

Sp. 31. *Willd.*; *sp.* 10. *Smith.* RUMEX ACETOSA. *Ed. Lond.*
Common sorrel.

Off.—The leaves.

FOLIUM RUMICIS ACETOSE. *Ed.*

ACETOSE FOLIA. *Lond.*

SORREL is a perennial plant, which grows wild in fields and meadows throughout Britain, and flowers in June. The leaves have a pleasant acid taste, without any smell or particular flavour; their medical effects are, to cool, quench thirst, and promote the urinary discharge: a decoction of them in whey affords an useful and agreeable drink in febrile or inflammatory disorders. All these effects are to be ascribed entirely to the super-oxalate of potass which they contain.

RUTA GRAVEOLENS. *Ed. Lond. Dub.*

Willd. g. 927, *sp.* 1. *Decandria Monogynia.*—*Nat. ord.* *Multisiliquæ.*

Rue.

Off.—The herb.

HERBA RUTÆ GRAVEOLENTIS. *Ed.*

FOLIA RUTÆ. *Lond. Dub.*

THIS is a small shrubby plant, a native of the south of Europe, and cultivated in our gardens.

Rue has a strong ungrateful smell, and a bitterish penetrating taste: the leaves, when in full vigour, are extremely acrid, insomuch as to inflame and blister the skin, if much handled. Neumann got from 960 drains of the dried leaves 330 alcoholic extract, and afterwards 290 watery; and inversely, 540 watery and 40 alcoholic. Both primary extracts are bitter and acrid. Rue also contains a volatile oil, which congeals readily, and is obtained in the greatest quantity by distilling the plant with the seeds half-ripe.

Medical use.—With regard to its medical virtues, like other remedies of which the active constituent is an essential oil, it is heating and stimulating, and hence it is sometimes serviceable in spasmodic affections, and cases of obstructed secretions.

SACCHARUM OFFICINARUM. *Ed. Lond. Dub.*

Willd. g. 122, *sp.* 4. *Triandria Digynia.*—*Nat. ord.* *Gramina.*

Sugar-cane.

Off.—a) Raw or brown sugar.

SACCHARUM. *Lond.*

SACCHARUM NON PURIFICATUM. *Ed.*

SACCHARUM RUBRUM. *Dub.*

b) Double refined sugar.

SACCHARUM PURIFICATUM. *Lond. Dub.*

SACCHARUM PURISSIMUM. *Ed.*

c) Molasses.

SACCHARI RUBRI SYRUPUS. *Dub.*

THE sugar-cane grows wild in both Indies, and forms the chief object of cultivation in the West Indies.

Sugar, of which we have already noticed the general properties, is principally obtained from this plant, by boiling down its expressed juice, with the addition of a certain proportion of lime or potass, until the greater part is disposed to concrete into brownish or yellowish crystalline grains. The lime or potass is added to saturate some malic acid, whose presence impedes the crystallization. The *molasses* is that portion of the inspissated juice which does not crystallize.

1. The crystallized portion, or *raw sugar*, is sent to Europe to be refined. This is performed by dissolving it in water, boiling the solution with lime water, clarifying it with blood, or white of eggs, and straining it through woollen bags. The solution, after due evaporation, is permitted to cool to a certain degree, and then poured into conical forms of unglazed earthen ware, where it concretes into a mass of irregular crystals. The syrup which has not crystallized runs off through a hole in the apex of the cone. The upper or broad end of the cone is then covered with moist clay, the water of which gradually penetrates into the sugar, and displaces a quantity of syrup, which would otherwise be retained in it, and discolour it. It is then carefully dried, and gets the name of *loaf* or *lump sugar*. When the solution and other steps of the process are repeated, the sugar is said to be *double refined*. Sugar is sometimes made to assume a more regular form of crystallization, by carrying the evaporation only a certain length, and then permitting the syrup to cool slowly. In this form it is called *Brown* or *White sugar-candy*, according to the degree of its purity.

Raw sugar varies very much in quality. It should be dry, crystallized in large sparkling hard grains, of a whitish or clear yellow colour, without smell, and of a sweet taste, without any peculiar flavour.

Refined sugar should have a brilliant white colour, and a close compact texture. It should be very hard but brittle, and break with sharp, semi-transparent, splintery fragments.

Medical use.—Sugar, from being a luxury, has now become one of the necessaries of life. In Europe, sugar is almost solely used as a condiment. But it is also a very wholesome and powerful article of nourishment; for during crop time, the negroes in the West Indies, notwithstanding their increased labours, always grow fat. It is in this way also that its internal employment is useful in some diseases, as in sea scurvy; for sugar produces no particular effect as a medicine, except that the coarse and impure kinds are slightly purgative. Applied externally it acts as an escharotic in spongy and unhealthy granulations; and to abraded or inflamed surfaces it proves gently stimulant. In pharmacy it is principally employed to cover bad tastes, to give form to, and to preserve more active substances. In using it for the last purpose, we must always remember, that if the proportion of sugar employed be too small, it will promote, instead of retarding the fermentation of the articles it is intended to preserve.

Molasses or treacle is a very impure syrup. It is thick, viscid, of a dark-brown, almost black colour, and has a peculiar smell, and a sweet, somewhat empyreumatic taste.—Treacle is applied to many domestic and economical purposes. It is admirably adapted for covering the taste of nauseous drugs; and in hospital practice may supersede the use of sugar in many instances.

SAGAPENUM. *Gummi-resina.* Ed. Lond. Dub.

Sagapenum. A gum-resin.

THE plant which furnishes the substance is not ascertained, but is conjectured by Willdenow to be the *Ferula Persica*.

Sagapenum is a concrete juice, brought from Alexandria, either in distinct tears, or agglutinated in large masses. It is outwardly of a yellowish colour; internally somewhat paler, and clear like horn; it grows soft upon being handled, and sticks to the fingers; its taste is hot, nauseous, and bitterish, and its smell disagreeable and alliaceous.

Neumann got from 480 grains, 306 alcoholic and 108 watery extract; and inversely, 170 watery, and 241 alcoholic extract. The alcohol distilled from it was sensibly impreg-

nated with its flavour, and along with the water a considerable portion of volatile oil arose. It is not fusible.

Medical use.—In medical virtues it holds a kind of middle place between *assa foetida* and *galbanum*, and may be employed in the same manner, and under similar circumstances.

SALIX.

Willd. g. 1756. *Smith, g.* 409. *Dioecia Diandria.*—Nat. ord. *Amentaceæ.*

Sp. 10. *Willd.*; *sp.* 17. *Smith.* SALIX FRAGILIS. *Dub.*
Crack willow.

Sp. 33. *Willd.*; *sp.* 45. *Smith.* SALIX ALBA. *Dub.*
Common white willow.

Sp. 101. *Willd.*; *sp.* 40. *Smith.* SALIX CAPREA. *Lond.*
Great roundleaved sallow.

Off.—The bark.
SALICIS CORTEX. *Lond. Dub.*

THE barks of these as well as of other indigenous species of willow, have been recommended as substitutes for cinchona. The white willow was first introduced into practice by Mr Stone; and strong evidence in favour of the use of the broad-leaved, in debility, intermittents and foul ulcers, has been published by Messrs James, White and Wilkinson. They possess very considerable astringency and bitterness, but differ chemically from cinchona in containing no tannin. An ounce and a half of the dried bark should be first macerated six hours in two pounds of water, and then made to boil in it for ten or fifteen minutes. An ounce or two of this decoction may be given three or four times a-day, or oftener.

SALVIA OFFICINALIS. *Ed. Dub.*

Willd. g. 63, *sp.* 7. *Diandria Monogynia.*—Nat. ord. *Verticillatæ.*

Sage.

Off.—The leaves.

FOLIUM SALVIE OFFICINALIS. *Ed.*

SALVIA. *Dub.*

SAGE is a perennial plant, a native of the south of Europe, and cultivated in our gardens. There are several varieties of it, differing in size, or in the colour of the flower, but their

properties are the same. They have a peculiar aromatic smell, and a warm aromatic taste, with some degree of bitterness and astringency.

Medical use.—In its effects, sage agrees with other aromatics. It is stimulant, carminative, and tonic. In cold phlegmatic habits it excites appetite, and proves serviceable in debility of the nervous system. The best preparation for these purposes is an infusion of the dried leaves, drunk at tea, or a tincture, or extract, made with rectified spirit, taken in proper doses; these contain the whole virtues of the sage, the distilled water and essential oil only its warmth and aromatic quality, without any of its roughness or bitterness. Aqueous infusions of the leaves, with the addition of a little lemon-juice, prove an useful diluting drink in febrile disorders, being sufficiently agreeable to the palate.

SAMBUCUS NIGRA. *Ed.*

Willd. g. 569, sp. 3. Smith, g. 157, sp. 2. Pentandria Trigynia.—*Nat. ord. Damosæ.*

Common elder.

Off.—*a)* The flowers.

FLOS SAMBUCI NIGRI. *Ed.*

SAMBUCI FLORES. *Lond. Dub.*

b) The berries.

BACCÆ SAMBUCI NIGRI. *Ed.*

BACCÆ SAMBUCI. *Dub.*

c) The inner bark.

CORTEX SAMBUCI NIGRI. *Ed.*

CORTEX INTERIOR SAMBUCI. *Dub.*

THIS tree is frequent in hedges; it flowers in June, and ripens its fruit in September. The berries contain malic acid, and have a sweetish, not unpleasant taste; nevertheless, eaten in substance, they offend the stomach. For the market, they are gathered indiscriminately from the *Sambucus nigra* and *Ebulus*, a very venial fraud, as their effects are exactly the same. They are, however, easily distinguished, by the latter, when bruised, staining the fingers of a red colour, and the former of the colour of a withered leaf.

Medical use.—An infusion of the inner green bark of the trunk in wine, or the expressed juice of the berries in the dose of half an ounce or an ounce, is said to purge moderately, and in small doses to prove an efficacious deobstruent, capable of promoting all the fluid secretions. The expressed juice, inspissated to the consistence of a rob, proves an useful

aperient medicine, promotes the natural evacuations, and, if continued for a sufficient length of time, is of considerable service in various chronical disorders. The young leaf buds are strongly purgative, and act with so much violence as to be deservedly accounted unsafe. The flowers are very different in quality; these have an agreeable aromatic flavour, which they yield in distillation to water, and impart, by infusion, to vinous and spiritous liquors.

SAPO.

a) Hard soap, composed of soda and olive oil.

SAPO: Sapo albus Hispanus, ex oleo Oleæ Europææ et soda confectus. *Ed.*

SAPO DURUS: Sapo ex Olivæ oleo et Soda confectus (Hispanicus). *Lond.*

SAPO: Durus Hispanicus. *Dub.*

b) Soft soap made of oil and potass.

SAPO MOLLIS: Sapo ex oleo et potassa confectus. *Lond.*

THE general chemical properties of soap have been already noticed. Soap is of two kinds, hard and soft, hard when it is made with soda, and soft when made with potass. The latter is a strong, but coarse soap, and in medicine is only used externally as a detergent and cataplasm. The officinal species of the former is composed of olive oil and soda. It is only prepared in the countries which produce the oil. For medicinal use we prefer the Spanish.

It should be white and hard, dissolve entirely in water and in alcohol, forming with the former a milky, and with the latter a transparent solution: and the solutions should froth freely on agitation. It should not be variegated in its colour, feel greasy or moist, or be covered with a saline efflorescence; and the solution should not have a rancid smell or taste. Some of the foreign Dispensatories are so very particular about the nature of the soap used in medicine, as to direct it to be prepared by the apothecary, by simply triturating, without the assistance of heat, Provence oil, with half its weight of a solution of soda, of the specific gravity of 1.375 until they unite.

Soap is decomposed by all the acids, earths, and earthy and metalline salts. The acids combine with the alkali, and separate the oil. The earths form an insoluble earthy soap with the oil, and separate the alkali; while with the salts there is a mutual decomposition, their acid combines with the alkali, and earthy or metalline soaps are formed.

Medical use.—The detergent property of soap, or the power it possesses of rendering oily and resinous substances miscible with water, has given rise to very erroneous notions of its medical virtues. It was supposed to render such substances more readily soluble in the juices of the stomach, and in the fluids of the body, and to be well fitted for dissolving such oily or unctuous matters as it may meet with in the body, attenuating viscid juices, opening obstructions of the viscera, and detarging all the vessels it passes through. It has likewise been supposed a powerful menstruum for the urinary calculus; and a solution of soap in lime-water has been considered as one of the strongest solvents that can be taken with safety into the stomach; for the virtue of this composition has been thought considerably greater than the aggregate of the dissolving powers of the soap and lime-water when un-mixed.

How erroneous these ideas are, appears evidently, when we recollect the very easy decomposition of soap, which renders it perfectly impossible that it should enter the circulating system, or indeed come into contact with the fluids even of the mouth, without being decomposed. As to the solution of soap in lime-water, we may observe, that it is only a clumsy way of exhibiting a solution of soda; for the soap is decomposed, an insoluble soap of lime is formed, and the soda remains in solution. The internal use of soap should therefore be confined, in our opinion, to the giving form to other substances which are not decomposed by it, and to the decomposing metallic poisons when they have been taken into the stomach. For this last purpose, a tea-cup full of a solution of soap in four times its weight of water may be drunk every three or four minutes, until a sufficient quantity be taken.

Applied externally, soap is a very powerful detergent, and combines the stimulating properties of the alkali with the lubricity of the oil. In this way it often proves a powerful discutient, and a useful application to sprains and bruises.

SCILLA MARITIMA. *Ed. Lond. Dub.*

Willd. g. 640, sp. 1. Hexandria Monogynia.—Nat. ord. *Li-
liaceæ.*

Squill.

Off.—The root.

RADIX SCILLÆ MARITIMÆ. *Ed.*

SCILLÆ RADIX. *Lond. Dub.*

THE squill is a perennial bulbous-rooted plant, which grows wild on the sandy shores of Spain, Portugal, north of Africa, and the Levant.

The root is about the size of the fist, pear shaped, with the apex upwards, and consists of fleshy scales, attenuated at both edges, surrounded by other scales, which are arid, shining, and so thin, that the root, at first sight, seems to be tunicated. The recent root is full of a white viscid juice, has scarcely any smell, but a very bitter, nauseous, and extremely acrid taste. Rubbed on the skin, it inflames and blisters.

It is more commonly met with in the shops in the form of the dried scales, which should be brittle, semi-pellucid, smooth, but marked with lines, and when chewed should feel tenacious, and taste very bitter, without manifest acrimony.

The active constituent of the squill is the acrid principle; and, therefore, it becomes almost inert by too much drying, or by being kept too long in the form of powder. It also contains bitter extractive, much mucilage, albumen and starch.

Medical use.—Given internally in large doses, it produces purging and vomiting, sometimes even strangury, bloody urine, inflammation and erosion of the stomach. In smaller doses, it proves a useful expectorant and diuretic, and it is said to lessen the frequency of the pulse.

Squill is sometimes given as a general stimulant in typhus, especially to cattle. But it is much more frequently exhibited as an expectorant, where the lungs are loaded with viscid matter, and as a diuretic in dropsical cases, for which purpose it is commonly conjoined with calomel.

The dose of squill is one or two grains three or four times a-day; and the most commodious form of its exhibition, unless when designed as an emetic, is that of a bolus or pill: in a liquid form it is to most people too offensive, though rendered less disagreeable both to the palate and stomach by the addition of aromatic distilled waters.

SCROPHULARIA NODOSA. *Dub.*

Willd. g. 1152, sp. 2. Smith, g. 285, sp. 1. Didymia Angiosperma.—*Nat. ord. Personata.*

Knotty-rooted figwort.

Off.—The herb.

HERBA SCROPHULARIÆ.

THIS is a perennial plant, growing in woods and under hedges. It flowers in July. The roots are grey and knotty, and have a nauseous smell, and a sweet but somewhat acrid taste, both of which they partly lose by drying.

SINAPIS.

Willd. g. 1246. Smith, g. 312, Tetradymania Siliquosa.—
 Nat. ord. *Siliquosæ*.

Sp. 4. Willd.; sp. 2. Smith, SINAPIS ALBA. Ed. Dub.
 White mustard.

*Off.—*The seeds.

SEMINA SINAPIS ALBÆ. *Ed.*

SEMINA SINAPI. *Dub.*

Sp. 5. Willd.; sp. 5. Smith, SINAPIS NIGRA. Lond.
 Common mustard.

*Off.—*The seeds.

SINAPIS SEMINA. *Lond.*

THESE plants are both annual, both grow wild in England, and possess similar virtues.

They flower in June, and produce small round compressed seeds, which have an acrid bitterish taste, and a pungent smell when reduced to powder. The common mustard has blackish seeds, and is more pungent than the white.

They impart their taste and smell in perfection to aqueous liquors, whilst rectified spirit extracts extremely little of either: the whole of the pungency arises with water in distillation. Committed to the press, they yield a considerable quantity of a bland insipid oil, perfectly void of acrimony: the cake left after the expression is more pungent than the mustard itself.

Medical use.—Mustard seed is swallowed entire, to the quantity of a table-spoonful or more, to stimulate the stomach in some cases of dyspepsia, and to excite the peristaltic motion of the intestines, especially when they are torpid, as in paralysis. The powder made into a paste with water is commonly used as a condiment with animal food; infused in water, it proves emetic when taken in considerable doses, and in smaller ones acts as a diuretic and aperient; but it is more frequently applied externally as a topical stimulus, made into a paste, or sinapism, with vinegar and bread-crumbs.

SISYMBRIUM NASTURTIIUM. *Ed.*

*Willd. g. 1238, sp. 1. Smith, g. 306, sp. 1. Tetradymania Siliquosa.—*Nat. ord. *Siliquosæ*.

Common water-cress.

*Off.—*The recent herb.

HERBA.

THIS plant is perennial, and grows wild in clear springs, and rivulets throughout Britain. Its leaves remain green all

the year, but are in greatest perfection in the spring. They have a pungent smell (when rubbed betwixt the fingers), and an acrid taste, similar to that of scurvy-grass, but weaker. By drying or boiling, they lose their sensible qualities entirely.

Medical use.—It acts as a gentle stimulant and diuretic: for these purposes, the expressed juice, which contains the peculiar taste and pungency of the herb, may be taken in doses of an ounce or two, and continued for a considerable time.

SIUM NODIFLORUM. Dub.

Willd. g. 544, sp. 4. Smith, g. 139, sp. 3. Pentandria Digynia.—Nat. ord. *Umbellatae.*

Procumbent water parsnip.

Officinal.—The herb.

HERBA SII. Dub.

THIS plant is perennial, and grows wild in rivers and ditches in England. It flowers in July and August, and was formerly alleged to be not only diuretic, but also emmenagogue and lithontriptic. It is now scarcely employed.

SMILAX SARSAPARILLA. Ed. Dub. Lond.

Willd. g. 1800, sp. 9. Dioecia Hexandria.—Nat. ord. *Sarmentaceæ.*

Sarsaparilla.

Off.—The root.

RADIX SMILACIS SARSAPARILLÆ. Ed.

SARSAPARILLÆ RADIX. Lond. Dub.

THIS root is brought from the Spanish West Indies. It consists of a great number of long fibres, hanging from one head: the long roots, the only part made use of, are of a blackish colour on the outside, and white within, about the thickness of a goose quill, or thicker, flexible, composed of a very small woody heart, surrounded with fibres running their whole length, which renders them extremely apt to split. They have a glutinous, bitterish, not ungrateful taste, and no smell. Inferior kinds of this root are also sold. They are in general thicker, of a paler colour on the outside, and less white within, with a much thicker woody heart. Neumann got from 960 grains, 360 watery, and 10 alcoholic extract, and inversely 240 alcoholic, and 120 watery.

Medical use.—It was first brought into Europe by the Spaniards, about the year 1563, with the character of being a specific for the cure of the lues venerea, a disease which made its appearance a little before that time, and likewise of several

obstinate chronic disorders. It then lost its reputation, and was considered by many as a very inert mucilaginous substance; and the diaphoresis, which it is sometimes supposed to produce, was entirely ascribed to the warm and diluent regimen employed at the same time. More recently, however, it has come into favour for the cure of many cutaneous affections, and especially of syphiloid diseases; and if upon just grounds, it will explain why it should have been so strongly recommended in syphilis, and why it should have failed.

SOLANUM DULCAMARA. *Lond. Dub.*

Willd. g. 383, sp. 15. Smith, g. 100, sp. 1. Pentandria
Monadelphia.—Nat. ord. *Solanaceæ.*

Bitter-sweet. Woody nightshade.

Off.—The twigs.

DULCAMARÆ CAULIS. *Lond.*

DULCAMARÆ STIPITES, *autumno collectæ. Dub.*

THIS climbing shrub grows wild in moist hedges, has woody brittle stalks, and flowers in June and July. The twigs should be gathered early in spring. The taste, as the name of the plant expresses, is both bitter and sweet; the bitterness being first perceived, and the sweetness afterwards; and when fresh they have a nauseous smell.

Medical use.—The dulcamara was formerly much esteemed as a powerful medicine. It is in general said to increase all the secretions and excretions, to excite the heart and arteries, and, in large doses, to produce nausea, vomiting, and convulsions; but its effects seem to differ according to the nature of the soil on which it grows, being most efficacious in warm climates, and on dry soils. It has been recommended in cutaneous affections, especially lepra and in syphiloid diseases, in rheumatic and cachectic swellings, in ill-conditioned ulcers, scrofula, indurations from milk, leucorrhœa, jaundice, and obstructed menstruation. It has principally been used in decoction: two or three ounces of that of the London Pharmacopœia may be given thrice a-day, and gradually augmented, till a pint be consumed daily. A stronger decoction may be used externally as a lotion. In the form of extract, from 5 to 10 grains may be given for a dose.

SOLIDAGO VIRGA AUREA. *Dub.*

Willd. g. 1483, sp. 35. Smith, g. 368, sp. 1. Syngenesia su-
perflua.—Nat. ord. *Compositæ radiatæ.*

Common golden-rod.

Officinal.—The flowers and leaves.

a) VIRGÆ AUREÆ FLORES. *Dub.*

b) VIRGÆ AUREÆ FOLIA. *Dub.*

This plant is perennial, and is found wild on heaths and in woods, producing spikes of yellow flowers from July to September. The leaves have a moderately astringent bitter taste; and thence prove serviceable in debility and laxity of the viscera, and disorders proceeding from that cause.

SPARTIUM SCOPARIUM. *Ed. Dub. Lond.*

Willd. g. 1332, sp. 19. Smith, g. 321, sp. 1. Diadelphia

Candria.—Nat. ord. *Papilionaceæ.*

Common broom.

Off.—The tops and seeds.

a) SUMMITATES SPARTII SCOPARII. *Ed.*

SPARTII CACUMINA. *Lond.*

GENISTÆ CACUMINA. *Dub.*

b) GENISTÆ SEMINA. *Dub.*

This is a very common shrub on dry pastures, flowering in June and July.

The leaves have a very bitter taste, and when given in decoction prove considerably diuretic. The seeds have similar properties.

SPIGELIA MARILANDICA. *Ed.*

Willd. g. 308, sp. 2. Pentandria Monogynia.—Nat. ord.

Stellata.

Carolina pink.

Off.—The root.

RADIX SPIGELIÆ MARILANDICÆ. *Ed.*

SPIGELIÆ RADIX. *Lond. Dub.*

This plant is perennial, and grows wild in the southern parts of North America. It is the *Unsteetla* of the Cherokees. The root is celebrated as anthelmintic, particularly for the expulsion of lumbrici from the alimentary canal, and it often affords relief where no worms are discharged. Some order it in doses of ten or fifteen grains, while others give it in drachm doses, alleging that the nervous affections it sometimes produces more readily happen from small doses, as the large ones often purge or puke. Some prefer the form of infusion. An emetic is generally premised; and its purgative effect is assisted by some suitable additions. Infused in wine, it has been found useful in intermittents. Dr Barton recommends

it in the insidious remitting fever of children, which often lays the foundation for hydrocephalus.

SPONGIA OFFICINALIS. *Ed. Lond.*

Cl. Zoophyta. Ord. Spongia.

Sponge.

Off.—Sponge.

SPONGIA OFFICINALIS. *Ed.*

SPONGIA. *Lond. Dub.*

SPONGE is principally found in the Mediterranean and Red Seas. It was long supposed to be a vegetable production, but it is now universally allowed to belong to that remarkable class of animals called Zoophytes, which are negatively characterized by Cuvier, as having no vertebræ, no sanguiferous vessels, no spinal marrow, and no articulated limbs. The sponges belong to that division of the zoophytes, which are attached to a solid trunk, and are particularized by their base being spongy, friable, or fibrous.

Sponge is a soft, light, very porous and compressible substance, absorbing by capillary attraction a large proportion of any fluid in which it is immersed.

Medical use.—From these properties, it is an useful substance in the practice of surgery. When applied to ulcers which are accompanied with a copious discharge, it absorbs the thinner and more acrid fluid, and leaves the ulcers covered with the thicker and blander matter. It is also useful in suppressing hæmorrhagies, when properly applied by compression, by favouring the coagulation of the blood at the mouths of the vessels. It also forms a convenient tent for dilating wounds and fistulous ulcers, especially when prepared by immersing it in melted wax, and keeping it compressed until it cools. On the melting of the wax by the heat of the part to which it is applied, it gradually expands, and affords an uniform and gently dilating pressure.

Burnt sponge is nothing else than charcoal mixed with a little muriate of soda and phosphate of lime.

STALAGMITIS CAMBOGIODES. *Ed. Lond. Dub.*

Willd. g. 1888, *sp.* 1. *Polygamia Monoecia.*—*Nat. ord. Tricocceæ.*

Off.—The gum-resin.

GAMBOGIA. *Ed. Dub.*

CAMBOGIA. *Lond.*

THE tree which furnishes the gamboge is of middling size, and grows wild in the kingdom of Siam and in Ceylon. In

Siam the gum-resin is obtained in drops by breaking the leaves and young shoots; hence probably its name *Gummi-guttæ*; but in Ceylon it is extracted from the wood of the tree in the form of a juice, which soon becomes solid. Gamboge, or at least a very similar substance, is also got in the same way from different species of *Garcinia*, especially the *Gambogia*, (the *Gambogia Gutta* of Lin.) *Willd. g. 938, sp. 3. Dodecandria Monogynia*, and from different species of *Hypericum*, especially the *Bacciferum*. It is brought from the East Indies in large cakes or rolls. The best sort has a deep yellow or orange colour, shining fracture, and is free from impurities. It has no smell, and very little taste, unless kept in the mouth for some time, when it impresses a slight sense of acrimony. Neumann got from 16 ounces, 14 of alcoholic extract, and one of watery; and inversely, 13 of watery, and 2 of alcoholic. He also found it almost entirely soluble in water, impregnated with a moderate proportion of fixed alkaline salt. According to my experiments, which confirm these observations, the watery solution is opaque and yellow. With alcohol it forms a transparent solution of a bright golden colour; and the residuum is totally soluble in water. The alcoholic solution is decomposed by water, becoming yellow and opaque; but the precipitate remains long suspended, and cannot be separated by common filtering paper. Ammoniated alcohol dissolves gamboge with similar phenomena. Gamboge is readily soluble in solution of potass, acquiring a bright red colour the moment it is thrown into it, and forming a dark-coloured solution, which is not decomposed by water; but the addition of any acid immediately produces a copious yellow precipitate, very soluble in excess of acid. Gamboge is also very soluble, but with decomposition, in acids. The acid solution is decomposed by water. Bracconot says it consists of one-fifth of gum, and four-fifths of an acidiferous resin, from which he extracted, by analysis, 22.5 dry muriatic acid, ? 35 charcoal, 42 gases. This requires to be repeated.

Medical use.—Gamboge evacuates powerfully both upwards and downwards; some condemn it as acting with too great violence, and occasioning dangerous hypercatharsis; while others are of a contrary opinion. Geoffroy seems particularly fond of this medicine, and informs us, that he has frequently given from two to four grains, without its proving at all emetic; that from four to eight grains both vomit and purge without violence; that its operation is soon over; and that, if given in a liquid form, and sufficiently diluted, it does not need 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 along with *calomel*. He nevertheless cautions against its use where the patients cannot easily bear vomiting.

It has been used in dropsy with cream of tartar or jalap, or both, to quicken their operation. It is also recommended by some to the extent of fifteen grains, with an equal quantity of vegetable alkali, in cases of the tape-worm. This dose is ordered in the morning; and if the worm is not expelled in two or three hours, it is repeated even to the third time with safety and efficacy. It is asserted, that it has been given to this extent even in delicate habits.

It is an ingredient, and probably the active one, in most of the nostrums for expelling tæniæ.

STANNUM. *Lond. Ed. Dub.*

Off.—a) Tin-filings.

STANNI LIMATURA. *Lond. Dub. Ed.*

b) Powder of tin.

STANNI PULVIS. *Dub. Ed.*

THE general properties of tin have been already mentioned.

It is found,

1. Sulphuretted, and combined with copper. Tin-pyrites.
2. Oxidized.
 - a. Combined with oxide of iron and silica. Common tinstone.
 - b. Combined with oxide of iron, and a little arsenic. Fibrous tinstone.

THE best tin is found in Cornwall, or is brought from the East Indies. Its purity is estimated by its small specific gravity, and by the crackling noise it makes when bent.

It is now only used as an anthelmintic, especially in cases of tænia, and probably acts mechanically.

STYRAX.

Willd. g. 874. Decandria Monogynia—Nat. ord. Bicornes.

Sp. 1. STYRAX OFFICINALE. Ed. Lond. Dub.

Off.—Storax, a balsam.

BALSAMUM STYRACIS OFFICINALIS. *Ed.*

STYRACIS BALSAMUM. *Lond.*

STYRAX CALAMITA ; resina. *Dub.*

THIS tree grows in the Levant, Italy, and France. The storax flows from wounds made in the bark, in countries where the heat is sufficient; for neither in France nor in Italy does it furnish any. It occurs either in small distinct tears, of a whitish or reddish colour, or in large masses composed of tears, or in masses of an uniform texture, and yellowish-red or brownish colour; though sometimes likewise interspersed with a few whitish grains.

The *common storax* of the shops is in large masses, considerably lighter and less compact than the foregoing; it appears on examination to be composed of a resinous juice, mixed with saw-dust.

Storax has an agreeable smell and an aromatic taste. Neumann got from 480 grains, 360 alcoholic, and 30 of watery extract; and inversely, 120 watery, and 240 alcoholic. In distillation it yielded benzoic acid. It is therefore a balsam, or natural combination of resin with benzoic acid.

Sp. 3. STYRAX BENZOÏN. Ed. Lond. Dub.

Off.—Benzoin, a balsam.

BALSAMUM STYRACIS BENZOÏNI, *vulgo* Benzoinum. *Ed.*

BENZOÏNUM; balsamum. *Lond.*

BENZOE; resina. *Dub.*

THIS species grows in Sumatra, and like the former also furnishes a balsam on being wounded, which is brought from the East Indies in large masses, composed of white and light brown pieces, with yellowish specks, breaking very easily betwixt the hands: that which is whitest, and freest from impurities, is most esteemed.

In its properties it differs from storax only in containing a larger proportion of benzoic acid. Neumann found that it was totally soluble in alcohol, forming a blood-red tincture, and that water extracted no gummy matter, but a notable proportion of benzoic acid. By sublimation he got two ounces of impure acid from sixteen of benzoin. Lime and the alkaline carbonates dissolve the acid without attacking the resin, and are accordingly employed in the process of Scheele, Gottling, and Gren, for obtaining the benzoic acid. I find that the solution of potass dissolves benzoin very rapidly, forming a dark coloured solution, mixed with fine crystals of benzoat of potass. This alkaline solution is not decomposed by water, but forms with acids a rose-coloured coagulum, easily soluble in excess of acid. Boiling nitrous acid also attacks benzoin with great violence, and dissolves it entirely; the solution becomes

turbid, and lets fall a copious precipitate on cooling, which, according to Mr Brande, is benzoic acid. It is decomposed by water, and by alkaline solutions.

SODÆ BORAS; s. s. Sub-boras sodæ. *Lond.*

BORAS SODÆ; v. s. Borax. *Ed.*

BORAX; s. s. Sub-boras sodæ. *Dub.*

Borate of soda. Sub-borate of soda. Borax.

BORAX is found only in Thibet and Persia. It is extracted from the waters of some wells and lakes by evaporation. In its impure state it is called tincal, and is brought from the East Indies in great masses, composed of a few large crystals, but chiefly of smaller ones, partly white and partly green, joined together as it were by a greasy yellow substance, intermixed with sand, small stones, and other impurities. By repeated solutions, filtrations and crystallizations, it shoots into hexangular prisms, of which two sides are broader than the others, terminated by triangular pyramids, of a white colour, a styptic and alkaline taste, colouring vegetable blues green, soluble in eighteen parts of water at 60°, and in six at 212°, slightly efflorescing in the air, and when heated, swelling, and with the loss of nearly half its weight, forming a porous friable mass, which in a greater heat melts into a transparent glass soluble in water. Besides the acids and alkalies, which have a greater affinity for its acid or basis than these have for each other, it is decomposed by the sulphates, muriates, nitrates, phosphates, and fluates, of all the earths, and of ammonia. It consists of 39 boracic acid, 17 soda, and 44 water.

Medical use.—The medical virtues of borax have not been sufficiently ascertained by experience; it is supposed to be, in doses of half a drachm or two scruples, diuretic and emmenagogue. Mr Bisset recommends a solution of the salt in water, as the most powerful dissolvent yet known, of apthous crusts in the mouth and fauces of children. And for the same purpose, it is often applied in the form of powder, mixed up with sugar.

SUCCINUM.. *Ed. Lond. Dub.*

Amber.

THIS is a solid, brittle, bituminous substance, dug out of the earth, or found upon the sea-shores, especially along the coasts of Polish Prussia and Pomerania. It is of a white, yellow, or brown colour, sometimes opaque, and sometimes very clear and transparent.

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It emits an agreeable smell when heated or rubbed. By friction it becomes electric; and when heated it softens, swells, and then melts, and burns with a greenish or bluish flame, leaving a coaly residuum. By distillation it affords a little acetic acid, an essential oil, and a peculiar acid, named from it the Succinic. It is not acted upon by water or diluted acids. It is imperfectly dissolved in alcohol and ether. Hoffmann dissolved it in oil of almonds in Papin's digester, and in a boiling solution of potass. Dr Thomson has discovered that it is soluble in the cold, even in a very weak solution of the sub-carbonate of potass. Heyer ascertained that it was soluble, with decomposition, in nitrous acid. In attempting to form succinic acid by the action of nitrous acid on amber, I made the same observation. The acid, when heated to ebullition, acts violently; copious red fumes are emitted, and the amber is first as if melted, and then dissolved. On cooling, part of the amber separates. The acid solution is decomposed by water, and by alkaline solutions. Amber is rendered soluble in the fixed and volatile oils, by melting or roasting it, or by the addition of a little camphor.

It is only used in pharmacy for the empyreumatic oil and acid obtained from it.

SULPHAS.

SULPHATE is a generic term for the combination of sulphuric acid with the alkalis, earths, and metallic oxides. Their generic characters have been already noticed. Like the other genera, they may be divided into three families.

Family 1. Alkaline sulphates.—These form no precipitate with alkaline carbonates.

Family 2. Earthy sulphates.—These are either insoluble in water, or, if soluble, form a white precipitate with alkaline carbonates.

Family 3. Metalline sulphates.—These form precipitates, which are often coloured, with alkaline carbonates in general, with prussiate of potass and iron, and with gallic acid.

SULPHAS ALUMINÆ, v. s. Alumen. *Ed.*

ALUMEN, s. s. Supersulphas aluminæ et potassæ. *Lond.*

ALUMEN, s. s. Supersulphas argillæ alcalisatæ. *Dub.*

Super-sulphate of alumina and potass. *Alum.*

Sulphate of alumina.

ALUM is obtained principally from schistose clays, which contain iron pyrites, by roasting, exposure to the air, lixiviation, the addition of a proportion of potass ley, evaporation, and crystallization.

The roasting destroys the bituminous matters these clays commonly contain; the exposure to the air acidifies the sulphur of the pyrites; and the addition of alkali is absolutely necessary for the constitution of alum, which is a triple, or even quadruple salt with excess of acid, consisting of sulphuric acid and alumina, with potass or ammonia, or both of them. The properties of alum do not seem to be affected by the nature of the alkali.

Near Whitby there are considerable works where alum is made, by burning a sulphuret of alumina, which is found there in the form of a soft grey clay, lying under a stratum of sand-stone, and adding to the ley of sulphate of alumina, muriate of potass.

Alum crystallizes in regular octohedrons, whose sides are equilateral triangles. It has a sweetish but very astringent taste. It is soluble in 15 times its weight of water at 60° , and in three-fourths of its weight at 212° . It reddens vegetable blues. It effloresces slightly in the air. By the action of heat it first undergoes the watery fusion, then loses its water of crystallization, and lastly great part of its acid. It is decomposed by baryta, potass, soda, strontia, and all salts of which these are the bases; by the nitrate, muriate, phosphate, carbonate, borate, and fluuate of ammonia; by the nitrate, muriate, phosphate, and carbonate of magnesia; and by the nitrate, muriate, and carbonate of lime. It is also decomposed by the gallic acid, by colouring matters, and by many animal and vegetable substances.

It commonly consists, according to Vauquelin, of 49 sulphate of alumina, 7 sulphate of potass, and 44 of water.

Medical use.—Alum is a powerful astringent: it is reckoned particularly serviceable for restraining hæmorrhagies and immoderate secretions; but less proper in intestinal fluxes. In violent hæmorrhagies, it may be given in doses of fifteen or twenty grains, and repeated every hour or half hour till the bleeding abates: in other cases, smaller doses are more advisable; large ones being apt to nauseate the stomach, and occasion violent constipations of the bowels. It is used also externally, in astringent and repellent lotions and collyria. Burnt alum, taken internally, has been highly extolled in cases of colic. In such instances, when taken to the extent of a scruple for a dose, it has been said gently to move the belly, and give very great relief from the severe pain.

SULPHAS BARYTÆ, v. s. Terra ponderosa vitriolata; Barytes. *Ed.*

Sulphate of baryta. Ponderous spar.

THIS salt is found in great abundance in many countries, either in a loose earthy form, or compact, or foliated, or striated, or acicular. The foliated is in general the purest. Its specific gravity is from 4.4 to 4.865. It is insoluble in water. It is soluble in boiling concentrated sulphuric acid. It decrepitates when suddenly heated. By being formed into a thin cake with flour and water, and being afterwards heated to redness, it becomes phosphorescent. Heated to redness with charcoal, it is converted into a sulphuret, and it may be decomposed either by boiling, or in a crucible, with the carbonates of potass and of soda. It contains about 84 of baryta, and 16 sulphuric acid and water.

SULPHAS MAGNESIÆ, v. s. Magnesia vitriolata; Sal catharticus amarus. *Ed.*

SULPHAS MAGNESIÆ, v. s. Sal catharticum amarum. *Dub.*

MAGNESIÆ SULPHAS, s. s. Sulphas magnesiæ purificata. *Lond.*

Sulphate of magnesia. Epsom salt. Bitter purging salt.

THIS salt is contained in several mineral springs, and also in sea-water, from which it is obtained by evaporation. It crystallizes in tetrahedral prisms, has a very bitter taste, and is soluble in its own weight of water at 60°, and in three-fourths of its weight of boiling water. Sulphate of magnesia, when perfectly pure, effloresces; but that of commerce generally contains foreign salts, such as the muriate of magnesia, which renders it so deliquescent that it must be kept in a close vessel or bladder. By the action of heat it undergoes the watery fusion, and loses its water of crystallization, but does not part with its acid. It is decomposed by baryta, strontia, the alkalis, and all the salts formed by these salifiable bases, excepting the alkaline muriates; and by the nitrate, muriate, and carbonate of lime.

Medical use.—It is a mild and gentle purgative, operating with sufficient efficacy, and in general with ease and safety, rarely occasioning any gripes, sickness, or the other inconveniences of resinous purgatives. Six or eight drachms may be dissolved for a dose in a proper quantity of common water; or four, five, or more, in a pint or quart of the purging mineral waters. These solutions may likewise be so managed as to promote evacuation by the other emunctories: if the patient be kept warm, they increase perspiration: and by moderate exercise in the cool air, the urinary discharge. Some

allege that this salt has a peculiar effect in allaying pain, as in colic, even independently of evacuation.

It is also used in great quantities for the preparation of the carbonate of magnesia.

a) SULPHUR. *Lond.*

Roll Sulphur.

b) SULPHUR SUBLIMATUM. *Lond.*

SULPHUR SUBLIMATUM. Sulphuris flores. *Ed. Dub.*

Sublimed sulphur.

THE physical and chemical properties of sulphur have been already mentioned.

In the neighbourhood of volcanoes it is sometimes found perfectly pure and crystallized; but all the sulphur of commerce is extracted from pyrites by sublimation. It is usually brought to us in large irregular masses, which are afterwards melted, and cast into cylindrical rolls, with the addition of some coarse resin, flour, or the like; whence the paler colour of the rolls. Sulphur should be chosen of a bright yellow colour, should be very inflammable, and should burn with a bright pure blue flame.

Sublimed sulphur is never prepared by the apothecary. It has the form of a very fine powder, having a beautiful yellow colour. It is often contaminated with a little sulphuric acid, formed during the process, from which it is easily freed by washing.

Medical use.—Sulphur stimulates the system, loosens the belly, and promotes the insensible perspiration: it seems to pervade the whole habit, and manifestly transpires through the pores of the skin, as appears from the sulphureous smell of persons who have taken it, and from silver being stained in their pockets of a blackish colour. In the stomach it is probably combined with hydrogen. It is a celebrated remedy against cutaneous diseases, particularly psora, both given internally, and applied externally. It has likewise been recommended in rheumatic pains, flying gout, rickets, atrophæ, coughs, asthmas, and other disorders of the breast and lungs, and particularly in catarrhs of the chronic kind. In hæmorrhoidal affections it is almost specific; but in most of these cases it is advantageously combined with some cooling purgative, especially super-tartrate of potass.

POTASSÆ SUPERTARTRAS, s. s. Supertartras potassæ purificata. *Lond.*

SUPER-TARTRIS POTASSÆ. *Ed. v. s.* Tartarus purificatus; Crystalli tartari. *Ed.*

TARTARI CRYSTALLI. *Dub.*
Super-tartrate of potass. Crystals of tartar, and cream of tartar.

SUPER-TARTRIS POTASSÆ IMPURUS, v. s. Tartarus crudus.
Ed.

TARTARUM, s. s. Potassæ super-tartras impurus. *Lond.*

TARTARUM. *Dub.*

Impure super-tartrate of potass. Tartar.

TARTAR exists in verjuice and in must, and is gradually deposited on the sides of the casks in which the wine is made, from which it is scraped before the next vintage, to prepare the casks to receive the new wine. The deepest coloured and roughest wines generally give most tartar; and it gets the name of white or red tartar, according to its colour.

It is purified by dissolving it in boiling water, and filtrating the boiling solution, which, on cooling, deposits irregular crystals, containing the oily and colouring matters. These are separated by boiling the crystals with a white clay. At Venice, they are purified by dissolving them in water, and clarifying them with whites of eggs and ashes. The tartar, thus purified, when crystallized, or in powder, is called Cream of Tartar.

Its crystals are small and irregular, and do not melt in the mouth, but feel gritty under the teeth. It has an acid harsh taste. It is soluble in sixty times its weight of water at 60°, and in thirty at 212°. It is decomposed, and its acid is destroyed by heat. It contains 23 parts of potass, according to Bergman, and 33 according to Thenard.

Medical use.—The virtues of tartar are those of a mild, cooling, aperient, laxative medicine. It is much used in dropsy; and some allege, that it has good effects as a deobstruent in dropsy from scirrhus. Taken from half an ounce to an ounce, it proves a gentle, though effectual purgative. Given in smaller doses, and in solution, it often acts as a powerful diuretic.

SUS SCROFA. *Ed. Lond.*

Cl. Mammalia.—*Ord. Pachyderma.*

The hog.

Off.—The fat. Hogs-lard.

ADEPS SUI SCROFÆ, vulgo Axungia porcina. *Ed.*

ADEPS. *Lond.*

ADEPS SULLUS. *Dub.*

HOGS-LARD is a very pure animal fat, of a soft consistence. Hence it is emollient, and is a convenient article for the formation of ointments, plasters, and liniments.

SWIETENIA.

Willd. g. 843, Decandria Monogynia.—Nat. ord. *Trikilata.*

Sp. 1. SWIETENIA MAHAGONI. Ed.

Mahogany tree.

Off.—The bark.

CORTEX.

THIS majestic tree grows principally in Jamaica and in Spanish America. Its useful wood is universally known. Its bark is brown, rough and scaly, on the branches grey and smoother. Its taste is very astringent, and more bitter than that of Peruvian bark. Its smell weak and aromatic. In its action on the living body, it is said to coincide nearly with Peruvian bark, and may be substituted for it in many situations.

Sp. 2. SWIETENIA FEBRIFUGA. Ed. Dub.

Febrifuge Swietenia.

Off.—The bark.

CORTEX.

THIS species, which in many respects resembles the former, is a native of the East Indies. Its bark is red, brittle and compact, and covered with a rough grey cuticle. In its properties it agrees with the mahogany bark, and forms a very valuable substitute for Peruvian bark in the East Indies, where this last is so dear and scarce, and the diseases in which it is indicated so common. It is, however, merely an astringent bitter, and contains no cinchonin. Dr Roxburgh sent from India a quantity of the extract of this bark, which could not be distinguished from the common kino of the shops.

TAMARINDUS INDICA. *Ed. Dub. Lond.*

Willd. g. 1250, sp. 1, Monadelphica Triandria.—Nat. ord. *Lomentaceæ.*

Tamarind tree.

Off.—The preserved fruit.

TAMARINDI PULPA; leguminis pulpa. *Lond.*