

wood of Thuringia.\* In its chemical composition, and electric properties, it bears a great analogy to amber; it is usually crystallized in small octahedrons. In the tertiary beds of Highgate a fossil resin, resembling copal, has been discovered.

24. THE DIAMOND.—The chemical constituents of the substances I have described are chiefly carbon or charcoal, and hydrogen, with a small proportion of oxygen—the essential characters of vegetable matter. In the diamond we have the elements of pure carbon; at a heat less than the melting point of silver, it burns, and is volatilized, yielding the same elementary products as charcoal. Sir Isaac Newton long since remarked, that the refractive power, that is, the property of bending the rays of light, was three times greater in respect of their densities, in amber and in the diamond, than in other bodies; and he therefore concluded that the diamond was some unctuous substance that had crystallized. Sir David Brewster has observed, that the globules of air (or some fluid of low refractive power) occasionally seen in diamonds, have communicated, by expansion, a polarizing structure to the parts in immediate contact with the air-bubble, a phenomenon which also occurs in amber. This is displayed in four sectors of polarized light encircling the globule of air; a similar structure can be produced artificially, either in glass or gelatinous masses,

\* Organic Remains of a Former World, vol. i. Pl. 1, fig. 2.