation. He will endeavour rather to combine them with the reft, by repeating the triture and digeftion.

The college of Wirtemberg require their mercurius dulcis to be only twice fublimed; and the Augustan but once; and Neumann proposes making it directly, by a fingle sublimation, from the ingredients which the corrosive sublimate is prepared from, by only taking the quickfilver in a larger proportion. If the medicine, made after either of these methods, should prove in any degree acrid, water, boiled on it for fome time, will diffolve and feparate that part in which its acrimony confifts. The marks of the preparation being fufficiently dulcified, are, its being perfectly infipid to the tafte, and indifioluble 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 falt, or any volatile alkaline spirit : if the decoction has any mercurial impregnation, it will grow turbid on this addition : if otherwife, it will continue limpid. But here care must be taken not to be deceived by an extraneous faline matter in the water itfelf : most of the common ipring waters turn milky on the addition of alkalies; and therefore, for experiments of this kind, distilled water, or rain water, ought to be used.

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Mercurius dulcis, feven times fublimed, has been commonly called *Calomelas*, and *Aquila alba*; names which are now dropt both by the London and Edinburgh colleges. *Calomelas* is indeed a very improper name for a white preparation, the word implying a black colour. By grinding mercurius dulcis with volatile fpirits, it becomes blackifh, and this perhaps is the true calomel.

Mercurius dulcis appears to be one of the beft and fafeft preparations of this mineral for general ufe, whether intended to act as a fialogogue, diaphoretic, or alterant. Many of the more elaborate proceffes are no other than attempts to produce from mercury fuch a medicine as this really is. The dofe, for raifing a falivation, is ten or fifteen grains, taken in the form of a bolus or pills, every night or oftener, till the ptyalifm begins. As an alterant and diaphoretic, it

is given in doles of five or fix grains; a purgative being occasionally interpoled, to prevent its affecting the mouth. It answers, however, much better, when given in fmaller quantities, as one, two, or three grains every morning and evening, in conjunction with fuch fubstances as determine its action to the fkin, as the extract or refin of guaiacum; the patient at the fame time keeping warm, and drinking liberally of warm diluent liquors. By this method of managing it, obfinate cutaneous and venereal diftempers have been fuccefsfully cured, without any remarkable increase of the fenfible evacuations.

Chap. 10.

PANACEA MERCURII. Mercurial panacea.

Take any quantity of levigated calomel, and four times as much fpirit of wine. Digeft them together in a fand-heat for twenty days, frequently fhaking the veffel; then pour off the fpirit, and dry the powder for ufe.

THIS preparation differs very little, if at all, from the foregoing ; for, as Lemery observes, the fpirit of wine does not diffolve any part of the calomel. Some chemifts have therefore recommended a proof fpirit, or common water, as more fuitable for this purpofe than rectified fpirit. If any part indeed of the calomel remains not fufficiently dulcified, this will be diffolved by boiling in water, and confequently the preparation becomes milder; but if the calomel be well made, even water will have no effect upon it ; the mercury and fpirit of falt being to closely united to each other, as not to admit of any feparation by the means here proposed. Nor indeed does good mercurius dulcis want any of its acid to be taken away, as being already fufficiently fafe, and mild

in its operation. The Edinburgh college therefore, who received this preparation in former editions of their pharmacopœia, have now rejected it.

MERCURIUS PRÆCIPITATUS ALBUS. White precipitate of mercury. Edinb.

Diffolve fublimate corrofive mercury in a fufficient quantity of hot water, and gradually drop into the folution fome fpirit of fal ammoniac, as long as any precipitation enfues. Wafh the precipitated powder upon a filter, with feveral fresh quantities of warm water.

THIS preparation is used chiefly in ointments, in which intention its fine white colour is no fmall recommendation to it. For internal purpofes, it is rarely employed, nor is it at all wanted. It is nearly fimilar to mercurius dulcis, but lefs certain in its effects. Corrofive fublimate, as we have already feen, confifts of mercury united with a large proportion of acid : it is there dulcified by adding as much fresh mercury as is fufficient to fatiate all the acid; here, by feparating all the acid that is not fatiated. This lait way feems an unfrugal one, on account not only of the lofs of the acid, but of the volatile spirit neceffary for abforbing it. The operator may however, if it should be thought worth while, recover the volatile falt from the liquor, by adding to it, after the precipitate has been separated, a proper quantity of potash, and distilling with a gentle heat, in the fame manner as for the fpirit or volatile falt of fal ammoniac; for a true fal ammoniac is regenerated, in the precipitation, from the union of the volatile spirit with the marine acid of the fublimate. It is by no means advifable LI4

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advisable to use the liquor itself as a folution of fal ammoniac, or to feparate the fal ammoniac from it by evaporation and crystallization, as a part of the mercury might be retained, and communicate dangerous qualities : but the volatile falt feparated by diffillation may be used without fear of its containing any mercury, none of which will arife with the heat by which volatile falts are diffilled.

Fixt alkalies answer as effectually, for precipitating folutions of fublimate, as the volatile. But the precipitate, obtained by means of the former, inflead of being white as with the latter, is generally of a reddifh yellow or orange colour. If fal ammoniac be diffolved, along with the fublimate, the addition of fixt alkalies will now, extricating the volatile alkali of the fal ammoniac, occasion as white a precipitation, as if the volatile alkali had been previoully separated and employed in its pure flate : and this compendium is now allowed by the London college. The process is as follows.

Lond.

Take

Sublimate corrofive mercury, Sal ammoniac, of each equal weights.

Diffolve them both together in water, filter the folution, and precipitate it with a folution of any fixt alkaline falt. Wafh the precipitated powder, till it is perfectly fweet (that is, infipid or void of acrimony).

HERE the fal ammoniac, befides its use in the capital intention, to make a white precipitation, promotes the folution of the sublimate; which, of itself, is difficultly, and fcarce at all totally foluble by repeated boiling in water. For, however skilfully it is prepared, fome part of it will have an underproportion of acid, and confequently approach to the flate of mercurius dulcis. A good deal of care is requifite in the precipitation. For, if too large a quantity of the fixt alkaline folution be imprudently added, the precipitate will lofe the elegant white colour for which it is valued.

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A PRECIPITATE of a different nature from the preceding has been commonly diffinguished by the fame name, MERCURIUS PRÆCIPITA-TUS ALBUS; the preparation of which, in a preceding edition of the Edinburgh pharmacopœia, is as follows.

Take any quantity of the folution of mercury (made in aquafortis) and pour into it, by little and little, fome very ftrong brine of fea falt, until all the quickfilver is precipitated in form of a very white powder; which is to be wafhed upon a filter with warm water, till the water comes off without any acrimony. The powder is then to be put betwixt the folds of paper, and dried with a very gentle heat.

THIS is a very unfrugal preparation. For, fea falt, in whatever proportion it be added, will not precipitate all the mercury : this evidently appears upon adding a imall quantity of a folution of fixt alkaline falt, or volatile alkaline fpirit, to the liquor which remains after the precipitate is fallen, when it will again grow turbid, and let fall a confiderable quantity of fresh precipitate. Homberg obferves, that if the acid spirit bear an overproportion to the mercury in the folution, no precipitation at all will follow upon the affusion of the brine of fea falt. If the precipitate be waihed

washed too often with hot water, it will all diffolve and pass the filter. The fame accident will likewise happen, if the brine employed at first to throw down the mercury be fuffered to stand too long upon the precipitate.

Some have been accuftomed to fubilitute the above officinal white precipitate in the place of this; but very injudicioufly. The first is fo mild, as not improperly to deferve the appellation by which it is diftinguished in the former Edinburgh pharmacopœia, dulcis; whilit this last is fo far corrolive, as to be employed by the farriers for the purposes of an escharotic. Internally, it is among us very rarely made use of; notwithstanding the character given of it by Boerhaave, of being " perhaps the best remedy " hitherto afforded by mercury." Mercurius dulcis produces the good effects which this is supposed to do, with a greater degree of certainty, and without difordering the conftitution, occafioning vomits, &c.which this precipitate, in a dofe of two or three grains, frequently does.

MERCURIUS PRÆCIPITATUS FUSCUS, Vulgo WURTZII. Brown, commonly called Wurtz's, precipitate.

Take any quantity of a folution of mercury (made in aquafortis) and gradually drop into it oil of tartar per deliquium, till the effervescence ceases. A powder will precipitate, which is to be edulcorated as the foregoing.

THIS preparation was in confiderable effeem fome years ago, but at prefent is rarely or never made use of, and hence it is now rejected both by the London and Edinburgh colleges. It does not feem to differ in strength or effects from the fweet precipitate.

MERCURIUS PRÆCIPITATUS VIRIDIS. Green precipitate of mercury. Edinb.

Diffolve four ounces of corrofive fublimate mercury (previoufly reduced to powder) in a quart of hot water.

Digeft an ounce and a half of copper filings, with eight ounces of spirit of sal ammoniac, in a matrafs, until a deep blue tincture be extracted.

Filter the tincture, and drop it by degrees into the mercurial folution. When the precipitate has fallen, evaporate in a fandheat to drynefs.

THIS differs from the fweet precipitate, in containing an admixture of copper, which renders it an emetic too rough to be used internally with fastety: and hence the present practice has almost entirely rejected it.

This preparation is confiderably different from the green precipitate of foreign pharmacopœias. There, the proportion of copper, contained in the preparation when finished, is much greater; for, though the quantity directed to be taken is less, yet aquafortis being employed for the menstruum, the whole is diffolved; whereas the volatile so diffolved; whereas the volatile so diffolved, extracts but a very fmall portion of it.

MERCURIUS EMETICUS FLAVUS. The yellow mercurial emetic. Lond.

Upon purified quickfilver, contained in a glafs veffel, pour double its weight of the ftrong fpirit, or oil of vitriol. Heat the liquor by degrees, fo as at length to make it boil, till a white mafs remain, which is to be thoroughly dried with a ftrong fire. This mafs, on Pharmaceutical Preparations.

on the affusion of warm water, grows yellowish, and falls into powder, which is to be diligently ground with the water, in a glass mortar. Then suffer it to settle, pour off the water, and wash the powder in several parcels of fresh water, until it be sufficiently dulcified.

MECURIUS PRÆCIPITATUS FLAVUS, feu

TURPETHUM MINERALE. Yellow precipitate of mercury, or turpeth mineral. Edinb.

Take four ounces of pure quickfilver, and eight ounces of oil of vitriol. Cautioufly mix them together, and diffil in a retort, placed in a fand-furnace, to drynefs; the white calx, which is left at the bottom, being ground to powder, and thrown into warm water, immediately grows of a yellow colour. Wafh this in frefh waters renewed feveral times, until it has loft all its acrimony: then dry it for ufe.

THE quantity of oil of vitriol, formerly directed, was double to that in the above prefcriptions. The reduction now made in this article, greatly facilitates the procefs : and even lefs than the prefent quantity would fuffice.

Boerhaave directs this prepararation to be made in an open glafs, flowly heated, and then placed immediately upon burning coals; care being taken to avoid the fumes, which are extremely noxious. This method will fucceed very well, with a little addrefs, when the ingredients are in fmall quantity; but where the mixture is large, it is better to ufe a retort, placed in a fend-furnace, with a recipient, containing a finall quantity of water, luted to it. Great care fhould be taken, when the oil of vitriol begins to bubble, to fleadily 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 posfible of the redundant acid may be expelled.

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If the matter be but barely exficcated, it proves a cauftic falt, which in the ablution with water will almost all diffolve, leaving only a little quantity of turpeth : the more of the acid has been diffipated, the lefs of the remaining mercury will diffolve, and confequently the yield of turpeth will be the greater; fire expelling only the acid (viz. fuch part of the acid as is not completely fatiated with mercury) while water takes up always, along with the acid, a proportionable quantity of the mercury itfelf. - Even when the matter has been ftrongly calcined, a part will still be foluble : this evidently appears upon pouring into the washings a little folution of fixt alkaline falt, which will throw down a confiderable quantity of yellow precipitate, greatly refembling the turpeth, except that it is lefs violent in operation.

From this experiment, it appears, that the beft method of edulcorating this powder is, by impregnating the water, intended to be used in its ablution, with a determined proportion of fixt alkaline falt : for by these means, the washed turpeth will not only turn out greater in quantity, but, what is of more confequence, always have an equal degree of ftrength ; a circumflance which deferves particularly to be confidered, especially in making fuch preparations as, from an error in the process, may prove too violently corrofive to be used with any tolerable degree of fafety.

It is observable, that though the superfluous

fuperfluous acid is here abforbed from the mercury by the alkaline falt; yet in fome circumstances this acid forfakes that falt to unite with mercury. If tartarum vitriolatum, or nitrum vitriolatum (i. e. 2 combination of vitriolic acid with fixt alkali) be diffolved in water, and the folution added to a folution 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 diffolved in the aquafortis, and united with the acid thereof into a regenerated nitre. On this principle depends the preparation defcribed by Wilfon, under the title of An excellent precipitate of mercury; which is no other than a true turpeth, though not generally known to be fuch. It is made by diffolving four ounces of nitrum vitriolatum in fixteen ounces of fpirit of nitre; diffolving in this compound liquor four ounces of mercury : abitracting the mentruum in a fand-heat; and edulcorating with water the gold-coloured mais which remains.

Turpeth mineral is a ftrong emetic, and in this intention operates the most powerfully of all the mercurials that can be fately given internally. Its action however is not confined to the primæ viæ; it will sometimes excite a ptyalism, if a purgative be not taken foon 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 faid likewife to have been employed with good fuccefs, in robuft constitutions, against leprous diforders, and obstinate glandular obstructions; the dofe is from two grains to fix or eight. It may be given in dofes of a grain or two as an alterative and diaphoretic, after the fame manner as the mercurius calcinatus already fpoken of.

This medicine has been of late recommended as the most effectual prefervative against the hydrophobia. There are feveral examples of its preventing madnefs in dogs that had been bitten; and fome, of its performing a cure after the madnels was begun. From fix or feven grains to a fcruple may be given every day, or every other day. for a little time, and repeated at the two or three fucceeding fulls and changes of the moon. Some few trials have likewife been made on human fubjects, bitten by mad dogs; and in these also the turpeth, used either as an emetic or alterative, feemed to have good effects. See James's treatife on canine madnefs.

The washings of turpeth mineral are used by fome externally, for the itch and other cutaneous foulneffes. In fome cafes 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 ftrength; more or lefs of the mercury being diffolved, as observed above, according to the degree of calcination. The pharmacopœia of Paris directs a mercurial wash free from this inconvenience, under the title of Aqua mercurialis, or Mercurius liquidus. It is composed of one ounce of mercury, diffolved in a fufficient quantity of spirit of nitre, and diluted with thirty ounces of diffilled water. In want of diftilled water, rain water may be used; but of fpring waters there are very few which will mix with the mercurial folution, without growing turbid and precipitating a part of the mercury.

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Preparations of Antimony.

A NTIMONY is composed of a metal, united with fulphur er common brimftone.

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If powdered antimony be exposed to a gentle fire, the fulphur 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 diffinguished from the other bodies of that class, by its not being foluble in aqua fortis. Its proper menstruum is aqua regis,

If aqua regia be poured upon crude antimony, the metallic part will be diffolved; and the fulphur thrown out, partly to the fides of the veffel, and partly to the furface of the liquor, in form of a greyish yellow substance. This, feparated and purified by fublimation, appears on all trials the fame with pure common brimftone.

The metal, freed from the fulphur naturally blended with it, and afterwards fuled with common brimftone, refumes the appearance and qualities of crude antimony.

THE antimonial metal is a medicine of the greatest power of any known fubstance. A quantity too minute to be fenfible on the tenderest balance, is capable of producing virulent effects, if taken diffolved or in a foluble flate. If given in such a form as to be immediately mifcible with the animal fluids, it proves violently emetic ; if fo managed as to be more flowly

acted on, cathartic; and in either cafe, if the dole be extremely fmall. diaphoretic. Thus, though vegetable acids extract fo little from this metal, that the remainder feems to have loft nothing of its weight, the tinctures prove, in no large dofes, ftrongly emetic, and in fmaller ones powerfully diaphoretic. The regulus has been caft into the form of pills, which acted as virulent cathartics, though without fuffering any fensible diminution of weight in their paffage through the body; and this repeatedly, for a great number of times. Stort de matchard

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This metal, divefted of the inflammable principle which it has in common with other metallic bodies, that are reduced to a calx, becomes indiffoluble and inactive. The calx neverthelefs, urged with a strong fire, melts into a glass, as eafy of folution (partially) and as virulent in operation, as the regulus itfelf. The glafs, thoroughly mingled with fuch fubftances as prevent its folubility, as wax, refins, and the like, is again rendered mild.

Vegetable acids, as already obferved, diffolve but an extremely minute portion of this metal. The folution nevertheless proves powerfully emetic and cathartic. The nitrous and vitriolic acids only corrode it into a powder, to which they adhere fo flightly as to be feparable. in good measure by water, and totally by fire, leaving the regulus in form of a calx fimilar to that prepared by fire alone. The marine acid has a very different effect. This

This reduces the regulus into a violent corrofive, and though it difficultly unites, yet very clofely adheres to it, infomuch as not to be feparable by any ablution, nor by. fire, the regulus arifing along with it. The nitrous or vitriolic acids expel the marine, and thus reduce the corrofive into a calx fimilar 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 fulphur) proves altogether mild. If a part of the fulphur be taken away, by fuch operations as do not deftroy or calcine the metal, the remaining mass becomes proportionably more active.

The fulphur of antimony may be expelled by deflagration with nitre. The larger the quantity of nitre, to a certain point, the more of the fulphur will be diffipated, and the preparation will be the more active. If the quantity of nitre be more than fufficient to confume the fulphur, the reft of it, deflagrating with the inflammable principle of the regulus itfelf, renders it again mild.

The fulphur of antimony is likewife abforbed, in fufion, by certain metals, and by alkaline falts. Thefe laft, when united with fulphur, prove a menftruum for all the metals (zinc excepted), and hence, if the fufion be long continued, the regulus is taken up, and rendered foluble in water.

CROCUS ANTIMONII MEDICI-NALIS.

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 fufficiently mild, though confiderably more active than the crude mineral: eighteen or twenty grains will in fome conflictutions operate, though very gently, both upwards and downwards. It appears to be nearly fimilar to the medicinal regulus hereafter defcribed.

In this and the following proceffes with nitre, the operator muft obferve 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 fo violent, that great part of the matter would be thrown over the crucible. The powder is most conveniently introduced by means of a fmall iron ladle. Care must be taken not to bring back with the ladle any spark of coal, which would let fire to the reft 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 foon as the deflagration ceafes, remove the matter from the fire (without fuffering it to melt) and reduce it into powder.

THIS preparation is called mitior, not in regard to the crocus above defcribed, but to that which follows. It acts much more powerfully than the foregoing; the increase of the nitre occasioning a greater

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greater quantity of the fulphur of the antimony to be diffipated. The London committee received it in their first draught, with the character of an antimonial of mild operation, which had proved a fuccefsful medicine in numerous inftances, without any one example of its being unfafe. Some trials however, afterwards reported to them, where the operation of this and the following crocus were compared, induced them to lay this preparation afide. It appears to differ from the other only in being lefs violent.

CROCUS ANTIMONII.

Crocus of antimony, commonly called Crocus metallorum, and by foreign writers, Hepar antimonii, or Liver of antimony.

Lond.

Take

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Antimony,

Nitre, of each equal weights. Reduce them feparately into powder; then mix, and inject them into a mucible heated to a white heat, that the mixture (after deflagration) may melt. Then pour it out, feparate the fcoriæ, and referve the matter underneath them for ufe. It proves different in colour, according to the continuance of the heat; the longer it has been kept in fufion, the yellower it will be.

Edinb.

The mixture of antimony and nitre, made as above, is to be injected into a red-hot crucible. When the detonation is over, feparate the reddifh metallic matter from the whitifh cruft, and edulcorate it by repeated wafhings with hot water.

HERE the antimonial fulphur

is almost totally confumed, and the metallic part left divested of its corrector. These preparations, given from two to fix grains, act as violent emetics, greatly difordering the constitution. 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 accuftomed to make the crocus with a lefs proportion of nitre than directed above ; and without any further melting, than what enfues from the heat that the matter acquires by deflagration, which, when the quantity is large, is very confiderable. A little common falt is added to promote the fusion. The mixture is put by degrees into an iron pot, or mortar, fomewhat heated, and placed under a chimney. When the first ladleful is in, a piece of lighted charcoal is thrown to it, which fets the matter on fire. The reft of the mixture is then added by little and little : the deflagration is foon over, and the whole appears in perfect fusion. When cold, a confiderable quantity of fcoriæ are found upon the furface; which fcoriæ are eafily knocked off with a hammer. The crocus, prepared after this manner, is of a redder colour, than that of the first of the above proceffes.

CROCUS ANTIMONII LOTUS. Washed crocus of antimony. Lond.

Reduce the crocus into a very fubtile powder, and boil it in water. Then, throwing away this water, wash the powder feveral times in fresh warm water, until it becomes perfectly infipid.

THIS

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THIS process is defigned chiefly to fit the crocus for the preparation of emetic tartar, of which hereafter, and of the antimonial emetic wine. If the crocus were employed for those purposes without washing, the alkaline falt, with which it is in fome degree impregnated from the deflagration of the nitre, would in part fatiate 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 fome 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 wafhed for ufe.

THE quantity of nitre is here fo large, as to confume not only the fulphur of the antimony, but likewife great part of the inflammable principle of the regulus. Boerhaave, from whom this preparation is taken, informs us, that it is fo mild, as often to occasion only fome light nausea and gentle vomiting, with a large discharge of faliva, and thick urine. Its effects feem to be nearly the fame

with those of the regulus medicinalis and crocus medicinalis.

CALX ANTIMONII.

Calx of antimony, commonly called Diaphoretic antimony, Lond,

at the last

Take of Antimony, one part ; Nitre, three parts.

Let the powdered antimony be well mixed with the nitre, and gradually injected into a crucible, heated to a light white heat. The matter being afterwards taken from the fire, is to be washed with water, both from the falt which adheres to it, and from the groffer part that is less perfectly calcined.

Edinb.

Take of

Antimony, calcined as for making the glafs,

Nitre, of each equal parts.

- Mix them together, and put them into a crucible; keep it in a red heat for an hour; afterwards powder it, and wash it often in hot water till it becomes infipid. —This powder, unwashed, is called
- ANTIMONIUM DIAPHORE-TICUM NITRATUM.

Nitrated diaphoretic antimony.

When the powder is washed with fresh quantities of water, till the water comes off insipid, it is called

ANTIMONIUM DIAPHORE-TICUM LOTUM, Washed diaphoretic antimony.

The feveral washings, mixed together, filtered, and evaporated over a gentle fire till a cuticle forms on the furface, yield, in the cold, crystals, called NITRUM STIBIATUM.

Antimoniated nitre.

The calx of antimony, when freed by washing from the faline matter, is extremely mild, if not altogether inactive. Hoffman, Lemery, and others, affure us, that they have never experienced from it any fuch effects as its usual title (that under which it flands in the laft of these processes) imports. Boerhaave declares, that it is a mere metallic earth, entirely deftitute of all medicinal virtue; and the committee of the London college admit that it has no fentible operation. The common dofe is from five grains to a fcruple, or half a dram; though Wilfon relates, that he has known it given by half ounces, and repeated two or three times a day, for feveral 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 deftroyed ; that the preparation has the virtues of other antimonials which are given as alteratives, that is, in fuch fmall dofes as not to ftimulate the primæ viæ; and that, therefore, diaphoretic antimony, as it is certainly among the mildeft preparations of that mineral, may be used for children, and fuch delicate conflitutions where the flomach and inteffines are eafily * 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 Strafburgh pharmacopœia, with good reafon, fufpects, that where the calx has proved emetic, it had either been given in fuch cafes as would of themfelves have been attended with this lymptom (for the great alexipharmac virtues, attributed to it, have occafioned it to be exhibited even in

the more dangerous malignant fevers, and other diforders, which are frequently accompanied with vomiting), or that it had not been fufficiently calcined, or perfectly freed from fuch part of the regulus as might remain uncalcined. The uncalcined part being groffer than the true calx, the feparation is effected by washing over with water, in the fame manner as is already directed for feparating earthy powders from their groffer parts.

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It has been obferved, that when diaphoretic antimony is prepared with nitre abounding with fea falt, of which all the common nitre contains fome portion, the medicine has proved violently emetic. This effect is not owing to any particular quality of the fea falt, but to its quantity, by which the proportion of the nitre to the antimony is rendered lefs.

The nitrum flibiatum is produced by the deflagration of the fulphur of the antimony with the nitre, in the fame manner as the fal polychreft, from which it differs no otherwife than in retaining fome portion of the antimonial calx.

CERUSSA ANTIMONII. Ceruffe of antimony.

Take of

Regulus of antimony, one part; Nitre, three parts.

Deflagrate them together, as in the foregoing process.

THE refults of both proceffes appear to be altogether the fame. It is not neceffary to use fo much nitre here, as when antimony itself is employed; for the fulphur which the crude mineral contains, and which requires for its diffipation 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, left fome parts of the regulus fhould efcape being fufficiently calcined.

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It may be proper to obferve, that though crude antimony and the regulus yield the fame calces, yet the falts feparated in washing the calces are very different. As crude antimony contains common fulphur, the acid of the fulphur unites with the alkaline bases of the nitre, and the refult is a neutral falt. As the regulus contains the phlogiftic or inflammable principle, but no fulphur, the nitre is alkalized as it would be by charcoal or fimilar inflammable bodies, and is at the fame time rendered more acrimonious than the common alkaline falts. If only equal parts of the regulus and nitre be employed, and the fire kept up ftrong for an hour or more, the falt will prove more cauftic than even the potential cautery of the fhops. But the caufticity of the falt will fill be far greater, if, instead of the fimple regulus of antimony, the martial regulus be used.

REGULUS ANTIMONII ME-DICINALIS.

Medicinal regulus of antimony. Edinb.

Take of

Antimony, five ounces ; Sea falt, four ounces ; Salt of tartar, one ounce.

Grind them into powder, and throw the mixture, by little at a time, into a red-hot crucible; occafionally breaking, with an iron rod, the cruft that forms on the furface. When the fufion is completed, pour out the matter into a heated cone, gently fhaking it now and then, or firiking it on the fides, that the regulus may fettle to the bottom. When grown cold, beat off the fcoriæ, and grind the regulus into a powder, which is to be kept in a clofe-ftopt vial.

THIS medicine is nearly fimilar in quality to one made with oneeighth of nitre, already described : in both proceffes, the antimony is freed from a fmall portion of its fulphur, which is diffipated in flame by the nitre, and abforbed by the alkaline falt. This preparation is greatly celebrated by Hoffman, and other German phyficians, in fundry obstinate chronical diforders, and efteemed one of the best antimonials that can be given with fafety as alterants. It operates chiefly as a diaphoretic, and fometimes, though rarely, proves emetic. The dole is from three or four grains to twenty.

This regulus, reduced to a fubtile powder, is the genuine FEBRIFUGE POWDER of Craanius (Pharm. Boruffo-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 faid that a dole or two has frequently removed these diforders. by occasioning either a falutary diaphorefis, or acting mildly by ftool or vomit. The colour of the levigated powder is a purplish brown. The antimonial emetic of Boerhaave, already mentioned, which is white, is nearly fimilar to it in its medicinal effects.

The common falt feems to be of no further use in the process, than as it ferves to promote the fusion; and even for this it is not necessary. The medicine is faid to be rather more mild and certain in operation, if prepared without it.

Mm

RECULUS

REGULUS ANTIMONIL. Regulus of antimony.

Take of

Antimony,

Nitre,

Crude tartar, of each equal parts.

Grind them feparately into a powder, then mix, and rub them all together. Throw the powder, at leveral times, into a red-hot crucible, taking care to break the cruft, which forms on the furface, with an iron rod : when the detonation is over, let a frong fire be made, that the matter may flow like water; then pour it out into a warm greafed cone, which is to be gently flruck on the fides, that the regulus may ieparate and fall to the bottom. When grown cold, let the regulus be cleared from the fcoriz 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 falt is produced from the nime and tartar, in fuch quantity as entirely to absorb the fulphur of the antimony : the alkali, thus fulphurated, 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 fmall, and if the fufion be long continued, fcarce perceptible; almost the whole of it being taken up into the fcoriæ. In order to obtain the largest quantity, the nitre ought to be diminissed 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 thefe

means, the lofs of fome part of the antimony, which otherwife happens from the vehemence of the deflagration, will be prevented, a fmaller crucible will ferve, and lefs time and labour complete the procefs.

The mixture of nitre and tartar deflagrated together, will reduce any of the antimonial calces (as the diaphoretic antimony, ceruffe, or antimony calcined by itfelf) into regulus; the oily matter of the tartar fupplying - the inflammable principle, which all calces require for their revival into a metallic form; and the alkaline falt 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 fimilar compositions. Mr. Geoffroy, who first communicated this method to the French academy, feems to look upon foap (the fubftance he happened to make use of himself) as the only one that will fucceed ; but the effects of this are not different from those of the foregoing flux. Both confift of an alkaline falt, and an inflammable (not fulphureous) fubfance, which are the only materials here neceffary. Upon the whole, the most advantageous process for obtaining this regulus, appears to be the following.

Let powdered antimony be calcined or roaffed 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

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in a crucible, with a quick fire, and when in thin fufion pour it into a cone heated over a finoaky flame. The pure regulus will fall to the bottom, the fcoriæ floating on the top.

REGULUS ANTIMONII MAR-TIALIS.

Martial regulus of antimony. Take of

Antimony,

Nitre,

Crude tartar, of each one pound; Small pieces of iron, half a pound.

Heat the iron in a crucible to a white heat; then gradually add the other ingredients, first powdered and mixed together, and proceed in the fame manner as in the foregoing proces.

THE nitre might here be diminished to one-fourth of its weight, and the tartar to half that quantity. The pieces of iron may be small nails; the filings of the metal, lying closer together, are not fo readily acted upon by the antimony.

REGULUS ANTIMONII STELLA-TUS.

Stellated regulus of antimony.

This is made by melting the martial regulus feveral times with fresh nitre and tartar.

THE fimple regulus of antimony is more readily made to exhibit a flarry appearance on its furface, than the martial; which it will also do by one, as well as by any number of fusions. The phænomenon entirely depends upon the regulus's being pure, brought into extreme thin fusion, and cooled flowly in the cone, without flaking or moving it. If the martial regulus be employed, it is convenient to add fome frefh antimony (about one-fourth the weight of the regulus) to abforb fuch part of the iron as may be retained in it; when the whole is in perfect fusion, inject, at times, about one-eighth of nitre, or fixt alkaline falt, previously dried, and made very hot.

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The three foregoing reguli are at present rarely, if ever, made use of in medicine ; the emetic cups, and perpetual pills, formerly made from them, have long been laid afide as precarious and unfafe. Hence the Edinburgh college, which retained them all in the edition of their pharmacopœia published in 1744, have at a late revifal rejected them. It should seem, however, that the pure regulus, though greatly too virulent to be taken by itfelf, might be employed to advantage for the making of fome other preparations, particularly the antimonial wine and emetic tartar. For the uncertainty in ftrength, which has often been complained of in those medicines, appears to proceed chiefly from faline or fulphureous matter in the antimonial preparation made use of for communicating the impregnation to the wine or tartar; and (except the calces, which are divefted of the proper antimonial virtues) the regulus is the only form in which we can expect to have the metallic part of the antimony free from fuch admixtures, the only antimonial preparation on which we can depend for being always equal in its own degree of power.

The fcoriæ produced in the foregoing proceffes, afford medicines lefs violent than the regulus itfelf, fome of which are in confiderable efteem. These fcoriæ confift of the fulphur of the antimony united with an alkaline falt, and a part of the regulus taken up by this com-M m 2 pound.

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SULPHUR AURATUM ANTIMO-

Golden fulpkur of antimony. Let the fcoriæ of regulus of antimony be reduced into powder, whillt warm, and then boiled for a confiderable time in thrice their quantity of water. Filter the yellowish red folution, and drop into it a proper quantity of fpirit of vitriol. A powder will precipitate, which is to be washed with water, till perfectly edulcorated and freed from its ill smell.

SULPHUR ANTIMONII PRÆ-CIPITATUM.

Presipitated fulphur of antimony. Lond.

Take of

Antimony, fixteen ounces; Tartar, a pound;

Nitre, half a pound.

Let these be reduced separately into powder, then mixed, thrown by degrees into a red-hot crucible, and melted with a ftrong fire. Pour out the matter into a conical mould; the metallic part, commonly called regulus of antimony, will fink to the bottom, the fcoriæ fwimming above it. Diffolve these fcoriæ in water, filter the folution through paper, and precipitate the fulphur by dropping in fome fpirit of fea falt : lattly, wash the fulphur from the falts, and dry it for ule.

SULPHUR AURATUM AN-TIMONII. Golden fulphur of antimony. Edinb.

Boil, in an iron pot, four pounds of foap leys diluted with three pounds of water, and throw in by degrees two pounds of powdered antimony ; keeping them continually flirring, with an iron fpatula, for three hours, over a gentle fire; and occafionally fupplying more water. The liquor, loaded with the fulphur of antimony, being then ftrained through a woollen cloth, drop into it gradually, whilft it continues hot, fo much ipinit of nitre diluted with an equal quantity of water, as shall be sufficient to precipitate the fulphur, which is afterwards to be carefully wathed with hot water. If the liquor remaining after the precipitation be purified by filtration, evaporated till a pellicle forms on the furface, and then fet to fhoot, it will yield crystals of antimoniated nitre (the fame with that obtained from the wafhings of diaphoretic antimony).

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THE foregoing preparations are not frictly fulphurs. They contain a confiderable quantity of the metallic part of the antimony, which is reducible from them by proper fluxes. That made by the first of the above processes contains greatest part of the metal; for, as we have already feen, very little, fometimes fcarce any at all, feparates in the fusion. The quantity of regulus taken up in the fecond alfo will be different, according to the degree of fire employed, and the length of time that the fusion is continued. These medicines, therefore, must needs be liable to great variation in point of ftrength, and in this respect they are, perhaps, the most precarious, though fome have affirmed that they are the most certain, of the antimonial medicines.

The foregoing preparations prove emetic when taken on an empty flomach, in a dofe of four, five, or 10 fin

fix grains ; but in the prefent prac- Boil them together for two hours, tice, they are scarce ever prescribed in this intention ; being chiefly ufed as alterative deobstruents, particularly in cutaneous diforders. Their emetic quality is eafily blunted, by making them up into pills with refins or extracts, and giving them on a full ftomach With these cautions, they have been increafed to the rate of fixteen grains a day, and continued for a confiderable time, without occasioning any diffurbance upwards or downwards. As their ftrength is precarious, they should be taken at first in very fmall dofes, and increased by degrees according to their effect.

A composition of the fulphur auratum, with mercurius dulcis, has been found a powerful, yet fafe, alterative in cutaneous diforders; and has completed a cure after falivation had failed. In venereal cafes, likewife, this medicine has produced excellent effects. A mixture of equal parts of the fulphur 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 dofe, a draught of a decoction of the woods, or fimilar liquors. This medicine generally promotes perfpiration, fcarce occasioning any tendency to vomit or purge, or affecting the mouth. See the Edinburgh effays, vol. i. and the Acta natur. curiof. vol. v.

KERMES MINERALIS. Kermes mineral.

Take of Antimony, fixteen ounces; Any fixt alkaline falt, four ounces ; Water, one pint.

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 falt, 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 falt, and another pint of water ; filtering the liquor as at first, and collecting the powders which fubfide from them in cooling.

THIS medicine has of late been greatly effeemed in fome places, under the names of Kermes mineral, pulvis Carthufianus, poudre des Chartreaux, &c. It was originally a preparation of Glauber, and for fome time kept a great fecret ; till at length the French king purchafed the preparation from M. de la Ligerie, for a confiderable fum, and communicated it to the public in the year 1720. In virtue, it is not different from the fulphurs above-mentioned. All of them owe their efficacy to a part of the regulus of the antimony, which the alkaline fait, by the mediation of the fulphur, renders foluble in water.

PANACEA ANTIMONII. Panacea of antimony.

Take of

Antimony, fix ounces;

Nitre, two ounces ;

Common fait, an ounce and a haif;

Charcoal, an ounce.

Reduce them into a fine powder, and put the mixture into a redhot crucible, by half a spoonful at a time, continuing the fire a quarter of an hour after the lait injection. Then either pour the matter into a cone, or let it cool in Mm 3

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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 fubflance; and on the top, a more fpongy 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 bafis of LOCKYER's PILLS, which were formerly a cele-Ten grains of the brated purge. powder mixed with an ounce of white fugar-candy, and made up into a mais with mucilage of gum tragacanth, may be divided into an hundred fmall pills; of which one, two, or three, taken at a time, are faid to work gently by ftool and vomit. The compact livercoloured fubstance, which lies immediately above the regulus, operates more churlishly. This last appears to be nearly of the fame nature with the crocus antimonii, and the former with the fulphur auralum.

VITRUM ANTIMONII. Glass of antimony. Edinb.

Take of

Antimony, reduced to powder, one pound.

Calcine it over a gentle fire, in an unglazed earthen veffel, keeping it continually flirring with an iron fpatula, until the fumes ceafe, and the antimony be reduced into a grey powder. Melt this powder in a crucible, with an intenfe fire, and pour out the liquid matter into a heated brafs difh.

THE calcination of antimony, to fit it for making a transparent glass, succeeds very flowly, unless

the operator be very wary and circumfpect in the management of it. The most convenient vessel is a broad fhallow difh, or a fmooth flat tile, placed under a chimney. The antimony fhould be the purer fort, fuch as is usually found at the apex of the cones. This, grossly powdered, is to be evenly ipread over the bottom of the pan, fo 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 flirred : when the fumes begin to decay, increase the heat, taking care not to raile it to high as to melt the antimony, or run the powder into lumps; after fome time the veffel may be made redhot, and kept in this flate, until the matter will not, upon being ftirred, any longer fume. If this part of the process be duly conducted, the anumony 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 fmooth and equally transparent, the vitrification is completed, and the glafs may be poured out upon a hot fmooth fione, or copper-plate, and fuffered to cool by flow 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 fhops, is faid to be prepared with certain additions: which may perhaps render it not fo fit for the purpofes here defigned.

ed. By the method above directed, it may be eafily made, in the requisite perfection, without any addition.

As we have feen, in a former process, antimony rendered nearly or altogether inactive by calcination ; it might be expected that the calx and glafs of the prefent procefs would be likewife inert. But here the calcination is far lefs perfect than in the other cafe, 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 faline flux, for of itfelf it will not vitrify) has little colour: but here fo much of the inflammable principle is left, that the calx is grey, and the glafs of a high colour. The calcined antimony is faid by Boerhaave to be violently emetic. Experience has shewn that the glass is fo, infomuch as to be unfafe for internal ufe. It is employed chiefly, in the preient practice, as being fubfervient to fome other preparations, particularly the emetic tartar and antimonial wine; and in combination with wax, and fome other fubftances, by which its power is obtunded.

VITRUM ANTIMONII CE-RATUM. Cerated glafs of antimony. Edinb.

Take of

Yellow wax, a dram

Glafs of antimony, reduced into powder, an ounce.

Melt the wax in an iron veffel, and throw into it the powdered glafs: keep the mixture over a gentle fire for half an hour, continually ftirring it; then pour it out upon a paper, and when cold grind t into powder. THE glass melts in the wax, with a very foft 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 fnuff, which is a mark of its being fufficiently prepared. The quantity here fet down, loses about one dram of its weight in the procefs.

This medicine has for fome time been greatly efteemed in dyfenteries: feveral instances of its good effects, in these cases, may be feen in the fifth volume of the Edinburgh effays, from which the above remarks on the preparation are taken. The dole is from two or three grains to twenty, according to the age and strength of the patient. In its operation, it makes fome perfons fick and vomit; it purges almost every one; though it has fometimes effected a cure. without occasioning any evacuation or ficknefs.

Mr. Geoffroy gives two fingular preparations of glass of antimony, which feem to have fome affinity with this. One is made by digefting the glafs, most fubtilely levigated, with a folution of maftich made in spirit of wine, for three or four days, now and then fhaking the mixture ; and at laft evaporating the fpirit, fo as to leave the maftich and glais exactly mingled. Glafs of antimony thus prepared, is faid 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 chylifta.

The other preparation is made by burning fpirit of wine upon the glafs three or four times, the powder being every time exquifitely rubbed upon a marble. The dofe of this medicine is from ten grains to twenty or thirty. It is faid to M m 4 operate

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operate mildly both upwards and downwards, and fometimes to prove fudorific.

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ANTIMONIUM CATHARTICUM.

The purging antimony of Wilfon.

Take four ounces of glafs of anti" mony, finely powdered, and gradually pour thereon twelve ounces of oil of vitriol : diftil in a fand-heat; and wash the powder, which remains in the bottom of the retort, till all its acrimony is loft : then dry it, and grind it with an equal weight of Glauber's cathartic falt, and a double quantity of vitriolated nitre. Let this mixture be kept a quarter of an hour in gentle fusion in a crucible ; and afterwards pulverized, wathed, and dried for use.

Mr. Wilfon, the inventor of this preparation, informs us, that it is the most certain antimonial purge he ever met with; that it operates without nauseating the stomach; and that by the use of this powder only, he knew three confirmed poxes cured. His dose is from two grains to ten.

We have already obferved, that the glafs of antimony contains a part of the regulus not fully divefted of its inflammable principle. The vitriolic acid, and neutral falts containing this acid, abforb the inflammable principle from fundry metallic and other bodies; and on this probably depends the mitigation of the glafs in the prefent procefs.

CAUSTICUM ANTIMO-NIALE.

The antimonial caustic, Lond.

Take of Crude antimony, one pound ; Corrofive mercury fublimate, two pounds.

Reduce them feparately into powder; then mix, and diffil them in a wide-necked retort, with a gentle fand-heat. The matter, which arifes into the neck of the retort, is to be exposed to the air, that it may run into a liquor.

BUTYRUM ANTIMONII. Butter of antimony. Edinb.

Take of

Crude antimony, one part;

Corrofive mercury fublimate, two parts,

Grind them first feparately, then thoroughly mix them together, taking the utmost care to avoid the vapours. Put the mixture into a coated glafs retort (having a fhort wide neck) fo as to fill one half of it. The retort being placed in a fand-furnace, and a receiver adapted to it, give first a gentle heat, that only a dewy vapour may arife. The fire being then increased, an oily liquor will alcend and congeal in the neck of the retort, appearing like ice, which is to be melted down by a live coal cautioufly applied. This oily matter is to be rectified, in a glass retort, into a pellucid liquor.

THESE proceffes are extremely dangerous, infomuch that even the life of the operator, though tolerably verfed in common pharmacy, may be affected for want of taking due care. Boerhaave relates, that one, who from the title he gives him is not to be fuppofed inexpert in chemical operations, or unacquainted with the danger attending this, was fuffocated for want of proper care to prevent the burling of the retort. The fumes which arife. Preparations of Antimony.

arife, even upon mixing the antimony with the fublimate, are highly noxious, and fometimes iffue fo copioufly and fuddenly, as very difficultly to be avoided.

Chap. 10.

The cauftic or butter, as it is called, appears to be a folution of the metallic part of the antimony in the marine acid of the fublimate; the fulphur of the antimony, and the mercury of the fublimate, remain at the bottom of the retort, united into an ethiops. This folution does not fucceed with fpirit of falt in its liquid state, and cannot be effected, unless (as in the cafe of making (ublimate) the acid be highly concentrated, and both the ingredients ftrongly heated. If regulus of antimony were added in the distillation of spirit of fea falt without water, a like folution would be made.

When the congealed matter that rifes into the neck of the retort, is liquefied by the moisture of the air, it proves lefs corrofive than when melted down and rectified by heat; though it feems, in either cafe, to be sufficiently ftrong for the purpoles for which it is intended, as the confuming of fungous flefh, and the callous lips of ulcers. It is remarkable, that though this faline concrete readily and almost entirely diffolves by the humidity of the air, only a fmall quantity of white powder feparating, it neverthelefs will not diffolve on putting water to it directly. Even when previoufly liquefied by the air, the addition of water will precipitate the folution.

CINNABARIS ANTIMONII. Cinnabar of antimony. Lond.

Let the matter which remains in the retort after the diffillation of the cauffic, be fublimed in a coated matrafs, in an open fire.

Edinb.

As foon as red vapours begin to appear in the diffillation of the butter, change the receiver, without luting the junctures; and increafe the fire until the retort becomes intenfely red- n an hour or two, the whole of the black powder will be fublimed, and its colour changed into red. Then break the retort, and diligently feparate the cinnabar, which will be found in the neck, from the black droffy matter.

THE cinnabar of antimony is composed of the fulphur of the antimony, and the mercury of the fublimate, which are perfectly the fame with the common brimftone and quickfilver, of which the cinnabaris factitia is made. The antimonial cinnabar therefore, whofe ingredients are laborioufly extracted from other fubstances, is not different from the common cinnabar made with the fame materials procured at a much cheaper rate. The former indeed is generally of a darker colour than the other, and has fomewhat of a needled appearance, like that of antimony itfelf; whence it has been supposed to participate of the metallic part of that mineral. But it appears from experiment, that both the colour and needled form are entirely accidental, and owing to the mixture's containing a larger proportion of fulphur, and being fublimed in a more languid manner.

MERCURIUS VITÆ, feu PULVIS AIGEROTHI.

Mercury of life, or Algeroth's powder. Take of

Rectified butter of antimony, as much as you pleafe.

Pour to it a fufficient quantity of fpring water, and an exceeding white powder will be precipitated. ed. Edulcorate this by repeated affusions of warm water, and dry it by a flow fire.

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This powder has not, as its name flouid feem to imply, any thing of mercury in it, but is folely composed of the reguline part of the antimony, corroded by the acid spirit of fea falt ; which acid is fo clofely united, as not to be feparated by any ablution with water. Le Mort directs fome alkaline falt to be diffolved 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 ftill virulent, or render it inert. It has therefore for a long time been laid alide by practitioners; and the Edinburgh college, who retained it in a preceding edition, have at a late revifal of their pharmacopæia expunged it.

BEZOARDICUM MINERALE. Bezoar mineral.

Take any quantity of butter of antimony newly reflified, and gradually drop into it fpirit of nitre, till the effervescence ceases. Draw off the spirit in a glass vessel, placed in a fand-heat, till a dry powder remains behind. Add to this a little fresh spirit of nitre, 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 faster to the operator, by dropping the butter of antimony into three or four times its weight in spirit of nitre, 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 likewife be made by diffilling fpirit of nitre from the mercurius vitæ, and calcining the remainder; or by deflagrating the mercurius vitæ with thrice its weight of pure nitre. This laft method, propofed by Wedelius, is followed by the Augustan college.

Bezoar mineral was formerly held in great effeem as a diaphoretic ; but its reputation is at prefent almost lost. It is not different in medical virtue, or in any fenfible quality, from the calces of antimony made directly by deflagration with nitre, fome of which have generally fupplied its place in the thops. It appears at first extraordinary, that the violent cauffic, butter of antimony, should be rendered indolent by the corrofive fpirit of nitre. How this happens will be eafily understood, upon confidering that the nitrous acid expels the marine (to which the cauftic quality of the butter is owing) and is itfelf expelled from most metallic fubstances by fire.

TARTARUM EMETICUM. Emetic tartar. Lond.

Take of

Washed crocus of antimony,

Cryftals of tartar, each half a pound ;

Water, three pints.

Boil them together for half an hour; then filter the liquor, and, after due evaporation, fet it by to cryftallize.

Edinb.

Take of

- Butter of antimony, any quantity.
- Infuse it in hot water, in which has been diffolved, before-hand, as much fixed alkaline vegetable falt

Chap. 10. Preparation of Bismuth.

falt well purified, as will precipitate all the antimony. Wafh and dry this precipitate, and boil nine drams of it with two ounces and an half of cryftals of tartar, finely powdered, in five pounds of water, till the powders are diffolved; ftrain the folution, evaporate to a pellicle, and fet it to cryftallize.

It may likewife be prepared, in the fame manner, from the crocus metallorum washed.

THIS preparation has been ufually made with the unwafhed crocus of antimony. By employing, as here directed, the washed crocus, it proves of a whiter colour, and likewife more certain in ftrength; though it will still be fomewhat precarious in this last respect, if the crystallization 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 fhould feem therefore more eligible, as foon as the folution has paffed the filter, to proceed to the total evaporation of the liquor, or at leaft to evaporate lower than is usual for cryfiallization, that the whole may fhoot at once.

The title of this medicine expreffes its principal operation. It is one of the best of the antimonial emetics, acting more powerfully than the quantity of crocus contained in it would do by itfelf, though it does not fo much ruffle the constitution. And indeed antimonials in general, when thus rendered foluble by vegetable acids, are more fafe and certain in their effects, than the violent preparations of that mineral exhibited by themfelves; the former never varying in their action from a difference in the food taken during their use, or fimilar circumstances, which occafioning more or lefs of the others to be diffolved, make them operate with different degrees of force. Thus crude antimony, where acid food has been liberally taken, has fometimes proved violently emetic ; whilft, in other circumftances, it has no fuch effect.

The dofe of emetic tartar, when defigned to produce the full effect of an emetic, is from four to fix or eight grains. It may likewife be advantageoufly given in fmaller dofes, half a grain for inftance, as a diaphoretic and alterative in cutaneous diforders; and added, in the quantity of a grain, as a flimulus to ipecacuanha, &c.

SECT. IX.

Preparation of Bismuth.

THIS metal refembles in appearance the regulus of antimony; but differs greatly from it, in its pharmaceutical properties and medical qualities. It melts in a very fmall heat, long before ignition; and totally diffolves, with great effervefcence, in aquafortis, which only corrodes the antimonial metal. As a medicine, it feems, when pure, to have little or no effeft ; though fome preparations of it were formerly accounted diaphoretic. At prefent, only one preparation comes under the notice of the apothecary or chemist, and that defigned for external use.

MAGISTERIUM BISMUTHI. Magistery of bismuth. Diffolve bismuth in a proper quantity of aquafortis, without heat, adding adding the bifmuth by little and little at a time. Pour the folution into fixteen times its quantity of fair water. It will grow milky, and, on flanding for fome 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.

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THIS preparation is of fome efteem as a cofmetic, 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 revifal, but was found much too infignificant to be admitted there.

SECT. X.

Preparations of Zinc.

THIS metal melts in a red heat; and if the air be admitted, flames, and fublimes into light, white, downy flowers; if the air be excluded, it arifes, by a ftrong fire, in its metallic form. Sulphur, which unites with, or fcorifies all the other metals except gold, does not act on zinc. Acids of every kind diffolve it.

Zinc, its flowers or calces, and folutions, taken internally, prove ftrong and quick emetics; in fmall doles, they are faid to be diaphoretic. Externally, they are cooling, aftringent, and deficcative.

PURIFICATIO ZINCI. Purification of zinc.

Melt zinc with a heat no greater than is just fufficient to keep it fluid. Stir it strongly with an iron rod, and throw in alternately pieces of fulphur and of tallow, the first in largest quantity. If any confistent matter, or scoria, form on the top, take it off, and continue the process, until the fulphur be found to burn freely and totally away on the furface 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 suffaining.

FLORES ZINCI. Flowers of zinc.

Let a large and very deep crucible. or other deep earthen vessel, be placed in a furnace, in an inclined fituation, only half upright. Put a fmall quantity of zinc into the bottom of the veffel, and apply a moderate fire, no greater than is neceffary to make the zinc flame. White flowers will arife, and adhere about the fides of the veffel like wool. When the zinc ceafes to flame, ftir it with an iron rod. and continue this operation till the whole be fublimed.

THESE flowers fhould feem preferable, for medicinal purpofes, to tutty, and the more impure fublimates of zinc, which are obtained in the brafs works; and likewife to calamine, the natural ore of this metal.

Chap. 10. Compound metallic Preparations.

metal, which contains a large quantity of earth, and frequently a portion of heterogeneous metallic matter.

SAL, feu VITRIOLUM ZINCI. Salt, or vitriol of zinc.

Diffolve purified zinc, by a gentle heat of fand, in a mixture of one part of oil of vitriol, and four of water. Filter the folution, and after due evaporation, fet it to crystallize.

THIS falt is an elegant white vitriol. It differs from the common white vitriol, and the *fal witrioli* of the fhops, only in being purer, and perfectly free from any admixture of copper, or fuch other foreign metallic bodies as the others generally contain.

SECT. XI.

Compound metallic Preparations.

LAPIS MEDICAMENTOSUS. The medicinal stone. Lond.

AKE of

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 altringent, for faftening loofe teeth, preferving the gums, healing and drying up ulcers and wounds, and reprefling defluxions of thin acrid humours upon the eyes. It is fometimes ufed in injections for checking a gonorrhæa, after the virulence is expelled. A preparation much refembling this is faid, in the Memoirs of the French academy, to be greatly efteemed among the furgeons in the army as a vulnerary.

SPECIFICUM ADSTRINGENS MAETZII.

An astringent preparation taken from Maetz, which has been fold under the name of

Colbatch's ftyptic poruder.

Take any quantity of iron filings, and as much spirit of falt as will rife 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 procefs be flopt as foon as it becomes dry, it has exactly the appearance of Colbatch's powder. It must be kept close from the air, otherwife it deliquiates.

THIS is faid to be the flyptic, with which fo much noife was made fome time ago by the author of the novum lumen chirurgiæ; and for the fale of which, a patent was procured : only in that was ufed oil of vitriol, inftead of the fpirit of falt in this; a difference not very material. The preparation flands recommended in all kinds of hæmorrhages and immoderate fluxes, both internally and externally : the dofe is from four grains to twelve.

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It is undoubtedly an efficacious flyptic, but for internal use a dangerous one. See the article LEAD, and its preparations.

ANTIHECTICUM POTERII. Peterius's antibectic.

Take of

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Martial regulus of antimony, fix ounces;

Fine tin, three ounces.

Melt these together in a crucible ; then pour them out into a warm greafed mortar, and when the mafs 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 fpoonful 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 fufficient quantity of warm water. Stir them well together with a peftle, 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 indiffoluble feces remain behind. Suffer all the milky liquors to reft. A powder will fall to the bottom, which is to be walked with repeated affusions of warm water, and laftly dried for ufe.

THE regulus of antimony fhould 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 diffipated by the heat requifite for the fufion of the regulus. The chemifts have been greatly divided with regard to the proportion which thefe two ingredients ought to bear to one another. Some vary fo much from the prefent prefcription, as to order two parts of the antimonial regulus to one of tin ; others

no more than one part to fix. Nor have they agreed upon the colour which this preparation ought to have; fome preferring that which is perfectly white, whilit others look upon a blueish tinge as a mark that the proportions have been duly observed, and the operation regularly performed. In the proccfs above, it feems intended to be white : for without the observance of certain encheireles, not there mentioned, as particularly calcining the powder after the ablution, it will fcarce have any thing of a blueifh caft.

Practical physicians do not differ lefs 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 fervice in hectical cafes ; whilft many, of no fmall note, are not only confident that it has none of the virtues attributed to it, but utterly condemn it as unfafe, and capable of producing the very diforders faid to be remedied by its ufe. This affair probably will not be fatisfactorily determined, till the virtues of calx of tin and calx of antimony (of which this medicine is a mixture) shall be better alcertained than they are at prefent. In the mean time, the use of the antibectic is in common practice laid afide; 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;

- Corrofive fublimate mercury, five ounces.
- Melt the regulus of antimony in a crucible, and put to it the tin, fo as to make a new regulus ; to which.

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which, after being levigated, add the corrofive fublimate, and diffil the mixture in a retort. Let the butter which arifes in this procefs, be fixed, by three repeated diffillations, with thrice its own quantity of fpirit of nitre. The powder is then to be calcined; thrown, whilf ignited, into a proper quantity of fpirit of wine; and afterwards dried for ufe.

THIS preparation is not greatly different from the foregoing. The butter feems to contain more of the tin, than of the antimonial regulus, united with the marine acid of the fublimate. The nitrous fpirit expels the marine, and is itfelf afterwards expelled in the calcination; leaving the powder a mere calx, fimilar to one prepared from the fame ingredients in a lefs troublefome manner, by deflagration with nitre.

ÆTHIOPS ANTIMONIALIS. Antimonial ethiops.

Let equal quantities of antimony and fea falt be melted together in a crucible for an hour; when grown cold, a regulus (improperly fo called) will be found in the bottom. This is to be feparated from the fcoriæ that lie above it, and ground with an equal weight of purified quickfilver, until they are united.

THIS medicine is faid to be of remarkable efficacy in venereal cafes of long flanding, in cancerous tumours, fcorbutic and fcrophulous diforders, obfinate glandular obftructions, and fundry other chronical diftempers which elude the force of the common medicines. A few grains may be given at firft; and the dofe gradually increased, according to its operation, to a fcruple or more. It acts chiefly by

promoting perfpiration. In fome conflictations, it proves purgative; and, in others, if the dofe be confiderable, emetic.

Sundry other preparations of this kind have been held by fome people in confiderable effeem, 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 fulphur. Mr. Malouin, of the faculty of Paris, made trial of different methods for uniting mercury and crude antimony into an ethiops. Those which fucceeded I shall here extract from his chimie medicinale.

On grinding together two parts of antimony and one of mercury, the mercurial globules difappeared in three hours, and the compound proved fimilar in appearance to the ethiops made with the fame proportions of mercury and common fulphur. 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 allo, 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 ethiops is made more perfect, in regard to the intimate union of the ingredients, by heat than by triture ; the most perfect antimonial ethiops alfo was obtained by means of fire, in the following manner.

A heated crucible is to be rubbed in the infide with tallow, immediately covered, and fet in the fire. When red-hot, throw in the antimony beaten into coarfe powder, and cover the veffel again. When the antimony is melted, take the crucible out of the fire, throw

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throw in a fmall bit of tallow, pour an equal weight of heated mercury on different parts of the furface, cover the crucible for a moment, and, while the mixture is ftill fluid, pour it out into a heated iron mortar. When grown cold, reduce it into a powder, which is to be levigated on a matble.

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On this black powder the author directs fome fpirit of wine to be burnt two or three times. This may very fafely be omitted, as it can nowife affect the medicine. The only difficulty in the procefs relates to the degree of heat of the melted antimony. If it be not fuf-

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ficiently fluid, the mercury cannot equally unite with it; and, if over hot, great part of the mercury will be diffipated.

Mr. Malouin commends this ethiops, as a medicine of great efficacy in glandular obftructions, obflinate cutaneous maladies of different kinds, inveterate rheumatifms, &c. It acts most commonly by urine and perspiration, rarely purges, or occasions only fome flight nause. The dose is from one grain to twenty, two or three times a day, that is, from one to fixty grains in a day. In some persons a dram has no sensible operation; others are moved by fix grains.

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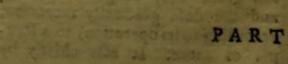
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PART IV.

MEDICINAL COMPOSITIONS.

CHAPTER I.

Powders.

HIS form receives fuch materials only, as are capable of being fufficiently dried to become pulverable, without the lofs of their virtue. There are many fubftances, however, of this kind, which cannot be conveniently taken in powder. Bitter, acrid, fetid drugs, are too difagreeable; emollient and mucilaginous herbs and roots are too bulky; pure gums cohere, and become tenacious in the mouth; fixt alkaline falts liquefy upon exposing the composition to the air; and volatile alkalies exhale.

The dofe of powders, in extemporaneous prefcription, is generally about half a dram: it rarely exceeds a whole dram; and is not often lefs than a fcruple. Subftances which produce powerful effects in fmaller dofes, are not trufted to this form, unlefs their bulk be increased by additions of lefs 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 confistent vehicle, as syrups; for, from thin ones, they soon subfide. Refinous substances likewife are most commodiously taken in thick liquors: in thin ones, they are apt to run into lumps, which are not easily again diffoluble.

General rules for making powders.

Ι.

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 [E.]

II.

The dry aromatics ought to be fprinkled, during their pulverization, with a few drops of any proper water [E.]

HI.

The moifter aromatics may be dried with a very gentle heat, before they are committed to the mortar [E.] N n IV. Gums,

Medicinal Compositions.

Part IV.

IV. Gums, and fuch other fubftances as are difficultly pulverable, fhould be pounded along with the drier ones, that they may pafs the fieve together [E.]

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No part fhould be feparated for ufe, until the whole quantity put into the mortar has paffed the fieve, and the feveral fiftings been mixed together; for thole parts of one and the fame fubject, 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 fmall quantities at a time, and kept in glafs veffels very clofely ftopt [E.]

If powders be long kept, and not carefully fecured from the air, their virtue is in great meafure deftroyed, although the parts in which it confifts fhould not in other circumflances prove volatile. Thus, though the virtues of ipecacuanha be fo fixt as to remain entire even in extracts made with proper menfirua, yet, as the college of Wirtemberg obferves, 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. L.E.

Take of

Afh-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 neceffary. 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.

PULVIS ARI COMPOSITUS. Compound powder of arum. Lond.

Take of

Arum root, fresh dried, two ounces;

Yellow water-flag roots,

Burnet faxifrage roots, each one ounce;

Crabs-eyes prepared,

Cinnamon, each half an ounce ; Salt of wormwood, two drams.

Beat them into a powder, which is to be kept in a close vefiel.

In former editions of the London pharmacopœia, one of the ingredients in this composition was called acorus vulgi or vulgaris; a name which has been applied, by different writers, both to calamus aromaticus, and to the gladiolus luteus, or common yellow water-flag. In this uncertainty, the compounders generally took the former. But as the medicine was first contrived by a German phyfician, Birkmann; and as in fome of the German pharmacopceias, the acorus vulgaris is explained to be the water-flag; the London college have now, rather in conformity to the original preicription, than from an opinion of the virtues of the water-flag (which appear, when the root is dried and powdered, to be very inconfideraable), made choice of this last, and expressed it by the name which more clearly diffinguishes it from the other. The caution of keeping the powder in a close veffel, is a very necessary one; for if exposed

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to the air, the alkaline falt, imbibing moisture from it, would run into a liquid state. Two alkaline falts have been generally directed; but as they differ from one another only in name, one of them is here juftly omitted, and fupplied by a proportionable increase of the other. Poffibly the prepared crabs - eyes might also have been dropt, unless they be intended to augment the volume of the medicine (an intention not very neceffary in this compolition), for they do not appear to have any medicinal virtue which alkaline falts do not possefs in a greater degree.

Agreeably to the above remark in a former edition of this book, the college of Edinburgh, in a late revifal of their pharmacopœia, have omitted the crabs-eyes, and continued the former practice of using calamus aromaticus for the acorus vulgaris. They have likewife exchanged the cinnamon for canella alba; and the alkaline falt for a neutral one, better fuited to the form of a powder. Their prefent formula is as follows.

Take of

Arum roots, newly dried, two ounces;

Calamus aromaticus,

Burnet faxifrage roots, each one ounce;

Canella alba, fix drams ;

Vitriolated tartar, two drams.

Mix and make them into a powder.

THE pulvis ari compositus was originally intended as a ftomachic : and in weakneffes and relaxations of the ftomach, accompanied with a furcharge of viscid humours, it is doubtlets a very useful medicine. It frequently also has good effects in rheumatic cases, of which I have known fome inftances. The dofe may be from a fcruple to a dram, two or three times a day, in any convenient liquor. It fhould be ufed as frefh as poffible, for its virtue fuffers greatly in keeping. The arum root in particular, its capital ingredient, foon lofes the pungency in which its efficacy principally confifts.

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PULVIS e BOLO COMPOSITUS fine OPIO. Compound powder of bole without opium.

Lond.

Take of

Bole armenic, or French bole, 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 BOLO COMPOSITUS cum OPIO.

Compound powder of bole with

opium.

Lond.

Take of opium strained, three drams.

Dry it a little, fo as to render it eafily pulverable; and add to it the foregoing fpecies, that they may all beat into a powder together.

THIS powder, with opium, is an elegant reform of the ipecies of Fracaltorius's confection, commonly called *diafcordium*; confifting only of fuch of the ingredients of that composition, as are most conducive to the intention for which it is at prefent prefcribed. Forty-five grains of the powder contain one of opium.

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548 The powder is directed to be kept in the fhops without opium, for cafes where the affiftance of that drug is not wanted. It is a warm, glutinous aftringent; and is given, in fluxes, or other diforders, where medicines of this clafs are proper, in dofes of a fcruple or half a dram.

PULVIS e CERUSSA COM-POSITUS. Compound powder of cerusse. Lond.

Take of

Ceruffe, five ounces ;

Sarcocolla, an ounce and a half; Gum tragacanth, half an ounce. Beat them together into a powder.

THIS composition is the trochifci albi of Razi, brought back to its original fimplicity with regard to the ingredients, and without the needlefs 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 e CHELIS CANCRO-RUM COMPOSITUS.

Compound powder of crabs claws. Lond.

Take of

The tips of crabs-claws prepared, one pound ; Pearls prepared,

Red coral prepared, each three ounces.

Mix them together.

Edinb.

Take of

Red coral prepared, one ounce; Black tips of crabs-claws prepared, two ounces. Mix them together.

THESE powders have loft feveral

of their ingredients, without any injury to their virtues; and poffibly they would ftill bear a further reduction; for both the crabs-eyes and claws are by themfelves at leaft as effectual as any composition of them with pearls and coral. In fome of our hospitals, the following composition is substituted.

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PULVIS TESTACEUS COMPO-SITUS.

Compound testaceous powder.

Take of

Oyfter shells prepared, one pound; White chalk, half a pound.

Mix them together.

THIS cheap abforbent powder is at least equally valuable, as a medicine, with the more coffly and compounded crabs-claw and bezoardic powders of the shops. These kinds of preparations are given from half a fcruple to half a dram, for abforbing or deftroying acidities in the first passages ; which feems to be the only good effect that can be reafonably expected from thefe fimple antacid earths. If they meet with no acid to diffolve them, they promife to be injurious rather than beneficial. They have often been given in fevers, under the notion of alexipharmacs and fudorifics, from a supposition that these diforders 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 abforbents from being uteful in these cafes, that fubitances of a directly contrary quality, mild acidulous liquors, are in general the most successful remedies, wherever the vis vitæ is not too far deprefied ; and, where it is, the infipid indolent earths can contribute nothing to Support or raile it.

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It may here be proper to take notice of a quality hitherto little expected from thefe kinds of fubftances; that of ftrongly promoting putrefaction. Flefh mixed with a fmall proportion of chalk, and exposed to a heat equal to that of the human body, not only corrupts fooner than without this addition, but likewife in a far greater degree, refolving in a few days into a perfect mucus. This quality of the abforbent powders (for the discovery of which, with many other curious experiments on the fame fubject, the public is obliged to the ingenious Dr. Pringle) feems to forbid their ufe in all those kinds of fevers, where the, animal juices are already too much disposed to a putrefactive state. We have before obferved, that, in these cases, though very frequently employed, they are at best unserviceable. Perhaps their ill effects would be oftener feen, if it were not for the quantity of acids ufually given in acute difeafes.

PULVIS BEZOARDICUS. Bezoardic powder. Lond.

Take of

Compound powder of crabsclaws, one pound;

Oriental bezoar prepared, one ounce.

Mix them together.

BEZOAR has hitherto been an ingredient in the foregoing compofition, which was then called Gafcoigne's powder; though notwithflanding the addition which this article made to the price, it added nothing to the virtue of the medicine. The college of London has therefore very prudently directed an abforbent powder, without this coftly article; and composed another, diftinguished by its name, for the use of those who expect any particular virtues from it. The Edinburgh college have entirely expunged this unneceffary drug, and take no further notice of it in their pharmacopœia, than barely giving it a place in the catalogue of fimples.

PULVIS CONTRAYERVÆ COMPOSITUS.

Compound powder of contrayerva. Lond.

Take of

Compound powder of crabsclaws, a pound and a half; Contrayerva root, five ounces. Make them into a powder.

Edinb.

Take of

Contrayerva root, fix drams; Virginian fnakeroot, two drams; English faffron, one dram; Compound powder of crabsclaws, two 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 afide as needlefs; 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 prefervation; for it is fcarce to be fupposed, that the powder will lofe more by being kept for a reasonable length of time in a close-flopt glass, than the balls will, in the humectation with water, and exficcation in the air, before they are fit for being put by to keep. These medicines have a much better claim to the title of alexipharmac and fudorific, than the two foregoing compositions. The contrayerva, Inakeroot, and faffron, by themfelves are fuch, and prove very ferviceable in low fevers, where the vis vitæ is weak, and a Nn 3 diaphorefis

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diaphorefis to be promoted. It is poffible, that the crabs-claw powders are of no further fervice, than as they divide thefe powerful ingredients, and render them fupportable to the ftomach.

PULVIS ad EPILEPTICOS de GUTTETA dictus. Epileptic powder. Edinb.

Take of

Wild valerian root,

Peony root, of each equal parts. Make them into a powder.

THIS powder has undergone a great reduction of its ingredients, to its advantage as a medicine ; the articles rejected being either infignificant, or at beft far inferior to those retained, and consequently increasing the bulk of the compofition, without communicating a proportionable thare of efficacy. Perhaps, for the fame reason, the peony roots are not altogether unexceptionable. The powder, however, as now reformed, may be looked on as a medicine of fome importance for the purposes expreffed in its title, far superior to those of fimilar intention in other pharmacopœias. The dose is from ten grains to half a dram for children, and from half a dram to The abtwo drams for adults. forbent powders, generally directed in these kinds of compositions, are here more prudently omitted, as they may eafily be mixed extemporaneoully, where particular cafes may require them. For children, these additions are often necessary, as in most of their diforders, acidities in the first passages have a confiderable fhare. In adults, they are rarely of ule.

PULVIS e MYRRHA COMPO-SITUS.

Compound powder of myrrb. Lond.

Take of Rue leaves, dried, Dittany of Crete, Myrrh, each an ounce and a half; Afafetida, Sagapenum, Ruffia caftor, Opopanax, each one ounce. Beat them together into a powder;

THIS is a reformation of the trochifci e myrrba, a composition contrived by Razi against uterine obstructions. It may be taken in any convenient vehicle, or made into boius, from a scruple to a dram or more, two or three times a day.

PULVIS ad PARTUM. Powder to promote delivery. Edinb.

Take of

Borax, half an ounce ; Caftor,

Saffron, each a dram and a half; Oil of cinnamon, eight drops; Oil of amber, fix drops.

Beat the species together into a powder, to which add the oils, and mix the whole well together.

THIS medicine has long been held in efteem for the purpofe exprefied in its title : neverthelefs, its real efficacy, and what thare thereof is owing to each of the ingredients, has not been fufficiently determined : the borax, though by fome thought to be of little importance, does not perhaps contribute the leaft to its virtue. The dofe is from a fcruple to a dram, or fo much as can be conveniently taken up at once on the point of a knife. It should be kept in a very clofe veffel, otherwife it will foon lofe

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lofe a confiderable deal of its more valuable parts.

PULVIS e SCAMMONIO COM-POSITUS.

Compound powder of scammony. Lond.

Take of

Scammony, four ounces;

Calcined hartshorn prepared, three ounces.

Grind them diligently together into a powder.

HERE the scammony is divided by the earthy calx, and thus rendered somewhat more soluble, and less adhesive. Hence its purgative quality is promoted, at the same time that it becomes less griping. The dose of the compound is from fifteen grains to half a dram.

This powder has been ufually prepared with diaphoretic antimony and cryftals of tartar (inftead of the calcined hartfhorn before directed) and called, from its firft publifher, PULVIS CORNA-CHINI, 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. In other prefcriptions, the tartar and antimonial calx bear nearly the fame proportion to the fcammony, as the calcined hartfhorn in the preceding formula. It appears probable, that neither of thefe ingredients are of any further ufe, than as they divide the texture of the fcammony; though Cornachini propofes notable advantage from fome deobftruent quality in the tartar, whereby the veffels fhall be opened, and the noxious humours prepared for expulsion; and from the preparation of antimony, tho' it have no fensible operation, he expects fome share of the fame fuccess, which fometimes attends the rougher preparations of that mineral.

PULVIS e SENA COMPO-SITUS. Compound powder of fena. Lond.

Take of Cryftals of tartar, Sena, each two ounces; Scammony, half an ounce; Cloves, Cinnamon, Ginger, each two drams.

Powder the fcammony by itfelf; and all the other ingredients together. Then mix them.

PULVIS DIASENNÆ. Edinb.

Take of

Cream of tartar, Sena, each two ounces; Scammony, Ginger, each half an ounce. Make them into a powder.

THESE powders are given as cathartics, in the dofe of two fcruples, or a dram. The fpices are added, not only to divide, but to warm the medicine, and make it fit eafier on the flomach. The fcammony is used as a flimulus to the fena. The quantity of the latter necessfary for a dole, when not affifted by fome more powerful material, is too bulky to be conveniently taken in this form.

PULVIS STERNUTATORIUS. Sternutatory powder.

Lond. Take of Afarum, Marjoram, N n 4

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Marum Syriacum leaves, dried, Lavender flowers, dried, each equal weights.

Rub them together into a powder.

PULVIS CEPHALICUS. Cephalic powder. Edinb.

Take of

The leaves of afarum, three parts;

Leaves of marjoram, one part. Beat them together into a powder.

THE titles of these powders sufficiently express their intention. They are both agreeable and esticacious errhines, and superior to most of those usually fold under the name of herb souff.

PULVIS STYPTICUS. Styptic powder. Edinb.

Take of

Alum, half an ounce; Gum kino, three drams. Rub them together into a powder.

THIS powder has long been in repute as an aftringent, under the title of PULVIS STYPTICUS HEL-VETII. It is undoubtedly a very powerful medicine : though the gum kino feems to have little fhare in its effects. Some direct the ingredients to be melted together before they are powdered. But this circumftance does not appear to be neceffary.

PULVIS e SUCCINO COMPO-SITUS. Compound powder of amber.

Lond.

Take of Amber prepared, Gum Arabic, each ten drams; Juice of hypocifits, Balauftines, 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 manifeftly abfurd or fuperfluous; and the making it up into troches, a very unnecessary trouble. The medicine, as now reformed, may be looked upon as an uleful, and tolerably elegant aftringent; though poffibly the ingredient which it receives name from, contributes little to its virtue. Two fcruples of the composition contain one grain of opium.

PULVIS e TRAGACANTHA COMPOSITUS.

Compound powder of gum tragacanth. Lond.

Take of Gum tragacanth, Gum Arabic, Marfhmallow root, each an ounce and a half; Starch, Liquorice, each half an ounce; Double refined fugar, three ounces. Grind them into a powder.

PULVIS DIATRAGACANTHI. Edinb.

Take of Gum tragacanth, one ounce and a half; Marfhmallow root, Liquorice, Starch, each half an ounce. Beat them together into a powder.

BOTH these powders are mild emollients; and hence become ferviceable in hectic cases, tickling coughs

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coughs, ftrangury, fome kinds of alvine fluxes, and other diforders proceeding from a thin acrimonious ftate of the humours, or an abrahon of the mucus of the inteffines. They fotten, and give a greater degree of confiltency to the former, and defend the latter from being irritated or excoriated by them. All the ingredients coincide in these general intentions. The marshmallow root, however, is fomewhat too bulky for this form, and likewife fubjects the composition to grow. mouldy in keeping; an inconvenience to which the cold feeds formerly employed in these powders were particularly liable. The dofe is from half a dram to two or three drams, which may be frequently repeated.

HIERA PICRA. Lond.

Take of

The gum extracted from Socotorine aloes, one pound; Canella alba, three ounces. Beat them feparately into powder, and then mix them together.

Pulvis HIERA PICRA dictus. Edinb.

Take of

Socotorine aloes, four ounces; Virginian fnakeroot,

Ginger, each half an ounce. Mix, and beat them into a powder.

THESE compositions were originally directed to be made into an electary. With us, they have been rarely used in that form, and not often in this of a powder, on account of their great nauseous fields. They are chiefly employed as the basis of a tincture called *tinctura* facta.

SPECIES AROMATICÆ.

Aromatic Species. Lond.

Take of

Cinnamon, two ounces;

Lesser cardamom seeds, husked, Ginger,

Long pepper, each one ounce. Beat them together into a powder.

PULVIS DIAROMATON. Aromatic powder. Edinb.

Take of

Nutmegs, Leffer cardamom feeds, Ginger, each equal parts. 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 firengthening the tone of the viscera. The dose is from ten grains to a scruple and upwards. The first is considerably the warmest.

SPECIES e SCORDIO fine OPIO.

Species of scordium without opium. Lond.

Take of Bole armenic, or French bole, four ounces ; Scordium, two ounces ; Cinnamon, an ounce and a half; Storax ftrained, Tormentil root, Biffort root, Gentian, Dittany of Crete, Galbanum strained, Gum Arabic, Red rofes, each one ounce ; Long pepper, Ginger, each half an ounce. Reduce them into powder. SPECIES

SPECIES e SCORDIO cum OPIO.

Species of fcordium with opium. Lond.

Take of strained opium, three drams.

Dry it a little, that it may eafily pulverize; and add it to the foregoing species in the beating, that they may be all reduced into a powder together.

THIS is the specie of Fracastorius's confection or diafcordium, which has been hitherto kept in the shops in the form of an electary only, but is now judicioufly directed in that of a powder alfo, both with and without the opium. When made into an electary, the medicine, in keeping, lofes much of its aftringency, in which confifts great part of its virtue. As this composition has in common practice been looked upon as a medicine of great confequence, and its effects determined by long experience; the college has made no further alteration in its ingredients, than fubflituting red roles themfelves to the fugar of roles; omitting forrel feeds, which are certainly infignificant; and fupplying the Lemnian earth, which with us is fcarce ever met with genuine, by a proper increale of the bole. They have neverthelefs given an elegant reformation of it, in the pulvis e bolo, cum et fine opio. There, the fcordium, ftorax, gentian, dittany, ginger, and galbanum, are rejected, as being either inperfluous or contrary to the intention; whilft an increase of the tormentil root amply fupplies the lofs of the biflort and roles. The quantity of opium is the fame in both, viz. one grain in forty-five of the composition.

Part IV. PULVIS TESTACEUS CERATUS. Cerated testaceous powder. Edinb.

Melt fome yellow bees-wax over a gentle fire; and carefully ftir into it, by little and little, as much of the compound powder of crabsclaw as the wax will take up.

THIS preparation, made with oyster-shells, instead of the crabsclaw powder, has been in use for fome time in the Edinburgh infirmary. It is given to the quantity of a dram, twice a day, in diarrhœas and dysenteries, wherever the vifcera are fubject to be eroded by acrimonious humours, and in immoderate uterine discharges. Its virtue feems to depend wholly upon the wax, the earthy powder being of no further use than to divide that concrete, and render it milcible with the animal fluids.

PULVIS ARTHRITICUS AMARUS. Bitter gout powder. Parif.

Take of Gentian root, Round birthwort root, Rhapontic root, Germander leaves, Groundpine leaves, Leffer centaury tops, of each equal parts.

Make them into a powder.

COMPOSITIONS of this kind were in use among the ancient Greek phyficians, and made a confiderable part of their practice in gouty and arthritic complaints. But while they beflow great praifes on them in cold and phlegmatic. conflitutions, they very properly condemn them as being extremely hurtful in the hot and bilious. Afterwards, on account probably of the ill confequences

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fequences arising from their indifcriminate use, these medicines fell into neglect, till the introduction of the Greek volumes into the weltern 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 omifion of the rhapontic root, was fome years ago brought thence, as a family receipt, by a perfon 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 fociety 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 falling, in a cup " of any agreeable liquor, fafting " 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 " fix months more. After the first " year, it will be fufficient to take " half a dram every other day. " As this medicine operates in-" fenfibly, it will take perhaps " two years before any great be-" nefit is received. In rheuma-" tilms that are only accidental, a few of the dram doles may do: " but in habitual rheumatisms, " and fuch as are of long standing, " it must be taken as for the gout. " The remedy requires patience, as " it operates but flow in both " cafes."

Dr. Clephane remarks (in the learned and judicious paper above referred to) that this medicine will probably do good in many cafes,

for in many cafes there is reafon to believe it extremely proper; but that an indifcriminate use of it will probably again do what a like abuse formerly did, bring a good medicine into difrepute.

PULVIS CATHARTICUS SALINUS. Saline cathartic powder.

Take of

Vitriolated tartar,

Crystals of tartar, each one dram; Sal prunel, or purified nitre, one fcruple.

Make them into a powder.

THIS is an ufeful cathartic in inflammatory diforders, and a vifcid impure state of the juices. The quantity here directed is intended for one dose, which should be accompanied with plentiful dilution.

PULVIS CARMINATIVUS. Carminative powder.

Take of

Anifeed,

Sweet fennel feed, each two fcruples;

Ginger, one fcruple;

Nutmegs, half a fcruple ;

Fine fugar, half a dram.

Reduce them into a powder, for four dofes.

THIS powder is employed for expelling flatulencies arifing from indigeftion, particularly those to which hypochondriacal and hysterical perfons are subject. It is likewife usefully given in the gripes of young children, either mixed with their food or otherwise.

PULVIS DIURETICUS. Diuretic powder.

Take of Sal prunel, ten grains; Salt of amber, four grains; Oil of turpentine, three drops; Fine fugar, one fcruple.

Drop

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Drop the oil upon the fugar, then add the falts, and grind the whole together.

THIS powder is a very efficacious diuretic, and may be given to advantage in cafes where the affiftance of fuch forcing medicines is required. The falts fomewhat abate the heating quality of the oil, and, at the fame time, cool and relax the paffages.

PULVIS ROBORANS. Strengthening powder.

Take of

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Extract of Peruvian bark, twelve grains ;

Salt of feel, two grains ;

Oil of cinnamon, one drop;

Fine fugar, half a dram.

Having mixed the oil with the fugar, add the other ingredients, and grind the whole well together, for two dofes.

THIS medicine has a much better title to the appellation of a ftrengthener, than those usually met with under that name in dispensatories. In lax habits, debilities of the nervous system, and the weaknesses peculiar to either fex, it has generally good effects.

PULVIS ad STRUMAS. Powder against the king's evil. Take of

Burnt sponge, one scruple; Nitre,

Coralline,

Fine fugar, each half a scruple. Reduce them into powder.

THIS powder is recommended in fcrophulous diforders and obftructions of the glands. It is fuppofed 'to open and deterge the minute vefiels, 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 limewater along with each dose. If the patient were much emaciated, the lime-water was mixed with about an equal quantity of milk.

PULVIS TEMPERANS.

Take of

Vitriolated tartar,

Purified nitre, each three drams; Cinnabar, finely levigated, two

fcruples.

Make them into a fubtile powder.

THESE kinds of powders are in frequent use among foreign phyficians in all diforders accompanied with immoderate heat or exagitation of the humours. They are called alfo, especially when absorbents are joined, pulveres præcipitantes, and antispasmodici. They are given in doses of only a few grains at a time, but repeated at short intervals.

PULVIS VERMIFUGUS. Vermifuge powder.

Take of 1.

Tanfy flowers, Worm-feed, each three drams; Salt of steel, one dram.

Make them into a powder.

Take of 2.

Tin reduced into fine powder, two drams; Ethiops mineral, half a dram; Fine fugar, one fcruple.

Mix them well together.

Take of 3. Choice rhubarb, three drams; Scammony,

Calomel, each one dram. Mix and make them into a powder. ALL

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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 falt of steel. The second is divided into three or four dofes; one of which is taken every morning, and a cathartic on the day following. The third, which is a brifk purgative, is ufed, in the quantity of half a dram, after the others have been premifed; or it is taken once or twice a week without their affiftance.

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CHAPTER II.

Troches and lozenges.

TROCHES and lozenges are composed of powders made up with glutinous fubitances into little cakes, and afterwards dried. This form is principally used for the more commodious exhibition of certain medicines, by fitting them to diffolve flowly in the mouth, fo as to pais by degrees into the ftomach. Hence these preparations have generally a confiderable proportion of fugar, or other materials grateful to the palate. Some powders have likewife been reduced into troches, with a view to their prefervation; though poffibly 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.

T.

The three first rules laid down for making powders, are also to be observed in the powders for troches [E.]

II.

If the mafs prove fo glutinous as to flick to the fingers in making up, the hands may be anointed with any convenient fweet or aromatic oil; or fprinkled with powder of flarch, or with that of liquorice [E.]

III.

In order to thoroughly dry the troches, put them on an inverted fieve, in a fhady, airy place, and frequently turn them [E.]

IV.

Troches are to be kept in glafs veffels, or in earthen ones well glazed [E.]

TROCHISCI ALBI RHASIS, feu SIEF ALBUM. The white troches, or dry collyrium of Razi. Edinb.

Take of

Cerusse, three ounces ; Sarcocolla, one ounce ; Gum tragacanth, three drams;

Camphor, one dram;

- Rofe-water, as much as is fufficient.
- Make them into troches according to art.

THE making of thefe ingredients into troches is an unneceffary trouble; fince, before they are ufed, they must be powdered again, for being mixed with rofe-water or other liquors, for the purpoles of a cooling, antacrid, and moderately astrictive collyrium, injection, &c. The London college has therefore directed them to be kept in the form of powder (under the title of *pulvis e ceruffa compositus*) omitting the camphor, which is not found in the original of Razi.

TROCHISCI BECHISI ALBI. White pectoral troches. Lond.

1-2 -

Take of Double-refined fugar, a pound and a half;

Starch, an ounce and a half;

Liquorice, fix drams ;

Florence

Troches and Lozenges.

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

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White fugar, one pound; Gum Arabic, four ounces; Starch, one ounce;

Flowers of benzoine, half a dram. Reduce them to a fine powder, and make them into a mafs with rofe 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 BECHICI NIGRI. Black pectoral troches. Lond.

Take of

Extract of liquorice,

Double-refined fugar, each ten ounces;

Gum tragacanth, half a pound. Drop upon these ingredients 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 fugar, eight ounces.

Diffolve them in boiling water, and ftrain; afterwards evaporate the liquor with a gentle fire, to a proper confiftence to be made into troches.

THESE compositions are defigned for the fame purposes as the white pectoral troches before described. In foreign pharmacopœias there are fome other troches of this kind, under the titles of trochifci becchici flavi and rubri; the former are coloured with faffron, the latter with bole armenic. The diffolving and straining of the extract of liquorice and gum Arabic, as now ordered in the latter of these prefcriptions, is a confiderable improvement; not only as they are by those means more uniformly mixed than they can well be by beating; but likewife as they are thereby purified from the heterogeneous matters, of which both those drugs have commonly no finall admixture.

TROCHISCI de MINIO. Red lead troches. Edinb.

Take of

Red lead, half an ounce;

Corrofive mercury fublimate, one ounce;

Crumb of the finest bread, four ounces.

Make them up with rofe-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 de MYRRHA. Troches of myrrh. Edinb.

Take of Myrrh, one ounce and a half; Lovage feed, Pennyroyal leaves,

Ruffia caftor,

Galbanum, each one ounce ;

Effential oil of favin, half a dram;

Elixir proprietatis, as much as is fufficient.

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Let the gum be foftened with the elixir into a mafs of the confiftence of honey; then add the oil and powders, and make the whole into troches according to art.

THESE troches are very well contrived, in regard to efficacy, and fuperior to those in most other pharmacopœias, under the fame title. Madder and cummin feed, two of their former ingredients, which were objected to in a former edition of this work, are now expunged ; the one as being an unneceffary article ; the other as being an offenfive one, and not of fimilar intention with the reft. In the place of this laft, lovage feed is introduced, which is doubtlefs more agreeable to the intention of the medicine. Afafetida is fupplied by an increase of the galbanum ; and the effential oil of rue, by an increase of the oil of favin. There feems to be no occasion for making a medicine of this kind into troches, as it cannot be conveniently taken in that form. The London college have therefore exchanged their TROCHISCI e myrrba for a Pulvis e myrrba compositus, which fee.

TROCHISCI e NITRO. Troches of nitre. Lond.

Take of

Nitre purified, four ounces; Double-refined fugar, one pound. Make them into troches, with mucilage of gum tragacanth.

THIS is a very agreeable form for the exhibition of nitre; though, when the falt is thus taken without any liquid (if the quantity be confiderable), it is apt to occafion uneafinefs about the flomach, which can only be prevented by large dilution with aqueous liquors.

TROCHISCI e SCILLA. Troches of fquills. Lond.

Take of Balad famille half a

Baked fquills, half a pound; Wheat flower, four ounces.

Beat them together, and form the mais into troches, which are to be dried with a gentle heat.

THIS preparation is used only as an ingredient in the theriaca. The defign of baking the fquills is, to abate their acrimony; and making it afterwards into troches seems the most convenient way of drying it. Common wheat flower is as fit for this purpose as any, though that of the white vetch has been generally directed.

TROCHISCI e SULPHURE. Troches of fulphur. Lond.

Take of

Flowers of fulphur, washed, two ounces;

Double-refined fugar, four ounces.

Beat them together, and adding fome mucilage of quince feeds, form them into troches.

TROCHISCI DIASULPHURIS. Troches of fulphur. Edinb.

Take of

Flowers of fulphur, two ounces ; Of benzoine, one fcruple ;

Factitious cinnabar, half a dram; White fugar, four ounces.

Mix them well together, and form them into troches with mucilage of gum tragacanth.

THESE compositions are to be confidered only as agreeable forms for

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Troches and Lozenges.

for the exhibition of fulphur, no alteration or addition being here made to its virtue; unlefs that, by the flowers of benzoine in the fecond prefcription, the medicine is fuppofed to be rendered more efficacious as a pectoral.

> TROCHISCI e TERRA JAPONICA. Troches of Japan earth. Lond.

Take of

Japan earth,

Chap. 2.

Gum Arabic, each two ounces; Sugar of roles, fixteen ounces.

Beat them together, and, dropping in fome water, make them into troches.

Edinb.

Take of

Japan earth, two ounces; Gum tragacanth, half an ounce; White fugar, one pound; Rofe-water, a fufficient 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 fome effeem as a mild reftringent, &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 flomach, as this form occasions them to be, they produce much better effects, than if an equal quantity were The troches of Jataken at once. pan earth are fufficiently palatable, and of confiderable fervice in fome kinds of coughs, thin acrid defluxions, diarrhœas, &c.

TABELLÆ CARDIALGICÆ. Cardialgic lozenges. Lond.

Take of Chalk prepared, four ounces; Crabs-claws prepared, two ounces ;

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Bole armenic, or French bole, half an ounce;

Nutmegs, one feruple ;

Double - refined fugar, three ounces.

Reduce thefe ingredients into powder, and make them into troches with water.

TROCHISCI CARDIALGICI. Edinb.

Take of

Oystershells prepared,

White chalk powdered, each two ounces;

Gum Arabic, half an ounce ;

Nutmegs, half a dram;

White fugar, fix ounces ;

Common water, a sufficient quantity.

Make them into troches according to art.

THESE compositions are calculated against that uneasy fensation at the stomach, improperly called the heartburn; in which they often give immediate relief, by abforbing and neutralizing the acid juices that occasion this diforder. The absorbent powders here made use of, are of the most powerful kind, though there does not seem to be any occasion for using more than one of them. Some have preforibed the following formula.

TABELLÆ ANTACIDÆ. Antacid lozenges.

Take of

Prepared white chalk, four drams;

Candied ginger, three drams ; Cinnamon, one dram ;

Fine fugar, diffolved in water, as much as is fufficient to reduce the whole into a due confiftence for being formed into lozenges.

HERE

HERE it may be obferved, that all these compositions, though very effectual for the intention, are accompanied with an inconvenience, which is frequently complained of in their use; their binding the belly. The use of the chalk, oyfterschells, and crabs-claws, is to abforb acidities; and both these and the other common abforbents, united with acids, compose aftringent concretes. The following compofition is free from this inconvenience.

TABELLÆ ANTACIDÆ LAX-ANTES.

Laxative antacid lozenges. Take of

Magnefia alba, fix ounces; Double-refined fugar, three ounces;

Nutmegs, one scruple.

Mix them well together, and form them into troches with mucilage of gum tragacanth.

SACCHARUM ROSACEUM. Sugar of Rofes. Lond.

Take of

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Red role buds, freed from the heels, and hastily dried, one ounce;

Double-refined fugar, one pound. Reduce them feparately into powder, then mix, and moillen them with water, that they may be formed into troches, which are to be dried by a gentle heat.

In the Edinburgh pharmacopæia, this preparation is directed as follows.

TABELLÆ ROSACEÆ. Rofe tablets. Edinb.

Take of Conferve of red rofes, four ounces; White fugar, in powder, one pound.

If any moifture be required, take of fyrup of dry rofes a fufficient quantity for forming them into troches, which are to be dried with a gentle heat.

THE fugar of roles was formerly made, by boiling a pound of fine fugar with four ounces of the juice of red rofes, over a gentle fire, till the juice was almost all evaporated; then throwing in an ounce of dry red rofes reduced to a very fine powder ; after which the matter was poured out upon a marble, and formed into lozenges. The two methods above directed, are more fimple and commodious ; though, if any virtue be expected from the roles, the medicine is not at all improved by the alteration. As the conferve contains only one-fourth of its weight of roles, in a fresh ftate, it is obvious that the quantity of fresh rofes in the second prefcription is lefs than that of the dry ones in the first.

These preparations are chiefly valued for their agreeableness to the eye and palate. Some likewife efferem them, medicinally, as light restringents; and look upon them, not undefervedly, as an excellent addition to milk in phthisical and hectic cases. Some have been accustomed to add a portion of acid in making these preparations, which improves the colour, but renders them unfit to be taken with milk.

TABELLÆ ANTHELMINTICÆ. Anthelmintic sugar-cakes.

Take of Powdered tin, half a dram ; Fine fugar, half an ounce ; Rofe-water, a fufficient quantity to make them into a mass for tablets.

Take

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Take of Scammony,

Mercurius dulcis, each four grains;

2.

Fine fugar, half an ounce; Rofe water, a fufficient quantity to make them into tablets.

THESE compositions are calculated for children, who are not eafily prevailed on to take anthelmintic medicines in lefs agreeable forms. If the first be made use of, it must be repeated three or four mornings successively, after which a purge is to be taken : the second, 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 strength of the patient.

TROCHISCI NERVINI. Nerve troches.

Take of

Compound spirit of lavender, fixty drops;

Oil of cinnamon,

Oil of rolemary, each four drops;

Florence orris root, two drams; Fine fugar, one ounce;

Mucilage of gum tragacanth, as much as will reduce them into a mafs, which is to be formed into troches of about half a fcruple each.

ONE or two of these troches, taken occasionally, and suffered to difforve in the mouth, prove ferviceable to those who are subject to paralytic and other nervous diforders. Warm aromatic medicines given in this form and manner, are supposed, from their flow diffolution in the mouth, to affect the nervous system more immediately than if received at once into the stomach.

MORSULI PURGANTES, Purging tablets.

Take of

Crystals of tartar, half an ounce; Scammony, three drams; Oil of cinnamon, four drops; Double - refined fugar, eight ounces.

Make them up, with rofe-water, into troches, weighing each about a dram.

THIS is a fufficiently elegant form for purgative troches. Each of the morfuli contains two grains and a half of fcammony.

Morsuli de RHABARBARO. Rhubarb troches.

Take of

Cream of tartar,

Rhubarb, each two drams;

Fresh lemon peel, half a dram;

Fine fugar, four ounces.

Make them into troches with rofewater.

Two drams of these troches contain about seven grains of rhubarb, and as much of cream of tartar. Both this and the preceding composition are among the officinals of the Brandenburgh pharmacopceia.

Morsuli restaurantes Kunckelii.

Kunckel's antimonial tablets.

Take of

The beft Hungarian antimony, levigated into an impalpable powder, three drams and a half;

Sweet almonds peeled,

Fresh pine nuts, each half an ounce;

Cinnamon, one dram;

Lesser cardamom seeds, husked, half a dram;

Double-refined fugar, four ounces. Diffolve the fugar in equal quantities of cinnamon-water and rofe-O o 2 water; water; then mix therewith the other ingredients, and form the whole into tablets weighing one dram each.

THESE tablets were brought into effeem by Kunckel, at a time when the internal use of crude antimony was almost universally reckoned poifonous. He had recourfe to them as a defperate medicine, in violent pains and contractions of the arms, after all the common methods of cure had been ufed without any relief; and being happily, in a fhort time, perfectly freed from his complaints, he made trial of them in feveral other cafes, with remarkable fuccefs. He feems to have begun with dofes of four or five grains (that is one of the tablets before prefcribed) which were repeated thrice a day, and gradually increased to a dram or more of the antimony every day.

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 tity.

Make them into troches or pellets. ONE of these troches is to be occationally held in the mouth, and chewed, to promote a discharge of faliva; which they effect by warming and stimulating 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.

THESE troches are of fervice for warming and ftrengthening the ftomach, expelling flatulencies, and promoting digettion. For these purposes 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.

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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 diffolve the most difficultly in the flomach, and produce the most gradual and lasting effects, of all the internal forms. This is in fome cafes of great advantage; in others it is a quality not at all defirable, and fometimes may even be of dangerous confequence; particularly with regard to emetics, which, if they pass the flomach undiffolved, and afterwards exert themfelves in the inteffines, operate there as violent cathartics. Hence emetics are, among us, scarce ever given in pills. And hence to the refinous and difficultly foluble fubitances, faponaceous ones ought to be added, in order to promote their folution.

Gummy refins and infpiffated juices, are fometimes foft enough to be made into pills, without addition. Where any moifture is requifite, fpirit of wine is more proper than fyrups or conferves, as it unites more readily with them, and does not fenfibly increafe their bulk. Light, dry powders require fyrup, or mucilages : and the more ponderous, as the mercurial and other metallic preparations, thick honey, conferve, or extracts.

Light powders require about half their weight of fyrup; and of honey, about three-fourths their weight; to reduce them into a due

confistence for forming pills. Half a dram of the mass will make five or fix pills of a moderate fize.

General rules for making pills from the Edinburgh pharmacopæia.

I.

The three first rules, formerly laid down for making powders, are here also to be carefully obferved.

II.

Gums and infpiffated juices, are to be first fostened with the liquid prefcribed : then add the powders, and continue beating them altogether till they are perfectly mixed.

III.

The maffes for pills are beft kept in bladders, which should be moistened, now and then, with fome of the same kind of liquid with which the mass was made up, or with some proper aromatic oil.

PILULÆ AROMATICÆ. Aromatic pills. Lond.

Take of

Socotorine aloes, an ounce and a half:

Gum guaiacum, one ounce ;

Aromatic species,

Balfam of Peru, each half an ounce.

Reduce the aloes and gum guaiacum feparately into powder, then mix them with the reft, and make the whole into a mass O o 3 with with a fufficient quantity of fyrup of orange peel.

IT is fomewhat difficult to unite these ingredients into a mass fit for making pills. The beft way is, to first rub the aromatic species with the balfam, then to add the powdered aloes, and afterwards the guaiacum. When thefe are well mixed together, drop in the fyrup by little and little at a time. Thefe pills are contrived to fupply the place of the PILULÆ DIAMBRÆ of our former pharmacopœia. They are far more elegant as well as fimple, truly uniform in their ingredients, and excellently adapted to the purposes they feem defigned for. Taken in small doses, as half a fcruple, or little more, and occasionally repeated, they warm the ftomach, and by degrees the whole habit, promote perspiration, and all the natural fecretions. If the dofe be confiderable, they operate gently by ftool: and, if continued for fome time in fmaller dofes, they prove at length purgative, or introduce a falutary loofenefs.

PILULÆ ALOETICÆ. Aloetic pills. Edinb.

Take of

Socotorine aloes in powder,

Hard extract of gentian, each two ounces.

Make them into a mafs with fimple fyrup.

THIS composition has been in use for some time in the Edinburgh infirmary, as a deobstruent in cachectic indispositions; and thence it is received into the pharmacopæia of the college. A focuple or half a dram of the mass is directed to be made into pills of a moderate fize for one dose. PILULÆ de JALAPPA. Jalap pills. Edinb.

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Take of

Extract of jalap, two ounces; Aromatic fpecies, half an ounce; Simple fyrup, enough to make them into a mafs.

THIS composition also is now received into the pharmacopœia. One of the fame kind, with powdered jalap in fubstance instead of the extract, is used in some of our hospitals, as a cheap and effectual purge.

PILULÆ E SCAMMONIO CUM ALOE.

Pills of Jeammony with aloes. Take of

Socotorine aloes, one dram; Aromatic fpecies, half a dram; Scammony, one fcruple;

Soft extract of liquorice, as much as is fufficient to reduce them into a mafs of a due confiftence for being formed into pills.

THIS warm purgative is recommended for removing the crudities, &c. after a furfeit 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 fix are to be taken for a dose.

PILULÆ e COLOCYNTHIDE SIMPLICIORES.

The more simple colocynth pills. Lond.

Take of

Pith of colocynth,

Scammony, each two ounces; Oil of cloves, two drams.

Polverize the coloquintida and feammony by themfelves, then mix

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mix in the oil, and make the whole into a mass with fyrup of buckthorn.

THE operator fhould be careful, in pulverizing the colocynth, to avoid the finer particles that fly off. from it; which, though they do not confiderably affect the mouth or fauces, have fometimes been obferved to occasion violent purging. The drug fhould first be well dried, cut with a sheers into small pieces, and freed from the feeds. Then rub it in an oiled mortar, adding a few drops of fweet oil occasionally during the trituration : afterwards mix this powder with the powdered scammony, and the effential oil prefcribed, and make the mixture into a mass, as before directed. The composition is apt to grow ftiff and dry in keeping, and therefore ought to be made pretty foft at first. The pills should be formed as they are wanted; for when long kept, they become fo hard, as to have fometimes pafied through the intestines undiffolved.

Thefe pills (formerly called P1-LULÆ DE DUOBUS, or pills of two ingredients) are very ftrong cathartics, and ought not to be ventured upon in cafes where lefs violent medicines will take effect. They have been often made use of in large dofes, along with large dofes also of mercurials, in venereal complaints, both in recent gonorrhœas, and in the fwellings and inflammations which fometimes follow from the Tuppreflion of the difcharge ; but in both these cases they are apparently improper, as they generally injure the conflitution, and as the latter complaint is for the molt part aggravated by them. The effential oil, which is added as a corrector to the purgative ingredients. does not contribute fo much, as is commonly iuppofed, to abate the

roughnels of their operation. The dole of these pills is from fifteen grains to half a dram; fome have imprudently gone as far as two foruples. Half a dram contains ten grains of coloquintida, and as much scammony.

PILULÆ COCCIÆ. The pills called cochiæ. Edinb.

Take of

Pills.

Coloquintida, Scammony, Socotorine aloes, each one ounce; Vituiolated texter two documents

Vitriolated tartar, two drams; Oil of cloves, one dram;

Syrup of buckthorn, a fufficient quantity.

Beat them into a mafs.

THIS composition, like the foregoing, is strongly cathartic; not less effectual, though fome that less irritating. Half a dram contains above fix grains and a half of coloquintida, the same quantity of fcammony, and the same of aloes.

PILULÆ ex COLOCYNTHIDE cum ALOE. Colocynth pills with aloes.

Lond.

Take of

Socotorine aloes, Scammony, each two ounces; Pith of colocynth, one ounce; Oil of cloves, two drams.

Let the dry fpecies be feparately reduced into powder; then mix in the oil, and make the whole into a mass with fyrup of buckthorn.

By the diminution of coloquintida in this prefeription, the ingredients are reduced to the proportions wherein they are fet down in the original of Galen; and what is of greater confequence, the medicine becomes lefs ungrateful to O 0 4 the

the ftomach, and lefs virulent in its operation. Half a dram of the mais contains nearly four grains of coloquintida, eight of aloes, and eight of fcammony.

PILULÆ ECPHRACTICÆ. Deobstruent pills. Lond.

Take of the

Aromatic pills, three ounces ; Rhubarb,

Extract of gentian,

Salt of fteel, each one ounce ;

Salt of wormwood, half an ounce. Beat them together into a mafs, with folutive fyrup of rofes.

IT is difficult to bring this mais into the due confiltence. the two falts acting upon one another, fo as to make it fwell and crumble. Notwithstanding the alkaline falt employed, the pill does not prove at all alkaline; for the acid of the falt of feel forfakes its metal, and unites with the alkali, into a vitriolated tartar; whence fome have proposed using, instead of the two falts here directed, an ounce of vitriolated tartar already made, and half an ounce of any of the calces of iron. This they observe prevents the inconveniency above-mentioned, without making any apparent alteration in the quality of the medicine.

PILULÆ ECPHRACTICÆ CHALYBEATÆ. Chalybeate ecphractic pills. Lond.

Take of

The mais of common pills, called Rufu 's pills, deferibed hereafter, one ounce and a half; Gum ammoniacum, Refin of guaiacum, each half an ounce; Salt of fieel, five drams; Syrup of orange-peel, as much as is fufficient to reduce the whole into a mass.

THE falt of fleel, which is one of the most active preparations of that metal, remains here undecompounded. Both these and the foregoing pills are very well calculated for answering the intention expressed in the title. A dram of the mass may be made into twelve pills, and two or three of these taken every night, or oftener, in chlorotic, or other cases, where warm, aperient, or deobstruent medicines are proper.

PILULÆ ECPHRACTICÆ PURGANTES.

Purging deohstruent pills. Edinb.

Take of

Socotorine aloes.

Extract of black hellebore,

Scammony, each one ounce ;

Gum ammoniacum,

Refin of guaiacum, each half an ounce ;

Vitriolated tartar, two drams;

Effential oil of juniper berries, one dram.

Beat them into a mafs, with a fufficient quantity of fyrup of buckthorn.

THIS composition may be given, from eight or ten grains to a fcruple 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 fix grains of each of the capital purgative ingredients; aloes, fcammony, and extract of hellebore.

PILULÆ FŒTIDÆ. Feid pills. Edinb.

Take of Afafetida,

Ruffian

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Ruffian caftor, each one dram and a half ; Camphor, half a dram ; Oil of hartshorn, twenty-four

drops.

Beat the camphor with the afafetida, then add the caftor and oil of hartfhorn, and make the whole into a maís.

PILULÆ GUMMOSÆ. Gum pills. Lond.

Take of Galbanum, Opoponax, Myrrh, Sagapenum, each one ounce; Afafetida, half an ounce. Make them into a mais with fyrup of faffron. Edinb.

Take of Alafetida, Galbanum, Myrrh, each one ounce : Oil of amber, rectified, one dram. Make them into a mais with fimple fyrup.

ALL these pills are defigned for antihysterics and emmenagogues, and very well calculated for answering those intentions : half a fcruple, a scruple, or more, may be taken every night or oftener. The fetid pills of our former pharmacopæias were confiderably purgative. The purgative ingredients are now omitted, as the phyfician may eafily, in extemporaneous prefcription, compound these pills with cathartic medicines, in fuch proportions as particular cafes shall require.

The following compositions are calculated for the fame intentions as the foregoing deobstruent, fetid, and gum pills.

1.

Take of Afafetida, Wood-foot,

Myrrh, each two ounces ;

- Oil of amber, one dram and a half;
- Syrup of fugar, a sufficient quantity.
- Mix and make them into a mais, according to art.

Take of 2. Afafetida, one dram ; Martial flowers, half a dram ; Oil of amber, eight drops; Balfam of Peru, a sufficient quantity to reduce them into a mafs.

Take of 3. Afafetida,

Gum ammoniacum,

Myrrh,

Aloes,

Ruft of fteel prepared,

- Extract of gentian, each one fcruple ;
- Syrup of ginger, as much as will make the other ingredients into a mais.

Take of

Galbanum, one dram ;

Salt of steel, half a dram ;

Alafetida.

Aromatic species, each one scruple;

Tincture of myrrh, as much as will make them into a mais.

In hysterical disorders, after bleeding and purging, where a fanguine 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 diforders both of body and mind ; which, however, foon go off, OF

or may be relieved by a proper dofe of opium given at bed-time. A dram of either of the maffes is to be made into twelve pills, one or two of which may be taken for a dofe, twice or thrice a day.

PILULÆ MERCURIALES. Mercurial pills. Edinb.

Take of

Quickfilver,

Honey, of each one ounce ;

Crumb of bread, two ounces.

Rub the quickfilver with the honey in a glafs mortar, till the mercurial globules ceafe to appear, adding a little fimple fyrup occafionally; afterward put to it the crumb of bread, and with a little water beat it into a mafs, and form it immediately into four hundred and eighty, pills.

Lond.

Take of

Quickfilver, five drams; Strafburghturpentine, two drams; Cathartic extract, four fcruples;

Rhubarb, powdered, one dram. Grind the quickfilver with the turpentine, until they are perfectly incorporated; then let the other ingredients be beaten up with this mixture into a mafs. If the turpentine happen to be too thick, foften it with a little oil olive.

PILULÆ MERCURIALES LAXANTES. Laxative mercurial pills. Edinb.

Take of

Pure quickfilver, one ounce; Refin of guaiacum, Extract of black hellebore, Powdered rhubarb, each half an ounce; Common fyrup, a fufficient quantity. Grind the quickfilver with the refin of guaiacum, until they are perfectly incorporated; then add the other ingredients, and beat the whole into a mass according to art.

THE three foregoing compolitions are useful mercurial pills; the first as an alterative, the other two as purgative mercurials. They are all, however, liable to an inconvenience; uncertainty in regard to their firength. For the mercury is but loofely united with the other ingredients, and very apt to feparate and run together in its original form, in which flate it never exerts its proper virtue. Though it appears perfectly extinguished by the matters it is ground with at first, part of it is apt to be fpued out on beating up the mixture with the other ingredients into a mais.

PILULÆ de GAMBOGIA. Gamboge pills.

Edinb.

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 fufficient quantity.

Beat them into a mafs.

THIS is a firong mercurial purgative, in which the mercurial preparation is not liable to the uncertainty with which the crude quickfilver 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

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mercurius dulcis, about five grains each.

PILULÆ ÆTHIOPICÆ. Ethiopic pills. Edinb.

Take of

Quickfilver, fix drams; Honey, half an ounce; Precipitated fulphur of antimony, Gum guaiacum powdered, of each half an ounce.

Rub the quick filver with the honey in a glafs mortar, till the mercurial globules ceafe to appear; afterwards add the fulphur of antimony and guaiacum, and make it into a mafs with the mucilage of gum Arabic.

THESE pills are much more efficacious than those of a former edition ; the ethiops mineral, there ordered, being exchanged for a more active composition. In their present form, they refemble Dr. Plummer's pills, defcribed in the Edinburgh effays, to which they are preferable in one respect, that they are less apt to run off by ftool. They are an useful alterative both in cutaneous and venereal diforders. One fourth part of the quantity above prefcribed may be made into fixty 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 infert fome 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 I. Crude quickfilver, Hard extract of guaiacum, each one dram and a half;

- Venice turpentine, a sufficient quantity.
- Grind the quickfilver with the turpentine, till they are perfectly incorporated. Then add the other ingedients, and reduce the whole into an uniform mafs; which is to be made into forty pills. Two, three, or more of thefe, may be taken for a dofe.
- Take of

Pills.

Mercurius dulcis,

Prepared chalk, each one fcruple; Mucilage of gum Arabic, a fufficient quantity.

- Make them into twelve pills, of which the dofe is from one to three.
- Take of
 - Mercurius dulcis, half a fcruple ; Softer extract of guaiacum, one dram ;
 - Effential oil of fassafras, ten drops.
- Mix, and make them into a mafs, for twenty pills ; the dofe of which is from one to fix.

Take of

Mercurius dulcis, half a fcruple; Camphor, half a dram;

Soft extract of guaiacum, as much as is fufficient to make them into a mafs, which is to be formed into twenty pills: the dofe is from one to fix.

Take of

Mercurius dulcis, half a fcruple; Venice turpentine, as much as will reduce it into a mafs of a proper confiftence; which is to be formed into five pills, for as many dofes.

Take of 6.

Calcined mercury, commonly called præcipitate per fe, Thebaic

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Thebaic extract, each two grains; Balfam of Peru, as much as will make them into a mafs; which is to be formed into two pills, for two dofes.

Take of

Turbith mineral, two fcruples; Thebaic extract, one fcruple;

- Mucilage of gum Arabic, as much as is fufficient to reduce them into a mafs, which is to be formed into twenty pills, for as many dofes.
- The mercurius corallinus may be made into pills in the fame manner, and taken in the fame dofe.

8.

Take of

- Mercurius dulcis, half a fcruple; Crude antimony, finely levigated, one dram;
- Conferve of orange peel, as much as will reduce them into a mais.
- This is to be formed into ten pills. The dofe is from one to three.

Take of

Mercurius dulcis,

- Precipitated fulphur of antimony, each five grains ;
- Socotorine aloes, fifteen grains; Balfamic fyrup, a fufficient quantity to reduce them into a mafs; which is to be made into five pills, for as many dofes.

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 ofe, than increase the dose. The patient ought to keep warm, and drink of warm diaphoretic liquors; as infusion of fassafras, decoction of the woods, the simple or compound lime water, &c. PILULÆ PACIFICÆ. The pacific pills, commonly called Mathews's pills.

Take of

Gum ammoniacum, three ounces;

Ruffian caftor, two ounces; English faffron,

Opium, each one ounce ;

- Common fyrup, as much as is fufficient.
- Mix, and make them into a mais, according to art.

THESE pills are contrived by a chemical empiric, Starkey, and communicated by him to Mathews, under whofe name they were once greatly celebrated. The form here given differs from the original in omitting a fmall portion of black hellebore, an ingredient of no great fervice; for though this article, as the London committee obferves, might perhaps promote a flool the day after the medicine is taken, that advantage, in cafes which require it, may with greater certainty be obtained by more obvious means.

Soap of tartar, as it is called, another ingredient in the original, on which the contriver of the compofition laid no fmall ftrefs, and which the Edinburgh college retained in former editions, is here, without any injury to the medicine, exchanged for an equal quantity of ammoniacum. Nor indeed are any of the ingredients of much confequence, except the opium ; their quantity being too inconfiderable to anfwer any ufeful purpofe. Eight grains of the composition contain nearly one of opium.

PILULÆ SAPONACEÆ. Saponaceous pills. Lond.

Take of Almond foap, four ounces; Strained

Pills.

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Strained opium, half an ounce; Effence of lemons, one dram. Soften the opium with a little wine, and then beat it with the reft, until they are perfectly mixed.

THIS pill is introduced in the room of Mathews's. The foap promotes the folution of the opium in the flomach, and thus occafions it to act the more quickly; which is the only intention that the more laborious foap of tartar can anfwer. The effence of lemons gives an agreeable flavour, makes the medicine fit eafier on the flomach, and prevents a naufea, which it would otherwife be apt to occafion. Ten grains of the pill contain nearly one grain of opium.

PILULÆ e STYRACE. Storax pills. Lond.

Take of

Strained ftorax, two ounces; Saffron, one ounce;

Strained opium, five drams.

Beat them together till perfectly united.

THESE are contrived for diffolving more flowly in the flomach than the faponaceous or Mathews's pills, and confequently for producing more gradual and lafting effects. One grain of opium is contained in five grains and fourfifths of a grain of the mafs.

PILULÆ ex OLIBANO. Olibanum pills. Edinb.

Take of Olibanum, two ounces; Myrrh, one ounce; Opium, five drams; Balfam of Peru, two drams; Common fyrup, a fufficient quantity. Make them into a mass, which supplies the place of the florax pills.

FILULÆ PECTORALES. Pectoral pills. Edinb.

Take of

Gum ammoniacum, half an ounce;

Ballam of Tolu, two drams;

Flowers of benzoine,

English fastron, each one dram ; Common syrup, a sufficient quan-

tity. 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 vifcid phlegm: the dofe is from fix or eight grains to a fcruple or more. It is here confiderably improved. The balfam of Tolu is introduced in the room of myrrh, the flowers of benzoine for benzoine in substance, and anifated ballam of fulphur, which encumbered the old form, is Here it may be obomitted. ferved, that though feveral compolitions be denominated pectorals, they are neverthelefs in virtue very diffimilar. Thus the pectoral decoction, the fyrup, and the troches, are calculated for foftening, lubricating, and incraffating thin tickling humours; whilft the pectoral pills, the elixir, and the oxymel, tend to flimulate and deterge the veffels, and attenuate or diffolve thick, tenacious juices.

PILULÆ RUFI. Rufus's pills. Lond.

Take of Socotorine aloes, two ounces; Myrrh,

Saffron,

Saffron, each one ounce.

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Make them into a mass with fyrup of faffron.

PILULÆ COMMUNES, vulgo RUFI.

The common pills, vulgarly called Rufus's pills. Edinb.

Take of Socotorine aloes, two ounces; Myrrh, one ounce; Saffron, half an ounce. Beat them into a mafs with a proper quantity of common fyrup.

THE virtues of this medicine may be eafily underftood from its ingredients. See *Elixir proprietatis*. The pills, given to the quantity of half a dram or two fcruples, prove confiderably cathartic, but they anfwer much better purpofes in fmaller dofes as laxatives or alteratives.

PILULÆ STOMACHICÆ. Stomachic pills. Edinb.

Take of

Rhubarb, one ounce ; Socotorine aloes, fix drams ; Myrrh, half an ounce ; Vitriolated tartar, one dram ; Effential oil of mint, half a dram ; Syrup of orange-peel, a fufficient quantity.

Make them into a mafs.

THIS pill is intended for moderately warming and ftrengthening the ftomach, and evacuating crude vifcid humours. A fcruple of the mafs may be taken twice a day.

PILULÆ SCILLITICÆ. Squill pills.

Take of Spanish foap, one ounce; Gum ammoniacum, Millepedes prepared, Fresh squills, each half an ounce; Balfam of Copaiba, as much as is fufficient.

Reduce them into a mais according to art.

THIS is an elegant and commodious form for the exhibition of fquills, whether for promoting expectoration, or in the other intentions to which that medicine is applied. As the virtue of the compound is chiefly from the fquills, the other ingredients are often varied in extemporaneous prefcription. The foap is commonly omitted, as being of no great use in the quantity that goes to a dofe of the composition; and other powders, as the leffer cardamom feeds, are fubitituted for the millepedes, whole virtues, in fuch imall doles, are very infignificant.

Agreeably to thefe remarks in a former edition of this work, the college of Edinburgh has now given the following improvement of this composition.

Take of

Gum ammoniacum,

- Leffer cardamom feeds, in powder,
- Extract of liquorice, of each one dram;

Squills, dried, and finely powdered, one fcruple.

Mix them well together, and make them into a mais with fimple fyrup.

PILULÆ AD DYSENTERIAM, Pills against the dysentery.

Take of

Yellow wax, half an ounce ; Spermaceti,

Japan earth, each one dram; Oil of cinnamon, twelve drops.

Make them into a mais.

THIS medicine has often been of great benefit for the purpole expreffed in its title, at the fame time ftrengthening

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firengthening the inteffines, and covering them with a foft mucus, which defends them from being irritated by the acrimony of the humours. Each half dram of the mafs may be formed into five or fix pills for one or two dofes.

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 ufeful addition, not only for procuring it a due confiftence, but likewife as it divides the refinous texture of the tar, and thus contributes to promote its folution by the animal juices. In the Edinburgh infirmary, half a dram of the mafs, made into middle-fized pills, is given every morning and evening, in diforders of the breaft, fourvies, &c.

PILULÆ ROBORANTES. Strengthening pills.

1.

Take of

Hard extract of Peruvian bark, one dram;

Salt of fteel, ten grains ;

Oil of cinnamon, five drops;

Balfam of Peru, as much as will reduce them into a mafs.

Take of

Olibanum, one dram ; Styptic powder, two fcruples ; Salt of fteel, one fcruple ; Syrup of fugar, a fufficient quantity to make them into a mafs.

IN a lax flate of the fibres, debilities of the nervous fystem, and fome decays of constitution, the first of these compositions is an effectual ftrengthener and reftorative. If the quantity prefcribed be made into twenty pills, one or two of thefe may be taken for a dofe, and repeated twice a day. The other is a ftronger ftyptic, and is ufed for reftraining immoderate alvine evacuations, and fanguineous or ferous difcharges from the remoter parts.

3.

Aromatic Species,

Take of

- Extract of gentian, each one dram;
- Extract of Peruvian bark, half a dram;
- Elixir of aloes, as much as will reduce them into a mafs.

THESE pills are ferviceable for warming and ftrengthening a weak cold ftomach, expelling flatulencies, and promoting digeftion. If ten pills be made out of a dram of the mafs, two may be taken thrice a day, about an hour before meals.

PILULÆ E SPERMATE CETI. Spermaceti pills.

Take of

Spermaceti, one dram;

- White fugar-candy in powder, two drams;
- Balfamic fyrup, as much as is fufficient.
- Grind the fpermaceti with the fugar, till they are perfectly mixed; then, adding the fyrup, rub them with a warm peftle into an uniform mafs.

WHERE fpermaceti cannot be commodioufly exhibited in any other form, three or four moderate-fized pills, made from this mafs, may be taken two or three times a day, in erofions of the vifcera by acrimonious humours, tickling coughs, and fimilar diforders.

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CHAPTER IV.

Bolufes.

B OLUSES differ little in confiftence from electaries, being only fomewhat fliffer, fo as to retain their figure without fpreading or falling flat.

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This form is very convenient for the exhibition of the more powerful medicines, which require their dofe to be exactly adjusted, as the ftronger alexipharmacs, cathartics, and opiates. As boluses are chiefly intended for immediate use; volatile falts, 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 feldom exceeds a dram. If the ingredients be of the lighter kind, even this will be too bulky to be commodioufly fwallowed.

The lighter powders are made up with fyrup; a fcruple or twentyfix grains of the powder, with as much fyrup as will bring it to a due confiftence, makes a bolus fufficiently large.

The more ponderous powders, as the mercurial ones, are commonly made up with conferve : fyrups fcarce holding them together. For the testaceous powders also an addition of conferve 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 lefs 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.

injes.

BOLUS ALEXIPHARMACUS. Alexipharmac bolus.

Take of I

Compound powder of contrayerva, half a fcruple;

Syrup of wild poppies, a fufficient quantity to make it into a bolus.

Take of

Take of

Contrayerva root, half a fcruple; Syrup of faffron, as much as is fufficient.

Make them into a bolus.

3.

Virginian fnakeroot, half a fcruple;

Confection of kermes, as much as is fufficient.

Mix and make them into a bolus.

4.

Take of

Virginian Inakeroot,

Contrayerva root, each eight grains;

Saffron, three grains ;

Syrup of meconium, a fufficient quantity to reduce them into a bolus.

Take of

Virginian fnakeroot, fifteen grains;

Caftor, ten grains ;

Syrup of fugar, as much as is fufficient.

Mix and make them into a bolus. 6.

Take of

Camphor, two grains ;

Saffron five grains ;

Mix and make them into a bolus.

7. Take

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Take of Camphor, two grains; Nitre, Contrayerva root, each ten grains; Syrup of clove july-flowers, as much as will make them into

7.

much as will make them into a bolus.

Take of

Musk, ten grains; Cordial confection, one scruple. Make them into a bolus.

Take of

Mulk, ten grains ; Salt of hartshorn, or of fal ammoniac, five grains ; Thebaic extract, half a grain ; Syrup of faffron, a fufficient quantity. Make them into a bolus.

THESE bolufes are defigned 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 diaphoress. The compofitions differ in strength, nearly according to the order in which they stand. The two last are of great power, and are defigned 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 fyrup, as much as will reduce them into a proper'confiftence for a bolus.

THIS composition is a very strong astringent, and is used with fuccess in violent uterine hæmorrhages, and other immoderate fecretions which require to be fpeedily reftrained. It may be taken twice a day; or if the flux be very violent, every four or fix hours, till it abate.

Bolus e CAMPHORA: Campbor bolus.

Take of

Camphor, half a fcruple ; 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 itfelf in large dofes, is apt to naufeate the ftomach; and rarely has fo good effects as when mixed in fmall quantifies with nitre or fimilar fubftances, and frequently repeated.

BOLUS E CASTOREO. Caftor bolus.

Take of

tity.

Caftor, one fcruple;

Salt of hartfhorn, five grains; or oil of hartfhorn, five drops; Simple fyrup, a fufficient quan-

Make them into a bolus.

THIS medicine is given in hyfterical and hypochondriacal diforders, and likewife as an alexipharmac in fevers. Its virtues, which are great and unqueffionable, feem to depend more upon the fetid animal oil, or volatile falt, than on the drug from which it takes its name.

BOLUS CATHARTICUS. Purgative bolus.

Take of 1. Rhubarb, half a dram ; Solutive fyrup of roles, a fuffi-P p cient

cient quantity to make a bolus.

2.

Take of Jalap, one fcruple; Jamaica pepper, Cryftals of tartar, each five grains; Syrup of buckthorn, as much as

will reduce them into a mais of a due confiftence.

Take of

Scammony, ten grains ;

Soluble tartar, one fcruple ;

Soft extract of liquorice, a sufficient quantity.

Let the fcammony be well ground with the foluble tartar, then add the extract, and make them into a bolus.

.

Take of

Gamboge,

Crystals of tartar, each eight grains;

Syrup of ginger, a fufficient quantity to reduce them into a bolus.

5.

Take of

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 these compositions are sufficiently obvious; the first is a mild purgative; the two last too strong to be in general ventured on; and the other two of intermediate degrees of strength.

BOLUS CATHARTICUS CUM MERCURIO. Purgative bolus with mercury. Take of 1. Jalap, one fcruple; Mercurius dulcis, five grains; Solutive fyrup of rofes, as much as is fufficient to make them into a bolus.

Take of

Gamboge, feven grains; Mercurius dulcis, Aromatic fpecies, each half a fcruple;

Syrup of buckthorn, a fufficient quantity to make a bolus.

THE first of these compositions is a fase and mild mercurial cathartic: the second is too strong for general use.

BOLUS DIAPHORETICUS. Diaphoretic bolus.

Take of

- Compound powder of contrayerva,
- Crude fal ammoniac, each one fcruple;

Simple fyrup, a fufficient quantity to form them into a bolus.

THIS bolus is given in fevers, and other cafes where a diaphorefis is to be promoted. Sal ammoniac is for this purpole one of the most efficacious of the neutral falts. It requires, however, when thus given in a folid form, to be affisted by warm diluents, frequently repeated; which not only promote its action, but likewife prevent its fitting uneafy on the ftomach.

BOLUS DIURETICUS. Diuretic bolus.

Take of Frefh fquills, fix grains; Compound powder of arum, ten grains;

Ginger, five grains ;

Syrup of orange peel, a fufficient quantity.

Make

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Make them into a bolus.

THIS composition is recommended by Dr. Mead, to be taken every morning in hydropic cafes, for promoting urine. He observes, that in these diforders, diuretic medicines vary greatly in their effects, those which answer fufficiently in one person, failing in another; and that the squill and its preparations are of all others those which most generally fucceed.

BOLUS AD DYSENTERIAM. Bolus against the dysentery. Take of

The cordial confection, French bole, each one fcruple; Thebaic extract, one grain. Make them into a bolus.

THIS composition is excellently well calculated for the purpose expressed in its title. Dr. Mead affures 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.

BOLUS EMMENAGOGUS. Emmenagogue bolus.

Take of 1. Socotorine aloes, eight grains; Saffron, four grains; Guinea pepper, two grains; Oil of favin, two drops; Conferve of rue, as much as is fufficient to reduce them into a due confiftence.

Take of 2. Salt of steel, one grain ; Myrrh, half a fcruple ; Cordial confection, fifteen grains. Make them into a bolus. Take of 3.

Black hellebore root, eight grains; Fresh squills, four grains;

- Effential oil of pepper-mint, two drops;
- Conferve of orange-peel, as much as is fufficient 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 perfons of a fanguine temperament, where chalybeate medicines cannot be borne.

BOLUS FEBRIFUGUS. Febrifuge bolus.

Take of

Peruvian bark, one fcruple; Cafcarilla, half a fcruple; Mucilage of quince feeds, a fufficient 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 cafes where the Peruvian bark by itfelf would be lefs proper. Where aromatics, chalybeates, bitters, &c. are also requisite, they are either to be premifed, or occasionally interposed.

BOLUS HYSTERICUS. Hysteric bolus.

Take of Mufk, Afafetida, each fix grains ; Caftor, half a fcruple ; Syrup of faffron, as much as is fufficient to make them into a bolus.

THIS medicine is very well contrived for the purpole expressed in its title. It is of great fervice both in hysterical and hypochondriacal diforders; and often gives relief Pp 2 in

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in the deprefions, faintings, flatulent colics, head-achs, and other fymptoms, attending them. It may be taken twice a day, along with any fuitable liquor.

BOLUS ILIACUS. Iliac bolus.

Take of

Cathartic extract, one fcruple; Thebaic extract, one grain. Make them into a bolus.

THIS bolus is prefcribed by Dr. Mead, for eafing the pain, and procuring ftools, in the iliac paffion, and dry belly-ach; where the irritating cathartics, exhibited by themfelves, are thrown up by vomit. The ufe of this medicine is to be preceded by plentiful bleeding, and accompanied with purgative glyfters of the more acrid kind; and its operation promoted by infufion of fena, mixed with a little of the elixir falutis, or tincture of fena.

BOLUS MERCURIALIS. Mercurial bolus.

Take of

Calomel, from five to fifteen grains;

Conferve of rofes, half a dram. Mix and make them into a bolus.

THIS bolus is given every night, or oftener, for raifing a falivation, in venereal, and other diforders, which require that herculean operation. It is likewife 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 MERCURIALIS EME-TICUS. Emetic mercurial bolus.

Take of

- Yellow emetic mercury, fix grains;
- Conferve of roles, a fufficient quantity.

Make them into a bolus.

THIS firong emetic is given in venereal and leprous difeafes; particularly in the cafe of foul ulcers of long ftanding, the cleanfing and cure of which are frequently promoted by it. The violence of its operation limits its use to robuft conflitutions.

BOLUS PECTORALIS. Pestoral bolus.

Take of

Spermaceti, fifteen grains; Gum ammoniacum, ten grains; Salt of hartshorn, five grains; Simple fyrup, as much as is fufficient.

Mix and make them into a bolus.

IN colds of long flanding, old coughs, afthmas, and beginning confumptions, this bolus generally gives relief; efpecially if bleeding be premifed, and repeated, if neceffary, at proper intervals.

BOLUS RHEI CUM MERCURIO. Bolus of rhubarb with mercury.

Take of

Choice rhubarb, twenty - five grains;

Calomel, five grains;

Simple fyrup, as much as will form them into a bolus.

THIS is a very mild mercurial purgative. It is given to deftroy worms, and in cachectic, chlorotic, and fimilar diforders.

BOLUS RHEUMATICUS. Rheumatic bolus. Take of

Extract

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Extract of guaiacum, half a dram; Salt of hartshorn, feven grains; Simple fyrup, a fufficient quantity.

Make them into a bolus.

In chronical rheumatifms, 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 venæfection, which is to be repeated every eight or ten days as long as the blood is This medicine is likewife fizy. exhibited in fciatic, arthritic, and other pains not accompanied with a fizinefs of blood. In these it much more frequently fails than in the true rheumatifm.

BOLUS SCILLITICUS. Scillitic bolus.

Take of

- Fresh squills, twelve grains ;

Aromatic species, half a scruple; Oil of pepper-mint, one drop.

Beat them well together into an uniform mafs, of a due confiftence for a bolus.

THIS is a warm, ftimulating, and attenuating medicine, and may be given to great advantage in cafes where the natural fecretions are obftructed or fupprefied from a vifcidity or fluggiftnefs of the juices. The efficacy of the fquills is promoted by the additional ingredients, which at the fame time warm and ftrengthen the ftomach and inteftines, and prevent the compolition from being thrown up by vomit, which this quantity of fquills, given by itfelf, would in many confitutions be.

BOLUS THERIACALIS. Treacle bolus.

Take of

Boluses.

Theriaca, two fcruples; Salt of hartshorn, seven grains

Camphor, three grains.

Mix and form them into a bolus.

CAMPHOR and falt of hartfhorn, when thus joined with opiates, have in many cafes better effects than if exhibited by themfelves, their diaphoretic virtue being greatly promoted by the relaxation which the opium occafions. The quantity of theriaca in this bolus contains fomewhat more than a quarter of a grain of opium.

BOLUS SUDORIFICUS. Sudorific bolus.

Take of

Camphor, five grains; Thebaic extract, one grain; Syrup of orange peel, a fufficient quantity to reduce them into a bolus.

THIS medicine is one of the moft effectual fudorifics, generally exciting a copious fweat. In many cales, where this intention is to be anfwered, whether acute or chronical, it may be given to great advantage.

BOLUS TEREBINTHINATUS. Turpentine bolus.

Take of

Chio turpentine, one fcruple ; Powdered liquorice, a fufficient quantity.

Make them into a bolus.

THIS is a convenient form for the exhibition of turpentine, the liquorice powder anfwering the fame intention here as the elecampane root in the *pilulæ piceæ*.

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CHAPTER V.

Electaries.

E LECTARIES are composed with fyrups, &c. into fuch a confiftence, that the powders may not feparate in keeping, that a dose may be eafily taken up on the point of a knife, and not prove too fliff to fwallow.

Electaries receive chiefly the milder alterative medicines, and fuch 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 feldom trufted in this form, on account of the uncertainty of the dose ; difgustful ones, acrids, bitters, fetids, cannot be conveniently taken in it; nor is the form of an electary well fitted for the more ponderous fubftances, as mercurials, because they are apt to subfide in keeping, unless the composition be made too fliff.

The lighter powders require thrice their weight of honey, or fyrup boiled to the thicknefs of honey, to make them into the confiftence of an electary; of fyrups of the common confiftence, twice the weight of the powders is fufficient.

Where the common fyrups are employed, it is necessary to add likewise a little conferve, to prevent the compound from drying too soon. Electaries of Peruvian bark, for inflance, made up with fyrup 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 fyrups, honey, or conferve. The three laft flick about the mouth and fauces, and thus occafion the tafte of the medicine to remain for a confiderable time; whilf mucilages pafs freely, without leaving any tafte in the mouth. A little foft extract of liquorice, joined to the mucilage, renders the composition fufficiently grateful, without the inconveniencies of the more adhefive fweets.

The quantity of an electary directed at a time, in extemporaneous prefcription, is rarely lefs 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 likewife to be obferved in making decoctions and powders for electaries [E.]

II

Gums, infpiffated juices, and fuch other fubftances as are not pulverable, fhould be diffolved in the liquor prefcribed : then add the powders by little and little, and keep the whole brifkly flirring, fo as to make an equable and uniform mixture [E.]

III.

Aftringent electaries, and fuch as have pulps of fruits in their compolition, should be prepared on-

ly

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Electaries.

Iy in fmall quantities at a time [E.]

For aftringent medicines lofe greatly of their virtue, on being kept in this form; and the pulps of fruits are apt to become four.

IV.

The fuperfluous moisture of the pulps should be exhaled over a gentle fire, before the other ingredients are added to them [E.]

v.

Electaries, if they grow dry in keeping, are to be reduced to the due confistence, with the addition of a little Canary wine; [L. E.] and not with fyrup 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 fyrup, and contain a large quantity of opium, as the confectio Paulina, and philonium [L.]

ELECTARIUM ad DYSEN-TERICOS. Antidyscnteric electary. Edinb.

Take of

Japonic confection, two ounces; Locatelli's balfam (beaten up with a fufficient quantity of yolk of eggs) 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 dofe of rhubarb. They ease the pain and moderate the flux for a time, but the fhort relief is apt to be followed by dangerous or even fatal confequences 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 falutary effects of the other materials. In many cafes, however, it may be still necessary to interpole that laxative drug by itfelf. The dole of the electary is the bulk of a large nutmeg, once or twice a day, according to the urgency of the lymptoms. One dram contains about one-fixth part of a grain of opium.

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ELECTARIUM e BACCIS. LAURI.

Electary of bay-berries. Lond.

Take of Rue leaves dried, Caraway feeds, Parfley feeds, Bay-berries, each one ounce ; Sagapenum, half an ounce ; Black pepper, Ruffian caltor, each two drams ; Clarified honey, thrice the weight of the powdered fpecies.

Mix the fpecies with the honey, and make them into an electary.

THIS composition is fometimes taken, in flatulent colics and hyfterical diforders, from a fcruple to two drams. But its principal use is in carminative glyfters, nor is it often employed in these. The college of Edinburgh have entirely dropt it.

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ELECTA-

ELECTARIUM e CASIA. Electary of cafia. Lond.

Take of

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Solutive fyrup of rofes, Pulp of cafia, fresh extracted, each half a pound; Manna, two ounces;

Pulp of tamarinds, one ounce.

Grind the manna in a mortar, and, with a gentle heat, diffolve it in the fyrup ; then add the pulps, and continue the heat until the whole is reduced to a due confiftence.

DIACASSIA.

Edinb.

Take of

Pulp of cafia, fix ounces ;

Tamarinds,

- Manna, of each one ounce and a half;
- Syrup of damafk rofes, fix ounces. Rub the manna with the fyrup, in a warmed mortar, and add the pulps, fo as to make the whole into an electary.

THESE compositions are very convenient officinals, to ferve as a bafis for purgative electaries, and fimilar purpoles; as the pulping of a fmall quantity of the fruits, for extemporaneous prefcription, is fufficiently troublefome : the tamarinds give them a pretty tafte, and do not subject them, as might be expected, to turn four : after ftanding for four months, the compolition was found no fourer than when first made up. They are likewife usefully taken by themfelves, in the quantity of two or three drams occasionally, for gently loofening the belly in coffive habits.

ELECTARIUM LENITIVUM. Lenitive electary. Lond.

Take of

Figs, one pound ;

Sena, eight ounces ;

Pulp of tamarinds,

Pulp of cafia,

Pulp of French prunes, each half a pound;

Coriander feeds, four ounces;

Liquorice, three ounces;

- Double refined fugar, two pounds and a half.
- Pulverize the fena along with the coriander feeds, and fift out ten ounces of the powder. The remainder is to be boiled with the figs and liquorice, in four pints of water, to one half; then ftrain and prefs out the liquor, and evaporate it to the weight of a pound and a half, or fomewhat lefs. In this diffolve the fugar, fo as to make it into a fyrup, and add this fyrup, by little and little, to the pulps; laftly, mix in the powder before feparated by the fieve.

Edinb.

Take of

Pulp of French prunes, one pound;

Cafia,

- Tamarinds, of each two ounces and a half;
- Melaffes, one pound and a half;
- Sena, finely powdered, four ounces;

Coriander feeds, finely powdered, half an ounce.

Boil the pulps with the melafies to the thickness of honey, and add the powders, and mix them well together into an electary.

THESE electaries may be occafionally

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fionally taken to the quantity of a nutmeg or more, for loofening the belly in coffive habits. They are likewife frequently employed in clyfters for the fame purpofe.

ELECTARIUM PECTO-RALE.

Pectoral electary. Edinb.

Take of

Rob of elder-berries, two ounces; Spermaceti diffolved in a fufficicient quantity of yolk of eggs, half an ounce;

Flowers of benzoine, one dram; Balfamic fyrup, as much as is fufficient 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 doles of about the quantity of a small nutmeg. Taken to the bulk of a large nutmeg, at bedtime, it generally, not only relieves the breaft, but tends to procure a falutary diaphorefis or fweat in the night. It is here improved from former editions, by fubilituting rob of elder-berries for conserve of rofes, and spermaceti for compound powder of gum tragancanth.

ELECTARIUM e SCAM-MONIO.

Electary of Scammony, Lond.

Take of

Scammony, an ounce and a half; Cloves,

Ginger, each fix drams;

Effential oil of caraway feeds, half a dram;

Honey, half a pound.

Let the fpices be ground together,

and mixed with the honey; then add the powdered fcammony, and afterwards the oil.

THIS electary is a warm, brik purgative. It is a reform of the electarium caryocoftinum of our preceding difpenfatories, a compofition which was greatly complained of, as being inconvenient to take, on account of the largenefs of its dofe. A dram and a half of this, which contains fifteen grains of fcammony, is equivalent to half an ounce of the other.

ELECTARIUM e SCORDIO.

Electary of fcordium, commonly called Diafcordium.

Lond.

Take of

Electaries.

The fpecies of fcordium with opium, any quantity;

- Syrup of meconium, boiled to the confiftence of honey, thrice as much by weight.
- Mix the species with the syrup, fo as to make an electary.

In our former dispensatories, the fpecies were ordered to be made up with honey. This is now exchanged. for a fyrup, more agreeable to the intention of the medicine, which is that of an opiate aftringent, whilit honey is manifestly aperient and detergent. It is not perhaps necelfary, for the purpoles of the shops, to make the species into an electary at all. By keeping in this form, the ingredients lofe much of their aromatic flavour and aftringency, becoming foft and imooth upon the palate; and the red colour, imparted by the bole, decays. The London college have therefore very juftly ordered them to be kept in powder as well as in an electary; and directed the powder both with and

and without opium, for different occasions. See Species e fcordio, and Pulvis e bolo, cum and fine opio. Either of these powders may be made up extemporaneously into an electary, with any fyrup that shall be judged proper.

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Diafcordium was intended by its author Fracaflorius for an antipefilential; but we have been fo happy as to have dittle occafion for medicines in that intention; nor could this be anywife depended on. It is a moderately warm aftringent and opiate; and in this light only is confidered by the prefent practice. One grain of opium is contained in nine fcruples of the electary.

The Species e Scordio, which make the bafis of this electary, contain, as we have already feen, feveral fuperfluous ingredients; for though the London college has given a judicious reformation of the powder, under the title of Pulvis e bolo, the electary is made with the powder unreformed; partly, that no material alteration might be made in a medicine, which is fo much depended on, and whofe effects have been fo long experienced ; and partly because the physician, if he prefer the pulvis e bolo, may direct an electary to be made with it in extemporaneous prefcription. In the Edinburgh pharmacopœia, this medicine is not ordered to be kept in powder, but the electary is reformed to a great degree of elegance and fimplicity. And as the ingredient from which it received its *name, being a very unimportant one, is now omitted, the composition is diffinguished by another title, viz.

CONFECTIO JAPONICA. Japonic confection. Edinb. Take of

Japan earth, four ounces; Gum kino, three ounces; Cinnamon,

Nutmeg, of each one ounce ;

- Opium, diffolved in a fufficient quantity of white wine, one dram and a half;
- Syrup of dry roles, boiled to the confiftence of honey, two pounds and a quarter.

Mix, and make an electary.

BALSAMUM LOCATELLI.

Locatelli's balfam.

Lond.

Take of

Oil olive, one pint; Strafburgh turpentine, Yellow wax, each half a pound;

- Red faunders, fix drams. Melt the wax over a gentle fire, with fome part of the oil: then add the reft of the oil, and the turpentine; afterwards mix in
 - the faunders, and keep them fliring together, until the mixture grow cold.

Edinb.

Take of

Yellow wax, one pound;

- Oil olive, a pint and a half;
- Chio or Strafburgh turpentine, a pound and a half;

Balfam of Peru, two ounces;

Dragons blood, in powder, one ounce.

Melt the wax in the oil over a gentle fire, then add the turpentine; and, having taken them from the fire, mix in the balfam of Peru and dragons blood, keeping them continually flirring till grown cold.

DRAGONS blood gives a more elegant colour to this composition than

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than red faunders, though on another account it is fomewhat lefs proper, having been found, when diffolved in oil, to communicate fome degree of heat and pungency, qualities quite foreign to the intention of the medicine. This balfam is used in internal bruises and hæmorrhages, erofions of the intestines, dyfenteries, and in fome kinds of coughs and afthmas. The dofe is from two fcruples to two drams. It may be commodioufly taken with about double its weight of conferve of roles, as directed hereafter. Some have likewife applied it externally, for deterging and incarnating recent wounds and ulcers.

BALSAMUM CEPHALICUM.

Cephalic balfam. Edinb.

Take of

Expressed oil of nutmegs, one ounce;

Distilled oil of cloves,

of lavender,

of rolemary, each half a dram;

of amber, half a fcruple; Balfam of Peru, one dram.

Liquefy the oil of nutmegs in a filver veffel : and, when taken from the fire, mix into it the diftilled oils and the balfam, 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 fmelt 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, compofed each of only one effential oil, incorporated with the exprefsed oil of nutmegs; which laft is to be previoufly freed from its flavour (by diftillation with water) that the fmell of the former may not be injured thereby. In the room of this prepared febaceons matter, a mixture of white wax and oil olive might be ufed. In the *practical chemiftry*, a general procefs is given for the making of thefe kinds of preparations, under the title of

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BALSAMUM ODORIFERUM. An odoriferous balfam.

Take of

Oil olive,

White bees wax, each two ounces. Put the oil into a China bafon, pla-

ced in a pan of boiling water, and flice the wax into it. Stir them together with a clean knife, or imall ipatula, till the wax is melted : then remove the vefiel out of the hot water, and when the matter begins to thicken, drop in four drams of any odoriferous effential oil, as that of cinnamon, nutmegs, mace, lemon-peel, rhodium, lavender, rolemary, &c. or of a mixture of two or three of the oils ; to which may be added one dram of effence of ambergris, which will heighten the fmell of the oils without communicating any of its own. Keep the whole constantly stirring, that they may be perfectly mixed; and as foon as this is done, plunge the veifel into cold water, to prevent the diffipation of the effential oils.

THESE kinds of balfams may be made of any colour, fo as to refemble in this refpect alfo, as well

well as in fmell, the vegetable, from which the effential oil, you make use of, was drawn. A little of the pigment, called by the painters fap-green, being previously ground with the oil olive, will give a fine green; a little cinnabar, a fcarlet; turmeric, a lemon colour; Prussian blue, a violet; and cochineal, a fine purplish hue.

CONFECTIO PAULINA. The confection called Paulina. Lond.

Take of

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Coftus, or in its ftead zedoary, Cinnamon, Long pepper, Black pepper, Storax, Galbanum, Opium, Ruffian caftor, each two ounces; Simple fyrup, boiled to the con-

Simple fyrup, boiled to the confiftence of honey, thrice the weight of the other ingredients.

Warm the fyrup, and carefully mix with it the opium, first diffolved in wine : gradually add this mixture, whilst it continues warm, to the storax and galbanum previously melted together ; and afterwards sprinkle in the other species reduced into powder.

THIS is the CONFECTIO AR-CHIGENIS OF a former difpenfatory, brought back to its first form and author. It is a warm opiate medicine, and is fometimes made use of in practice. Thirty-two grains contain one grain of opium.

MITHRIDATIUM, five CON-FECTIO 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, Frankincenfe, Chio turpentine, each ten drams; Camels' hay, Coftus, or, in its stead, zedoary, Indian leaf, or, in its flead, mace, Stechas, Long pepper, Hartwort feeds, Hypociitis, Storax, strained, Opopanax, Galbanum, strained, Opobalfam, or, in its flead, expreffed oil of nutmegs, Ruffian caftor, each one ounce; Poley mountain, Scordium, Carpobalfam, or, in its flead, cubebs, White pepper, Candy carrot feed, Bdellium, ftrained, each feven drams; Celtic nard, Gentian root, Dittany of Crete, Red roles, Macedonian pariley feed, Leffer cardamom feeds, hufked, Sweet fennel feed, Gum Arabic, Opium, strained, each five drams; Calamus aromaticus, Wild Valerian root, Anifeed, Sagapenum, ftrained, each three drams ; Meum athamanticum, St. John's wort, Acacia, or, in its flead, terra Japonica, Bellies

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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 diffolved in wine; melt the florax, galbanum, turpentine, and opobalfam (or expreffed oil of nutmegs) together in another veffel, continually flirring them about, to prevent their burning. With thefe fo melted mix the hot honey, at first by fpoonfuls, and afterwards in larger quantities at a time. When the whole is grown almost cold, add by degrees the other fpecies reduced into powder.

THERIACA ANDROMACHI.

Venice treacle. Lond.

Take of

Troches of fquills, half a pound; Long pepper, Opium, strained, Vipers dried, each three ounces; Cinnamon, Opobalfam, or, in its stead, expreffed oil of nutmegs, each two ounces; Agaric, Florence orris root, Scordium, Red rofes, Navew feeds, Extract of liquorice, each an ounce and a half; Indian nard, Saffron, Amomum, Myrrh, Coftus, or, in its flead, zedoary, Camels hay, each one ounce ; Cinquefoil root, Rhubarb, Ginger, Indian leaf, or, in its flead, mace,

Dittany of Crete, Horehound leaves, Calamint leaves, Stechas, Black pepper, Macedonian parfley feed, Olibanum, Chio turpentine, Wild valerian root, each fix drams; Gentian root, Celtic nard, Spignel, Poley mountain 7 St. John's wort } leaves, Groundpine Germander tops, with the feed, Carpobalfam, or, in its flead, cubebs, Anifeed, Sweet fennel feed, Leffer cardamom feeds, hufked, Bishops weed Hartwort feeds. Treacle muftard Hypociftis, Acacia, or, in its flead, Japan earth, Gum Arabic. Storax, strained, Sagapenum, strained. Terra Lemnia, or, in its flead, bole armenic or French bole, Green vitriol calcined, each half an ounce ; Small (or, in its flead, the long) birthwort root, Leffer centaury tops, Candy carrot feed, Opopanax, Galbanum, strained, Ruffian caltor, Jews pitch, or, in its flead, 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 fame manner as directed

date.

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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, phyfician to Nero. The mithridate itself is faid 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 confift in its being a most powerful prefervative against all kinds of venom. Whoever took a proper quantity in a morning, was enfured from being poifoned during that whole day. This was confirmed by the example of its supposed inventor, who, as Celfus informs us, was by its conftant use fo fortified against the commonly reputed poifons, that none of them would have any effect upon him when he wanted their affistance. But the notions of poifons, which prevailed in those ruder ages, were manifestly erroneous. Before experience had furnished mankind with a competent knowledge of the powers of fimples, they were under perpetual alarms from an apprehension of poisons, and bufied themfelves in contriving compolitions which should counteract their effects; accumulating together all those substances which they imagined to be poffefied of any degree of alexipharmac power. Hence proceed the voluminous antidotes which we meet with in the writings of the ancient phylicians. Yet it does not appear, that they

directed in making the mithri- were acquainted with any real poiion, except the cicuta, aconitum, and bites of venomous beafts; and to these they knew of no antidote whatever. Even admitting the reality of the poilons, and the efficacy of the feveral antidotes feparately, the compositions could no more answer the purposes expected from them, than the accumulating of all the medicinal fimples into one form could make a remedy against all difeates.

> Yet notwithstanding the absurdity in the original intention of these medicines, and their enormity in point of composition; as they contain feveral powerful materials, whole virtues, though greatly prejudiced, yet are not deftroyed, by their multiplicity and contrariety; the compounds have been found, from repeated experience, to produce very confiderable effects. as warm opiate diaphoretics.

These compositions might without doubt be lopt of numerous fuperfluities, without any diminution of their virtues. Yet, as the effects of them, in their prefent form, are well known, fo much regard has been paid to ancient authority, as not to attempt a reformation of that kind. The London college has however thought proper to retrench, from forms originally complex, all fubfequent additions that have crept into them. Neither the description in verse of the elder Andromachus, nor the profe explanation of the younger, make any mention of the white pepper afterwards added to the theriaca; and the orris root, in the mithridate of a former pharmacopœia, is alfo a fupernumerary ingredient, not warranted by the original : theie therefore are rejected. Nor is the afarum in mithridate grounded on any good authority :

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thority : the verfe it is taken from, is mutilated and corrupt; and the word which fome, upon conjecture only, suppose to have been afarum, others, alio upon conjecture, chuie to read differently. Till fome emendation shall be better founded than merely upon critical gueffes, this fingle species may be fafely paffed over, without any prejudice to the medicine. None of the ancient defcriptions afford any other light in this particular; for they either omit this ingredient, and others alfo, or abound with additions.

One innovation in both thefe medicines, the college has allowed themfelves. In each of thefe compositions are found both cinnamon and cafia lignea; and it is very evident, from feveral parts of Galen's works, that the latter was used by the ancients only upon account of the great difficulty of procuring the other; fo that to retain the cafia, now that cinnamon is io common, is a blind following of thefe writers, without any attention to their meaning. The cafia therefore is now rejected, and half the quantity of cinnamon put in its room, which is the proportion that Galen directs to be observed in substituting the one for the other. It is probable, that the cafe is the fame with regard to the Celtic and Indian nard ; that the former had a place in these compofitions, on account of the difficulty of procuring the Indian; for Galen expreisly prefers the latter.

There is a material error in regard to the theriaca, which has paffed through most of the editions of our pharmacopceia. This is, the fubstituting of Roman vitriol to the ancient chalcitis, now not certainly known, and in the catalogue of fimples, defcribing the Roman to

be a blue vitriol ; whereas the Italian writers are unanimous it is a green vitriol; and were it not, it would not answer to the effects of the chalcitis, which was certainly a chalybeate, and gives the medicine its black colour. What has chiefly occasioned chalcitis to be supposed a cupreous vitriol, feems to be its name, derived from xalx@, copper. But it is to be observed, that all vitriols were formerly imagined to proceed from copper, and were named accordingly. The green or martial vitriols are still called by the Germans kupfferwasser, and by us copperas. It is probable, that the ancient chalcitis was no other than a native martial vitriol, calcined by the heat of those warm climates, to a degree of yellowish red or coppery colour : and therefore the common green vitriol, thus calcined by art, very properly fupplies its place.

The London college has likewife fomewhat facilitated the preparation of thefe medicines, by omitting the trochifci cypheos used in the mithridate, and the hedychroi and wiperini for the theriaca; and inferting their ingredients, after Zweiffer's manner, in the compofitions they are intended for. This is done in the theriaca very commodioufly, the ingredients in these troches uniting with those in the theriaca itself, into unbroken numbers. But to render the numbers equally fimple in the mithridate. it was necessary to retrench a few odd grains from fome of the articles, and make a fmall addition to fome others. They adjusted the proportions of the ingredients in the trochifci cypheos from the original description in Galen; the numbers in our former pharmacopœia being very erroneous.

The college of Edinburgh, pay-

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ing very little deference to antiquity or common prejudice, has ventured at length to difcard thefe venerable reliques; and has fubftituted in their room an elegant and fimple form, equivalent to them both in efficacy, under the title of

THERIACA EDINENSIS. Edinburgh theriaca. Edinb.

Take of

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Virginian fnakeroot, ten ounces; Contrayerva root, fix ounces; Refin of guaicum, four ounces; Leffer cardamom feeds, two ounces;

LED,

Myrrh,

English faffron,

Opium, each one ounce ; Rob of elder-berries, thrice the

weight of the powders ;

Canary wine, as much as is fufficient to diffolve the opium.

Make them according to art into an electary.

THIS composition confilts of very powerful ingredients, and is doubtlefs 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 lefs exceptionable ingredients of Andromachus's. But as thefe medicines have for a long time been chiefly employed for external purpole, in the way of cataplaim, the theriaca Londinensis is now omitted, and its place supplied by a cataplafm 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 prefent fo much regarded as they have been heretofore; practitioners having introduced in

their room, extemporaneous bolufes of Virginian Inakeroot, camphor, contrayerva, and the like, which anfwer all their intentions; with this advantage, that they may be given either with or without opium, an ingredient which renders the others prejudicial in cafes where they might otherwife 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 fcruples, fifteen grains of the Venice treacle; and in five fcruples of the theriaca Edinensis. The proportion of opium will vary a little, according to the time that they have been kept; their moifture by degrees exhaling, fo as to leave the remainder ftronger 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 fupposed, from their multiplicity and contrariety, to be continually exalting and improving the virtues of one another.

A good deal of care is requifite in making thefe 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 diffolving the opium in wine, for these and other electaries, is, that it may be more uniformly mingled with the rest.

PHILONIUM LONDINENSE.

London philonium.

Lond.

Take of White pepper, Ginger,

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- Caraway feeds, each two ounces; Strained opium, fix drams;
- Syrup of meconium, boiled to the confiftence of honey, thrice the weight of the other ingredients.
- Heat the fyrup, and carefully mix with it the opium, previoufly diffolved in wine; then add the other ingredients, reduced into powder.

THIS is a reformation of the philonium defcribed by Galen, which was received in our preceding pharmacopœias with the addition of tome fuperfluous ingredients, and diftinguished, but not very properly, by the epithet Romanum. The additional articles, and fome unneceffary ones that were in the original, are here omitted, and the quantities of the other varied, io as to preferve the fame proportion of opium to the whole, as in our last pharmacopœia. Thirtyfix grains of the composition contain one grain of opium.

THE mithridate, theriaca, diafcordium, confectio Paulina, and philonium, are the only compositions now remaining, of what have been called the officinal capitals. They are all medicines of great power; and as, on the one hand, they are applicable, by the judicious phyfician, to excellent purpofes, fo on the other, their imprudent use has often been productive of mischievous consequences. It has been cultomary among nurles, and others, to give diafcordium to children, to eafe their complaints, and to procure fleep : intentions which it effectually anfwers, but at the fame time never fails to bring on a coffive habit, the foundation of many difeafes. This medicine has likewife been too unwarily given for restraining fluxes; whole suppression was afterwards followed by more dangerous fymptoms. The celebrated alexipharmics, mithridate, and theriaca, have oftentimes aggravated the diforders they were intended to remedy, have converted a common cold into a high fever, have raifed flight febrile complaints into a malignant fever. However ftrongly therefore these kinds of medicines be recommended for eating pain, warming, promoting fweat, expelling malignity, &c. the utmost caution is requisite in the use of them. The cases which demand their affiftance, are much lefs frequent than is generally fuppofed.

ELECTARIUM ACIDUM. Acid electary.

Take of

- Conferve of woodforrel, one ounce;
- Pulp of tamarinds, half an ounce; Weak fpirit of vitriol, as much as is fufficient to give a grateful acidity;
- Syrup of lemon juice, as much as will reduce the whole into the confiftence of a foft electary.

THIS grateful acid composition is an useful refrigerant and antifeptic in different kinds of inflammatory and putrid diforders.

ELECTARIUM ALEXETERIUM. Alexeterial electary.

Take of

Confection of kermes, one dram; Candied ginger, fix drams; Contrayerva root,

Virginian fnakeroot, each one dram;

Syrup of orange peel, as much as is fufficient to make the other ingredients into the confiftence of an electary.

Cq THIS is a moderately warm elec-

tary, contrived by Boerhaave for raifing and recruiting the firength in low fevers, where the pulfe is funk, and the patient languid and dejected. It may be taken to the quantity of a fmall nutmeg every four or five hours, with any proper julep.

ELECTARIUM ALTERANS. Alterative electory.

Take of

Crude antimony, finely levigated, three drams;

Refin of guaiacum, two drams ; Oil of faffafras, fix drops ;

- Conferve of red rofes, one ounce and a half;
- Balfamic fyrup, as much as is fufficient.

Grind the refin and the levigated antimony well together; and, having mixed there with the oil (dropt on a little fugar) and the conferve, let the whole be foftened with the fyrup into a due confiftence,

THIS medicine is used against cutaneous foulnesses, obstructions of the glands, and impurities of the blood and juices. Difpenfatory writers in general lay the principal stress, in compositions of this kind, upon the calx, ceruffe, or cinnabar of antimony, preparations which are far inferior to the crude mineral, and very ill deferve the great character which has been ufually given of them. The bulk of a fmall nutmeg of this electary may be taken every morning and evening with a little of the fimple or compound lime-water.

ELECTARIUM ANTIEPILEPTI-CUM.

Antiepileptic cleatary.

Take of

Peruvian bark, one ounce; Wild valerian root, two drams; Syrup of orange peel, a fufficient quantity to reduce the others into an electary.

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THIS medicine has been frequently prefcribed by Dr. Mead, in epileptic cafes, with fuccefs. He directs one dram to be taken every morning and evening, for three months together; after which, to confirm the cure and prevent a relape, the fame dofe is to be repeated, for three or four days, before every new and full moon for a confiderable time.

ELECTARIUM ANTIDYSENTE-RICUM.

Antidy Senteric electary.

Take of

Yellow wax, three drams;

Spermaceti, two drams ;

- Conferve of red rofes, an ounce and a half;
- Oil of almonds, half an ounce ; Balfamic fyrup, a fufficient quantity.
- Let the wax and spermaceti be melted in the oil, over a gentle fire, and then mixed with the conferve and syrup.

WHERE fharp irritating humours have eroded the inteffines, and laid open the mouths of the bloodveffels, this foft healing electary is often of great ufe. It is faid that fluxes of long flanding, contracted in the Indies, which had yielded nothing to medicines of the reftringent kind, have been removed by this, which fupplies the natural mucus of the bowels that the flux has carried off, heals the excoriations, and obtunds the acrimonious humours.

ELECTARIUM AROMATICUM. Aromatic electory.

Take of

The aromatic species, one dram and a half;

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Conferve of lavender, two ounces; Syrup of orange peel, a fufficient quantity.

Make them into an electary.

THIS warm cordial medicine is of use in nervous complaints and decays of constitution. The bulk of a fmall nutmeg may be taken two or three times a day with a glass of wine, or any other proper liquor, after it.

ELECTARIUM BALSAMICUM. Balfamic electary.

Take of

Conferve of rofes, two ounces; Locatelli's balfam, one ounce.

Diffolve the balfam in the yolk of an egg, and then mix therewith the conferve.

THIS electary is used in fome coughs and diforders of the breaft; as alfo in the vomica, or fuppuration in the ftomach, which fometimes happens after dyfenteries; and where there is an erofion or rupture of the blood-veffels, as in hæmoptoes. In these cafes, the bulk of a nutmeg may be taken for a dofe, twice or thrice a day.

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 ;

- Conferve of orange peel, one ounce;
- Balfamic fyrup, as much as is fufficient to make them into an electary.

Take of

Ruft of steel, or steel prepared with fulphur, fix drams; Candied ginger, one ounce.; Conferve of orange peel, three ounces;

Syrup of orange peel, as much as will reduce them into a proper confiftence.

THESE elegant chalybeate medicines are given not only in cachectic and chlorotic cafes, and menftrual obstructions; but likewife in low hysteric, and melancholic diforders; and for warming and invigorating the habit in great debilities and decays of conflitution. 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 foap, each a dram ;

Powdered fquills, one fcruple ;

Conferve of orange peel, half an ounce ;

Syrup of ginger, as much as is fufficient to reduce the other ingredients into the confiftence of an electary.

WHERE the breaft is opprefied by thick phlegm, or the vifcera 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 fix or eight doses.

ELECTARIUM ADGONORRHOEAM, Electary for a gonorrbæa.

Take of 1. Lenitive electary, three ounces; Jalap, three drams; Nitre, one dram and a half; Simple fyrup, a fufficient quan-

tity to make them into an electary.

Qqz

Take

Take of 2. Lenitive electary, three ounces; Balfam of copaiva, one ounce and a half; Rhubarb, Gum guaiacum, Nitre, each one ounce; Syrup of orange peel, as much as will reduce them into a proper

confiftence for an electary.

THESE compositions are faid to be used in fome of the military hofpitals; the first as a cooling laxative, for the inflammation and tenfion of the urinary passages, which always accompany a virulent gonorrhœa. In this intention, a dram and a half is directed to be taken The every morning and evening. fecond is defigned for ftrengthening the parts after the virulence is expelled, and the heat and inflammation have ceased : the bulk of a nutmeg may be taken twice or thrice a day.

ELECTARIUM E GUMMI GUAIACO.

Electary of gum guaiacum.

Take of

Gum guaiacum,

Compound powder of arum, Canella alba, each fix drams; Conferve of fcurvy-grafs, two ounces;

Syrup of orange peel, as much as will bring them into a proper confiftence.

In chronical rheumatifms, pains, and aches in general, that are not accompanied with inflammation, and fome kinds of paralytic numbneffes, this warm flimulating electary may be taken to the quantity of a nutmeg twice a day. ELECTARIUM EX HELLEBORO NIGRO,

Electary of black bellebore.

Take of

Black hellebore root,

Extract of favin,

Compound powder of myrrh, each half an ounce;

Canella alba, two drams;

Syrup of orange peel, as much as is fufficient.

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 INCRASSANS.

Incrassating electary.

Take of

Gum tragacanth,

- Pulp of fresh comfry root, each one ounce;
- Conferve of mallows, half an ounce;

Syrup of marshmallows, as much as is fufficient to reduce the whole into the confistence of an electary.

THIS electary is taken to the quantity of a chefnut, three or four times a day, along with a milk diet, for incraffating and obtunding thin ferous humours, in hectic diforders, in coughs proceeding from thin tickling rheums, and in fluxes and heat of urine, where the natural mucus of the parts is abraded.

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ELECTARIUM AD NEPHRITICOS. Nephritic elicitary.

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 fufficient.
- Diffolve the turpentine in the yolk of an egg, and then mix the whole together, according to art, fo as to make thereof an electary.

THIS composition, taken from the Edinburgh infirmary, is contrived for cleaning the urinary paifages in nephritic diforders. Turpentine, properly divided by earthy powders, is a fafe, and, at the fame time, one of the most powerful diuretics that can in these cases be ventured on. The rhubarb and laxative electary are very ufeful additions; for the belly ought here to be always kept open, though the ftronger porgatives are very improper. A drain of the electary may be taken once or twice a day, along with an infusion of marshmallow roots, fweetened with a spoonful of honey.

ELECTARIUM PARALYTICUM. Paralytic electary.

Take of

Mustard feed,

Conferve of rolemary tops, each one ounce;

Compound spirit of lavender, two drams.

Beat the mustard feed with a little water, that the pulp may be preffed through a hair fieve; then mix with it the conferve and the fpirit.

THIS is a very efficacious medicine for paralytic diforders, tremors and numbnefs of the limbs, the de-

cays accompanying old age, and in all cafes where the folids require to be ftimulated, or fluggifh ftagnant 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 glafs of rich wine, or any proper julep, after it.

ELECTARIUM E CORTICE PERU-VIANO.

Electary of Peruvian bark.

I.

Take of

Peruvian bark, three ounces; Cafcarilla, half an ounce; Syrup of orange peel, a fufficient quantity.

- Garage

Take of Peruvian bark, three ounces; Virginian fnakeroot, one ounce; Syrup of orange peel, a fufficient quantity.

Take of

Peruvian bark, three ounces; Crude fal ammoniac, three drams; Syrup of lemon juice, a fufficient quantity.

4.

3.

Take of Peruvian bark, three ounces ; Colcothar of vitriol, fix drams ; Simple fyrup, a fufficient quantity.

La free

Take of Peruvian bark, three ounces; Alum, one ounce;

Syrup of lemon juice, as much as is fufficient.

6.

Take of

Extract of Peruvian bark, one ounce :

Extract of logwood,

Extract of liquorice, each half an ounce;

Mucilage of quince feeds, as much as is fufficient to reduce the other ingredients into the confiftence of an electary.

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ALL

elegant and efficacious in the inten- be taken once a day occasionally in tions for which they are defigned. The first is calculated for common intermittent fevers, in the cure of which the virtues of the bark are greatly affifted by the cafcarilla. The fecond and third are given in those intermittents, which happen in cachectic habits, and perfons fubject to obstructions of the vifcera, where the bark by itfelf, on account of its great altringency, would be prejudicial. The fourth is a good ftrengthener in laxities of the folids and decays of conftitution; and the fifth a powerful flyptic 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 cafe. The fixth is a very agreeable form for the exhibition of Peruvian bark to those who are more than ordinarily offended with its tafte ; the fubitances here joined effectually covering its taffe, at the fame time that they coincide with it in virtue. The compofition is a very elegant and pleafant one, and well deferves a place in the shops. It may either be given in the form of a bolus or electary, in the dole of a dram or more; or diffolved in any fuitable liquor into a draught.

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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 difeases. The bulk of a nutmeg may be taken every hour, or oftener, till it begins to

ALL these compositions are very operate, or the same quantity may dry coffive habits.

> ELECTARIUM SAPONACEUM. Saponaceous electary.

Take of

Hard Spanish soap, two ounces; Pareira brava, one ounce ;

Rhubarb,

- Gum of aloes, each three drams; Syrup of orange peel, a fufficient quantity.
- Mix and make them into an electary.

THIS electary.is calculated for jaundices arifing from an obstruction of the biliary ducts, or a vifcidity of the bile itfelf. Such are those which most commonly occur. in which the ftools are of a whitifh or afh-colour, and voided with difficulty. The dofe is from half a dram to a dram, twice a day. How far the pareira brava in this composition contributes to its virtues, I shall not take upon me to determine. Some have recommended this root, as a most powerful attenuant, in a great variety of diforders, whilft others look upon it as not superior, if equal, to the common aperient roots. The fenfible qualities of the pareira difcover little foundation for the great character given of it; and a competency of fair trials of its virtue, is as yet wanting. The London college has not received it into their pharmacopœia.

ELECTARIUM SISTENS. Binding electary.

Take of

The japonic confection, two ounces ;

Extract of logwood, one ounce;

Syrup of dry roles, as much as will reduce them into a proper confidence for an electary.

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THIS electary is calculated for the relief of dyfenteries, and other inteftinal 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.

ELECTARIUM E SULPHURE. Electary of fulphur.

Take of

Flowers of fulphur, half an ounce; Lenitive electary, two ounces; Syrup of marshmallows, a sufficient quantity to make them into an electary.

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THIS electary is defigned againft the piles, and generally diftinguifhed in the hofpitals by the title of *electarium bæmorrhoidale*. Where the diforder is accompanied with febrile or inflammatory fymptoms, fome nitre is occafionally added, in the proportion of two drams, to the quantity here directed. It may be given from a dram to half an ounce at a time.



Part IV.

CHAPTER VI.

Lobochs.

A Loboch, eclegma, linetus, or lambative, is a foft compound defigned to be licked or flowly fwallowed down, of a middle confiftence between a fyrup and electary, at leaft never fo thin as the former, nor fo thick as the latter.

These preparations are generally composed of expressed oils, mixed with fyrups, and fimilar fubflances. In making them, the fyrup is first to be mixed with a little fugar, and then briskly beaten up in a mortar, with the oil; which will thus readily incorporate, especially if the fyrup be of the acid kind. Two ounces of fyrup, a dram of fugar, and an ounce of expressed oil, form a linctus of a due confistence; which may be made thicker at pleasfure by adding more oil, of thinner by an increase of the fyrup.

Any oily fubftance, as Locatelli's balfam, fpermaceti, &c. may likewife be reduced into this form : and inftead of fugar, powders more agreeable to the intention of emollients or pectorals, may be ufed; as the compound powder of gum tragacanth, or the white or black bechic troches of the fhops. But the form at beft is very unfightly and difagreeable, and fubftances of this kind render it more fo.

LOHOCH COMMUNE. Common lohoch. Edinb.

Take of

Fresh-drawn oil of almonds, Syrup of marshmallows, or balfamic fyrup, each one ounce; White fugar, two drams.

Mix and make them into a lohoch.

6

LOHOCH EX AMYLO. Starch lohoch. Edinb.

Take of

Starch, two drams ; Japan earth, one dram ; Balfamic fyrup, Whites of eggs, beaten up into

a thin fluid, each one ounce. Mix and make them into a lohoch.

LOHOCH DE LINO. Lohoch of linsted. Edinb.

Take of

Fresh-drawn linfeed oil, Balfamic fyrup, each one ounce; Flowers of fulphur washed, White fugar, each two drams. Mix and make them into a lohoch.

LOHOCH DE MANNA. Lokoch of manna.

Edinb.

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. Edinb.

Take of

Caftile foap, 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.

Edinb.

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Edinb.

Take of Spermaceti, two drams; Fresh-drawn oil of almonds, half an ounce;

Balfamic fyrup, one ounce.

Mix the spermaceti with a fufficient quantity of yolk of eggs. Then add the oil and syrup, and make them into a lohoch.

> LOHOCH BALSAMICUM. Balfamic loboch.

Take of

Spermaceti, two drams; Balfam of Peru, one dram; Syrup of marfhmallows, two ounces.

Let the fpermaceti and balfam be well worked up with a fufficient quantity of yolks of eggs; and then mix with them the fyrup.

> LINCTUS SOLUTIVUS. Solutive loboch.

Take of

Conferve of hips, one ounce; Solutive fyrup of roles,

Oil of olive, each four ounces. Mix and make them into a lohoch.

The principal use of lohochs is in diforders of the internal parts of the mouth, fauces, and œfophagus; as in aphthæ, and tickling coughs from defluxions in the first passages. For, however they 601

may have been celebrated, under the vague appellation of pectorals, in affections of the breaft 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 flow manner in which they are fwallowed down renders them well adapted to correct acrimony and irritation in the throat and about the mouth of the flomach ; though the free use of such unctuous compolitions is foon liable to pall the appetite. Indeed the form is an inelegant one, and in the prefent practice is little regarded.

LINCTUS ACIDULUS. Acidulous linetus.

Take of

Conferve of red rofes, two ounces;

Weak fpirit of vitriol, four fcruples, or as much as is fufficient 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 reftringent and detergent. It rather itrengthens than relaxes the stomach, is sufficiently agreeable in taste, and of a fine red colour.



Part IV.

CHAPTER VII.

Emulfions.

I N the foregoing chapter, oils were united with watery liquors, by the mediation of fugar and fyrups, into thick uncluous compounds. The prefent chapter contains mixtures of oily, refinous, and fimilar bodies, with water, in a liquid form, of a white colour refembling milk, and hence called emulfions.

Emulfions have been generally prepared by grinding the oily feeds of plants, or kernels of fruits, along with common water, or any agreeable fimple diffilled 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 possels fome 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.

Emultions, befides their ufe as medicines themfelves, are excellent vehicles for certain fubftances which cannot otherwife be fo conveniently taken in a liquid form. Thus camphor, triturated with almonds, readily unites with water, into an emultion, and in this form is conveyed into the remotest parts of the body, with fufficient efficacy to anfwer intentions of moment, at the fame time that its heat and pungency are fortened by the unctuofity of the almonds.

Pure oils, balfams, refins, and other fimilar fubflances, are likewife rendered mifcible with water, into emulfions or milky liquors, by the intervention of mucilages. The white or yolk of an egg unites thefe bodies alfo with water, but lefs elegantly.

Several of the gummy refins, as ammoniacum, galbanum, myrrh, and others, are reducible into emulfions by trituration with water alone; their refinous part being rendered diffoluble by the mediation of the gummy.

EMULSIO COMMUNIS. Common emulfion. Lond.

Take of

Sweet almonds blanched, one ounce;

Gum Arabic, half an ounce;

Double-refined fugar, fix drams; Barley water, two pints.

Diffolve the gum in the barley water warmed. As foon as the water is grown thoroughly cold, pour it by little at a time upon the almonds and fugar, first beaten together, continuing to grind the whole, that the liquor may grow milky; after which, it is to be passed through a strainer.

Ediub.

Take of

Sweet almonds, one ounce;

Bitter almonds, one dram;

Water, two pounds and an half.

- Blanch the almonds, and beat them in a flone mortar, and gradually pour upon them the water; and flrain off the liquor.
- If, whilft the almonds are beating, two ounces of mucilage of gum Arabic be added, the preparation is called EMULSIO ARABICA, the Arabic emulfion.

GREAT care fhould be taken, that the almonds are not become rancid by keeping ; which will not only render the emulfion extremely unpleafant, a circumflance of great confequence

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confequence in a medicine that requires to be taken in large quantities, but likewife give it injurious qualities little expected from preparations of this clafs. Thefe liquors are principally made use of for diluting and obtunding acrimonious humours ; particularly in heat of urine and stranguries arising either from a natural fharpnefs 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 emulfions to be boiled, with a view to deprive them of fome imaginary crudity; but by this process they quickly cease to be emulfions, the oil separating from the water, and floating diffinct upon the furface. Acids, and vinous spirits, produce a like decomposition. On standing also for fome days, without addition, the oily matter separates, and rifes to the top, not in its pure form, but in that of a thick cream. These experiments prove the composition of the emulfions made from the oily feeds of kernels, and at the fame time point out fome cautions to be attended to in their preparation and use.

EMULSIO CAMPHORATA. Camphorated emulsion. Edinb.

Take of

Camphor, half a dram; Sweet almonds, fix in number; White fugar, half an ounce; Simple pennyroyal water, half a pint.

Grind the camphor and almonds well together in a flone mortar, and add by degrees the pennyroyal water. Then firain the liquor, and diffolve in it the fugar.

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 affistance 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; Simple pennyroyal water, half a pint.

Grind the ammoniacum with the water, in a mortar, until the gum be difiolved.

THIS liquor is employed for attenuating tough phlegm, and promoting expectoration, in the humoural afthmas, coughs, and obftructions of the vifcera. It may be given to the quantity of two fpoonfuls twice a day.

EMULSIO PURGANS.

A purging emulfion.

Take of

- Sweet almonds, blanched, two drams;
- Fine fugar, one dram;
- Gum Arabic, half a dram;
- Scammony, ten grains ;
- Simple cinnamon water, one ounce.
- Diffolve the gum in the cinnamon water, and, having ground the fcammony with almonds and fugar, pour on the liquor by little at a time, continuing to grind them together, fo as to make them into an emulfion.

THIS emultion is an agreeable and effectual purgative. It may be prepared with different proportions of the fcammony, at pleafure : other purgative refins, as that of jalap,

jalap, may be fubfituted to the fcammony; a proper quantity of any fyrup to the fugar; and to the cinnamon water, any other fimple water that may be more acceptable: but fpirituous waters, for reafons already mentioned, have no place. Some have employed an infufion of liquorice, which appears to be a very proper addition in thefe kinds of preparations, as it coincides with the almonds in correcting the irritating power of the purgative material.

EMULSIO OLEOSA. Oily emulfion.

Take of

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Oil olive, a quarter of a pint; Spirit of hartfhorn, two drams; Simple pennyroyal water, twelve ounces;

Pectoral fyrup, 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 diforder.

A much more elegant oily emulfion, for all the intentions in which the fimple lubricating quality of exprefied oils is wanted, may be prepared in the following manner.

Take an ounce of powdered gum Arabic, and the fame quantity of common water. Diffolve the gum in the water, that it may form a thick mucilage; to which add by degrees four ounces of freshdrawn oil of almonds, rubbing them well together in a mortar till they incorporate into a fmooth white mass. Then pour in by Part IV.

little and little, continuing the agitation, four ounces of common water; to which may be added nutmeg water, rofe water, and fimple fyrup, of each two ounces.

THIS appears to be the pleafanteft form that oils can be given in. The union is alfo more perfect, and the oil lefs difpofed to feparate on itanding, than in the emulfions obtained by other means. Even ftrong acids added to the emulfion, produce no decomposition in it. But alkalies can have no place in this form. For thefe, as we have obferved upon another occasion, precipitate pure gums themselves from water.

EMULSIO SPERMATIS CETI. Emulfion of Spermaceti.

Take equal parts of fpermaceti and of mucilage of gum Arabic. Rub them together in a mortar till they are incorporated into a thick mafs, which may be diluted at pleafure with water, as in the foregoing procefs.

EMULSIONS of fpermaceti, or fpermaceti draughts, are commonly prepared by means of yolks of eggs; and the emulfions, fo prepared, are fufficiently uniform. Thofe made with mucilage, as here directed, have this advantage, that they are lefs difagreeable in tafte, and not liable to grow rancid. The mixture of the fpermaceti and mucilage may be kept, for many days, in a flate fit for being diluted by gradual additions of water, into a fmooth emulfion.

EMULSIO CUM ARO. Emulfion with arum root. Take of

Fresh arum root, Gum Arabic, each two drams; Spermaceti, two scruples;

Common

Emulfions.

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Common water, five ounces; Nutmeg water,

Syrup of orange peel, each half an ounce.

- Diffolve the gum Arabic, with a part of the water, into a mucilage, which is to be beaten with the fpermaceti into a fmooth pafte.
- To this add the arum root, previoufly beaten by itfelf into a pulp; and rub them well together that they may be thoroughly mixed. Then gradually pour in the waters and the fyrup.

FRESH arum root may be taken in this form without the leaft inconvenience from the pungency, with which the root itfelf fo violently affects the mouth. I have given a fpoonful of the emulfion every fix hours, or oftener, in cafes of the rheumatic kind, and generally with great benefit. The more immediate effect experienced from it was that of warming the ftomach, and promoting fweat, which in fome inftances it did profufely.



CHAPTER VIII.

Juleps, Mixtures, and Draughts.

B flood, an agreeable liquor, defigned as a vehicle for medicines of greater efficacy, or to be drunk after them, or taken occasionally as an auxiliary. In this light their bafis is generally common water, or a fimple distilled water, with onefourth or one-third its quantity of a diftilled spirituous water : this mixture is fweetened with fugar, or any proper fyrup, or acidulated with vegetable or mineral acids, or impregnated with other medicines fuitable to the intention ; care being taken that these additions be fuch, as will not render the compound unfightly or unpalatable. The quantity usually directed at a time, in common prefcription, is fix or eight ounces, to be taken by fpoonfuls.

A mixture, more firicity fo called, receives more efficacious materials, whether foluble in water, as extracts or falts, or indiffoluble, as powders ; more regard being here had to the medicinal intention, than to the fightlinefs or palatableneis of the compound. There is indeed no precise diffinction between the two; the fame compofition 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 difagreeable liquor, or that of mixture to a very pleafant one.

A draught differs from a julep or mixture only in being prefcribed in lefs quantity, the whole being intended for one dofe.

JULEPUM e CAMPHORA, Julep of camphor.

Take of

Camphor, one dram;

Double-refined fugar, half an ounce;

Lond.

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Boiling water, one pint.

Grind the camphor first with a little rectified spirit of wine, until it grows soft; 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.

THIS is a more easy and effectual way of mingling camphor with aqueous liquors, than grinding it with water alone, or fetting it on fire, and then quenching it in water, as directed in a former difpenfatory, and in other books of pharmacy. Though even this method is liable to fome inconveniencies; part of the camphor exhaling, unlefs an extraordinary deal of care be taken, upon the affusion of the boiling water; and part remaining upon the strainer. The julep tastes firong of the camphor, and may be given, in cafes where this drug is proper, in the dole of a spoonful or two. In extemporaneous prefcription, vinegar is fometimes employed inftead of water ; this acid not only rendering the julep more grateful to the palate and ftomach, but likewife promoting and extending the efficacy of the camphor, rendering it ferviceable in fome fevers where that hot pungent medicine by it felf would be less proper. In this view the following form is a very elegant one. ULEPUM

Chap. 8. Juleps, Mixtures, and Draughts.

JULEPUM E CAMPHORA ACE-TOSUM.

Campbor julep with winegar. Take of

Camphor, one dram; Gum Arabic, two drams; Double-refined fugar, half an ounce;

Vinegar, one pint.

Grind the camphor with a few drops of reftified fpirit of wine, till it grows foft; then add the gum, previoufly 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 fugar diffolved in it.

By this management, the whole fubftance of the camphor is united with, and kept fufpended in, the liquor; and confequently every fpoonful of the mixture is equivalent to one grain and feven eighths of a grain of camphor in fubftance. The fame treatment fucceeds equally when water is used for the menftruum; and if the affiftance of nitre be required, this alfo may be added in either form.

JULEPUM e CRETE. Chalk julep. Lond.

Take of

The whiteft chalk, prepared, one ounce;

Double-refined fugar, fix drams; Gum Arabic, two drams; Water, two pints.

Mix them together.

THIS julep is defigned for heartburns and fimilar diforders arifing from acid juices in the first paffages. The chief use of the gum is to give a greater degree of confistence to the water, and enable it to keep the powdered chalk sufpended. JULEPUM e MOSCHO. Musk julep. Lond.

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Take of

Damask-rose water, fix ounces by measure;

Musk, twelve grains;

Double-refined fugar, one dram.

Grind the fugar and the musk together, 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 mufk than role-water : but as the former is fcarce procurable in perfection, the latter is here preferred. The julep appears turbid at first; on standing a little time, it deposits a brown powder, and becomes clear, but at the fame time loses great part of its virtue. This inconvenience may be prevented, by thoroughly grinding the musk with two or three drams of mucilage of gum Arabic, before the addition of the water, as directed in the preceding chapter for making emultions. By means of the gum, the whole substance of the musk is made to remain suspended in the water. Volatile spirits are in many cafes an useful addition to mulk. and likewife enable water to keep fomewhat more of the mufk diffolved, than it would otherwife retain. The following composition of this kind is used in some of our hoipitals.

JULEPUM MOSCHATUM, Musk julep.

Take of

Rofe-water, fix ounces ;

Volatile oily spirit, one dram and a half;

Musk, fifteen grains;

White fugar, half an ounce.

Grind

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Grind the musk with the sugar, and then mix therewith the other ingredients.

JULEPUM ALEXIPHARMACUM. Alexipharmic julep.

Take of 1. Simple alexeterial water, fix ounces;

Spirituous alexeterial water, two ounces;

Syrup of clove-july-flowers, two drams.

Mix them together.

Take of

Simple alexeterial water, fix ounces;

Spirituous alexeterial water, with vinegar, two ounces;

Syrup of lemon juice, two drams. Mix them together.

JULEPUM CARDIACUM. Cordial julep. Take of I. Simple cinnamon water, Simple orange peel water, each three ounces; Nutmeg water, two ounces; Syrup of orange-peel, half an ounce;

Mix them together.

Take of Dill-feed water, fix ounces; Cardamom - feed water, two ounces; Compound spirit of lavender, Syrup of faffron, each two drams. Mix them together.

JULEPUM CARMINATIVUM. Carminative julep.

Take of 1. Fennel-feed water, fix ounces; Compound juniper water, two ounces; Syrup of clove july-flowers, half an ounce. Take of Jamaica - pepper water, fix ounces; Compound anifeed water, two ounces; Syrup of orange-peel, half an ounce.

Take of Dill-feed water, fix ounces; Compound caraway water, two ounces; Syrup of ginger, half an ounce.

JULEPUM HYSTERICUM. Hysteric julep.

Take of Simple pennyroyal water, Caftor water, each three ounces; Spirituous pennyroyal water, two ounces; Simple fyrup, two drams.

Z.
Take of
Simple alexeterial water, fix ounces;
Cardamom - feed water, two ounces;
Compound fpirit of lavender, Volatile aromatic fpirit, each one dram;
Syrup of clove-july-flowers, half an ounce.

Take of Dill-feed water, four ounces; Simple 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; Damask-rose water, two ounces; Seville orange juice, Syrup of violets, each fix drams.

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JULEPUM STOMACHICUM. Stomachic julep.

Take of 1. Simple mint water, fix ounces; Spirituous mint water, two ounces; Syrup of faffron, two drams.

Take of 2. Tincture of mint, fix ounces; Cardamom water, two ounces; Simple fyrup, half an ounce.

Take of 3. Cinnamon water, fix ounces; Nutmeg water,

Stomachic tincture, 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 occafionally, 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 fquills, three ounces. Mix them together.

Two fpoonfuls of this mixture may be given twice a day, in coughs, afthmas, and opprefions at the breaft. It is a medicine of confiderable efficacy, but not a little unpleafant, though called a julep in the hofpitals where it is ufed.

JULAPIUM ANTIHYSTERICUM. Antibysteric julep.

Take of

Pennyroyal water, fout ounces; Compound valerian water, two ounces;

Tincture of caftor, two drams;

Salt of hartshorn, ten grains; White sugar, fix drams. Mix them together.

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THE virtues of this composition are fufficiently obvious from its title. The dole is two fpoonfuls, to be taken twice or thrice a day.

JULAPIUM CARDIACUM. Cordial julep.

Take of

Alexeterial water, four ounces; Aromatic water, two ounces; Volatile oily fpirit,

Tincture of faffron, each two drams;

White fugar, half an ounce. Mix and make them into a julep.

THIS mixture is an useful cordial in all depressions of the spirits, in the finkings of low severs, 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

Alexeterial water, four ounces; Spirit of Mindererus, two ounces; Salt of hartshorn, ten grains; White fugar, fix drams. Mix them for a julep.

THIS excellent composition is a very powerful fudorific, and anfwers its intention more effectually, and with greater certainty, than many others calculated for the fame purpofe. Where a copious fweat is to be excited, as in rheumatic difeafes, two fpoonfuls are to be taken warm in bed every hour, or two hours, till the fweat break out. If warm diluting liquors be not afterwards fufficient to keep it up, the fame medicine is to be occafionally repeated.

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JULAPIUM

JULAPIUM DIAPHORETICUM ACIDUM. Acid diaphoretic julep.

Take of

Alexeterial water, four ounces; Treacle vinegar, two ounces; Tincture of faffron, half an

ounce; Spirit of amber, one dram; White fugar, one ounce.

Mix them together.

THE acid quality of this diaphoretic julep adapts it more particularly to those disorders in which any of the internal parts are inflamed, as in pleurisies and peripneumonies. It is given in the same dose as the preceding.

JULAPIUM DIURETICUM. Diuretic julep.

Take of

Spirit of Mindererus, four ounces; Compound horferadifh water, two ounces;

Syrup of marshmallows, three ounces.

Mix them together.

THE fpirit of Mindererus is an excellent aperient faline liquor, capable of promoting evacuation either by the cutaneous pores, or the urinary paffages, according to the manner of exhibiting it. We have feen before, that when taken warm in bed, it proves a powerful fudorific; especially if affisted by volatile falts, fmall dofes of opiates, or other fubstances which tend to determine its action to the fkin. If the patient walk 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 dropfies, but likewife in inflammatory diforders, wherever this falutary fecretion is to be promoted. It is given to the quantity of two fpoonfuls, thrice a day.

A dram of fpirit of amber is fometimes mixed with this julep, which neverthelefs does not feem to receive from that ingredient any additional virtue : whatever virtues the *falt* of amber may poffefs (which probably are not fo great as is generally fuppofed) the *fpirit* is impregnated therewith in an extremely low degree.

JULAPIUM FOETIDUM. Fetid julep.

Take of

Afafetida, one dram and a half; Rue water, fix ounces;

- Compound valerian water, two ounces;
- Oil of hartshorn, twenty drops; White sugar, ten drams.
- Rub the afafetida in the rue water till it diffolves; and having dropt the oil upon the fugar, mix the whole together.

THIS composition is not a little fetid and unfightly; it is nevertheless a medicine of great efficacy, in hypochondriacal and hysteric diforders, assumed and other nervous complaints: the dose is one spoonful, to be taken thrice a day. It is fometimes prepared without the oil of hartschorn.

JULAPIUM HYDRAGOGUM. Hydragogue julep.

- Take of
 - Chamomile flower water, fix ounces;

Emetic tartar, ten grains;

Syrup of buckthorn, two ounces. Mix them together.

Two fpoonfuls of this julep are given, in hydropic cafes, evrry two

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effect as a purgative; which it generally does before the quantity here prescribed has been made use of. Emetic tartar, thus exhibited in fmall doles, 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 neverthelefs, for the most part, with fufficient cafe.

JULAPIUM SISTENS. Binding julep.

Take of

Alexeterial water, four ounces ; Aromatic water, two ounces ; Japonic confection, two drams ; Japan earth, in powder, one dram :

Liquid laudanum, forty drops; White fugar, half an ounce. Mix them well together.

THIS julep is calculated against dyfenteries and diarrhœas; in which, after proper evacuations, it generally eafes 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.

MISTURA ALEXETERIA. Alexeterial mixture.

Take of

Common water, four ounces ; .

Spirituous alexeterial water with vinegar,

Julep of camphor, each one ounce and a half;

Compound powder of contrayerva, four fcruples;

Nitre, two fcruples;

Syrup of orange peel, fix drams. Mix them together.

In hospitals and places ill aired, common inflammatory fevers fometimes change into putrid and ma-

two hours, till it take sufficient lignant ones. To guard against any accident of this kind, as foon as the inflammation begins to abate, or the pulfe to foften, three or four spoonfuls of this alexipharmic mixture may be given every fix hours. Camphor feems to answer best when thus given in a liquid form ; and to be most efficacious in fuch fmall dofes, for abating inflammation and nervous fymptoms, and likewife for promoting a gentle diaphorefis.

MISTURA ANTIDYSENTERICA. Antidy fenteric mixture.

Take of

Simple cinnamon water, feven ounces;

Spirituous cinnamon water, one ounce;

Electary of fcordium with opium, half an ounce.

Mix them together.

Take of Extract of logwood, three drams; Tincture of Japan earth, two drams;

Spirituous cinnamon water, one ounce;

Common water, feven ounces.

Diffolve the extract in the cinnamon water, 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 the first, which is a mild opiate, fail of procuring reft, it is a fign that fome of the corrupted humours ftill remain in the bowels, and that it is more proper to go on with the evacuation, than to suppress the flux. These medicines will fometimes likewife take place in the laft ftage of the difease, when through Rrz neglect

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neglect or mifmanagement it has continued till the firength is much impaired, the inteffines greatly relaxed, and their villous coat abraded; provided there be neither ichorous or involuntary flools, aphthæ, petechiæ, hiccup, or great anxiety at the breaft. Rhubarb, and thefe affringents, are to be fo interpoled, that at the fame time the putrid humours are diflodged, the ilrength may be supported, and the inteflines braced. See Dr. Pringle's excellent Observations on the difeafes of the army, page 254, & feq. where the reader will find a full and fatisfactory history of the fymptoms and cure of this diftemper, fo frequent and fatal in the camp.

MISTURA ANTIEMETICA SALINA.

Saline antiemetic mixture. Take of

Salt of wormwood, half a dram; Lemon juice, fix drams;

Simple cinnamon water, one ounce;

Fine fugar, one fcruple. Mix them together.

THIS mixture is frequently prefcribed, not only for the purpofe expressed in its title, but likewife as a faline aperient in icterical, inflammatory, and other diforders, where medicines of that class are proper.

> MISTURA CARDIACA. Cordial mixture.

Take of

Simple cinnamon water, four ounces;

Spirituous cinnamon water, two ounces;

Extract of faffron, one fcruple ; Confection of kermes, fix drams. Mix them together.

In great languors and depref-

fions, a fpoonful of this rich cordial mixture may be taken every half hour.

MISTURA AD PHTHISIN. Mixture against the phthiss.

Take of Balfam of Copaiba, one dram; Common water, four ounces; Spirituous cinnamon water, one ounce;

Syrup of orange peel, half an ounce.

Let the balfam he diffolved in a proper quantity of yolk of egg, and then mixed with the other ingredients.

Take of

Thebaic extract, one grain ; Conferve of rofes, half a dram. Mix them together for a bolus.

2.

Takeof

Oxymel of squills, a dram and a half;

Thebaic tincture, fifteen drops; Spirituous cinnamon water, two drams;

Common water, two ounces. Mix them together.

In the advanced flate of a confumption, we may diffinguish two forts 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 fenfible to irritation. It is this latter kind, perhaps, which is most painful and teazing to the patient. The first fort requires ballamics, if the ulcer be open, and the matter can be expectorated. For this purpole, the first of the above mixtures, is a very elegant and effectual formula : two fpoonfuls are to be taken at a time, twice a day. If the balfam purge, two drams of the paregoric elixir, added Chap. 8. Juleps, Mixtures, and Draughts.

added to the quantity of the mixture here prescribed, will prevent. that effect. The other kind of cough can only be palliated by incraffants; and for that purpole, the fecond of the above compolitions is one of the molt fuccelsful medicines : the conferve is altogether fafe, and otherwife well adapted to the nature of the difease, 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 obftruct expectoration. Since these bad qualities are in good measure corrected by fquills; as foon as the patient begins to complain of reftlefs nights from coughing, the third mixture may be given at bed-time. See Pringle's Observations on the difeafes of the army.

MISTURA E VALERIANA. Valerian mixture.

Take of

- Simple 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 epilepfies and vertigos, feems to anfwer better, when thus exhibited in fubflance, than if given in form of tincture or infution. The liquors here joined to it excellently coincide, and by their warmth and pungency greatly improve its virtues. Two fpoonfuls of the mixture may be taken twice or thrice a day.

> HAUSTUS CATHARTICUS. Cathartic draught.

Take of

Scammony, ten grains; Spirit of rofemary, two drams; Syrup of buckthorn, fix drams.

Grind the fcammony with the fpirit in a glafs mortar, and when perfectly incorporated, mix in the fyrup.

Take of 2. Jalap, in powder, one fcruple ; Ipecacuanba, three grains ; Compound juniper water, one ounce ; Infufion of linfeed, an ounce and a half ;

Simple fyrup, one dram. Mix them together.

BOTH these compositions are ftrong 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 fo much as many other medicines of this kind.

HAUSTUS CATHARTICUS SALINUS.

Saline cathartic draught.

Take of

Glauber's cathartic falt,

Manna, each fix drams;

Boiling water, three ounces;

Tincture of cardamoms, one dram.

Diffolve the falt 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 faline 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 ftomach.

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HAUSTUS

HAUSTUS DIAPHORETICUS. Diaphoretic draught.

Take of

Spirit of Mindererus,

Syrup of meconium, each half an ounce;

Salt of hartfhorn, five grains. Mix them together.

THIS draught is a very powerful faline diaphoretic. It is given with fafety, and often with great benefit, in the beginning of inflammatory fevers, after bleeding; where theriaca, and other warm fubftances ufually employed, if they fail in bringing out a fweat, increafe the fever.

> HAUSTUS DIURETICUS. Dieuretic draught.

Take of

Oxymel of fquills, one dram and a half;

Simple cinnamon water, one ounce;

Compound spirit of lavender,

Syrup of orange peel, each one dram.

Mix them together.

Take of

Vinegar of fquills, one dram (or one dram and a half);

Salt of wormwood, half a dram; Lemon juice, fix drams;

Simple cinnamon water, an ounce and a half;

Spirituous pepper-mint water, half an ounce;

Syrup of orange peel, one dram.

Let the falt of wormwood and lemon juice be first mixed rogether, and then add to them the other ingredients.

Take of

Diuretic falt, two fcruples ;

Oxymel of fquills, one dram by measure;

3.

Water, an ounce and a half. Mix them together. Take of

Tincture of cantharides, fifteen drops;

Salt of wormwood, half a dram; Lemon juice, fix drams;

Simple penny-royal water, an ounce and a half;

Simple fyrup, two drams. Mix them together.

THE two first of these elegant and efficacious compositions are commended by Dr. Mead, for promoting urine in hydropic cafes. He directs them to be taken every night, or oftener, according to the urgency of the fymptoms. The fquill, one of the most powerful diutetics is, by the additions here joined to it, rendered not only more grateful to the palate and ftomach, but likewife enabled more effectually to aniwer the purpoles intended by it. The other two are taken from our hospitals; in which the former, composed on the fame plan with the two preceding, is justly distinguished by the title of mitior or milder; and the latter, containing, befides the faline matter, a moderate dose of cantharides, by that of fortior or stronger.

HAUSTUS ANODYNO-DIURE-TICUS.

An anodyne-diuretic draught.

Take of

Ley of tartar, half a dram ;

Thebaic tincture, forty drops;

Pepper-mint water, one ounce;

Simple cinnamon water, half an ounce;

- Spirituous cinnamon water, two drams;
- Syrup of marshmallows, one dram.

Mix them together.

THOUGH practitioners have rarely

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rarely ventured to exhibit opium in dropfies; yet, in thofe which are accompanied with great pain, this anodyne drug, by eafing the pain, and removing the ftricture of the paffages, which painful fenfations always occafion, proves a medicine of great fervice, and notably promotes the urinary difcharge. Dr. Mead has given a remarkable inftance of the good effects of the mixture above prefcribed, in a perfon labouring under an afcites and tympany at the fame time, where the pain was intolerable, the thirft intenfe, and the urine in very fmall quantity. The ftronger purgatives increafed the diffemper; foap, alkaline falts, nitre, and other diuretics, were tried in vain: this draught (when the patient feemed to be beyond any affiftance from medicine) procured unexpected relief, not only a gentle fleep, and truce from the pain, but likewife a copious difcharge of urine. By repeating the medicine, for a little time, every eight hours, and afterwards ufing corroborants, the cure was perfectly completed.



Part IV.

CHAPTER IX.

Lotions, Gargarisms, Injections, &c.

AQUA ALUMINOSA BATEANA. Bates's alum water. Lond.

AKE of

Alum,

White vitriol, each half an ounce ;

Water, two pints.

Boil the falts in the water till they are diffolved, let the folution fettle, and afterwards filter it through paper.

BATES directs the falts to be first powdered and melted over the fire ; but this is needless trouble, fince . Take of the melting only evaporates the aqueous parts, which are reftored again on the addition of the water. This liquor is used for cleanfing 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 fometimes likewife employed as a collyrium ; and as an injection, in the gonorrhœa and fluor albus, when not accompanied with virulence.

AQUA ALUMINOSA. Alum water. Edinb.

Take of

Corrofive mercury fublimate, Alum, each two drams; Water, two pints.

Let the fublimate and alum be ground into powder, and boiled with the water, in a glafs veffel, to the confumption of half the

water; then fuffer the liquor to fettle, and pour it off clear from the fediment.

THIS is taken from Fallopius, with the exchange of role and plantane waters for common water, which is equally fit for the purpofe. The composition is defigned chiefly for cutaneous puftules and ulcerations.

AQUA SAPPHIRINA.

Sapphire-coloured water.

Lond.

Lime-water, newly made, one pint ;

Sal ammoniac, one dram.

Let them fland together, in a copper veffel, or along with fome plates of copper, until the liquor have acquired a fapphire colour.

Take of

Lime-water, newly made, one pint ;

Sal ammoniac, two drams.

Diffolve the falt in the lime-water, and let the folution fland in a brafs vessel, until it have acquired a blue colour.

THIS water is much in use, as a detergent of foul and obstinate ulcers, and for taking away specks or films in the eyes. The copper contributes more to its colour, than to its medicinal efficacy : for the quantity of the metal diffolved is extremely minute.

AQUA

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AQUA VITRIOLICA CÆRULEA. Blue vitriolic water. Lond.

Take of

Blue vitriol, three ounces; Alum,

Strong fpirit (or oil) of vitriol, each two ounces;

Water, a pint and a half.

Boil the falts in the water, until they are diffolved, then add the acid fpirit, and filter the mixture through paper.

AQUA STYPTICA. Styptic water. Edinb.

Take of

Blue vitriol,

Alum, each three ounces;

Water, two pounds;

- Vitriolic acid, one ounce and a half.
- Boil the falts in the water till they are diffolved, then filter the liquor, and add the acid.

THESE compositions are formed upon the ftyptic, recommended by Sydenham, for ftopping bleeding at the nofe, and other external hæmorrhages: for this purpofe, cloths or doffils are to be dipt in the liquor, and applied to the part.

AQUA VITRIOLICA CAM-PHORATA. Camphorated vitriolic water. Lond.

Take of

White vitriol, half an ounce; Camphor, two drams;

Boiling water, two pints.

Mix them, that the vitriol may be diffolved; and after the feces have fubfided, filter the liquor through paper,

THIS is an unfrugal method of managing camphor, the greatest part of which feparates with the feces of the vitriol, very little of it remaining fulpended in the water. The Edinburgh college, in a preceding edition of their pharmacopœia, had a preparation under the title of AQUA OPHTHALMICA, differing little otherwife from this than in the quantity of water being greater, and in an addition of tutty and bole, ingredients which could be of no ufe, as not being forluble in water, and fubfiding from it in standing. They have therefore reduced this preparation to the following more fimple form.

AQUA VITRIOLICA. Vitriolic water. Edinb.

Take of

White vitriol, fixteen grains; Water, eight ounces;

- Weak fpirit of vitriol, fixteen drops.
- Diffolve the vitriol in the water; afterwards add the acid, and filter.

WHERE the eyes are watery or inflamed, thefe folutions of white vitriol are very ufeful applications: the flighter inflammations will frequently yield to this medicine without any other affiftance: in the more violent ones, venæfection and cathartics are to be premifed to its ufe.

AQUA PHAGEDÆNICA.

Phagedenic water. Edinb.

Take of Lime water, one pint ; Corrofive mercury for

Corrofive mercury fublimate, half a dram.

Let a folution be made.

THIS

THIS is defigned for washing and cleanfing 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. Aftringent gargarifm. Take of

Oak bark, one ounce; Alum, one dram; Honey of rofes, one ounce; Water, a pint and a half.

Boil the water with the oak bark, till the liquor, when firained, will amount only to one pint; to which add the alum and the honey.

GARGARISMA COMMUNE. Common gargarism.

Take of

Tincture of roles, one pint; Honey of roles, two ounces. Mix them together.

Or,

Take of

Water, fix ounces;

Nitre, one dram;

Honey of rofes, one ounce.

Mix them together. Where acids are requifite, forty drops of the weak fpirit of vitriol are added to this composition.

GARGARISMA DETERGENS. Detergent gargarifm.

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 Marfhmallow 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 fecond and third, where ulcerations require to be deterged, or the excretion of thick viscid faliva promoted; and the fourth, where the mouth is dry, parched, and rigid, to moisten and soften it. In fome cafes, volatile spirits may be advantageoufly joined to thefe kinds of preparations. Dr. Pringle informs us, that, in the inflammatory quinfey, or firangulation of the fauces, he has observed little benefit arifing from the common gargles; that fuch as were of an acid nature feemed to do more harm than good, by contracting the emunctories of the faliva and mucus, and thickening these humours ; that the decoction of figs in milk and water feemed to have a contrary effect, especially if some spirit of sal ammoniac was added, by which the faliva was made thinner, and the glands brought to fecrete more freely ; a circumftance always conducive to the cure.

> ENEMA DE AMYLO. Starch glyfter.

Take of Gelly of flarch, four ounces; Linfeed oil, half an ounce.

Liquefy the gelly over a gentle fire, and then mix in the oil. Forty drops of liquid laudanum are fometimes added.

> ENEMA ANODYNUM, five OPIATUM.

Anodyne, or opiate glyster. Take of

Infusion of linseed, fix ounces; Liquid laudanum, forty drops.

Mutton broth, five ounces ; Thebaic

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an

Thebaic extract, three grains.

ENEMA ANTICOLICUM. Glyster against the colic. Take of Common decoction, half a pint;

Tinctura facra, one ounce; Common falt, one dram; Linfeed oil, two ounces. Mix them together.

> ENEMA ASTRINGENS. Aftringent glyfter.

Take of Lime-water, ten ounces; Japonic confection, half

Mix them together for a glyfter, of which one half is to be injected at a time.

ENEMA ASTRINGENS BALSAMICUM. Aftringent balfamic glyfter. This is made by adding to the foregoing half an ounce of Locatelli's balfam, diffolved in the yolk of an egg.

ENEMA COMMUNE. Common glyster.

Take of

Common decoction, twelve ounces;

Lenitive electary, one ounce; Common falt, half an ounce: Oil olive, two ounces. Mix them together.

ENEMA DOMESTICUM. Domestic glyster.

Take of Cows' milk, half a pint; Brown fugar, 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 FOETIDUM. Fetid glyster.

Take of Afafetida, two drams; Rue,

Savin, each half an ounce; Oil olive, one ounce; Oil of amber, half a dram; Water, one pint and a half.

Boil the water with the rue and favin, till half a pint be wafted. Then firain off the remaining decoction, and mix with it the afafetida and the oils. Half 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 foap, one ounce; Syrup of buckthorn, an ounce and a half. Mix them together.

ENEMA TEREBINTHINATUM. Turpentine glyfter.

Take of

Common decoction, ten ounces; Venice turpentine (diffolved in

the yolk of an egg) half an ounce;

Linfeed 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,

tions, and eafe the pains which accompany these diforders. The turpentine glyster is injected in nephritic cafes ; the fetid in hysteric ones. The others are calculated for unloading the inteffines of their contents, where the exhibition of purgatives in other forms is improper, or unfafe. Glyfters have been looked upon by fome as mere topical applications, whofe operation was confined to the inteffine, into which they are received. But experience has thewn, that in many cafes their action is extended much further. Thus the turpentine glyfter promotes the difcharge by the kidneys, and communicates to the urine a violet fmell; and the anodyne glyfter proves narcotic, as if a moderate dofe of opium had been fwallowed. Perfons have been inebriated by spirituous glysters; and some affirm, that life has been supported for feveral days, by those of a nutritious kind.

> INJECTIO BALSAMICA. Baljamic injection.

Take of

Balfam of Copaiba, half an ounce;

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Lime-water, fix ounces; Honey of rofes, two ounces.

Let the balfam be well beaten up with the yolk of one egg; and then gradually add the limewater and honey.

INJECTIO MERCURIALIS. Mercurial injection.

Take of

Quickfilver,

Balfam of Copaiba, each half an ounce;

Rose-water, half a pint.

Rub the quickfilver with the balfam, till they be perfectly incorporated; then mix with them the yolk of an egg, and afterwards add the rofe-water.

THIS and the foregoing preparation are defigned to be injected into the urethra in virulent gonorrhœas, for cleanfing and deterging the parts.

CHAP.



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CHAPTER X.

Plasters.

PLASTERS are composed chiefly of oily and unctuous fubftances, united with powders, into fuch a confiftence, that the compound may remain firm in the cold, without flicking to the fingers; that it may be foft and pliable in a fmall heat; and that by the armth of the human body it be fo tenacious, as readily to adhere both to the part on which it is applied, and to the fubftance on which it is fpread.

There is however a difference in the confistence of plasters, according to the purposes to which they are to be applied : thus, fuch as are intended for the breaft and ftomach, fhould be very foft and yielding; whilft those defigned for the limbs are made firmer and more adhefive. An ounce of expressed oil, an ounce of yellow wax, and half an ounce of any proper powder, will make a platter of the first confistence; for a hard one, an ounce more of wax, and half an ounce more of powder, may be added. Plafters may likewife be made of refins, gummy refins, &c. without wax, especially in extemporaneous prescription : for officinals, these compositions are lefs proper, as they foon grow too foft in keeping, and fall flat in a warm air.

It has been fuppofed, that plafters might be impregnated with the fpecific virtues of different vegetables, by boiling the recent vegetable with the oil employed for the composition of the plaster. The coftion was continued till the herb was almost crifp, with care to prevent the matter from contracting a black colour : after which the liquid was firained off, and fet on the fire again till all the aqueous moifture had exhaled. We have already obferved, that this treatment does not communicate to the oils any very valuable qualities, even relative to their use in a fluid flate : much less can plasters, made with such oils, receive any confiderable efficacy from the herbs.

Calces of lead, boiled with oils, unite with them into a plaster of an excellent confistence, and which makes a proper basis for several other plasters.

In the boiling of thefe compofitions, a quantity of water muft be added, to prevent the plafter from burning and growing black. Such water, as it may be neceffary to add during the boiling, muft be previoufly made hot : for cold liquor would not only prolong the procefs, but likewife occafion 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 plafter be extremely hot.

EMPLASTRUM ANODY-NUM.

Anodyne plaster. Edinb.

Take of

White refin, eight ounces; Tacamahaca, in powder, Galbanum, each four ounces; Cummin feeds, three ounces; Black foap, four ounces.

Melt the refin and the gums together; then add the powdered feeds feeds and the foap, and make the whole into a plaster.

THIS plafter fometimes gives eafe in flight rheumatic pains, which it is fuppofed to effect by preventing the afflux of humours to the part, and putting in motion and repelling fuch as already flagnate there.

EMPLASTRUM ANTIHYS-TERICUM. Antihysteric plaster. Edinb.

Take of

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Common plaster,

Afafetida, strained, 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 cafes; and fometimes with good effect.

EMPLASTRUM ATTRA-HENS. Drawing plaster. Lond.

Take of

Yellow refin,

Yellow wax, each three pounds; Tried mutton fuet, one pound.

Melt them together, and, whilft the mass remains fluid, pass it through a strainer.

THIS is a very well contrived plafter for the purpofe expressed in its title. It is calculated to fupply the place of melilot plaster : whose great irritation, when employed for the dreffing of blisters, has been continually complained of. This was owing to the large quantity of refin contained in it, which is here for that reason retrenched. It should seem that, when designed only for dreffing blisters, the refin ought to be entirely omitted, unless where a

continuance of the pain and irritation, excited by the veficatory, is required. Indeed plafters of any kind are not very proper for this purpofe: their confiftence makes them fit uneafy, and their adhefivenefs renders taking them off painful. Cerates, which are fofter and lefs adhefive, appear much more eligible. The ceratum album will ferve for general ufe : and, for fome particular purpofes, the ceratum citrinum may be applied.

EMPEASTRUM CEREUM. Wax plaster. Edinb.

Take of

Yellow wax, three parts; Mutton fuet,

White refin, of each two parts.

THIS plafter is fimilar to the foregoing, but the further reduction of the refin renders it for fome purpofes more eligible.

EMPLASTRUM CEPHA-LICUM.

Cephalic plaster. Lond.

Take of

Burgundy pitch, two pounds; Soft labdanum, one pound; Yellow refin,

Yellow wax, each four ounces; The expressed oil, called oil of mace, one ounce.

Melt the pitch, refin, and wax together; then add, first the labdanum, and afterwards the oil of mace.

Edinb.

Take of

Tacamahaca in powder,

Yellow wax,

Venice turpentine, each four ounces;

Oil of lavender, two drams;

Oil of amber, one dram.

Melt the tacamahaca with the wax, and then add the turpentine, that

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that a plaffer may be formed. When this compound is taken from the fire, and grown almost cold, mix in the oils.

THESE plasters are applied, in weakness or pains of the head, to the temples, forehead, &c. and fometimes likewife to the feet. Schulze relates, that an inveterate rheumatism in the temples, which at times extended to the teeth, and occafioned 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 fo acrid as to corrode the cuticle.

EMPLASTRUM de CICUTA, cum AMMONIACO. Plaster of hemlock, with ammoniacum. Edinb.

Take of

Juice of hemlock leaves, four ounces;

Gum ammoniacum, eight ounces; Vinegar of fquills, as much as is fufficient to diffolve the gum.

Add the juice to this folution, and having firained the mixture, boil it to the confiftence of a plafter.

THIS plafter was formerly fuppofed to be a powerful cooler and diffutient, and to be particularly ferviceable against fwellings of the fpleen and distentions of the hypochondres. For fome time past, it has been among us entirely neglected; and hence the London college, at a late revifal of their pharmacopæia, omitted it. But the high refolvent power which Dr. Stork has discovered in hemlock, and which he found it to exert in this as well as in other forms, entitle it to further trials. The plafter appears very well contrived, and the additional ingredients well chofen for affifting the efficacy of the hemlock.

EMPLASTRUM COMMUNE. Common plaster, usually called Diachylon. Lond.

Take of

Take of

Oil olive, one gallon;

Litharge, ground into a most fubtile powder, five pounds.

Boil them over a gentle fire with about two pints of water, keeping them continually flirring, till the oil and litharge unite, and acquire the confiftence of a plaster. If all the water should be confumed before this happens, add fome more water previously made hot.

Edinb.

Oil olive, fix pints ; Litharge, three pounds. Boil them into a plafter.

THE heat in these processes should be gentle, and the matter kept continually flirring, otherwise it swells up, and is apt to run over the vesfel. If the composition prove 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, flight flesh wounds, and the like. They keep the part fost, and fomewhat 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 hogs lard. This, This, however, is by no means allowable, not only as it does not flick fo well, but likewife as the lard is apt to grow rancid and acrimonious. The counterfeit is diftinguifhable by the eye.

EMPLASTRUM COMMUNE ADHÆSIVUM. Common flicking plaster. Lond.

Take of

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Common plaster, three pounds ; Yellow refin, half a pound.

- Melt the common plafter over a very gentle fire; then add the refin, first reduced into powder, that it may melt the fooner; and mix them all together.
- This plafter may otherwife be made, by taking, inftead of the common plafter, its ingredients oil and litharge; and adding the refin a little before they have come to the due confiftence; then continue the boiling, till the plafter is finished.

It turns out the most elegant when made by this last method.

EMPLASTRUM ADHÆSI-VUM. Sticking plaster. Edinb.

Take of Common plaster, five parts; White refin, one part.

THESE plasters are used chiefly as adhesives, for keeping on other dressings, &c.

EMPLASTRUM COMMUNE cum GUMMI. Common plaster with gums. Edinb.

Take of

Common plaster, three pounds ; Galbanum strained, eight ounces; Common turpentine, Frankincense, each three ounces. Or, instead of the common plaster already made, you may take the oil and litharge boiled together. As foon as these unite, before they have acquired the confistence of a plaster, the other ingredients are to be added.

EMPLASTRUM GUMMOSUM. Gum plaster. Edinb.

Take of

Common 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.

EMPLASTRUM CROCEUM, vulgo OXYCROCEUM. Saffron plaster, commonly called Oxycroceum.

Edinb.

Take of

Burgundy pitch, Yellow wax, each one pound; Galbanum,

Tar, each half a pound ;

Saffron, rubbed into powder, two ounces;

Let the Borgundy pitch, wax, and galbanum, be melted together over a gentle fire; then add the tar and faffron, and make the whole into a plafter.

THIS infrugal and injudicious composition

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composition is faid to ftrengthen the parts to which it is applied, especially the tendinous ones; to warm in a great degree; and to resolve and discuss cold tumours. Tar is now introduced as an ingedient, in the room of Venice turpentine, myrrh, and olibanum.

EMPLASTRUM e CYMINO. Cummin plaster. Lond.

Take of

Burgundy pitch, three pounds; Yellow wax, Cummin feeds, Caraway feeds, Bay berries, each three ounces.

Melt the pitch with the wax; then fprinkle in the other ingredients, first reduced into a powder, and mix the whole well together.

THIS plafter ftands recommended as a moderately warm diffutient; and is directed by fome to be applied to the hypogaftric region, for ftrengthening the vifcera, and expelling flatulencies.

EMPLASTRUM DEFENSI-VUM. Defensive plaster. Edinb.

Take of

Common plaster, twenty - four parts;

White refin, fix parts;

Yellow wax,

Olive oil, of each three parts;

Colcothar of vitriol, eight parts. Rub the colcothar with the oil, and afterward add it to the reft when melted.

THIS plaffer is laid round the lips of wounds and ulcers, over the other dreffings, for defending them from inflammation, and a fluxion of humours; which however, as Mr-Sharp very justly observes, plasters, on account of their confistence, tend rather to bring on than to prevent.

EMPLASTRUM E MELILOTO. Melilot plaster.

Take of

Ss

Melilot leaves, fresh, fix pounds; Beef fuet, three pounds; White refin, eight pounds; Yellow wax, four pounds.

Boil the herb in the melted fuet till it is almost crifp; then strongly prefs out the fuet, and, adding the refin and wax, boil the whole a little, fo as to make a plaster.

THIS plaster has been frequently made use of for dreffing blifters: fee EMPLASTRUM ATTRAHENS. The London college have diminifhed the quantity of refin, to render the composition less irritating; and likewife omitted the herb, as being of no fignificancy towards the use of the platter, and of a very disagreeable scent; a circumstance of primary confequence to be avoided in diforders, where freedom from disturbance, and every means that can contribute to quiet reft, ought by all possible endeavours to be procured : not to mention the mischievous adulterations sometimes practifed in this plaster with irritating materials, for procuring the green colour, which is made its marketable characteriftic, more compendioully than by the decoction of the herb. The most certain method of discovering abuses of this kind, is to put a little of the plaster into fome fpirit of fal ammoniac; if it tinge the fpirit blue, we may be certain it is adulterated. The London college has fubfituted to this plaster the emplastrum attrabens, and the Edinburgh the emplastrum cerzum.

EMPLAS-

EMPLASTRUM ex AMMONI-ACO cum MERCURIO. Plaster of ammoniacum with mercury.

Lond.

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Take of

- Gum ammoniacum, ftrained, one pound;
- Quickfilver, three ounces;
- Simple balfam of fulphur, one dram.
- Grind the quickfilver with the balfam of fulphur, till it ceafe 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 plafter. If in fome cafes it fhould not prove adhefive enough, the addition of a fmall quantity of turpentine will readily make it fo.

EMPLASTRUM COMMUNE cum MERCURIO.

Common plaster with mercury. Lond.

Take of

Common plaster, one pound; Quickfilver, three ounces; Simple balfam of fulphur, one dram.

Make them into a plaster, after the fame manner as the foregoing.

EMPLASTRUM e HYDRAR-GYRO, five CŒRULEUM. Mercurial plaster. Edinb.

Take of

Olive oil,

White refin, of each one part; Quickfilver, three parts;

Common plaster, fix parts.

Melt the oil and refin together, and when cold, rub the quickfilver with them till perfectly incorporated; then add the common plaster melted, by degrees, and accurately mix the whole together.

THESE mercurial plafters are looked on as powerful refolvents and difcutients, acting with much greater certainty in thefe intentions, than any composition of vegetable fubstances alone; the mercury exerting itfelf in a confiderable degree, and being fometimes introduced into the habit in fuch quantity as to affect the mouth. Pains in the joints and limbs from a venereal caufe, nodes, tophs, and beginning indurations of the glands, are faid fometimes to yield to them.

EMPLASTRUM e MINIO. Red lead plaster. Lond.

Take of

Oil olive, four pints;

- Red lead, reduced to a most fubtile powder, two pounds and a half.
- Make them into a plaster, after the manner directed for preparing the common plaster. But more water is here required, and greater care is necessary to prevent the composition from burning and growing black.

THIS is used for the fame purposes as the common or diachylon plaster, from which it differs little otherwise than in colour. It has an inconvenience of not flicking fo well; and therefore the Edinburgh college have now omitted this composition.

EMPLASTRUM DE MINIO CUM SAPONE.

Red lead plaster with Soap.

This is made by adding to the foregoing plaster, taken from the fire as foon as the moisture is evaporated,

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Take of

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porated, and whilft hot, half a pound of Spanish foap cut into thin flices : ftir the whole ftrongly together, until the foap be liquefied, and a plaster formed according to art.

THIS is much effeemed by fome, for difcuffing gouty tumours, and the juices stagnating after sprains. Whatever virtues it may have, diftinct from the general ones of the applications of this class, they depend entirely upon the foap; and foap in the form of platters does not appear to exert much of the efficacy which it does in forms of a fofter confiftence.

EMPLASTRUM e MUCILAGI-NIBUS. Plaster of mucilages. Lond.

Take of

Yellow wax, forty ounces;

Oil of mucilages, half a pint; Gum ammoniacum, strained, half

a pound ;

Common turpentine, two ounces. Melt the ammoniacum with the turpentine; and having, in another veffel, liquefied the wax with the oil, add this latter mixture to the other.

Some have been accustomed to use, instead of the oil of mucilages, common oil olive, flavoured with fenugreek feeds. And poffibly this fubstitution may be admitted as a venial one; for the oil of mucilages, genuinely made, contains fcarce any thing of any of the ingredients, except that part of the fenugreek feeds wherein their flayour refides, the mucilaginous materials ferving only to provide it with a name.

EMPLASTRUM ROBORANS. Strengthening plaster.

Lond.

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Common plaster, two pounds; Frankincenfe, half a pound ; Dragons blood, three ounces.

- Melt the common plaster, and add to it the other ingredients reduced into a powder.
- The dragons blood fhould be reduced to a very fine powder, otherwife the mixture will not be of an uniform colour.

THIS is a reformation of the laborious and injudicious composition defcribed in our preceding pharmacopœias, under the title of EM-PLASTRUM AD HERNIAM; and though far the most elegant and fimple, is as effectual for that purpofe as any of the medicines of this kind. If conftantly worn, with a proper bandage, it will, in children, frequently do fervice ; though perhaps not fo much from any firengthening quality of the ingredients, as from its being a foft, clofe, and adhefive covering. It has been supposed, that plasters composed of styptic medicines conftringe and ftrengthen the part to which they are applied; but on no very just foundation ; for plasters in general relax rather than aftringe; the unctuous ingredients, neceflary in their composition, counteracting and deftroying the effect of the others.

EMPLASTRUM e SAPONE. Soap plaster. Lond.

Take of

Common plafter, three pounds; Hard foap, half a pound.

Having melted the common plaster, mix with it the foap, and boil them to the confiftence of a platter. Take care not to let it grow too cold, before you form it into rolls, for then it will prove too brittle. S \$ 2

THIS

THIS plaster differs only in colour from the red lead plaster, with foap, before mentioned.

EMPLASTRUM SAPONA-CEUM. Saponaceous plaster. Edinb.

Take of

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Common plaster, four parts;

Gum plaster, two parts ;

Spanish soap, shaved thin, one part.

Melt the plaffers together, and add the foap; afterwards boil it a little, that it may make an emplafter.

EMPLASTRUM STOMACHI-CUM.

Stomach plaster. Lond.

Take of

Soft labdanum, three ounces; Frankincenfe, one ounce; Cinnamon,

The expressed oil, called oil of mace, each half an ounce;

Effential oil of mint, one dram. Having melted the frankincenfe, add to it first the labdanum fostened by heat, and then the oil of mace. 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 flomach plafter. It is contrived fo as to be eafily made occafionally (for thefe kinds of compositions, on account of their volatile ingredients, are not fit for keeping), and to be but moderately adhesive, fo as not to offend the skin; and that it may without difficulty be frequently taken off and renewed, which these forts of

applications, in order to their producing any confiderable effect, require to be.

Edinb.

Take of

Yellow wax, eight ounces;

Tacamahaca in powder, four ounces;

Cloves, powdered, two ounces; Palm oil, fix ounces;

Expressed oil of mace, an ounce and a half;

Essential oil of mint, two drams.

Melt the wax and tacamahaca with the palm oil; then removing the mixture from the fire, add the other ingredients, and make them into a plafter according to art.

THESE plafters are applied to the pit of the flomach, in weaknefs of that vifcus, in vomitings, the diforder improperly called the heartburn, &c. and fometimes with good fuccefs. The pit of the flomach however, as Hoffman has obferved, is not always the most proper place for applications of this kind. If applied to the five lower ribs of the left fide, towards the back, the flomach will in general receive more benefit from them; for it appears from anatomical infpection, that greateft part of it is fituated there.

EMPLASTRUM VESICATO-RIUM.

Blistering plaster, or epispastic plaster. Lond.

Take of

Drawing plafter, two pounds; Cantharides, one pound; Vinegar, half a pint.

Melt the drawing plafter, and a little before it grows fliff, mix in the cantharides, reduced into a most fubtile powder; then add the vinegar, and work them well together.

Edinb.

Part IV.

Chap. 10.

Edinb.

Take of Hogs fat,

Yellow wax,

White refin,

Cantharides, in fine powder, of each an equal quantity.

After the reft are melted, remove them from the fire, and add the cantharides.

Compound epispastic plaster. Edinb.

Take of

Burgundy pitch, twelve ounces; Yellow wax, four ounces;

Venice turpentine, eighteen ounces;

Muftard feed,

Black pepper, each one ounce; Verdegris, two ounces;

Cantharides, twelve ounces.

Melt the wax and pitch together; then add the turpentine; and when this is liquefied, fprinkle in the other ingredients, first powdered and mixed together; keeping them continually flirring, to as to make a plaster thereof according to art.

The bliftering plafters are to be kept in oiled bladders.

THIS laft composition has long been used in some particular shops, as the most infallible blifter : though either of the other two answers the purpose very successfully. Whether the vinegar in the first be of any advantage, is greatly to be doubted. In fome cases, indeed, it has been observed, that the plaster without this addition feemed at first to fail of its effect; and that on taking it off, and rubbing the part with vinegar, the fame plafter, applied again, has bliftered freely : but this does not appear to be fo much owing to any peculiar quality of the vinegar, as to its foftening the ikin when applied in this manner, and fitting it

for the action of the cantharides. When mixed with the other ingredients of the plafter, it has not this effect: it likewife exhales in keeping; infomuch that the composition, though fufficiently foft at first, becomes in no long time too dry. Some have been accustomed to some have been accustomed to some have been accustomed to some trouble of making any plaster on purpose for blistering, by occasionally spreading some of the cantharides in powder upon a common plaster.

EMPLASTRUM ANODYNO-DISCUTIENS.

An anodyne and discutient plaster.

Take of

Plasters.

Cummin plaster, two ounces; Camphor, three drams;

- Thebaic extract, one dram and a half.
- Grind the camphor, with fome drops of oil olive, into a very fubtile powder, and then mix it with the other ingredients, according to art, into a plafter.

EMPLASTRUM CALIDUM. Warm plaster.

Take of

Gum plaster, one ounce;

Bliftering plafter, 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. S \$ 3 CHAP- Medicinal Compositions.

Part IV.

CHAPTER XI.

Ointments, Liniments, and Cerates.

INTMENTS and liniments differ from plasters little otherwife than in confiftence. An officinal plaster, diluted with fo much oil as will reduce it to the thicknefs of stiff honey, forms an ointment : by further increasing the oil, it becomes a liniment.

UNGUENTUM ÆGYPTIA-CUM.

Edinb.

Take of

Verdegris, finely powdered, five ounces;

Honey, fourteen onnces ;

Vinegar, feven ounces.

Boil them over a gentle fire, to the confistence of an ointment.

MEL ÆGYPTIACUM.

Lond.

Take of Verdegris, reduced into a very

fubtile powder, five ounces; Honey, fourteen ounces by

weight ; Vinegar, feven ounces by mea-

fure.

Boil these ingredients together, over a gentle fire, till they have acquired a due confistence, and a reddifh colour. On keeping this mixture for fome time, the thicker part falls to the bottom ; the thinner, which floats on the top, is called mel Ægyptiacum.

THESE preparations are defigned only for external use, for cleaning and deterging nlcers, and keeping down fungous flefh ; they are ferviceable alfo in venereal ulcerations

of the mouth and tonfils. If, for particular purpofes, they fhould be wanted more acrid, they may be occafionally rendered fo by fhaking the vefiel, fo as to mix up the thick matter at the bottom (which contains greatest part of the verdegris) with the upper thin one.

UNGUENTUM ALBUM. White ointment.

Lond.

Take of Oil olive, one pint ; White wax, four ounces ; Spermaceti, three ounces.

Liquefy them by a gentle fire, and keep them conftantly and brifkly ftirring, till grown thoroughly

cold.

Edinb.

Take of

White, or fimple ointment, five parts.

Ceruffe, one part. M. S. A.

THESE are uleful, cooling, emollient ointments, of good fervice in excoriations, and fimilar frettings of the fkin. The ceruffe is omitted in the first prescription, on a fufpicion that it might produce fome ill effect, when applied, as thefe unguents frequently are, to the tender bodies of children. Though there does not feem to be much danger in this external use of cerulle, the addition of it is the lefs necessary here, as there is another ointment containing a more active preparation of the fame metal, the unguentum faturninum ; which may be occasionally mixed with this,

OF

or employed by itself, in cases where faturnine applications are wanted.

UNGUENTUM ALBUM CAM-PHORATUM. Camphorated white ointment.

Lond.

This is made by adding to the white ointment a dram and a half of camphor, previoufly ground with fome drops of oil of almonds.

Edinb.

Take of

The white ointment, one pound; Camphor, rubbed with a little oil, one dram and a half. Mix them together.

THESE ointments are fuppofed to be more diffutient than the foregoing, and ferviceable against cutaneous heats, itching, and ferpiginous eruptions. They should be kept in close vessels, otherwise the camphor will soon exhale. Their smelling strong of this ingredient is the best mark, of their goodness.

UNGUENTUM ex ALTHÆA. Ointment of marshmallows.

Lond.

Take of

Oil of mucilages, three pints; Yellow wax, one pound; Yellow refin, half a pound;

Common turpentine, two ounces. Melt the refin and wax with the oil; then, having taken them from the fire, add the turpentine, and, while the mixture remains hot, ftrain it.

THIS ointment receives no virtue from the ingredient from which it takes its name, and therefore the Edinburgh college has omitted it. UNGUENTUM ANTIPSORICUM. Ointment against the itch.

Take of

Elecampane root, fresh,

Sharp-pointed dock root, fresh, each three ounces ;

Water-creffes, fresh and bruifed, ten ounces;

Hogs lard, four pounds ;

Yellow wax,

Oil of bays, each four ounces; Vinegar, one pint;

Water, three pints.

Bruife the roots, and boil them in the water and vinegar, till half the liquor is confumed. Strain and flrongly prefs out the remainder; add to it the watercreffes and the lard, and boil them till the moifture is exhaled; then prefs out the ointment, and liquefy in it the wax and the oil of bays.

Sulphur is added to this ointment occasionally.

UNGUENTUM ANTIPSORICUM CUM MERCURIO.

Ointment against the itch with mercury.

This is made by adding to the foregoing ointment four ounces of quickfilver, killed with a fufficient quantity of Venice turpentine, and mixing them together, according to art, into an unguent.

THESE ointments are very inelegant ones, and rarely made use of. The first is likewise precarious in its effects; and though those with fulphur and mercury are of undoubted efficacy, yet they are by no means superior to the more simple ointments of those drugs defcribed hereaster. The Edinburgh college has therefore, at a late reformation, very properly omitted both the antipforic ointments.

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UNGUENTUM BASILICUM FLAVUM.

Yellow basilicum ointment.

Lond.

Take of

Oil olive, one pint;

Yellow wax,

Yellow refin,

Burgundy pitch, each one pound; Common turpentine, three ounces.

Melt the wax, refin, and pitch, along with the oil, over a gentle fire; then take them from the fire, add the turpentine, and whilft the mixture remains hot, ftrain it.

Edinb.

Take of Hogs fat, eight parts ; White refin, five parts ; Yellow wax, two parts. Diffolve them over a gentle fire.

THESE are commonly employed in dreffings, for digefting, cleanfing, and incarnating wounds and ulcers.

UNGUENTUM BASILICUM NIGRUM vel TETRAPHARMACUM.

Black basilicum ointment, or ointment of four ingredients.

Lond.

Take of

Oil olive, one pint;

Yellow wax,

Yellow refin, Tar, each nine ounces.

Mix them all together, and, whilft the mixture is hot, firain it off.

THIS ointment was formerly of confiderable effeem for healing and incarnating wounds, &c. but is faid to have an inconvenience of being apt to render them foul, and produce fungous fiefh. At prefent in is rarely made use of; the yellow bafilicum, and the liniment of Arcæus, being in general preferred.

Part IV.

UNGUENTUM BASILICUM VIRIDE. Green basilicum ointment.

Lond.

Take of

Yellow bafilicum, eight ounces; Oil olive, three ounces by meafure;

Verdegris 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 refembling this, under the title of Unguentum varide detergens.

UNGUENTUM CITRINUM. Yellow ointment. Edinb.

Take of

Quickfilver, one ounce ; Spirit of nitre, two ounces ; Hogs lard, tried, one pound.

Diffolve the quickfilver in the fpirit of nitre, by digeftion in a fand-heat; and, whilft the folution is very hot, mix with it the lard, previoufly melted by itfelf, and juft beginning to grow ftiff. Stir them brifkly together, in a marble mortar, fo as to form the whole into an ointment.

UNGUENTUM CÆRULEUM FORTIUS.

The fironger blue continent. Lond.

Take of

Hogs lard, tried, two pounds; Quickfilver, one pound;

Simple balfam of fulphur, half an ounce.

Grind the quickfilver with the balfam of fulphur till they be perfectly incorporated; then gradually

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dually add the lard heated, and mix them carefully together.

UNGUENTUM CÆRULEUM MITIUS. The milder blue ointment. Lond.

Take of

Hogs latd, tried, four pounds; Quickfilver, one pound;

Common turpentine, one ounce. Grind the quickfilver with the turpentine, in a mortar, till it ceafe to appear; then gradually add the lard warmed, and carefully mix them together.

THIS last unguent turns out of a much better blue colour than the foregoing, which is of a very dingy hue. Mercurial unguents have in many cafes the fame effects with the preparations of this mineral taken internally; and are at prefent frequently employed, not only against cutaneous diforders, as alterants; but likewife in venereal and other obffinate cases, for raising a falivation. The ptyalism excited by unction is faid to be attended with the feweit inconveniencies, and to perform the most complete cure. In fome confficutions, mercurials taken inwardly, ron off by the inteffines, without affecting the mouth; and in others, they effect the falival glands fo quickly, as to occation a copious ptyalifm, without extending their action to the remoter parts, and confequently without removing the caufe of the difease.

UNGUENTUM DESICCATIVUM RUBRUM. Red deficcative ointment. Take of

Oil olive, a pint and a half; White wax, half a pound; Calamine prepared, fix ounces; Litharge prepared, Bole armenic, each four ounces; Camphor, three drams.

Melt the wax in the oil, and, having taken them from the fire, gradually fprinkle in the other ingredients, flirring them brifkly together into an ointment. The camphor must be previously ground with a little oil of almonds.

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THIS is faid to be an excellent drier and healer; but is at prefent in no great effeem, and rarely kept in the fhops. It was retained in a late Edinburgh pharmacoposia, but is now dropt.

UNGUENTUM DIAPOMPHOLYGOS. Ointment of pompholyx.

Take of

Oil olive, twenty ounces ;

- Juice of the berries of common, or deadly nightfhade, eight ounces;
- White wax, five ounces;
- Cerufie, four ounces;

Burnt lead,

Pompholyx, each two ounces ; Pure frankincense, one ounce.

Boil the oil and the juice over a gentle fire, till the juice be exhaled; and, towards the end of the coction, melt the wax in the oil; then take the mixture from the fire, and add to it, whilft hot, the other ingredients reduced to powder. Mix and make them into an ointment.

UNGUENTUM e GUMMI ELEMI. Ointment of gum elemi. Lond.

Take of

Mutton fuet, fresh and tried, two pounds;

Gum elemi, one pound ;

Common turpentine, ten ounces. Melt the gum with the fuet, and

having taken them from the fire, immediately mix in the turpentine ; tine; then, whilft the mass remains fluid, firain it off.

UNGUENTUM, vulgo LINI-MENTUM, ARCÆI. The ointment, commonly called lini-

ment, of Arceus. Edinb.

Take of

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Hogs lard, one pound ;

Goats fuet, or mutton fuet, two pounds;

Venice turpentine,

- Gum elemi, each a pound and a half.
- Melt and firain them, fo as to make an ointment according to art.

Twis 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 EMOLLIENS. Emollient ointment. Edinb.

Take of

Palm oil, four pints ;

Fresh-drawn linseed oil, three pints;

Yellow wax, one pound ;

Venice turpentine, half a pound. Melt the wax in the oils, over a gentle fire; then mix in the turpentine, and firain the ointment, which fupplies the place of the ointment of marfhmallows.

It is at least equal to that ointment for the purpose expressed in its title, nothing of the mucilage or emollient matter of the marshmallows being there retained. And indeed if mucilages were blended with ointments, they would possibly diminish, rather than increase, their emollient virtue; as they render oils fensibly less unctuous, forming with them a new compound, differ-

ent from the ingredients, and mifcible with water into a milky liquor, as we have feen in Chap. vii.

UNGUENTUM MERCU. RIALE.

Mercurial ointment.

Take of

Hogs lard, two ounces ; Quickfilver, one ounce.

Beat them together till the quickfilver difappears. It may likewife be made with two, three, or more times the quantity of quickfilver.

THIS is the most fimple of the mercurial ointments, though poffibly as efficacious as any. It requires indeed a great deal more labour to extinguish the mercury in the lard alone, than when turpentine, or fimilar substances, are joined : but, in recompence, the composition with lard is free from an inconvenience with which the others are accompanied, viz. being apt, by frequent rubbing, to fret tender fkins. Some chufe to ftiffen this ointment with a fourth part of fuet (proportionably diminishing the lard) which gives it a better confiftence for ufe.

The above prefcription, and remark, are from a former edition of this difpenfatory. The college has now received the addition of fuet, in fuch proportion as to make one fourth the quantity of the whole ointment; the proportion of quickfilver being continued the fame. The composition is now as follows.

Edinb.

Take of Hogs lard, three ounces; Mutton fuet, one ounce; Quickfilver, one ounce.

Beat

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Beat them together in a mortar, till the mercurial globules difappear. This ointment is made alfo with twice, and with thrice, the quantity of mercury.

UNGUENTUM e MERCURIO PRÆCIPITATO.

Ointment of mercury precipitate. Lond.

Take of

Simple ointment, an ounce and a half;

Precipitated fulphur, two drams; White mercury precipitate, two

- fcruples. Mix them well together, and moif-
- ten them with ley of tartar, that they may be made into an ointment.

THIS is a very elegant mercurial ointment, and frequently made use of against cutaneous diforders. The preparations of mercury and fulphur here directed, are chosen, on account of their colour.

UNGUENTUM NERVINUM. Nerve ointment.

Take of

Mutton fuet, two pounds;

- Oil of chamomile (by decoction) one pound ;
- Oil of bays, a pound and an half;

Effential oil of origanum, or of rofemary, two ounces.

Melt the fuet, over a gentle fire, in the oil of chamomile, fo as to make an ointment; which being removed from the fire, ftir into it the oil of bays and effential oil.

THIS ointment is defigned, as its title expresses, for warming and firengthening the nerves.

UNGUENTUM NUTRITUM. The ointment called nutritum, Edinb. Take of

Litharge,

Vinegar, each two ounces; Oil olive, fix ounces.

Rub them in a mortar, adding the oil and vinegar, alternately, by little and little at a time, till the vinegar ceafe to appear, and the ointment become uniform and white.

THIS ointment is troublefome to make, and does not keep well, the vinegar exhaling, fo as to leave the compound too ftiff: for which reafon, it is now directed to be made in lefs quantity than in former editions. It is fuppofed to be a good cooler and deficcative; and is occafionally ufed in excoriations, flight ferpiginous eruptions, and for anointing the lips of wounds or ulcers that itch much, or tend to inflammation.

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 likewife be made with two, three, or more times the quantity of camphor.

THIS unguent is very well contrived for the purpofe 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 requifite in the use of faturnine applications, for fo 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 preforiber shall think fit; the Edinburgh

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ceding edition of which the above form is taken) has now omitted it.

UNGUENTUM e PICE. Ointment of tar. Lond.

Take of

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Mutton fuet, tried,

Tar, each equal weights.

Melt them together, and strain the mixture whilft hot.

THIS composition, with the addition of half its weight of refin, has long been used in the shops as a cheap fubititute for the black bafilicum.

UNGUENTUM SAMBUCI-NUM. Ointment of elder. Lond.

Take of

Elder flowers, full blown, four pounds ;

Mutton fuet, tried, three pounds; Oil olive, one pint.

Melt the fuet with the oil, and in this mixture boil the flowers till they be almost crifp. Then strain and prefs out the ointment.

Edinb.

Take of

The inner bark of the elder tree, The leaves of elder, fresh, each

four ounces;

Linfeed oil, two pints ;

White wax, fix ounces.

Let the bark and leaves be well bruifed, and boiled in the oil till the humidity be confumed ; then prefs out the oil through a ftrainer, and melt in it the wax, fo as to make an ointment.

THESE ointments do not feem fuperior to fome others, which are much neater, and parable at lefs expence. They can fcarce be fuppofed to receive any confiderable

burgh pharmacopœia (from a pre- virtue from the ingredients from which they take their name.

UNGUENT. SATURNINUM. Saturnine ointment.

Lond.

Take of

Oil olive, half a pint; White wax, an ounce and a half :

Sugar of lead, two drams.

Let the fugar of lead, reduced into a very fubtile powder, be ground with fome part of the oil, and the wax melted with the reft of the oil. Mix both together, and keep them ftirring till the ointment be cold.

Edinb.

Take of

Sugar of lead, one ounce; White wax, three ounces ; Oil olive, one pint.

Liquefy the oil and wax together, and gradually add the fugar of lead; continually ftirring them, till, growing cold, they unite into an ointment.

BOTH these ointments are uleful coolers and deficcatives ; much fuperior both in elegancy and efficacy to the nutritum or tripharmacum.

UNGUENTUM SIMPLEX. The simple cintment. Lond.

Take of

fore.

Hogs lard, tried, two pounds ; Role water, three ounces by mea-

Beat the lard with the role water, till they be well mixed. Then melt them over a very gentle fire, and fet them by for fome time, that the water may fubfide : pour the lard off from the water, and keep inceffantly ftirring and beating it about till it grows cold, fo as to reduce it inte

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into a light incoherent mafs. Lastly, add fo much effence of lemons as will be fufficient to give a grateful odour.

UNGUENTUM ROSACEUM, vulgo POMATUM.

The rofe ointment, commonly called pomatum.

Edinb.

On any quantity of hogs lard, cut into fmall pieces, and placed in a glazed earthen veffel, pour as much water as will rife above it fome inches; and digeft 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 rofe water. Work them well together; and afterwards, pouring off the water, add to the lard fome drops of oil of rhodium.

THESE ointments are in common use for softening and smoothing the skin, and healing chops.

UNGUENTUM e SULPHURE. Ointment of fulphur. Lond.

Take of

The fimple ointment, half a pound;

Flowers of fulphur, unwashed, two ounces;

Effence of lemons, one scruple. Mix them together.

This is defigned for cutaneous diforders. It is much neater than the unguentum antipforicum cum fulphure, though, at leaft, equally efficacious.

Ointment against the itch.

Take of

Sulphur, one ounce ;

White hellebore root, in powder, or crude fal ammoniac, two drams;

Hogs lard, two ounces.

Mix, and make them into an ointment.

SULPHUR is a certain remedy for the itch, more fafe and efficacious than mercury. For, as Dr. Pringle observes, unless a mercurial unction were to touch every part of the fkin, there can be no certainty of fuccefs; whereas, by a fulphureous one, a cure may be obtained by only partial unction; the animalcula, which occasion this diforder, being, like other infects, killed by the fulphureous fteams which exhale by the heat of the body. As to the internal use of mercury, which fome have accounted a specific, there are several inftances of men's undergoing a complete falivation for the cure of the lues venerea, without being freed from the itch.

The quantity of ointment, here directed, serves for four unctions : the patient is to be rubbed every night; but to prevent any diforder that might arife from ftopping 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 fecond quantity also be exhausted; and in the worst cases to fubjoin the internal use of fulphur, not with a view to purify the blood, but to diffuse the steams more certainly through the fkin ; there being reason to believe, that the animalcula may fometimes lie too deep to be thoroughly deftroy. ed by external applications.

UNGUENTUM TRIPHAR-MACUM.

Ointment of three ingredients. Lond.

Take of

Common plaster, four ounces ; Oil olive, two ounces by meafure ;

Vinegar, one ounce by measure. Boil them together over a gentle fire, keeping them continually ftirring till they are reduced to the confistence of an ointment.

THIS is a new method of preparing the unguentum nutritum, much lefs troublefome than the one already defcribed under that title. The composition proves likewife more fmooth and uniform, and not fo liable to grow dry in keeping. This ointment is neverthelefs inferior, both in refpect of elegancy and efficacy, to the unguentum faturninum.

UNGUENTUM TUTLÆ. Ointment of tutty. Lond.

Let any quantity of prepared tutty be mixed with as much purified vipers fat, as is fufficient to reduce it into the confistence of a foft ointment.

THIS ointment is defigned for an ophthalmic. What particular virtues it receives from the vipers fat, we shall not prefume to determine.

IN a prefent edition of the Edinburgh pharmacopœia, this ointment is directed as follows.

Edinb.

Take of White, or fimple liniment, five parts ;

Tutty prepared, one part.

UNGUENTUM e CALCE ZINCI.

Ointment of the calx of zinc. Edinb.

Take of

White, or fimple liniment, fix parts; Calx of zinc, one part.

UNGUENTUM VERMIFUGUM.

Ointment against worms.

Take of

Lavender cotton,

Wormwood,

Rue,

Savin,

- Tanfy leaves, fresh gathered, each two ounces;
- Oil olive, a pint and a half;

Hogs lard, one pound ;

Yellow wax, three ounces;

Ox gall,

Socotorine aloes, each an ounce and a half;

Coloquintida,

Wormfeed, each one ounce.

Bruife the herbs, and boil them with the oil and lard, till the aqueous moisture be evaporated ; then prefs the liquor through a ftrainer, melt in it the wax, and afterwards add the other ingredients, boiling and firring them together, fo as to make an ointment. The aloes, coloquintida, and wormfeed, muft be previoufly reduced into a very fubtile powder.

THIS ointment is rubbed on the bellies of children for deftroying worms, and fometimes, as is faid, with good fuccefs. It is taken from a preceding edition of the Edinburgh pharmacopœia ; fince which it is omitted.

UNGUENTUM ad VESICA-TORIA. Ointment for blifters. Lond.

Take of

Hogs lard, tried, Bliftering plafter, each equal weight.

Melt them together over a very gentle fire, and keep them conftantly ffirring till grown cold.

UNGUENTUM EPISPASTI-CUM e PULVERE CAN-THARIDUM. Ointment for blifters with the powder of cantharides.

Edinb.

Take of

Basilicum ointment, seven parts; Cantharides, powdered, one part.

THESE ointments are added in the dreffings for blifters, intended to be made perpetual, as they are called, or to be kept running for a confiderable time, which in many chronic, and fome acute cafes, they are required to be. Particular care fhould be taken, that the cantharides employed in these compositions be reduced into very fubtile powder, and that the mixtures be made as equal and uniform as possible.

UNGUENTUM EPISPASTI-CUM ex INFUSIONE CANTHARIDUM.

Ointment for blifters with the infusion of cantharides.

Edinb.

Take of Cantharides, White refin, Yellow wax, each one ounce; Hogs lard, Venice turpentine, each two ounces; Boiling water, four ounces. Infuse the cantharides in the water, in a clofe veffel, for a night; then firongly prefs out and firain the liquor, and boil it with the lard till the watery moifture be confumed; then add the refin, wax, and turpentine, and make the whole into an eintment.

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THIS ointment, containing the foluble parts of the cantharides uniformly blended with the other ingredients, is more commodious, and occafions lefs pain, though not lefs effectual in its intention, than the two foregoing compositions with the fly in fubftance.

UNGUENTUM VIRIDE.

Green ointment. Lond.

Take of

The green oil, three pints; Yellow wax, ten ounces.

Melt them together over a gentle fire, and keep the mixture continually flirring until it grow cold.

THIS ointment does not feem to receive any particular virtue from the ingredients to which its colour is owing.

LINIMENTUM ALBUM. White liniment.

Lond.

Take of

Oil olive, three ounces by meafure;

Spermaceti, fix drams; White wax, two drams.

Melt them together over a gentle fire, and keep them constantly and brickly ftirring, till grown cold.

THIS differs only in confistence from the unguentum album.

UNGUENTUM ex ÆRUGINE. Verdegris ointment. Edinb.

Take of

640

Bafilicum ointment, five parts; Verdegris, one part.

A balfam, fimilar to this, is faid to have been greatly valued by our furgeons as a detergent.

LINIMENTUM TRIPHARMA-CUM.

Liniment of three ingredients. Lond.

Take of

Common plaster, four ounces ; Oil olive, a quarter of a pint ; Vinegar, one ounce by measure.

Boil them over a gentle fire, continually flirring them until they acquire the confistence of a liniment.

THIS is the fame with the unguentum tripharmacum, except that the quantity of oil is here increased, to give the compound the softer consistence of a liniment.

LINIMENTUM VOLATILE. Volatile liniment.

Take of

Oil of hartfhorn,

Spirit of hartshorn, each equal parts.

Mix them together.

DR. Pringle obferves, that in the inflammatory quinfey, or firangulation 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 flimulating application, the neck, and fometimes the whole body, is put into a fweat, which, after bleeding, either carries off or leffens the inflammation. Where the fkin cannot bear the acrimony of this mixture, the volatile liniment of the fhops may be tried.

CERATUM ALBUM. White cerate. Lond.

Take of

Oil olive, a quarter of a pint; White wax, four ounces; Spermaceti, half an ounce.

Liquefy them all together, and keep them flirring till the cerate be quite cold.

THIS differs from the white ointment and liniment, only in being of a thicker confiftence.

CERATUM CITRINUM. Yellow cerate. 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 being of a stiffer confistence, which renders it for some purposes more commodious.

CERATUM EPULOTICUM.

Epulotic cerate.

Lond.

Take of

Oil olive, one pint;

Yellow wax,

Calamine prepared, each half a pound.

Liquefy the wax with the oil, and, as foon as the mixture begins to grow fliff, fprinkle in the calamine; keeping them conftantly flirring together, till the cerate be quite cold.

CERATUM

Part IV.

CERATUM e LAPIDE CALA-MINARI. Cerate of calamine. ' Edinb.

Take of

White, or fimple cerate, five parts; Calamine prepared, one part.

THESE compositions are formed upon the cerate which TURNER firongly recommends in cutaneous ulcerations and excoriations, and which has been ufually diffinguished by his name. They appear from experience to be excellent epulotics, and are frequently made use of in practice.

CERATUM MERCURIALE. Mercurial cerate. Lond.

Take of

Yellow wax,

Hogs lard, tried, each half a pound;

Quickfilver, three ounces;

Simple ballam of fulphur, one dram.

Melt the wax with the lard, then gradually add this mixture to the quickfilver and balfam of fulphur previoully ground together.

* CERATUM SAPONACEUM. Soap cerate.

Take of

Litharge, in powder, one pound; The fharpeft wine vinegar, one gallon;

Caffile foap, fhaved thin, half a pound ;

Oil olive, one pound ;

Yellow wax, ten ounces.

Diffolve two ounces of the foap in a quart of the vinegar, and mix it with the litharge; fimmer it over a gentle fire, keeping it conftantly ftirring, till the vinegar is nearly evaporated, when add a quart more vinegar and two ounces more of ioap diffolved in it, and evaporate as before; repeat it to the fourth time; and when the vinegar is all evaporated, add the oil and wax, melted together beforehand in another veffel, and boil it gently to the confiftence of a cerate.

041

THIS cerate has been used many years, with great fuccess, in most of our hospitals, for defending the parts from defluxions, in fractures, diflocations, and contustions; and is universally approved of, as a most excellent diffcutient.

UNGUENTUM PARALYTICUM.

Palfy ointment.

Take of

Hogs 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 foon reddens and inflames the fkin, 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

ces ;

Yellow bafilicum,

Black bafilicum, each eight oun-

Balfam of turpentine, four ounces.

Mix and make them into an ointment.

TE

LINIMEN-

Medicinal Compositions.

LINIMENTUM ANODYNUM. Anodyne liniment.

Take of

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Nerve ointment, three ounces; Balfam of turpentine, one ounce. Mix them together.

LINIMENTUM HÆMORRHOI-DALE. Liniment for the piles.

Part IV.

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.

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CHAPTER XII. Epithems.

EPITHEMA VESICATORIUM. 7 Blistering epithem. Lond.

TAKE of Cantharides, reduced into a molt fubtile powder, Wheat flour, each equal weights. Make them into a pafte with vinegar.

THIS composition is of a fofter confiftence than the bliftering plafters, and, for this reason, is in some cases preferred. Practitioners differ with regard to the degree of confistence and adhesiveness most proper for applications of this kind, and sometimes vary them occasionally.

CATAPLASMA e CYMINO. Cataplasm of cummin. Lond.

Take of

Cummin feeds, half a pound; Bay berries, Scordium leaves, dried, Virginian fnakeroot, each three ounces; Cloves, one ounce; Honey, thrice the weight of the powdered fpecies. Make them into a cataplafm.

THIS is a reformation of the THERIACA LONDINENSIS, which for fome time was fcarce otherwife made use of than as a warm cataplasm; only such of its ingredients are retained as contribute most to this intention.

CATAPLASMA AROMATI-CUM. Aromatic cataplasm. Edinb. Take of

Long birthwort root, Bay berries, each four ounces;

Sweet fennel feeds,

Mint leaves, each three ounces; Jamaica pepper,

Myrrh, each two ounces ;

Honey, thrice the weight of the powders.

Mix and make them into a cataplafm; which fupplies the place of theriaca for external purpofes.

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 fpirit of wine, one ounce.

Boil the roots and flowers in a fufficient quantity of water, till they become tender; and, having then bruifed them, add to them the gum ammoniacum, diffolved in a fufficient quantity of vinegar, and likewife the fal ammoniac and fpirit. Mix the whole together, fo as to make them into a cataplafm.

THIS composition is as good a diffutient 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. Difcutient cataplasm. Take of Barley meal, fix ounces; Tt 2 Fresh Fresh hemlock, well bruised, two ounces;

Crude fal 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 fal ammoniac.

CATAPLASMA MATURANS.

Ripening cataplasm. Lond.

Take of

Figs, four ounces ;

Yellow bafilicum 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, bruifed, fix drams; Galbanum, half an ounce;

Yellow bafilicum ointment,

Oil of chamomile by decoction, each one ounce;

Linseed meal, as much as is fufficient.

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 diffolved in the yolk of an egg. BOTH these compositions are good fuppurants, or ripeners; though their effects probably depend more on their keeping the part fost, moist, and warm, than on any particular qualities of the ingredients.

SINAPISMUS. A finapifm. Edinb.

Take of

- Mustard seed, in powder, Crumb of bread, each equal parts;
- Strong vinegar, as much as is fufficient.

Mix and make them into a cataplafm; to which is fometimes added a little bruifed garlic.

IN a preceding edition, two finapifms were defcribed; a *fimple*, which is that before directed, without the garlick; and a *compound*, which is as follows.

Take of

Muftard feed, in powder,

Crumb of bread, each two ounces:

Garlic, bruised, half an ounce ;

Black foap, one ounce ;

Strong vinegar, a fufficient quantity.

Mix and make them into a cataplaim, 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 set in the low state of acute diseases, for raising the pulse and relieving the head.

COAGULUM ALUMINOSUM. Alum curd. Lond.

Any

Take of

Part IV.

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Chap. 12.

Any quantity of the white of eggs.

Agitate it with a fufficiently large Jump of alum, in a tin difh, till it be coagulated.

THIS preparation is taken from Riverius. It is an uleful altringent epithem for fore, moift eyes, and excellently cools and represes thin defluxions. Slighter inflammations of the eyes, occasioned by duit, exposure to the fun, or fimilar caufes, are generally removed by fomenting them with warm milk and water, and washing them with the collyrium defcribed before. Where the complaint is more violent, this preparation, after the inflammation has yielded a little to bleeding, is one of the belt external remedies. It is to be fpread on lint, and applied at bed-time.

CATAPLASMA EMOLLIENS. Emollient cataplasm.

Take of

Crumb of bread, eight ounces; White foap, one ounce; Cows' milk, fresh, a sufficient quantity. Boil them a little together. CATAPIASMA STOMACHICUM. Stomachic cataplasm,

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Take of

Epithems.

- The aromatic cataplasm, one ounce;
- Expressed oil of mace, two drams;
- Anodyne balfam, as much as is fufficient to reduce them into a proper confiftence.

CATAPLASMA CAMPHORATUM. Campborated cataplasm.

Take of

Aromatic cataplasm, one ounce; Camphor, one dram.

Mix them together.

CATAPLASMA ISCHIADÍCUM. Ifchiadic cataplasm.

Take of

Muftard feed, 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.





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