which it produces on the system, are an increase of urine and perspiration. It has been recommended in glandular swellings, gleets, schirrus of the uterus, scrofula and dropsy. It is however as an antisyphilitic remedy that it has been principally celebrated. According to Dr. Chrestien of Montpelier, it would appear that gold was not merely adequate to the cure of syphilis in all its forms, but that it possesses very great advantages over mercury—It does not affect the gums, nor does it in any way disturb the general health of the patient. Notwithstanding this warm recommendation of Dr. Chrestien, it is still doubtful whether gold is adequate to the cure of syphilis. The best form in which the gold can be given is that of the muriate, prepared according to the directions of the Pharmacopœia of the United States; of this the dose is one fifteenth to one fourth of a grain, in pills, given every six, eight, or twelve hours.]

BALSAMUM PERUVIANUM. L.E.D.

(Myroxylon Pruiferum.) *Peruvian Balsam.*

Qualities. *Form*, a viscid liquid of a reddish brown colour. *Odour*, fragrant and aromatic. *Taste*, hot and bitter. Chemical Composition. Resin, volatile oil, and benzoic acid; it is therefore a true *balsam*: this term was formerly applied to every vegetable resin having a strong scent and the fluidity of treacle, and which was supposed to possess many medicinal virtues; it is now restricted to those resins which contain the benzoic acid in their composition, of which there are only three, viz. the Balsams of *Peru*, *Tolu*, and *Benzoin*. Solubility. Water when boiled upon it dissolves only a portion of benzoic acid; æther is its most complete solvent; alcohol dissolves it completely, but the quantity of this menstruum must be considerable. Properties, stimulant, and tonic, on which account in certain chronic affections of the lungs, it has been found a serviceable expectorant; Sydenham gave it in Phtisis, but wherever any inflammatory action is to be apprehended Dr Fothergill wisely cautions us against its use. Forms of Exhibition. Diffused in water by means of mucilage, or made into pills with any vegetable powder. Dose, gr. v to 3j. Adulterations. A mixture of resin and some volatile oil with benzoin, is often sold for Peruvian Balsam, and the fraud is not easily detected, and is probably of but little importance.

BALSAMUM TOLUTANUM. L.E.D.

(Toluifera Balsamum.) *Balsam of Tolu.*

Qualities. *Form*, a thick tenacious liquid, becoming concrete by age, in which state it is usually found in the shops. *Taste*, warm and sweetish *Odour*, extremely fragrant, resembling that of lemons. Chemical Composition. Volatile oil, resin, and benzoic acid. Solubility. It is soluble in alcohol, forming a tincture which is rendered milky by water, but no precipitate falls. When dissolved in the smallest quantity of a solution of potass, its odour is changed into one that resembles clove pink. Medicinal Uses. It has been regarded as expectorant. In turning to the classification of expectorants, p. 105, it will be found to occupy a place in the second division of our first class, for it may be considered as capable of stimulating the pulmonary exhalants; whence its use in chronic coughs. Forms of Exhibition. It may be suspended in water by means of mucilage, or yelk of egg, but it is rarely em-

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ployed except on account of its agreeable flavour ;* its virtues are similar to those of the Balsam of Peru. Officinal Prep. *Tinct : Benzoin : com* : L.E.D. *Tinct : Toluiferi Balsam :* E.D. *Syrup : Tolut :* L.

BELLADONNÆ† FOLIA. L.E.D.

(Atropa Belladonna.) *Deadly Nightshade.*

Qualities. The leaves are inodorous. *Taste*, slightly nauseous, sweetish, and subacrid ; their peculiar properties are not lost by drying. Chemical Composition. Vauquelin found that the leaves contained a substance analogous to albumen, salts with a base of potass, and a bitter principle on which its narcotic properties depended, and more lately the presence of an alkaline element has been detected, which has received the appellation of *Atropia*, the sulphate of which crystallizes very beautifully. Solubility. Water is the most powerful solvent of its active matter. Uses. It is a powerful sedative and narcotic, both as an internal medicine and as an external application ; in this latter form, it alleviates local pains very effectually, but is liable to affect the nervous system. The recent leaves powdered, and made into an ointment with an equal weight of lard will be found an efficient form for many purposes ; rubbed over the penis it prevents priapism and relieves chordee more effectually than any application which has been proposed. Forms of Exhibition. Every part of the plant is poisonous, and the berries from their beautiful appearance have often tempted the unwary ; the leaves however furnish the most convenient and powerful form of exhibition ; externally, they may be used as a poultice, internally, one grain of the dry leaves powdered, and gradually increased to 10 or 12 grains, or the leaves may be infused in boiling water in the proportion of four grains to two fluid-ounces, which may be given as a dose. A little of this infusion dropped into the eye permanently dilates the pupil, for which intention it has been successfully applied previous to an operation for the cataract. The extract of this plant, since its active principle is fixed, ought to possess activity, but as it occurs in commerce it is found to be very uncertain and variable, a circumstance which entirely depends upon the manner in which it has been prepared.‡ See *Extractum Belladonnæ.*

*Tolu Lozenges. Sugar 8 oz. Cream of Tartar 1 oz. Starch 2 drachms. Tinct. Toluiferæ Balsami E. one fluid-drachm, mucilage of Gum Tragacanth q. s.

† *Belladonna*, so called from the juice of its berries being used as a cosmetic by the Italian women, to make their faces pale.

‡ The root of this plant seems to partake of the same qualities as the leaves, but is perhaps less virulent :

"Or have we eaten of the insane root,
That takes the reason prisoner."

Macbeth.

The Belladonna is supposed by Sauvage to be the plant that produced such extraordinary effects upon the Roman soldiers during their retreat, under the command of Anthony, from the Parthians, when they are said to have "suffered great distress for want of provisions, and were urged to eat unknown plants : among others they met with a herb that was mortal : he that had eaten of it lost his memory and his senses, and employed himself wholly in turning about all the stones he could find, and after vomiting up bile, fell down dead." (Plutarch's Life of Anthony.) The Scotch historian Buchannan relates, "that the Scots mixed a quantity of the juice of the Belladonna (*Solanum Somniferum*) with the bread and drink which by their truce they were to supply the Danes with, which so intoxicated them that the Scots killed the greater part of Sweno's army.

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An overdose of belladonna produces the most distressing and alarming symptoms, and so paralyzing is its influence, that vomiting can be hardly excited by the strongest doses of tartarized antimony; in such cases vinegar will be found the best antidote, or the affusion of cold water over the surface of the body, after the application of which, emetics are more likely to perform their duty, for physiological reasons explained in p. 87. OFFICINAL PREPARATIONS. *Extract: Belladonnæ* L. *Succus spissatus Atropæ Bellodonnæ*. E.

BENZOINUM. L.E. Benzoe. D. (Styrax. Benzoin) vulgo *Benjamin*.

QUALITIES. *Form*, brittle masses, composed of white and brownish, or yellowish fragments; *Odour*, fragant; *Taste*, scarcely perceptible. When heated, it exhales benzoic acid in the form of crystals. CHEMICAL COMPOSITION. Resin, and a large proportion of benzoic acid. SOLUBILITY. It is readily dissolved by alcohol and æther, and is again separated from them by water; solutions of lime, and the fixed alkalies separate the benzoic acid from it, which can afterwards be recovered from such solutions by the addition of an acid. USES. It is considered expectorant, and was formerly used in asthma, and other pulmonary affections; it has however fallen into disuse, and is now principally employed in perfumery, and odoriferous fumigations.* OFFICINAL PREPARATIONS. *Acidum Benzoicum* L.E.D. *Tinct: Benzoini comp:*† L.E.D. IMPURITIES. It is found in the market in various degrees of purity, the best is yellowish, studded with white spots; the worst is full of dross, and very dark or black.

BISMUTHI SUB-NITRAS. L.

QUALITIES. *Form*, a white, inodorous, tasteless powder. CHEMICAL COMPOSITION. Oxide of Bismuth in combination with some water and a little nitric acid. SOLUBILITY. It is insoluble in water and dilute acids, but is dissolved by the concentrated acids, and is again precipitated by water. The alkalies, Potass and Soda, also dissolve it, but sparingly; it is more soluble in ammonia. USES. It was formerly employed as a cosmetic, under the name of *Magistery of Bismuth*, or that of *Pearl White*;‡ since, however, it becomes black from the operation of Sulphuretted Hydrogen and its compounds § much inconvenience attends its applica-

* FUMIGATING PASTILLES. Benzoin generally constitutes the chief ingredient in these compositions, to which may be added any variety of odoriferous substances; the following formula may be offered as a specimen: ℞ Benzoin ʒj, Cascarillæ ʒss, Myrrh ℈j. Olei nuc. moschat. ol. Caryophyll. ãa gr. x. potassæ nitratis ʒss, carb. ligni ʒ vj, mucilag. gum. Trag. q. s.

† VIRGIN'S MILK. A spirituous solution of Benzoin mixed with about twenty parts of rose water, forms a cosmetic long known by this name. Under the same title also a very different preparation is sold, vid. Liquor Plumbi sub-acetatis.

FRIAR'S BALSAM, WADE'S DROPS, JESUIT'S DROPS.—These preparations are nothing more than the Tinctura Benzoini compositа.

PECTORAL BALSAM OF HONEY.—Is merely the tincture of Benzoin or that of Tolu.

ESSENCE OF COLTSFOOT.—This preparation consists of equal parts of the Balsam of Tolu, and the Compound Tincture of Benzoin, to which is added double the quantity of rectified Spirit of Wine; and this forsooth is a Pectoral for Coughs! If a patient with a pulmonary affection should recover during the use of such a remedy, I should certainly designate it as a lucky Escape, rather than as a skilful Cure.

‡ The Pearl Powder of Perfumers is obtained from the nitric solution of Bismuth, by adding a proportion of muriatic acid, and then precipitating by a small quantity of water. In this way it is obtained in the form of minute scales of a pearly lustre.

§ The gas which arises from the combustion of mineral coal will produce the same

tion. Its medicinal powers appear to have been first noticed by Jacobi,* but the remedy attracted little or no attention until the publication of a paper upon the subject by Odier† of Geneva. The diseases in which it powers as a tonic have been more particularly displayed, are Gastrodynia, Pyrosis, and Dyspepsia attended with cholic. Dr. Marcet in a paper read in 1801 before the Medico chirurgical Society of London, says, "I have had frequent opportunities of trying the oxide of Bismuth in spasmodic affections of the stomach in Guy's Hospital, and those trials have fully confirmed the opinion which I formerly gave of the utility of this medicine. The practitioner will receive a further confirmation of its value by referring to Dr. Bradsley's Medical Reports: and Dr. Yeats has published in the Royal Institution Journal‡ a striking case illustrative of its efficacy.§ Dose, gr. v to xv, in the form of pills.

BISTORTÆ RADIX. L.E.D.

(Polygonum Bistorta.) *Bistort Root.*

Qualities. This root has no odour, but is highly astringent. Chemical Composition. Its active principles are tannin and gallic acid. Med. Uses. Its acts as an astringent, and is accordingly used in hemorrhages and fluxes. Dose of the root ℈j—3j; of a decoction f℥j—f℥ij. Combined with *Calamus* it has been successfully administered for the cure of intermittent fevers. *See p* 172.

effect. It is related of a lady of fashion, who had incautiously seated herself too near the fire, at a quadrille party, that her countenance changed on a sudden from a delicate white to a dark tawny, as though by magic. The surprise and confusion of the whole party had such an effect upon the disfigured *fair one*, that she was actually dying from apprehension, when the physician dispelled their fears by informing his patient that nothing more was necessary than for her to abstain from the use of mineral cosmetics, and to trust in future to those charms which Nature had betowed upon her.

* L. F. Jacobi de Bismutho. Erford, 1697.

† Journal de Medicine, 1786, T. 68, p. 49.

‡ Vol. iv. p. 156.

§ In this country Bismuth has enjoyed for some years a reputation exceedingly high. Dr. Samuel W. Moore, of New-York, was the first to call the attention of the American medical public to it, in a very interesting dissertation which was published in the year 1810. In this essay are recorded a number of cases illustrative of the salutary effects of this medicine in spasmodic pain and other troublesome affections of the stomach. See Eclectic Repertory, Vol. 1, p. 234. By the Editors of the New-England Journal of Medicine and Surgery, we are furnished with the following unqualified statement in relation to the virtues of this medicine. "The action of this substance on the stomach is that of a mild and effectual tonic; and from our own experience of its virtues, we do not hesitate to affirm with Odier, Marcet, Bradsley, and Moore, that in pyrosis, cardialgia, and more particularly gastrodynia, it operates more speedily and with more certainty, than any other article of the Materia Medica. In the course of the last five years, we have frequently prescribed it in these forms of dyspepsia with almost uniform success; and although a medicine possessing such active properties might be supposed occasionally to produce some unpleasant effects on the system, we have never known any injurious consequences to result from its exhibition. A substance which discovers such qualities ought to be more generally known and more frequently administered; for even on the supposition that it is capable of producing no greater effects than those of the medicines usually prescribed in these complaints, its use will be attended with the advantage of discarding, in some measure, from practice, the long continued employment of alcohol and bitters, which ultimately lessen the activity of the digestive organs, and either prolong or perpetuate the disease they were intended to relieve." New-England Journal of Med. and Surg. Vol. 1, p. 286–7. In addition to its use in gastric disorders, it is stated by Dr. Chapman, that Dr. Carmichael, of Virginia, has administerd Bismuth with much success in the treatment of Intermittents. *Ed.*

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