

VINUM VERATRI. *Lond.*
Wine of White Hellebore.

Take of

White hellebore root sliced, eight ounces ;
 Wine, two pints and a half.

Macerate for fourteen days, and filter.

THIS preparation is now introduced, we are told by Dr Powell, "because it is a medicine usefully and extensively employed in practice." This must be understood as applying only to London, for it is not yet known in Edinburgh, although there can be no doubt of its activity.

CHAP. XXXV.—EXTRACTS AND RESINS.

EXTRACT, in pharmacy, has long been used, in the common and true acceptation of the term, to express a thing extracted, and therefore it was applied to substances of all kinds which were extracted from heterogeneous bodies, by the action of any menstruum, and again reduced to a consistent form, by the evaporation of that menstruum. Lately, however, Extract has been used in a different and much more limited sense, as the name for a peculiar principle, which is often indeed contained in extracts, and which before had no proper appellation. It is in the former sense that we employ it here, and in which we wish it to be only used, while a new word should be invented as the name of the new substance. Till a better be proposed, we shall call it *Extractive*.

The London college have also added to the confusion in their last edition, by applying the term extract to what are commonly called inspissated juices, where no menstruum is employed.

Extracts are of various kinds, according to the nature of the substances from which they are obtained, and the menstruum employed: but they commonly consist of gum, sugar, extractive, tannin, cinchonin, gallic acid, or resin, or several of them mixed in various proportions. The menstrea most commonly employed are water and alcohol. The former is capable of extracting all the substances enumerated, except the resin, and the latter all except the gum. Wine is also sometimes employed, but very improperly; for as a solvent it can only act as a mixture of alcohol and water, and the principles which it leaves behind, on evaporation, are rather injurious than of advantage to the extract.

Water is the menstruum most economically employed in making extracts, as it is capable of dissolving all the active principles except resin, and can have its solvent powers assisted by a considerable degree of heat.

Watery extracts are prepared by boiling the subject in water, and evaporating the strained decoction to a thick consistence.

It is indifferent, with regard to the medicine, whether the subject be used fresh or dry; since nothing that can be preserved in this process will be lost by drying. With regard to the facility of extraction, however, there is a very considerable difference; vegetables in general giving out their virtues more readily when dried than when fresh.

In many cases, it is necessary to assist the action of the menstruum by mechanical division, but it should not be carried so far as to reduce the substance to a very fine powder; as Fabbroni found that cinchona, at least, yielded a larger proportion of extract, when only coarsely powdered.

The quantity of water ought to be no greater than is necessary for extracting the virtues of the subject. This point, however, is not very easily ascertained; for, although some of the common principles of extracts be soluble in a very small proportion of water, there are others, such as the tannin, of which water can dissolve only a certain proportion, and cannot be made to take up more by any length of boiling; besides, we have no very good method of knowing when we have used a sufficient quantity of water; for vegetable substances will continue to colour deeply successive portions of water boiled with them, long after they are yielding nothing to it but colouring matter. One of the best methods is to boil the subject in successive quantities of water, as long as the decoctions form a considerable precipitate with the test which is proper for detecting the substance we are extracting, such as a solution of gelatin for tannin, of alum for extractive, &c.

The decoctions are to be evaporated after they have been filtered boiling hot, without any farther depuration; because some of the most active principles of vegetable substances, such as tannin, are much more soluble in boiling than in cold water, and because almost all of them are very quickly affected by exposure to the atmosphere. Therefore, if a boiling decoction, saturated with tannin, be allowed to cool, the greatest part of the very principle on which the activity of the substance depends, will separate to the bottom, and, according to the usual directions, will be thrown away as sediment.

The same objection applies more strongly to allowing the decoction to cool, and deposite a fresh sediment, after it has been partially evaporated. Besides, by allowing the decoctions to stand several days before we proceed to their evaporation, we are, in fact, allowing the active principles contained in the decoction to be altered by the action of the air, and to be converted into substances, perhaps inactive, which also are thrown away as sediment.

The evaporation is most conveniently performed in broad shallow vessels; the larger the surface of the liquor, the sooner will the aqueous parts exhale. This effect may likewise be promoted by agitation.

When the matter begins to grow thick, great care is necessary to prevent its burning. This accident, almost unavoidable if the quantity be large, and the fire applied, as usual, under the evaporating basin, may be effectually prevented, by pouring the extract, when it has acquired the consistence of a syrup, into shallow tin or earthen pans, and placing these in an oven with its door open, moderately heated; which, acting uniformly on every part of the liquid, will soon reduce it to any degree of consistence required. This may likewise be done, and more securely, by setting the evaporating vessel in boiling water; but the evaporation is in this way very tedious. Dr Powell has figured a modification of the common tin sauce-pan for this purpose. It is nothing but putting a tin evaporating dish over a sauce-pan filled with water, which is made to boil.

Alcohol is much too expensive to be employed as a menstruum for obtaining extracts, except in those cases where water is totally inadequate to the purpose. These cases are,

1st, When the nature of the extract is very perishable when dissolved in water, so that it is liable to be decomposed before the evaporation can be completed, especially if we cannot proceed immediately to the evaporation.

2dly, When water is totally incapable of dissolving the substance to be extracted; and,

3dly, When the substance extracted can bear the heat of boiling alcohol without being evaporated, but would be dissipated by that of boiling water; that is, when it requires a heat greater than 176° , and less than 212° , for its evaporation.

In the last case, the alcohol must be perfectly free from water, because the heat necessary to evaporate it at the end of the process would frustrate the whole operation. Hence, also, the subject itself ought always to be dry: those substances,

which lose their virtue by drying, lose it equally on being submitted to this treatment with the purest alcohol.

In this way the alcoholic extract of some aromatic substances, as cinnamon, lavender, rosemary, retain a considerable degree of their fine flavour.

In the second case, the alcohol need not be so very strong, because it is capable of dissolving resinous substances, although diluted with a considerable proportion of water.

In the first case, the alcohol may be still much weaker; or rather, the addition of a small proportion of alcohol to water will be sufficient to retard or prevent the decomposition of the decoction.

The alcohol employed in all these cases should be perfectly free from any unpleasant flavour, lest it be communicated to the extract.

The inspissation should be performed from the beginning, in the gentle heat of a water-bath. We need not suffer the alcohol to evaporate in the air: the greatest part of it may be recovered by collecting the vapour in common distilling vessels. If the distilled spirit be found to have brought over any flavour from the subject, it may be advantageously reserved for the same purposes again.

When diluted alcohol is employed, the distillation should only be continued as long as alcohol comes over; and the evaporation should be finished in wide open vessels.

In this chapter we have also included the processes intended for purifying inspissated juices and resinous substances.

Pure resins are prepared, by adding, to spiritous tinctures of resinous vegetables, a large quantity of water. The resin, incapable of remaining dissolved in the watery liquor, separates and falls to the bottom; leaving in the menstruum such other principles of the plant as the spirit might have extracted at first along with it. But this is only practised for the purpose of analysis.

EXTRACTS MADE WITH WATER.

EXTRACTUM GENTIANÆ LUTÆÆ. *Ed.*

Extract of Gentian.

Take of

Gentian root, any quantity.

Having cut and bruised it, pour upon it eight times its weight

of distilled water. Boil to the consumption of one-half of the liquor, and strain it by strong expression. Evaporate the decoction immediately, to the consistence of thick honey, in a bath of water saturated with muriate of soda.

EXTRACTA. *Lond.**Extracts.*

In preparing all extracts, evaporate the fluid in a pan, in a water-bath, as quickly as possible, until it become of a proper thickness for forming into pills, stirring it constantly towards the end with a spatula.

Sprinkle a little Rectified spirit on all softer extracts.

EXTRACTA SIMPLICIORA. *Dub.**Simple Extracts.*

ALL simple extracts, unless otherwise ordered, are to be prepared according to the following rule:

The vegetable matter is to be boiled in eight times its weight of water, to one-half; the liquor is then to be expressed, and, after the *faeces* have subsided, to be filtered; it is then to be evaporated, with a heat between 200° and 212° , until it becomes thickish; and, lastly, it is to be evaporated with a heat less than 200° , and frequently stirred, until it acquire a consistence proper for forming pills.

All extracts, when they begin to get thick, ought to be frequently stirred with a clean iron spatula. They may be reduced to a proper thickness by means of a stove, heated on purpose.

They ought to be preserved as much as possible from the contact of the air, and the softer ones are to be sprinkled with rectified spirit.

In this manner are prepared the following officinal Extracts.

EXTRACTUM	Extract of
<i>Cacuminum</i> ABSINTHII. <i>Dub.</i>	Wormwood.
<i>Radice</i> GLYCYRRHIZÆ GLABRÆ. <i>Ed.</i>	} Liquorice.
GLYCYRRHIZÆ. <i>Dub.</i>	
HELLEBORI NIGRI. <i>Ed. Dub.</i>	Black Hellebore.
GENTIANÆ LUTÆ. <i>Ed.</i>	} Gentian.
GENTIANÆ. <i>Dub.</i>	
JALAPÆ. <i>Dub.</i>	Jalap.
<i>Foliorum</i> RUTÆ GRAVEOLENTIS. <i>Ed.</i>	} Rue.
RUTÆ. <i>Dub.</i>	
CASSIÆ SENNÆ. <i>Ed.</i>	Senna.
SABINÆ. <i>Dub.</i>	Savin.
<i>Florum</i> ANTHEMIDIS NOBILIS. <i>Ed.</i>	} Chamomile.
CHAMÆMELI. <i>Dub.</i>	

<i>Capitum PAPAVERIS SOMNIFERI.</i>	<i>Ed.</i>	Poppy-heads.
<i>Cacuminum GENISTÆ.</i>	<i>Dub.</i>	Broom-tops.
<i>Ligni HÆMATOXYLI CAMPECHIANI.</i>	<i>Ed.</i>	} Logwood.
<i>Scobis HÆMATOXYLI.</i>	<i>Dub.</i>	
<i>Corticis QUERCUS.</i>	<i>Dub.</i>	Oak bark.
<i>Herbæ et Radicis TARAXACI.</i>	<i>Dub.</i>	Dandelion.

EXTRACTUM ALOES PURIFICATUM. *Lond.*
Purified Extract of Aloes.

Take of

Socotorine aloes, in powder, half a pound ;
Boiling water, four pints.

Macerate in a gentle heat for three days, then strain, and set it at rest till the fæces subside. Pour off the clear liquor, and evaporate to a proper thickness.

THIS is supposed to be less irritating than the aloes itself, but it appears to be an unnecessary refinement.

EXTRACTUM ANTHEMIDIS. *Lond.*
Extract of Chamomile.

Take of

Chamomile flowers, dried, one pound ;
Water, one gallon.

Boil down to four pints, and filter the liquor while hot. Then evaporate to a proper thickness.

EXTRACTUM CINCHONÆ. *Lond.*
Extract of Cinchona.

Take of

Lance-leaved cinchona bark, bruised, one pound ;
Water, one gallon.

Boil to six pints, and filter the liquor while hot. With the same quantity of water, and in the same manner, repeat the boiling and filtration four times. Then reduce all these liquors, mixed together, to a proper thickness, by evaporation.

This extract must be kept in two forms ; one *soft*, and fit for making pills ; the other *hard* and pulverizable.

EXTRACTUM CINCHONÆ. *Dub.*
Extract of Cinchona.

Take of

Cinchona, in coarse powder, one pound ;
Water, six pints.

Boil, for a quarter of an hour, in a vessel almost covered ; filter the decoction while hot through linen, and set it

aside. Boil the residuum again, in the same quantity of water, and filter it in the same manner. This may be repeated a third time, and all the decoctions are to be mixed and reduced to a proper degree of thickness by evaporation.

This extract ought to be kept in two states; one soft, adapted for making pills; and the other hard, capable of being pulverised.

EXTRACTUM COLOCYNTHIDIS. *Lond.*
Extract of Colocynth.

Take of

Pulp of colocynth, one pound;

Water, one gallon.

Boil to four pints, and filter the liquor while hot. Lastly, evaporate to a proper thickness.

Mr Phillips says, that it is scarcely possible to boil the colocynth in the assigned quantity of water, and that the extract obtained is remarkably spongy, and very soon becomes hard and mouldy.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM. *Dub.*
Compound Extract of Colocynth.

Take of

Pith of colocynth, cut small, six drachms;

Hepatic aloes, one ounce and a half;

Scammony, half an ounce;

Lesser cardamom seeds, husked, one drachm;

Castile soap, softened with warm water, so as to have a gelatinous consistence, three drachms;

Warm water, one pint.

Digest the colocynth in the water, in a covered vessel with a moderate heat, for four days. To the liquor, expressed and filtered, add the aloes and scammony, separately reduced to powder: then evaporate the mixture to a proper thickness for making pills, having added, towards the end of the evaporation, the soap-jelly and powdered seeds; and mix all the ingredients thoroughly together.

EXTRACTUM GENTIANÆ. *Lond.*
Extract of Gentian.

Take of

Gentian root, one pound;

Boiling water, one gallon.

Macerate for twenty-four hours ; then boil down to four pints, and filter the liquor while still hot ; lastly, evaporate it to a proper thickness.

EXTRACTUM GLYCYRRHIZÆ. *Lond.*

Extract of Liquorice.

Take of

Liquorice root, sliced, one pound ;
Boiling water, one gallon.

Macerate for twenty-four hours ; then boil down to four pints, and filter the liquor while still hot ; lastly, evaporate it to a proper thickness.

EXTRACTUM HÆMATOXYLI. *Lond.*

Extract of Logwood.

Take of

Logwood, bruised, one pound ;
Boiling water, one gallon.

Macerate for twenty-four hours, then boil to four pints.—
Strain the liquor while hot, and evaporate to a proper consistence.

EXTRACTUM HUMULI. *Lond.*

Extract of Hops.

Take of

Hops, four ounces ;
Water boiling, a gallon.

Boil down to four pints, strain the hot liquor, and evaporate it to a proper consistence.

IN the former edition 1809, the quantity of hops was half a pound, in regard to which Mr Phillips says that the proportion of water ordered was considerably too small. It has accordingly been corrected.

EXTRACTUM OPII AQUOSUM. *Dub.*

Watery Extract of Opium.

Take of

Opium, two ounces ;
Boiling water, one pint.

Triturate the opium in the water, for ten minutes ; then, after waiting a little, pour off the liquor, and triturate the remaining opium with the same quantity of boiling water, pouring off the infusion in the same manner. This may be repeated a third time. Mix the decanted liquors, and expose the mixture to the air, in an open vessel, for two

days. Lastly, filter through linen, and, by slow evaporation, form an extract.

EXTRACTUM OPII. *Lond.*
Extract of Opium.

Take of

Opium, sliced, half a pound;
Water, three piats.

Add a small quantity of the water to the opium, and macerate for twelve hours, that it may soften; then, having gradually added the rest of the water, triturate them, until they become thoroughly mixed, and set the mixture at rest until the fæces subside. Then filter the liquor, and evaporate to a proper thickness.

EXTRACTUM PAPAVERIS. *Lond.*
Extract of Poppy.

Take of

Poppy heads, bruised without the seeds, one pound;
Boiling water, a gallon.

Macerate for twenty-four hours; then boil to four pints: strain the liquor while hot, and evaporate to a proper thickness.

EXTRACTUM SARSAPARILLÆ. *Lond.*
Extract of Sarsaparilla.

Take of

Sarsaparilla root, sliced, one pound;
Boiling water, one gallon.

Macerate for twenty-four hours; then boil to four pints, and filter the liquor while hot; lastly, evaporate to a proper thickness.

EXTRACTUM TARAXACI. *Lond.*
Extract of Dandelion.

Take of

Fresh dandelion root, bruised, one pound;
Boiling water, one gallon.

Macerate for twenty-four hours; then boil to four pints, and filter the liquor while hot; lastly, evaporate to a proper thickness.

EXTRACTUM VALERIANÆ. *Dub.*
Extract of Valerian.

Take of

Valerian root, in coarse powder, six ounces ;
Boiling water, three pints.

Mix and digest, with a moderate heat, twenty-four hours, in a covered vessel ; and then express the liquor, and evaporate it to a proper thickness.

EXTRACTS MADE WITH ALCOHOL.

EXTRACTUM CINCHONÆ OFFICINALIS. *Ed.*
Extract of Cinchona.

Take of

Cinchona bark, in powder, one pound ;
Alcohol, four pounds.

Digest for four days, and pour off the tincture.

Boil the residuum in five pounds of distilled water, for fifteen minutes, and filter the decoction, boiling hot, through linen. Repeat this decoction and filtration, with the same quantity of distilled water, and reduce the liquor, by evaporation, to the consistence of thin honey.

Draw off the alcohol from the tincture, by distillation, until it also become thick ; then mix the liquors, thus inspissated, and evaporate them in a bath of boiling water, saturated with muriate of soda, to a proper consistency.

EXTRACTUM CONVULVULI JALAPÆ. *Ed.*
Extract of Jalap,

Is prepared in the same way, from the root.

EXTRACTUM CINCHONÆ RESINOSUM. *Lond.*
Resinous Extract of Cinchona.

Take of

Lance-leaved cinchona, bruised, one pound ;
Rectified spirit of wine, four pints.

Macerate for four days, and strain ; distil the tincture, in a water-bath, to a proper thickness.

EXTRACTUM COLOCYNTHIDIS COMPOSITUM. *Lond.*
Compound Extract of Colocynth.

Take of

Pulp of colocynth, sliced, six drachms ;

Socotorine aloes, in powder, one ounce and a half;
Scammony, in powder, half an ounce;
Cardamom seeds, powdered, one drachm;
Proof-spirit, one pound.

Macerate the pulp of colocynth in the spirit, with a gentle heat, for four days. Strain the liquor, and add to it the aloes and scammony. Then evaporate to a proper thickness, adding, towards the end of the operation, the cardamom seeds.

EXTRACTUM RHEI. *Lond.*
Extract of Rhubarb.

Take of

Rhubarb root, in powder, one pound;
Proof-spirit, one pint;
Water, seven pints.

Macerate, with a gentle heat, for four days; then filter, and set it aside, until the fæces subside. Pour off the liquor clear, and evaporate to a proper thickness.

EXTRACTUM JALAPÆ. *Lond.*
Extract of Jalap.

Take of

Jalap, in powder, one pound;
Rectified spirit, four pints;
Water, two pints.

Macerate the jalap in the spirit, for four days, and pour off the tincture. Boil the residuum in the water to two pints. Then filter the tincture and decoctions separately, and evaporate the latter, and distil the former until both thicken; lastly, mix the extract with the resin, and evaporate to a proper thickness.

THIS extract is to be kept in two states, one *soft*, proper for making pills, and one *hard* and pulverizable.

EXTRACTUM CASCARILLÆ RESINOSUM. *Dub.*
Resinous Extract of Cascarilla.

Take of

Cascarilla, in coarse powder, one pound;
Rectified spirit of wine, four pints.

Digest for four days; then pour off the tincture, and strain; boil the residuum, in ten pints of water, to two: evaporate the filtered decoction, and distil the tincture, in a retort, till both begin to grow thick; then mix them, and evaporate them to a state fit for making pills. Lastly, they are to be intimately mixed.

In this way are prepared

EXTRACTUM CINCHONÆ RUBRÆ RESINOSUM. *Dub.*
Resinous Extract of Red Cinchona Bark.

EXTRACTUM JALAPÆ RESINOSUM. *Dub.*
Resinous Extract of Jalap.

OPIUM PURIFICATUM. *Dub.*
Purified Opium.

Take of

Opium, cut into small pieces, one pound;

Proof-spirit of wine, twelve pints.

Digest with a gentle heat, stirring now and then till the opium be dissolved; filter the liquor through paper, and distil in a retort until the spirit be separated: Pour out the liquor which remains, and evaporate, until the extract acquires a proper thickness.

Purified opium must be kept in two forms; one *soft*, proper for forming into pills; the other *hard*, capable of being reduced into powder.

Lond.

Very carefully separate opium from all heterogeneous matters, especially those adhering to it on the outside. Opium is to be kept in two states; one *soft*, fit for making pills; and another *hard*, dried in a water-bath, until it become pulverizable.

ALL these extracts are supposed to contain the virtues of the substances from which they are prepared, in a very pure and concentrated form; but this supposition is, probably in several instances, erroneous; and the directions for preparing them are frequently injudicious and uneconomical.

As the changes which opium and aloe undergo by solution, and subsequent evaporation, have never been ascertained by careful and satisfactory experiments, well-selected pieces of these substances are to be preferred to the preparations in which they are supposed to be purified. As a farther proof of the superiority of good opium over all its preparations, I may also remark, that the latter, however well prepared, soon become mouldy, the former never does.

Mr Phillips, however, prefers the preparing of an extract of opium, by first submitting it to the action of boiling water, as long as any portion of it continues to be dissolved, and then digesting the residuum in rectified spirit, and mixing the watery and alcoholic extracts thus obtained. He found, that 72 parts of opium, dried by steam till it became pulverizable,

yielded to cold water 30 parts, then to boiling water 9, and, lastly, to alcohol 7. The first solution or cold infusion was of a deep brownish-red colour, remained transparent, and smelt strongly of opium; the second or decoction was of a pale brown colour, deposited on cooling the greater part of what had been dissolved, and had no smell of opium; and the third or tincture very much resembled common tincture of opium, and furnished, on the addition of water, an abundant yellowish-white precipitate. Dr Powell also says, that proof-spirit by heat dissolves 9-12ths of opium; and water, although heated, only 5-12ths.

Cinchona bark is a medicine of very great importance; but, unfortunately, the proportion of woody fibres, or inert matter, which enters into its composition, is so great, that weak stomachs cannot bear it, when given in quantity sufficient to produce any very powerful effects. On this account the preparation of an extract, which may contain its active principles in a concentrated form, is a desirable object. On this subject there is still much room for experiment. The London college, in its former Pharmacopœia, certainly erred in two important particulars; in the first place, in desiring the decoction to be continued until the greatest part of the menstruum was evaporated; and, in the second place, in separating, by filtration, the powder which separated from the decoction after it had cooled. The first error probably originated in the idea, that, by continuing the boiling for a great length of time, more of the bark would be dissolved; but it is now known, that water is incapable of dissolving more than a certain quantity of the active principles of cinchona; and that after the water has become saturated, by continuing the decoction we diminish the quantity of the menstruum, and therefore also diminish the quantity of bark dissolved. It is not easy to account for the second error; for, according to the old idea, that the powder which separated, on cooling, from a saturated decoction of cinchona, was a resinous substance, it surely ought not to have been rejected from what were supposed to be resinous extracts. This precipitate is now known to be caused by the much greater solubility of its active principles in boiling than in cold water; so that the precipitate is not different from what remains in solution. Accordingly, I ascertained, by experiment, that cinchona gave at least one half more extract when the decoction was conducted according to the directions of the Edinburgh college; and the London college, in their present Pharmacopœia, have improved their processes on the same principles.

The real advantage of so expensive an agent as alcohol, in preparing any of these extracts, has not been demonstrated; and, if I be not misinformed, it is seldom employed by the apothecaries in preparing even what are called the Resinous Extracts.

RESINA FLAVA. *Dub.*
Yellow Resin.

This remains in the retort after the distillation of oil of turpentine.

TURPENTINES are combinations of volatile oil and resins, which are easily separated by distillation. The process, however, cannot be carried so far as to separate the whole of the oil, without charring and burning part of the resin. In this state it has a brown colour, and a certain degree of transparency, and is well known under the name of Fiddlers Rosin. But if water be added to the residuum of the distillation, and be thoroughly mixed with it by agitation, it becomes opaque, and is called Yellow Rosin.

Yellow rosin is a useful ingredient in the composition of plasters and hard ointments.

GUMMI RESINE. *Lond.*
Gum Resins.

Those gum-resins are to be reckoned the best which are selected so pure, that they do not stand in need of purification. But if they seem impure, boil them in water until they grow soft; then squeeze them through a canvas bag, by means of a press. Let them remain at rest till the resinous part subside; then evaporate, in a water-bath, the part of the water decanted off; and towards the end of the evaporation, mix the resinous part with the gummy into a homogeneous mass.

Gum-resins which melt easily may be purified by putting them into an ox bladder, and holding it in boiling water till they become so soft, that they can be separated from impurities by pressing them through a hempen cloth.

As one, and perhaps the most active, constituent of gummy resins, as they are called, is of a volatile nature, it is evident that it must be, in a great measure, dissipated in the process just described, and that we cannot expect the same virtues in these substances after they are purified, which they possess in their crude state. This process is, therefore, contrary to the principles of good pharmacy; and such specimens of these

gummy resins as stand in need of it to give them an apparent degree of purity, should not be admitted into the shop of the apothecary. Besides, many of the impurities which they usually contain are easily separated, in compounding the preparations or extemporaneous prescriptions into which they enter.

STYRAX PURIFICATA. *Lond.*

Purified Storax.

Dissolve storax in rectified spirit of wine, and filter; afterwards reduce the balsam to a proper thickness, by distilling off the spirit with a gentle heat.

Dub.

Digest the storax in water, with a low heat, until it get soft; then express it between iron plates, heated with boiling water; and, lastly, separate it from the water.

STORAX is a balsam, or combination of resin and benzoic acid, both of which are soluble in alcohol, and neither of them volatile in the heat necessary for evaporating alcohol. The London process for purifying it is therefore not liable to any chemical objections. The method now directed by the Dublin college is certainly more economical, but must be attended with loss of benzoic acid.

CHAP. XXXVI.—POWDERS.

THIS form is proper for such materials only as are capable of being sufficiently dried to become pulverizable, without the loss of their virtue. There are several substances, however, of this kind, which cannot be conveniently taken in powder; bitter, acrid, fetid drugs are too disagreeable; emollient and mucilaginous herbs and roots are too bulky; pure gums cohere, and become tenacious in the mouth; fixed alkaline salts deliquesce when exposed to the air; and volatile alkalies exhale. Many of the aromatics, too, suffer a great loss of their odorous principles when kept in powder, as in that form they expose a much larger surface to the air.

The dose of powders, in extemporaneous prescription, is generally about half a drachm; it rarely exceeds a whole drachm; and is not often less than a scruple. Substances