der and urinary organs, and, it would seem, without any theory respecting its *modus operandi*; but it has at length fallen into disrepute, and probably with justice: it occasionally renders the urine of a blackish colour, a fact which is not easily to be explained. When it is administered, the form of powder is preferred, and in doses from ℈j to ʒj. The leaves of the *Vaccinium Vitis Idæa* (Red Whortle-Berry,) are sometimes substituted for those of *Uvæ Ursi*; but they may be easily distinguished; *botanically*, by the net work appearance of their veins above, and by their dots underneath; *chemically*, by their infusion neither precipitating the solution of isinglass, nor that of sulphate of iron.

ZINCI OXYDUM. L.E.D.

Oxide of Zinc.

This is occasionally used internally as a tonic, and may be exhibited in the form of pill. It is however principally employed externally, as a mild but efficient astringent; viz. *Ung: Zinci.* ADULTERATIONS. Dr. Roloff of Magdeburgh has lately discovered the casual presence of *Arsenic** in this oxide; by boiling the substance in distilled water, and assaying the solution with the ammoniaco-nitrate of silver, its presence may be instantly recognised; *Chalk* may be detected by sulphuric acid, exciting an effervescence; and *White Lead*, by its forming an insoluble sulphate of lead. It ought to be volatile.

ZINCI SULPHAS. L.E.D.

Sulphate of Zinc, olim, White Vitriol.

QUALITIES. *Form*, crystals, which are four-sided prisms, terminated by four-sided pyramids; they are slightly efflorescent; *Taste*, styptic, metallic, and slightly acidulous. CHEMICAL COMPOSITION. One proportional of oxide, and one proportional of acid; its crystals contain seven proportionals of water. SOLUBILITY. It is soluble in 2.5 times its weight of water at 60°, and in less than its own weight of boiling water, but is quite insoluble in alcohol. INCOMPATIBLE SUBSTANCES. *Alkalies: earths; hydro-sulphurets; astringent vegetable infusions; Milk.* MED. USES. Tonic, astringent, and, in large doses emetic, (*Form.* 66.) As an emetic it operates directly, and offers therefore a prompt resource in cases of poison, or where an immediate discharge from the stomach is required; it appears to differ from most remedies of this nature, in not proving diaphoretic in smaller doses: in spasmodic† coughs it is administered with the best effects, especially when combined with camphor or myrrh, (*Form.* 59:) in affections of the chest attended with inordinate secretion, I have witnessed much benefit from its exhibition, particularly when presented in the form of lozenge; and, when dissolved in water, in the proportion of grs. ij to f℥j, it forms a useful injection in fluor

* I have been lately informed by a practical chemist, that he has occasionally found his hydrogen, when produced by zinc and dilute acid, to contain a portion of Arseniureted hydrogen; a fact which confirms the assertion of Roloff.

† The various quack remedies advertised for the cure of the hooping cough are either Opiates, or Medicines composed of sulphate of zinc. The nostrum, sold under the name of Anti-per-tussis, contains this metallic salt as its principal ingredient.

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albus, &c. ; in small doses its internal exhibition is also useful in Leucorrhæa. When combined with opium it is well calculated to obviate that atony, and those frequent discharges of fæces, without pain, that take place in the protracted stages of dysentery. As an external application it is very generally employed in the proportion of grs. x to eight fluid-ounces of water. The supposed ill effects consequent on the application of preparations of lead to a great surface, have determined some practitioners to substitute in their place, solutions of sulphate of zinc, but not with the same effect ; for to that very property, which may occasionally render saturnine lotions dangerous, is their virtue to be attributed ; see *Liquor Plumbi Sub-acetatis*. Dose, as an emetic from grs. x. to ʒss—as a tonic, and astringent, from grs. j. to ij. Officinal Prep. *Liquor : Alum : comp :* L. (℞) *Solutio Sulphatis Zinci.* E. *Solutio Acetatis Zinci.* E. (I). *Tinct : Acetatis Zinci* D. (I). Adulterations. The *white vitriol* of commerce ought never to be used in medicine, without previous purification, since it generally contains the sulphates of copper and iron.

ZINGIBERIS RADIX. L.E.D. (Zingiber Officinale.)

Ginger.

Chemical Composition. Volatile oil, fecula, and resino-extractive matter ; on the first of these principles its well known flavour and odour depend ; but its pungency resides in the last. Solubility. Water, alcohol, and æther, extract its virtues. Med. Uses. It is highly stimulant, and is therefore frequently beneficial in flatulant cholic, dyspepsia, and gout ; it is however more generally employed as an adjunct to other remedies, to promote their efficacy or to correct their operation, (see *Form.* 92, 94, 112, 153,) and it is found, that it does not produce the ill effects of those spices, whose virtues reside in an acrid oil. Dose, of the powders grs. x to ʒj. Officinal Prep. *Syrup : Zingib :* L.E.D. *Syrup : Rhamni :* L. (E). *Tinct : Zingib :* L.D.* *Tinct : Cinnamom : comp :* L. (℞.) *Acid. Sulphuric : aromat :* E. *Confectio Opii.* L. *Confectio Scammon :* L.D. (E) *Infus. Sennæ. co.* L. (E) *Pulvis Cinnamom : comp :* L.E.D. (℞) *Pulv. Scammon : comp :* L.D. (E) *Pulv. Sennæ. comp :* L. (E) *Pil : Aloes :* D. *Pill : Scillæ comp :* L.D. *Vinum Aloes.* L.E.D. Adulterations. The powder is rarely met with in any tolerable degree of purity : there are two varieties of ginger in the market, viz. *Black*, produced by scalding the root, and afterwards hastily drying it in the sun ; and the *White*, being that which has been carefully washed, scraped, and gradually dried.

* Oxley's Concentrated Essence of Jamaica Ginger.—A mere solution of Ginger in Rectified spirit.

Ginger Beer Powders.—White sugar, ʒj ℈ij, ginger grs. v. sub-carbonate of soda grs. xxvj, in blue paper. Tartaric acid grs xxx, in each white paper. These proportions are directed for half a pint of water.

Ginger Beer. The following is the receipt by which this popular beverage is prepared. Take of lump sugar half a pound ; of cream of tartar half an ounce ; Bruised Ginger an ounce ; boiling water one gallon. Ferment for twenty-four hours with yeast.

Preserved Ginger.—That from India is almost transparent, while that manufactured in Europe is always opaque and fibrous.

THE END.

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