ERYNGIUM MARITIMUM. *Dub.*
Willd. g. 518, *sp.* 6. *Smith, g.* 121, *sp.* 1. *Pentandria Monogynia.*—Nat. ord. *Umbellatæ.*
Sea-eryngo. Sea-holly.

Officinal.—The root.
ERYNGII RADIX.

THIS plant grows plentifully on some of our sandy and gravelly shores. It is perennial, and flowers in July and August. The roots are slender and very long; of a pleasant sweetish taste, which, on chewing them for some time, is followed by a light degree of aromatic warmth and acrimony. They are accounted aperient and diuretic, and have also been celebrated as aphrodisiac; their virtues, however, are too weak to admit them under the head of medicines.

EUGENIA CARYOPHYLLATA. *Dub. Lond.*
CARYOPHYLLUS AROMATICUS. *Ed.*
Willd. g. 972, *sp.* 24. *Icosandria Monogynia.*—Nat. ord. *Hesperideæ.*
The clove tree.

Officinal.—The calyx, flower-bud and its essential oil.
a) CARYOPHYLLI AROMATICI FLORIS GERMEN. *Ed.*
CARYOPHYLLI. *Lond.*
CARYOPHYLLI AROMATICÆ CALYX. *Dub.*
b) CARYOPHYLLI AROMATICI OLEUM VOLATILE. *Ed.*
CARYOPHYLLI OLEUM. *Lond.*
CARYOPHYLLI AROMATICÆ OLEUM ESSENTIALE. *Dub.*

THIS is a beautiful tall tree, a native of the Molucca islands. The Dutch, from a desire of monopolizing the valuable spice produced by it, destroyed all the trees except in Amboyna, where it is carefully cultivated. But their scheme has been frustrated, and the clove is now thriving in the isle of France and other places. Every part of this tree is highly aromatic, especially the leaf-stalk. Cloves are the flower-buds, which are gathered in October and November, before they open, and when they are still green, and are dried in the sun, after having been exposed to smoke for some days.

Cloves have somewhat the form of a nail, consisting of a globular head, formed of the four petals of the corolla, and four leaves of the calyx not yet expanded; (but this part is often wanting, being easily broken off), and a germen situated below, nearly cylindrical, but somewhat narrower towards the bottom, scarcely an inch in length, and covered with another thicker calyx, divided above into four parts. Their colour should be of a deep brown, their smell strong, peculiar, and

grateful; their taste acrid, aromatic, and permanent. The best cloves are also large, heavy, brittle, and when pressed with the nail, exude a little oil. When light, soft, wrinkled, dirty, pale, and without smell or taste, they are to be rejected.

The Dutch, from whom we had this spice, frequently mix it with cloves from which the oil has been distilled, and the fraud may be continued. These, though in time they regain from the others a considerable share both of taste and smell, are easily distinguishable by their weaker flavour and lighter colour.

Cloves yield by distillation with water about one-seventh of their weight of volatile oil; 960 parts also gave to Neumann 380 of a nauseous, somewhat astringent, watery extract. The same quantity gave only 300 of excessively fiery alcoholic extract. When the alcoholic extract is freed from the volatile oil by distillation with water, the oil that arises proves mild, and the resin that remains insipid. Its pungency therefore seems to depend on the combination of these principles. The Dutch oil of cloves is extremely hot and fiery, and of a reddish brown colour, but it is greatly adulterated, both with fixed oils and resin of cloves; for the genuine oil, when recently distilled, is comparatively quite mild and colourless, although it gradually acquires a yellow colour. It is heavier than water, and rises in distillation with some difficulty, so that it is proper to use a very low-headed still, and to return the distilled water several times upon the residuum.

Vauquelin obtained from the leaves of the *Agathophyllum ravensara* an essential oil absolutely the same with oil of cloves in respect to colour, taste, smell, and gravity, being heavier than water. It was only somewhat less limpid, owing, probably, to the leaves having been long kept, and the oil in consequence resinified.

Medical use.—Cloves, considered as a medicine, are very hot stimulating aromatics, and possess in an eminent degree the general virtues of substances of this class.

EUPHORBIA OFFICINARUM. *Lond.*

Willd. g. 959, *sp.* 7. *Dodecandria Trigynia.*—Nat. ord. *Tricoccæ.*

Officinal euphorbia.

Officinal—The gum resin.

EUPHORBIÆ GUMMI RESINA. *Lond.*

THE London College have restored this drastic and corrosive substance to their list of officinals. It is produced from several species of the African genus Euphorbia; such as the *E. of-*

ficinarum of the Cape of Good Hope, the *E. antiquorum* which grows in Egypt, Arabia, and the East Indies, and which is said to have furnished the Euphorbium of the ancients, and the *E. Canariensis*. Mr Jackson, in his account of Morocco, has described it, but unfortunately not in the language of science. *Furbiune*, he says, is the Arabic name of this gum, which is produced by a very curious succulent plant, growing on the Atlas mountains, and called by the Shellahs and Arabs *Dergmuse*. From the main body of the plant, proceed several solid leafless branches, about three inches in circumference and one in diameter, from the top of which shoot out similar ones, each bearing on its summit a vivid crimson flower; these branches are scolloped, and have on their outer side small knots, from which grow five extremely sharp-pointed thorns, about one-third of an inch in length. The stalk is at first soft and succulent, but becomes hard in a few years, when the plant assumes the above-mentioned form, and may then be considered as at its maturity. The inhabitants of the lower regions of Atlas make incisions in the branches of the plant with a knife, from which a corrosive lacteous juice issues, which, after being heated by the sun, becomes a substance of a whitish yellow colour, and in the month of September drops off, and forms the gum Euphorbium. The plants produce abundantly only once in four years; but this fourth year's produce is more than all Europe can consume; for, being a very powerful cathartic, it is there little used. The people who collect the gum are obliged to tie a cloth over their mouth and nostrils, to prevent the small dusty particles from annoying them, as they produce incessant sneezing. The branches are used in the tanning of Morocco leather, and it is in great request among the women as a *depilatory*.

The gum is brought to us immediately from Barbary, in drops of an irregular form; some of which, on being broken, are found to contain little thorns, small twigs, flowers, and other vegetable matters; others are hollow, without any thing in their cavity; the tears, in general, are of a pale yellow colour externally, but somewhat white within: they break easily between the fingers. Braconnot has analysed euphorbium. He got from 100 parts, 37 of resin, 19 of wax, 20.5 of malate of lime, 2 of malate of potass, 13.5 of woody matter, 5 of water, and there was 3 of loss. Euphorbium is extremely troublesome to pulverize; the finer part of the powder, which flies off, affecting the head in a violent manner. The acrimony of this substance is so great, as to render it unfit for internal use; It burns with an agreeable smell and a bright flame.—When applied to the tongue, it seems at first to have no taste,

but on being held some time in the mouth, it excites a very violent biting and burning; which lasts a long time, and cannot be abated by washing out the mouth.

FERRUM. *Lond. Dub. Ed.*
Iron.

THIS is the most common of all metals. It seems even to be a constituent of organic substances, and is the only metal which, when taken into the body, exerts no deleterious action upon it. The numerous ores of iron which are found in every part of the globe, may be reduced to the following genera.

1. Native iron. Immense isolated masses of this have been found in Siberia and in South America. Their origin is still perfectly problematical.
2. Carburetted iron. Plumbago.
3. Sulphuretted iron. Pyrites.
4. Oxidized iron.
   a. Protoxide. Magnetic iron ore; colour black or grey.
   b. Peroxide. Not magnetic; colour red or brown.
   c. Carbonated.
   d. Arseniated.
   e. Tungstated.

The properties of iron, when obtained from any of these ores by the usual processes of fusion, &c. have been already described. As its mechanical division is extremely difficult, it is directed to be kept in the shops in the state of filings or wire, and the scales of black oxide, which are found around the smith's anvil. Soft malleable iron is the only kind fit for internal use, as steel and cast-iron always contain impurities, and often arsenic.

Iron is prescribed,

I. In its metallic state.
   Ferri limatura. *Ed.*
   ———— purificata. *Ed.*
   Ferri ramenta et fila. *Lond.*
   Ferri scobs. *Dub.*

II. Oxidized.
   1. Protoxide,
      Ferri squamæ. *Ed.*
      Ferri oxydi squamæ. *Dub.*
         Oxidum ferri nigrum purificatum. *Ed.*
         Oxydum ferri nigrum. *Dub.*
   2. Peroxide,
      Oxidum ferri rubrum. *Ed. Dub.*
   3. Supercarbonated; as in the chalybeate mineral waters.