becomes green on exposure to air and light, which appears to depend upon the absorption of oxygen: when heated, it loses its colour; it melts by heat; and has a *sp. grav:* of 1·2289. Solubility. *Water* dissolves out of it about 9 per cent. of extractive matter; *alcohol* 95, and *æther* 40 parts in a hundred. The *alkaline* solutions and their *carbonates* dissolve it readily; *Sulphuric acid* dissolves it with scarcely any effervescence, and affords a solution of a rich claret colour; *Nitric acid* dissolves it with a copious extrication of nitrous fumes; *Muriatic acid* dissolves a small portion only; but in all these cases the guaiacum is decomposed; the acids are therefore incompatible with it. Chemical Composition. The experiments of Mr. Hatchett demonstrate that it is a substance *sui generis*, and not a resin, or gum-resin. Med. Uses. Stimulant, diaphoretic,* and in large doses, purgative. Forms of Exhibition. In that of bolus; or diffused in water, by means of one half of its own weight of gum arabic. Dose, gr. x to ʒss. Officinal Prep: *Mist: Guaiac:* L. *Tinct. Guaiac* L.E.D. *Tinct. Guaiac. Ammoniat.* L. E.D. *Pulv. Aloes com.* L.D. (**C.M.**) Adulterations. *Common resin* may be detected by the turpentine emitted when the guaiac is thrown upon hot coals; *Manchinal gum*, by adding to the tincture a few drops of sweet spirit of nitre, and diluting with water; the guaiac is thus precipitated, but the adulteration floats in white striæ.

HÆMATOXYLI LIGNUM. L.E.D.

(Hæmatoxylon Campechianum). *Logwood.*

Qualities. The wood is hard, compact and heavy. *Odour*, none: *Taste*, sweet, and astringent; *Colour*, deep red. Chemical Composition. The colouring matter of this wood has been very recently submitted to a rigid examination; and the name of *Hematin* has been given to it; it affords small brilliant crystals of a reddish white colour, and slightly astringent, bitter, and acrid flavour; sulphuretted hydrogen passed through its solution in water, gives it a yellow colour, which disappears in a few days. Gelatine throws it down in reddish flakes. The habitudes of Logwood are curious with respect to mutability of colour. The recent infusion, made with distilled water, is yellow, but that with common water has a reddish purple colour, which is deepened by the alkalies, and changed to yellow by the acids; various salts precipitate it; *acetate of lead; alum;* the *sulphates of copper and iron; tartarized antimony;* and *sulphuric, muriatic, nitric,* and *acetic acids*, are on this account incompatible with it. Med. Uses. It is supposed to be astringent, and is therefore given in protracted diarrhœas, and in the latter stage of dysentery. Officinal Prep. *Extract. Hæmatoxyli.* L.

* The Chelsea Pensioner. An empirical remedy for the rheumatism is well known under this name; it is said to be the prescription of a Chelsea Pensioner, by which Lord Amherst was cured; the following is its composition—Gum Guaiac ʒj Powdered Rhubarb ʒij—Cream of Tartar ʒj—Flowers of Sulphur ʒj—One Nutmeg finely powdered; made into an Electuary with one pound of Clarified Honey. Two large spoonsful to be taken night and morning.

Walker & Wessel's Jesuit Drops. This is nothing more than the Elixir Anti-venereum of Quincey, consisting of Guaiacum, Balsam of Copaiba, and Oil of Sassafras, made into a Tincture by Spirit.

Hatfield's Tincture. Guaiac and Soap, equal parts, ʒij—Rectified Spirit oiss.

Hill's Essence of Bardana. Guaiac ʒj—Spirit fℨ iij.

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HELLEBORI FŒTIDI FOLIA. L.

(Helleborus Fœtidus). Helleboraster. D.

The Leaves of Fœtid Hellebore.

As this plant is merely retained in the list of materia medica on account of its anthelmintic properties, it might be well dispensed with, since we possess many others which are much more safe, as well as more efficacious.

HELLEBORI NIGRI RADIX. L.E.D.

*The Root of Black Hellebore. Melampodium.**

Christmas Rose.

Qualities. The fibres of the root are the parts employed; they are about the thickness of a straw, corrugated, externally of a deep dark colour, hence the epithet *black;* internally white, or of a yellowish hue. *Odour*, unpleasant; *Taste*, bitter and acrid. Chemical Composition. An analysis of this root has lately been effected by M. M. Feneulle and Capron, from which it appears that its active principle, unlike that of the white Hellebore (*Veratrum*) is not an alkali, the following substances enter into its composition, viz. 1. A Volatile Oil.—2. A Fatty matter.—3. A Resin.—4. Wax.—5. A Volatile Acid.—6. A bitter principle.—7. Mucus.—8. Alumina.—9. Gallate of Potass.—10. Acidulous Gallate of Lime.—11. A Salt, with an Ammoniacal base. Solubility. Both water and alcohol extract its virtues, but the spirituous solution is the most active; long coction diminishes its powers, hence the watery extract acts more mildly than the root. Medicinal Uses. This is one of the most ancient articles of the materia medica. Ctesias, who lived in the time of Plato, and anterior to Hippocrates, speaks of it as a medicine of important virtues. By the Greek and Roman physicians it was highly esteemed as a remedy in Mania, (*see* page 8.) The extraordinary cures performed at the island of Anticyrus, famous for its Hellebore, are celebrated by the poets and historians of antiquity. It is a drastic cathartic, and may prove therefore emmenagogue, and hydragogue, but in this country, its reputation has been destroyed by the decided manner in which Dr. Cullen reprobated its use. Forms of Exhibition. It is seldom given in subtance, but in the form of tincture or extract; or in that of decoction, made with two drachms of the root to a pint of water. Dose of the powdered root, grs. x to ℈j; of the decoction, f℥j. Officinal Preparations. *Tinct. Hellebori Nigri.* L.E.D. *Extractum Hellebori Nigri.* E. D. Adulterations. The roots of the poisonous aconites are often

* Matthew's Pills.—Starkey's Pills. Of the Roots of Black Hellebore, Liquorice, and Turmeric, equal parts, purified Opium, Castille Soap, and Syrup of Saffron, the same quantity, made into pills with Oil of Turpentine.

Bacher's Tonic Pills. These are composed of equal parts of the Extract of Hellebore, and Myrrh ℥j, with ℥iij of powdered Carduus Benedictus: which are made into a mass, and divided into pills, each weighing one grain; from two to six of which may be given three times every day, according to the effects they produce.

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fraudulently substituted ; this is easily discovered, for the aconite is lighter coloured than the palest specimens of black hellebore ; it is safe therefore to choose the darkest.

HORDEI SEMINA. L.E.D.

(Hordeum Distichon. *Semina, tunicis nudata.*)

Hordeum Perlatum. *Pearl Barley.*

Barley is formed into *Pearl Barley* by the removal of its bark or cuticle,* and afterwards by being rounded and polished in a mill. These well known granules consist chiefly of fecula, with portions of mucilage, gluten, and sugar, which water extracts by decoction, but the solution soon passes into the acetous fermentation ; the bran of barley contains an acrid resin, and it is to get rid of such an ingredient that it is deprived of its cuticle. Officinal Preparations. *Decoct. Hordei.* L.E.D. *Decoct. Hordei. comp.* L. D.

HUMULI STROBILI. L.E.

(Humulus Lupulus. *Stroboli Siccati.*)

Qualities. *Odour*, fragrant, and sub-narcotic. *Taste*, bitter, astringent, and aromatic. Chemical Composition. Tannin, 5 grs. ; Extractive, 10 grs. ; Bitter principle, 11 grs. ; Wax, 12 grs. ; Resin, 36 grs. ; Lignin, 46 grs. The fact, with respect to the residence of the properties of the hop in the yellow grains scattered over its scales, has been since confirmed by the observations of M. Payen and A. Chevalier, who have moreover detected a volatile oil in the Lupulin, amounting to 2 per cent ; its proportion, however, appears to vary in the Hop of different countries ; the French hop, for instance, has been found to contain more than the Belgic, but less than the English ; Hops, moreover, soon after having been picked, yield, *cæteris paribus*, more oil and less resin than the old ; a circumstance which induced M. M. Payen and Chevalier to suspect that the oil is capable of being resinified. (*Journal de Pharmacie, Juin* 1822.) This oil is similar in odour to the hop, but much more penetrating, narcotic, and very acrid in the throat.

Solubility. Boiling water, alcohol, and æther, extract their virtues ; but their aromatic flavour is destroyed by decoction ; like most vegetable bitters, the cold is more grateful than the warm infusion ; its colour is deepened by alkalies, and rendered turbid by the mineral acids ; metallic salts also produce decomposition. Medicinal Uses. Hops have been said to be tonic, narcotic, and diuretic ; they have been recommended in the cure of rheumatism ; and, like many articles in the materia medica which have received the sanction of respectable practitioners, they have been extolled far beyond their merit. They undoubtedly possess the advantages of a pleasant bitter combined with a feeble narcotic ; the late Mr. Freake was very sanguine as to their powers, and at his request I made a series of experiments at the Westminster Hospital, but I confess that their results have not established my confidence in their efficacy.

* Whence the decoctions of this substance have been termed Ptisans, from πτίσσω, decortico, to peel.

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Officinal Preparations. *Extract. Humuli.* L. *Tinct. Humuli.* L. Their use as a preservative of beer is well known, and the philosophy of their agency is fully described in the first part of this work, (*page* 172); it is equally notorious, that various vegetable substances are daily substituted for them, such as *Quassia** and *Wormwood*, both of which are inferior to the *Menyanthes Trifoliata*, or *Marsh Trefoil*. The people of Jersey are said to use the wood-sage, *Teucrium Scorodonia*; it imparts however a very high colour to the beer During the first four years that the Cape of Good Hope was in the possession of the British, more than 300,000 pounds of Aloes were imported into England; how could such a quantity be consumed: except, as Mr Barrow states, by the London Porter brewers; it must however be allowed that a considerable quantity of this article is used by the Varnish makers.

HYDRARGYRUM.† L.D. Hydrargyrus. E.

Olim, Argentum vivum. *Mercury*, or *Quicksilver*.

Mercury, in its metallic state, is never applied to any medicinal use,‡ except in visceral obstruction, in hopes of forcing a passage by its gravity; but under various forms of preparation, it affords a series of very active remedies. Adulterations. With the exception of Peruvian Bark, there is perhaps no active article in the materia medica more shamefully adulterated; its impurity is at once indicated by its dull aspect; by its tarnishing, and becoming covered with a grey film; by its diminished mobility, in consequence of which its globules are unable to retain the spherical form, and therefore *tail*, as it is technically expressed. *Lead* is discovered by dissolving it in nitric acid, and adding to the solution water impregnated with sulphuretted hydrogen, when if lead be present a dark brown precipitate will ensue. *Bismuth*, by pouring the nitric solution into distilled water, when it will appear as a white precipitate. *Zinc*, by exposing the mercury to heat. *Tin* is detected by a dilute solution of nitro-muriate of gold, which throws down a purple precipitate. The presence of lead in mercury is a most dangerous circum-

* A Compound, consisting of Extract of Quassia and Liquorice, is used by fraudulent brewers to economise both malt and hops, and is technically called "Multum." An Extract of Cocculus Indicus is sold under the name of "Black Extract," for imparting an intoxicating quality to the Beer.

† Ὑδραργυρος of the Greeks, from its fluidity and colour.

Quicksilver. Quick in the old Saxon tongue signifies living, an epithet derived from its mobility.

Mercury. Mythologists inform us that he was the winged messenger of the Gods, and the Patron of Thieves —What name therefore could be more appropriate for the metal in question than that of this Deity? for it is not only distinguished from all other metals by its mobility, but its universal agency has rendered it the resource of those worst of Thieves—Quacks and Nostrummongers.

‡ There is indeed another purpose to which pure quicksilver has been apdlied that deserves notice. Its administration has been proposed in cases where silver coin has been swallowed, with a view of forming with it an amalgam that would speedily pass through the alimentary canal.

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stance ; I have once witnessed a case of *cholica pictonum* in consequence of it. The usual mode of purifying quicksilver, by pressing it through chamois leather, will not separate the lead, if it be, as is generally the case, in combination with bismuth ; for the manner in which the adulteration is effected, is by melting with a gentle heat these two metals, and adding the alloy to the mercury ; and although this alloy should exceed one-fourth of the whole bulk, it will pass, together with the mercury, through chamois leather. On standing, the bismuth will be thrown upon the surface, in the form of a dark powder, but the lead will remain in solution. The greatest part of the mercury of commerce, comes from Istria and Friuli, and from the Palatinate, and as it passes through the hands of the Dutch, we must expect to receive it in a state of alloy. On a superficial examination, it ought not, when shaken with water, to impart to it any colour ; when agitated or digested with vinegar, it should not communicate a sweetish taste ; and when exposed in an iron spoon to heat, it ought to evaporate entirely. The French are so well aware of the mischievous extent to which this metal is falsified, that in their late Codex they direct the reduction of the *red oxyd* in order to obtain it ; the process however is too expensive for general adoption. The Italian Jews purify quicksilver for their barometers, by digesting it in dilute sulphuric acid, which is by no means an improper process. The mode directed for the purification of mercury by the London College (*Hydrargyrum Purificatum*) is unable to separate it *completely* from its more deleterious contaminations. It is a general opinion in Germany, that mercury, boiled in water, will impart to it an anthelmintic virtue ; * this, if it happens, can only depend upon the impurities of the mercury ; but large draughts of cold water are in themselves anthelmintic. Although metallic mercury in its fluid form exerts no effect upon the animal system, it nevertheless, in a state of vapour, manifests considerable powers ; and it is necessary for the practitioner to be informed that it assumes this condition at the ordinary temperature of the atmosphere. I have stated several experiments in proof of this fact in my work on Medical Jurisprudence, *Art.* "*Aerial Poisons*," to which the reader may refer.

HYDRARGYRUM PRÆCIPITATUM ALBUM. L.

SUBMURIAS HYDRARGYRI AMMONIATUM. D.

White Precipitate.

QUALITIES. *Form*, an impalpable powder of a snowy whiteness ; *Odour* and *Taste*, none. CHEMICAL COMPOSITION. It is a triple compound of oxide of mercury 81, muriatic acid 16, ammonia 3 parts. SOLUBILITY. It is insoluble in water, and in alcohol ; when triturated with lime-water it does not become black. It is now only used in combina-

*Fodere (Med. Leg. T. iii. p. 455) states that he has seen water, in which mercury has been boiled, become purgative and vermifuge ; and yet the metal, in such cases, has not lost any of its weight.

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tion with lard as an ointment; formerly it was administered internally, and Boerhaave strongly recommends it as a safe and mild mercurial, and as seldom, if ever, exciting copious salivation. Officinal Prep. *Unguent. Hydrarg. præcipitati albi.* L.D.

HYDRARGYRUM CUM CRETA. L.D.

Mercury with Chalk.

This is mercury slightly oxydized by trituration, and mixed with chalk. Grs. iij contain about one grain of mercury. Dose, grs. v. to 3ss. It is a mild and excellent mercurial, and has been known to cure syphilitic affections, when the constitution had proved rebellious to every other form of preparation. Dr. George Fordyce committed a great error, when he denied to this compound any mercurial efficacy. The peculiar mildness of this preparation has been very justly attributed to the effects of the carbonate of lime, in neutralizing acid matter in the primæ viæ. In Mesenteric affections I have employed it with much advantage; in certain forms of Dysentery it is also a very valuable medicine.

HYDRARGYRI NITRICO-OXYDUM. L.

Oxydum Hydrargyri rubrum per acidum Nitricum. E.

Oxydum Hydrargyri Nitricum. D.

Nitric Oxyd of Mercury-Red Precipitate.

Qualities. *Form*, small scales of a bright red colour; *Taste*, acrid, and corrosive. Chemical Composition. It is strictly speaking a *subnitrate* of mercury, for if it be boiled for a short time with six times its weight of water, the liquor when filtered yields a precipitate with ammonia. Solubility. It is slightly soluble in water, but extensively in nitric acid, without any effervescence. Uses. It is used only externally, as an escharotic. Officinal Prep. *Unguent. Hydrargyri Nitrico-oxyd.* L.E.D. Adulterations. *Red Lead* may be detected by digesting it in acetic acid, and adding sulphuret of ammonia, which will produce a dark-coloured precipitate: it should be totally volatilized by heat.

HDYRARGYRI OXYDUM CINEREUM. L.E.

Pulvis Hydrargyri Cinereus. D.

Grey Oxyd of Mercury.

Qualities. *Form*, an impalpable grey coloured powder, which becomes paler on exposure to air and light. *Odour* and *taste*, none. Chem. Composition. When properly prepared it is protoxide of mercury; but, as frequently found in the shops, it contains a mixture of the triple salt consisting of oxide of mercury, ammonia, and nitric acid. It

is rarely used; although Dr. Saunders suggested it as a succedaneum for Plenck's remedy, and Mr. Abernethy considers it preferable to the red Sulphuret for mercurial fumigation, on account of its not yielding any suffocating vapour. Officinal Prep. *Unguent. Hydrarg. ciner.* E.

HYDRARGYRI OXYDUM RUBRUM. L.

Oxydum Hydrargyri. D.

Red Oxyd of Mercury.

The *Precipitate per se* of the older Chemists.

Qualities. *Form*, minute crystalline scales, of a deep red colour, inodorous, but acrid and caustic; it is soluble in several of the acids without decomposition; it is also slightly soluble in water; from which solution it is precipitated by ammonia Uses. It is very active as a mercurial, and has been a favourite remedy with John Hunter (*Form.* 141) and other celebrated practitioners; it is however apt to affect the stomach and bowels, and is therefore now rarely employed except as an external application. Dose, gr. j. combined with opium gss. Adulterations. It is seldom adulterated, as it would be difficult to find a substance suited to that purpose. If well prepared it may be totally volatilized by heat.

HYDRARGYRI OXY-MURIAS. L.

Murias Hydrargyri Corrosivus. E.D.

Oxy-muriate of Mercury.

Corrosive Muriate of Mercury. Corrosive Sublimate.

Qualities. *Form*, a crystalline mass, composed of very small prismatic crystals, which is easily pulverized, and undergoes a slight alteration by exposure to air, becoming on its surface opaque and pulverulent. Light, however, has no effect upon it, although a different opinion has existed, and it has accordingly been recommended to be kept in black bottles. *Odour*, none. *Taste*, very acrid, with a metallic astringency, occasioning a sensation of obstruction in the throat which continues for some time. *Sp. gr.* 5·1398. When pulverized and thrown upon burning coals, it is immediately volatilized giving out a thick white smoke of a very pungent smell which irritates the mucous membranes extremely, and is highly dangerous to those who inhale it. Chemical Composition. According to the latest views, it is a *Bi-chloride* of mercury, consisting of one proportional of mercury, to two proportionals of chlorine. In the French codex, it is termed "*Deuto-Chloruretum Hydrargyri.*" Solubility. It is soluble in eleven parts of cold, and in three of boiling water, and in half its weight of alcohol; it is very soluble in æther; indeed this latter liquid has the curious property of abstracting it from its solution in water, when agitated with it. Its solubility in water is greatly increased by the addition of a few drops of rectified spirit, or of muria-

tic acid. In a solution of muriate of ammonia it is seventeen times more soluble than in water, no decomposition however arises; it is therefore probable that a triple salt is formed: it is also soluble in the sulphuric, nitric and muriatic acids, and may be obtained again unaltered, by simply evaporating the solutions. Dr. Davy in his late researches upon corrosive sublimate states that with muriatic acid, common salt, and some other muriates, it forms definite compounds remarkable for their solubility. Its watery solution is said to change vegetable blues to green, but this is an optical fallacy. On exposure to light this solution slowly undergoes decomposition; but Dr. Davy has shewn that corrosive sublimate remains unaltered when exposed in solution in media having a strong affinity for it, as in alcohol, æther, muriatic acid, &c. and that decomposition only takes place under circumstances of complicated affinities, as in the instance of *Liquor Hydrargyri Oxymuriatis*, and in that of the aqueous solution; in which cases Calomel and Muriatic acid appear to be formed, and oxygen to be evolved. INCOMPATIBLE SUBSTANCES. The *carbonates of the fixed* alkalies precipitate it of a yellow hue, but the precipitates are not pure oxides; *ammonia* forms with it a white triple compound. *Lime water* decomposes it more perfectly than any alkaline body, occasioning a precipitate of a deep yellow colour,* which is a peroxyd of mercury containing a little muriatic acid; this result forms an useful lotion to ill conditioned ulcers, and has been long known under the title of *Aqua Phagadenica*; f℥j of lime water should be employed for the decomposition of two grains of the salt. *Tartarized antimony, nitrate of silver, acetate of lead, sulphur, sulphuret of potass*, and *soaps*, decompose it. *Iron, lead, copper, bismuth*, and *zinc*, in their metallic state, also decompose it, producing precipitates which consist of an amalgam of the metal employed, except in those cases where the metal in question refuses to amalgamate with mercury, when this latter metal appears as a metallic dew, composed of very minute globules, with calomel; hence mortars of glass or earthenware should be used for dispensing this article; when triturated with olive oil, the oil becomes white, and when boiled with it, *calomel* is precipitated; the same happens, if sugar be substituted for the oil. *The volatile oils* reduce it. When Oil of Turpentine was used, some traces of artificial camphor was discovered by Dr. Davy, and when the oils of Cloves and Peppermint, a purple compound distilled over, consisting of the oil employed and muriatic acid. The following vegetable infusions produce precipitates, viz. *the infusions and decoctions of chamomile, horse-raddish root, columba root, catechu, cinchona, rhubarb, senna, simarouba, oak bark, tea* and *almond emulsion*. Swediaur observes, that "many authors have recommended *sublimate* combined with bark, but that a reciprocal decomposition is thus produced by which the energies of both remedies are alike annulled;" to this ignorance, however, he thinks that many patients have been indebted for their lives; for says he, "I see every day examples of weak and very delicate persons, of both sexes, to whom ignorant practitioners prescribe, and sometimes in very large doses, the *corrosive sublimate*, with a decoc-

* If the quantity of Lime water be small, the precipitate will assume a red colour, and will be found to be a Submuriate of the peroxide.

tion of bark; certainly without curing the syphilis, but at the same time without occasioning those grave and dangerous symptoms, which that acrid medicine would certainly produce, if given alone, or without that decoction." We have here presented the reader with the opinion of Swediaur, but it is just to state that the experience of this country has rather tended to subvert, than to confirm, such a belief. That the corrosive sublimate of mercury is actually decomposed by the vegetable principles of the bark is sufficiently evident, but it would seem that the oxide thus developed and recombined with vegetable extractive, is a very active mercurial, especially with respect to its alterative powers. The same observation will, to a certain extent, apply to the results of its decomposition by other agents: the fixed alkalies have been found by actual experiment to be incapable of disarming this salt of its virulence, because, as Orfila has stated, the oxide liberated is, in itself, an active poison. Mr. Rose has lately transmitted to me a formula for the preparation of "*Alterative Drops*," which he states, from ample experience to possess very considerable powers as a mercurial, and to excite ptyalism, with a quickness and certainty, which characterize but few preparations of the same class. The principal ingredients are an alcoholic solution of *corrosive sublimate* and a vinous solution of *tartarized antimony*. It is scarcely necessary to observe that upon admixture a mutual decomposition takes place; the *peroxide of mercury* is precipitated by the alkaline element of the antimonial compound, whilst this latter salt, having its affinities thus overthrown, parts with the *protoxide of antimony*: so that the preparation holds a considerable quantity of insoluble matter in suspension, and which is to be carefully incorporated with the liquid by shaking the phial, whenever the drops are administered. Now there can be but little doubt but that the activity of this preparation is owing to the *peroxide of mercury*, thus diffused in a state of minute division, while at the same time the antimonial protoxide very probably disposes the stomach and system to be more readily influenced by it, for reasons which have been fully discussed in page 156 of this work. Med. Uses. It is one of the most acrid and active of all metallic preparations; in well directed doses, however, it is frequently of service in secondary syphilis, and in cases of anomalous disease, when it would be improper to administer the other forms of mercury.* In obstinate cutaneous diseases its administration in

* As this salt has been supposed to arrest the progress of syphilis more rapidly, and at the same time, to excite the salivary glands less than any other preparation of mercury, it generally forms the basis of those dangerous nostrums, which are advertised for the cure of Syphilis without Mercury. The contrivers hope also to elude detection by the density and colour of the preparation.

Gowland's Lotion. Is a solution of sublimate in an emulsion formed of bitter almonds, in the proportion of about gr. jss to f℥j. A solution of this mercurial salt in Spirit of Rosemary, is also sold as an emperical cosmetic.

Norton's Drops. A disguised solution of corrosive sublimate.

Ward's White Drops. This once esteemed Anti-Scorbutic was prepared by dissolving mercury in nitric acid, and adding a solution of carbonate of ammonia; or frequently it consisted of a solution of sublimate with carbonate of ammonia.

Spilsbury's Antiscorbutic Drops. Of Corrosive Sublimate ℥ij, Prepared Sulphuret of Antimony ℥j, Gentian root and Orange peel, equal parts ℥ij, Shavings of Red Saunders, ℥j, made with a pint of proof spirit into a tincture, which is to be digested and strained.

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small doses is often very serviceable; I have, however, seen extreme emaciation and hectic fever produced by its too long continued exhibition, although ptyalism was never occasioned. Its application also as a lotion to leprous affections, in the proportion of about one grain to a fluid-ounce and a half of some liquid vehicle, I have frequently seen highly beneficial; in directing the use of so acrid a lotion, we should caution the patient not to touch his eyes until his hands have been washed; in consequence of a neglect of this kind I have seen a very severe opthalmia produced. The practitioner should also remember that the system may become affected by such external applications; a case stands recorded in which a girl of five years old became salivated, and died, in consequence of an application made to the head for the cure of *Tinea*, which consisted of Pomatum rubbed up with a few grains of this salt. Its internal exhibition should be accompanied with mucilaginous drinks; when no overdose has been taken the *white* of egg, diluted with water, is the best antidote, for Orfila has found that albumen decomposes it, reducing it to the state of mild muriate, whilst the compound which it forms with it is inert. Many examples are recorded of the success of this practice.

"The Antivenereal Drops," so famous at Amsterdam, were analysed by Scheele, who found that they were composed of muriate of iron, with a small proportion of corrosive sublimate.

Marsden's Antiscorbutic Drops. A solution of sublimate in an infusion of Gentian.

Green's Drops. The basis of these also is sublimate.

Solomon's Anti-Impetigines. A solution of sublimate.

Rob Anti-Syphilitique, par M. Laffecteur, Medicin Chemiste. This popular nostrum of the French contains as a principal ingredient, corrosive sublimate. A strong decoction of the Arundo Phragmitis (the bull rush) is made, with the addition of sarsaparilla and aniseeds towards the end, which is evaporated, and made into a rob, or syrup, to which the sublimate is added.

Sirop de Cuisiniere. This consists of decoctions of sarsaparilla, burrage flowers, white roses, senna, and aniseed, to which sublimate is added, and the whole is then made into a syrup with sugar and honey.

Terre Feuilletee Mercurielle of Pressavin. This is Tartarized Mercury, for it is made by boiling the oxyd of mercury (obtained by precipitating it from a nitric solution, by potass) with cream of tartar.

Velno's Vegetable Syrup. There has been a great obscurity with respect to the genuine composition of this nostrum; it has generally been supposed to consist of sublimate rubbed up with honey and mucilage. I have lately received from my friend Mr. Brodie a formula, by which a medicine perfectly analogous in its sensible characters, and medicinal properties, to the Syrup in question, may be prepared; and I am assured that, wherever it has been tried, its effects are in every respect similar to those produced by the original nostrum. Take of Burdock root (young and fresh) sliced, ℥ij; Dandelion root ℥i; Spear Mint (fresh) ℥j; Senna Leaves, Coriander Seeds (bruised), Liquorice Root (fresh) of each ʒ iss; Water oiss; boil gently until reduced to oj; then strain, and, when cold, add lb of lump sugar, and boil it to the consistence of a syrup, and add a small proportion of the solution of Oxymuriate of Mercury. Swediaur says that volatile alkali enters into this nostrum as an ingredient; this alkali was proposed by Dr. Peyrile, as a substitute for mercury, and it constitutes the active ingredient of the following composition, which was proposed by Mr. Besnard, Physician to the King of Bavaria.

Tinctura Antisyphillitica. Sub-carb. potass, lbj. dissolved in Aq. Cinnam, oj. Opii puri, ℥ij. dissolved in Spir. cinnamom. f℥iv. mix these separate solutions, and put them on a water-bath for three weeks, taking care to shake the vessel frequently; to this add Gum arabic ℥ij, Carb. Ammoniæ ℥j, dissolve in Aq. Cinnamomi; mix, filter, and keep for use. Dose, twenty-four drops three times a day, in a glass of the cold decoction of Marsh Mallow root.

The external use of these drops is also advised for local syphilitic complaints!

In the Transactions of the King and Queen's College of Physicians in Ireland, an interesting case of this kind is related by Dr. Lendrick; it is, however, at the same time but justice to state, that there are instances also of the failure of this antidote. In the 41st volume of the *London Medical and Physical Journal*, p. 204, the reader will find the case of a girl, who was poisoned by a drachm of Sublimate, and who, notwithstanding the copious ingestion of albumen, died in ninety hours. More recently vegetable gluten, as existing in wheat-flower, is said to answer as well as albumen; for the administration of which all that is required is to give wheat flower and water. Dose, gr. $\frac{1}{8}$ to $\frac{1}{2}$, see *Liquor Hydrargyri Oxy-muriatis*, and *Form.* 142. ADULTERATIONS It ought to be volatilized by heat; it is frequently met with in commerce contaminated with muriate of iron, sometimes with arsenic; the presence of calomel is at once discovered from its insolubility. TESTS OF ITS PRESENCE. If any powder be suspected to contain this salt, expose it to heat in a coated tube, as directed in the treatment of arsenic, but without any carbonaceous admixture, when corrosive sublimate, if present, will rise and line the interior surface with a shining white crust. This crust is then to be dissolved in distilled water, and assayed by the following tests; 1st, *lime water* will produce, if the suspected solution contains this salt, a precipitate of an orange yellow colour. 2d, a single drop of a dilute solution of *sub-carbonate of potass* will at first produce a white precipitate, but on a still farther addition of the test, an orange-coloured sediment will be formed. 3rd, *sulphuretted water* will throw down a dark coloured precipitate, which when dried and strongly heated may be volatilized without any alliaceous odour. 4th, *ammonia* produces a white precipitate, *which is an insoluble triple salt, composed of muriatic acid, ammonia, and oxide of mercury, which on being heated grows yellow*; it passes afterwards to a red, and gives out ammoniacal gas, nitrogen, calomel, and metallic mercury. In this operation the oxide is supposed to be decomposed by the hydrogen which results from a portion of the ammonia. 5th, *Nitrate of tin*, according to Dr. Bostock, is capable of detecting the three-millionth part of a grain; a single drop will occasion an immediate and copious dark-brown precipitate. All the above precipitates, if rubbed on a bright plate of copper, will render its surface silvery white. Where the salt is mixed with various coloured liquids, we must proceed, as directed under the head of Arsenic. A very ingenious application of galvanic electricity has been also proposed by Mr. Silvester for the detection of *corrosive sublimate*, which will exhibit the mercury in a metallic state. A piece of zinc or iron wire about three inches in length, is to be twice bent at right angles, so as to resemble the Greek letter Π, the two legs of this figure should be distant about the diameter of a common gold wedding ring from each other, and the two ends of the bent wire must afterwards be tied to a ring of this description. Let a plate of glass, not less than three inches square, be laid as nearly horizontal as possible, and on one side drop some sulphuric acid, diluted with about six times its weight of water, till it spreads to the size of a halfpenny. At a little distance from this, towards the other side, next drop some of the solution supposed to contain corrosive sublimate, till the edges of the two liquids become joined; and let the wire and ring, prepared as above, be laid in such a way that the wire may touch the acid, while the gold ring is in contact with the suspected liquid. If the minutest quantity of corrosive

sublimate be present, the ring in a few minutes will be covered with mercury on the part which touched the fluid. This experiment may be beautifully simplified in the following manner: drop a small quantity of solution containing corrosive sublimate on a piece of gold, and bring in contact a key, or some piece of iron, so as to form a galvanic circuit, when the gold will be immediately whitened. A solution of nitrate of silver will, under similar circumstances, occasion on the gold a white precipitate, but as no amalgamation takes place, it is readily wiped off, and cannot possibly occasion any fallacy.*

Certain metals likewise decompose solutions of this salt, by virtue of superior affinity; in those cases where the precipitating metal is capable of forming a direct union with Mercury, we shall find the precipitates to consist of an amalgam of the metal employed; where no such combination takes place, the mercury will be frequently seen standing on the surface as a metallic dew. This is particularly striking where iron or steel has been employed; these metals are also at the same time blackened by it.

Brugnatelli† has proposed the following method of distinguishing *corrosive sublimate* from *arsenic*.—Take a quantity of fresh wheat starch, mix with water, and add a sufficient quantity of *iodine* to give the liquid a blue colour; if *corrosive sublimate* or *arsenic* be added to this liquor, the colour is alike destroyed and it becomes reddish, but if the change has been effected by the latter substance, a few drops of sulphuric acid will restore the blue colour, but if by the former, it is not recoverable by such means.‡

HYDRARGYRI SUB-MURIAS. L.

Sub-murias Hydrargyri sublimatum. D.

Sub-murias Hydrargyri Mitis. E.

vulgo. *Calomel.*§

This preparation has been known in pharmacy for upwards of two centuries under a variety of fanciful names, such as *Draco mitigatus; Aquila alba; Aquila mitigata; Manna metallorum; Panchymagogum minerale; Panchymagogus quercetanus; Sublimatum dulce; Mercurius dulcis sublimatus; Calomelas;* and yet there is not a name in this list that is so objectionable as the one at present adopted by our colleges; for whether we adhere to the theory of muriatic acid being the *simple* body, or accede to the new views of *chlorine*, the name is equally inappropriate; if we regard it as a compound of muriatic acid and oxyd of mercury, it is not a *sub*-muriate, but as much a *muriate* as the corrosive sublimate; the only difference depending upon the degree of oxidizement of the mercury, which is at a *minimum* in calomel, and at a *maximum* in sublimate. According to the new views respecting chlorine, calomel must

* By this simple and beautiful test, the late Mr. Archdeacon Wollaston identified the presence of Sublimate in the yeast dumplings by which Michael Whiting was poisoned at Ely; a case which I have recorded in my work on Medical Jurisprudence, Vol. II. p. 265.

† Ann. de Chimie et phys. iv. 334.

‡ For a more elaborate account of the various tests of corrosive sublimate, see Beck's Medical Jurisprudence, Vol. II. p. 267. Ed.

§ For the origin of the term Calomel, see note at page 40.

consist of one proportional of chlorine with one proportional of metal, and is therefore a *chloride of mercury*. (" *Proto-chloruretum Hydrargyri.*" Codex Med. Paris.)

Qualities. *Form.* A semi-transparent mass, consisting of short prismatic crystals; * inodorous, insipid, and of an ivory colour, which deepens by exposure to light. Solubility. It is considered as being insoluble, since according to Rouelle, one part requires 1152 of water, at 212° for its solution. Incompatible Substances. *Alkalies* and *lime water* decompose it and turn it black, in consequence of precipitating the black oxyd of the metal; it is also decomposed by *soaps*, *sulphurets of potass and antimony*; and by *iron*, *lead*, and *copper*; hence it is improper to employ any metallic mortar for dispensing medicines which contain it. There seems to be reason for supposing that this preparation may undergo decomposition *in transitu*, and that therefore some substances may be *chemically*, and yet not be *medicinally* incompatible with it. If calomel be boiled for a few minutes in distilled water to which alcoholized potass has been added, it is completely decomposed, a *muriate of potass and black oxyd of mercury* being the new products. Calomel is not affected by sulphuric acid in the cold, but, at a boiling temperature, corrosive sublimate and deuto-sulphate of mercury are formed. Medicinal Uses.† This mercurial preparation is more extensively and more usefully employed than almost any other article of the materia medica. It is capable of curing syphilis in every form, provided it does not run off by the bowels; and in obstructions and hepatic affections, it is in well-regulated doses a most valuable remedy; in combination, it probably merits the appellation of *Dirigens*, more decidedly than any other remedy with which we are acquainted, for when combined with certain diuretics, it is diuretic, (*Form.* 103, 104) and in diaphoretic arrangements, it is diaphoretic: it moreover imparts force to many of the mild, and moderates the severity of drastic medicines: whenever we wish a strong and permanent impression to be made on the alimentary canal, and through it on the neighbouring viscera or the system generally, Calomel by universal consent is adopted for such a purpose. (*Form.* 81, 88, 119, 161). In larger doses it is one of the most efficient purgatives which we possess, especially when in combination with other cathartics: it appears to be particularly eligible in the

* Mr. William Phillips has favoured me with a model of this crystal cut in wood; it is a rectangular prism whose solid angles are deeply replaced by planes.

† Many of the nostrums advertised for the cure of worms, contain Calomel as their principal ingredient, combined with scammony, jalap, gamboge, or some other purgative; they are uncertain and dangerous medicines; the method of exhibiting them in the form of lozenges (worm cakes), is also attended with inconvenience, for the sugar and the gum generating an acid, by being kept in damp places, may considerably increase the acrimony of the mercury; besides which, the calomel is frequently diffused very unequally through the mass, one lozenge may therefore contain a poisonous dose, whilst others may scarcely possess any active matter.

Ching's Worm Lozenges. These consist of yellow and brown lozenges, the former are directed to be taken in the evening, the latter the succeeding morning.

The Yellow Lozenges. Take of Saffron ʒss. of water oj, boil, and strain; add of White Panacea of Mercury (Calomel washed in spirit of wine) lbj, white sugar, 28lb, mucilage of Tragacanth as much as may be sufficient to make a mass, which roll out of an exact thickness, so that each lozenge may contain one grain of Panacea.

The Brown Lozenges. Panacea ʒ vij, resin of jalap, lb iijss, white sugar lb ix, mucilage of tragacanth q. s, each lozenge should contain gr. ½ of panacea.

Story's Worm Cakes. Calomel and jalap made into cakes and coloured with cinnabar.

diseases of children; and it is singular that infants can generally bear larger doses of it than adults. Dose. as an alterative, from gr. ss to j, night and morning; as a purgative from gr. ij to gr. x, or in some cases even to gr. xv, or ℈j. Forms of Exhibition. That of pill; its insolubility and specific gravity render any other form ineligible. Officinal Preparations. *Pil. Hydrargyri submuriat comp:* L. Impurities. *Corrosive sublimate* may be detected by precipitation being produced, by the carbonate of potass, in a solution made by boiling the suspected sample with a small portion of muriate of ammonia, in distilled water; calomel ought also, when rubbed with a fixed alkali, to become intensely black, and not to exhibit any trace of an orange hue.

Howard's or Jewel's *Hydro-sublimate.* Instead of subliming so as to obtain the calomel in a concrete state, as directed by the Pharmacopœia, the salt in the act of sublimation is exposed to aqueous vapour, and received in water. Being in a state of very minute division, it is lighter than common calomel in the proportion of three to five, and it cannot contain any corrosive sublimate. The French in their late *codex* have introduced a simular formula, under the title of "Murias Mercurii dulcis mediante aqua subtilissime divisus, *juxta Methodum Josiæ Jewel.*"

This *Patent Calomel* of Howard is undoubtedly to be preferred, and appears, in consequence probably of its minute division, to affect the system more readily than that made according to the Pharmacopœias.

Sub murias Hydrargyri Præcipitatus. E. D. This is produced by precipitating a nitrate of mercury by muriate of soda; the preparation will generally contain a small portion of *sub-nitrate*, and it is on that account more liable to run off by the bowels in small doses: in other respects it is essentially the same as that procured by sublimation.

HYDRARGYRI SULPHURETUM RUBRUM. L.

Sulphuretum Hydrargyri rubrum. D. Olim, *Hydrargyrus Sulphuretus ruber. P. L.* 1817—*Cinnabaris* factitia*, 1745.

Qualities. *Form*, a red crystalline cake, inodorous, insipid, and insoluble in water, alcohol, acids, and alkalies, although these last bodies decompose it when melted with it; it is also decomposed by nitro-muriatic acid, which unites with the metal, and disengages the sulphur. Chemical Composition. It is a *bi-sulphuret of Mercury*, i. e. it consists of two proportionals of sulphur and one of mercury. Uses.* It is

* For the origin of this term see page 40.

† Chamberlain's Restorative Pills. "The most certain cure for the Scrofula, or King's Evil, Fistula, Scurvy, and all Impurities of the Blood."

My attention has been particularly directed to these pills, in consequence of having lately seen, during the course of my professional duty, several highly respectable persons, who had been induced to make trial of their efficacy. Their inventor, if I am rightly informed, resides at Ipswich, where, for the benefit of suffering humanity, he prepares these wonderful pills, and, with the alacrity of his patron deity, Mercury, transmits them to every corner of the United Kingdom. It appears from the printed directions which accompany the "Restorative Pills," that their use must be continued for a long period; but upon this occasion we must allow the Doctor to speak for himself. "It may be necessary to observe, that in some cases of Scrofula, especially when the seat of the disease is in the feet, ancles, or hands, it may take a long time to effect a cure, even two years, and it may be twelve or sixteen months, with seeming little or no improvement, yet the cure is certain by perseverance." What—two years! and to be taken during a period of sixteen months without any sensible benefit! Is it possible that persons can be found with sufficient credulity and resolution to submit to so pre-

now only used for the purpose of mercurial fumigation, which is done by inhaling the fumes, produced by throwing 3ss of it on red hot iron ; the effect which is generally produced is violent salivation ; this however does not depend upon the action of the substance as a *sulphuret*, but upon its decomposition, and the volatilization of the metallic mercury with a portion of sulphate and sulphureous vapour. Mr Pearson observes that it is useful in those cases of venereal ulcers in the mouth, throat, and nose, where it is an object to put a *sudden* stop to the progress of the disease, but that mercury must at the same time be introduced into the constitution, by inunction, just as much as if no fumigations had been made use of. Ulcers and excrescencies about the pudendum and anus in women are particularly benefitted by it ; and in these cases it is conveniently applied by placing a red hot heater at the bottom of a night-stool pan, and after sprinkling on it a few grains of the sulphuret, placing the patient upon the stool. ADULTERATIONS. *Red Lead** may be discovered by digesting it in acetic acid, and by adding sulphuret of ammonia, which will produce a black precipitate ; or by burning a small portion of the suspected sample on a piece of bread in the candle, when metallic globules will announce its presence ; for the oxide of mercury, although revived by this process, will at the same time be volatilized. The bread, by combustion, affords the carbon by which the metallic reduction is effected. *Dragon's Blood*, by its giving a colour to alcohol when digested with it ; *Chalk*, by its effervescence, on the addition of an acid. It is known in the arts under the name of *Vermillion ; and by the following simple expedient its presence may, in very minute quantities, be easily recognised ; boil a portion with sulphuric acid in a platina spoon, and lay the sulphate thus produced, in a drop of* muriatic acid, on a piece of gold, and bring a piece of metallic tin in contact with both, when the white mercurial stain will be produced.

posterous a proposal? we have no doubt that Mr. Chamberlain can produce as great a proportion of cures *after* such an ordeal, as was adduced in former times, in proof of the efficacy of the Royal Touch, and for the same obvious reason. (*See* page 16.)

Upon examining these said pills, I find them to consist of Cinnabar, Sulphur, Sulphate of Lime, and a little vegetable matter, perhaps gum. Each pill weighs a fraction less than three grains ; upon dividing one with a penknife, and examining the cut surface through a lens, it exhibited the appearance of scoriæ of a brick red colour, having small yellowish masses imbedded in its substance. When exposed on a piece of platinum foil to the action of the blow-pipe, it yielded vapours of a strong sulphureous smell, and left a residuum of a pearly white matter, which consisted almost entirely of Sulphate of Lime. Upon submitting a portion of the pill, in a glass tube, to the heat of a spirit lamp, two distinct sublimates were produced, the first consisting of Sulphur, the second of Cinnabar ; and a small carbonaceous deposit remained. The Pill was then assayed, *via humida ;* distilled water dissolved the Sulphate of lime, which was identified by appropriate tests, and left sulphur and cinnabar on the filtre. By the above experiments I feel warranted in considering the composition of this pill as fully ascertained.

BOERHAAVE S RED PILL. The basis of this nostrum is Cinnabar.

* The anatomist employs it for giving colour to his injections ; for this purpose it is very essential that it should be quite free from red lead, or his preparations will in a short time lose their splendour, and ultimately become black. This has unfortunately happened with some preparations which Dr. Baillie presented to the College of Physicians. Mr. Accum, in his work entitled " Death in the Pot," states a case of poisoning from cheese which had been coloured with adulterated Vermillion. I am ready to admit, however, that the source of this information is of very doubtful authority ; never did a work appear which so little merited the attention it received ; even the title, which seemed to have some claim to originality, was borrowed from a work by Mouchart, called " *Mors in Olla.*"

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HYDRARGYRI SULPHURETUM NIGRUM. L.E.

Hydrargyrus cum Sulphure. P.L. 1787. Olim, *Ethiops Mineral.*

Qualities. *Form*, a very black, impalpable, insipid, and inodorous powder. Chemical Composition. It is a *Sulphuret of Mercury*, i. e. it consists of one proportional of sulphur, and one proportional of mercury; when heated in contact with the air it is converted into a *bi-sulphuret.* Solubility. It is entirely soluble in a solution of pure potass, from which the acids precipitate it unchanged; it is insoluble in nitric acid. Med. Uses. It is supposed to be alterative, and has been given for such a purpose in doses from gr. v to 3ss, but its medicinal virtues are very questionable. Adulterations. It is frequently imperfect, globules of mercury being still discoverable in it by a magnifying glass, or by its communicating a whiteness to a portion of gold upon which it is rubbed; *ivory black* may be discovered by the residue, after throwing a suspected sample on a red hot iron; it is also sometimes mixed with equal parts of crude antimony.

HYOSCYAMI FOLIA ET SEMINA. L.E.D.

(Hyoscyamus Niger.) *Henbane.*

Qualities. This plant, when recent, has a strong fetid, and narcotic odour; properties which are nearly lost by exsiccation. Chemical Composition. Resin, mucilage, extractive matter, gallic acid, and some salts; an alkaline element (*Hyoscyama*) is said to constitute its active principle. This principle differs from the other vegetable alkalies, in being able to resist a low red heat, without undergoing decomposition. Solubility. Water freely extracts the narcotic powers of this plant, and decoction destroys them; diluted alcohol is the best menstruum. Incompatibles. Precipitates are produced by *acetate of lead*, *nitrate of silver*, and *sulphate of iron*; vegetable acids weaken its narcotic powers. The extract or inspissated juice is the best form in which it can be exhibited; see also the *Tincture*; its leaves form an anodyne cataplasm, and the smoke from its seeds, when applied by a funnel to a carious tooth, is recommended in severe fits of odontalgia. The root of this plant is poisonous.* In Dr. Molyneux's appendix to Threlkeld's "Synopsis Stirpium Hibernicarum" are related several cases of its effects on persons who had eaten them instead of *Skirrets.* Officinal Prep. *Extract: Hyoscyam: Tinct: Hyoscyam:* L.E.D.

ICHTHYOCOLLA.

(Acipenser *Huso* & *Ruthenus. The great and small Sturgeon.*)

Isinglass. Fish Glue.

The following kinds, imported from St Petersburg, are found in the market. *Short Staple; Long Staple; Book;* and *Leaf. Picking the Sta-*

* Anodyne Necklaces. The roots of Hyoscyamus are commonly strung in the form of beads, and sold under this name, to tie round the necks of children, to facilitate the growth of their teeth, and allay the irritation of teething. The application of medicated necklaces is a very ancient superstition. (*See* page 13.) Such remedies were sometimes called Periapts, περιαπτον.

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