

with sand and clay (*Bohnerz*). (See p. 255 and Book III. Part II. Sect. iii. § 3.)

Spathic Iron-ore, a coarse or fine crystalline or dull compact aggregate of the mineral siderite or ferrous carbonate, usually with carbonates of calcium, manganese and magnesium; has a prevalent yellowish or brownish color, and when fresh, its rhombohedral cleavage-faces show a pearly lustre, which soon disappears as the surface is oxidized into limonite or hæmatite. Occurs in beds and veins, especially among older geological formations. The colossal Erzberg at Eisenerz in Styria, which rises more than 2700 feet above the valley, consists almost wholly of siderite.¹⁵⁹

Clay-iron stone (*Sphærosiderite*), a dull brown or black, compact form of siderite, with a variable mixture of clay, and usually also of organic matter. Occurs in the Carboniferous and other formations, in the form either of nodules, where it has usually been deposited round some organic centre, or of beds interstratified with shales and coals. It is more properly described at p. 256, with the organically derived rocks.

Magnetic iron-ore, a granular to compact aggregate of magnetite, of a black color and streak, more or less perfect metallic lustre, and strong magnetism. Commonly contains admixtures of other minerals, notably of hæmatite, chrome-iron, titanite-iron, pyrites, chlorite, quartz, hornblende, garnet, epidote, felspar. Occurs in beds and enormous lenticular masses (*Stöcke*) among crystalline schists, likewise in segregation-veins of gabbros and other eruptive rocks; also occasionally in an oolitic form (probably as a pseudomorph after an original calcareous oolite) among Palæozoic rocks, as in the so-called "pisolitic iron-ore" of North Wales. Among the Scandinavian gneisses lies the iron mountain of Gellivara in Lulea-Lappmark, 17,000 feet long, 8500 feet broad, and 525 feet high.

Siliceous Sinter (*Geyserite*, *Kieselsinter*), the siliceous deposit made by hot springs, including varieties that are crumbling and earthy, compact and flinty, finely laminated and shaly, sometimes dull and opaque, sometimes translucent, with pearly or waxy lustre, and with chalcedonic alterations in the older parts. The deposit may occur as an incrustation round the orifices of eruption, rising into dome-shaped, botryoidal, coralloid, or columnar elevations, or investing leaves and stems of plants, shells, insects, etc.,

¹⁵⁹ Zirkel, Lehrb. i. p. 345.