

that they have suffered no change, except that of having been moved with the chalk from a horizontal to a vertical position. These sands and clays present every variety of colour of green, yellow, red, crimson, ferruginous, white, black, and brown." Beds of pipe-clay also occur; some of which contain layers of wood-coal, with branches and leaves. The coal burns with difficulty, and emits a strong sulphureous smell; masses are constantly drifted by the sea and thrown on the shore near Brighton, where this substance was formerly used as fuel by the poorer inhabitants.*

25. LONDON CLAY OF THE HAMPSHIRE BASIN.—The London clay extends over the greater portion of the area of the Hampshire basin, its peculiar fossils abounding in many localities. Castle Hill, near Newhaven, which has been already mentioned, is a series of sands, marls, and clays, with beds of oyster-shells and of shingle that occupy the upper part of the hill, and rest upon the chalk which forms the lowermost fifty feet of the cliff. The subsulphate of *alumine*,† a mineral substance peculiar to this locality, occurs in the ochraceous clay which is in immediate contact with the chalk. Selenite, or crystallized gypsum, abounds in the gypseous marls; a layer of surturbrand, or wood-coal, a few inches thick, contains impressions of land-

* See Geology of the South Downs, p. 261.

† British Mineralogy, Tab. 499. Geology of the South-East of England, p. 56.