

feet, *made before the invention of gunpowder*. The greatest depth to which human labor and ingenuity have as yet been able to penetrate is 3778 feet, in the old Kuttenberger mine in Bohemia, now abandoned. This depth, as remarked by Humboldt, is about eight times the height of the pyramid of Cheops or the Cathedral of Strasburg.

The deepest excavation in the United States is probably that of the Minnesota mine near Ontonagon, Lake Superior, which descends upon a copper-bearing lode to the depth of over 1300 feet. The Quincy mine at Hancock is 900 feet deep. The deepest mine in California is said to be the Hayward Quartz mine in Amador county, 1200 feet deep. The deepest excavations on the Comstock lode, Nevada, are 700 feet.

Mining excavations frequently extend from half a mile to a mile under the sea. In these gloomy subterranean and submarine passages, where, in some cases, one or two hundred feet of sea-water rest upon a slaty roof but three or four feet thick, the low moan of the waves can be continually heard above the miner's head, and in time of storms the howl becomes terrific and intolerable. The great adit for the discharge of the waters of the Gwennap tin mines in Cornwall exceeds 30 miles. In 1864, a tunnel 14 miles in length was completed in the region of the Harz mines, Brunswick, for the drainage of the district. A similar tunnel, 15 miles in length, designed for the drainage of the Freiberg district, has been in progress for several years. The Sutro tunnel, designed for the drainage of the mines located upon the Comstock lode, Nevada, is to be 19,000 feet in length, 12 feet wide, and 10 feet high, and will cost between four and five millions of dollars.

The great "tunnel" at Chicago, through which the city is supplied with pure water from Lake Michigan, is 10,567 feet long, five feet wide, and five feet two inches high, and at the shore extremity communicates with a vertical shaft 82 feet below the lake-level, and at the other extremity with a crib and shaft 66 feet below the lake-level.

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NOTE VI., page 185.

As the *Archæopteryx*, or bird-reptile, is one of the most remarkable relics of the ancient world, and has but recently been brought to light, I append some references to sources of information upon the subject: Prof. Wagner first announced the discovery to the Royal Academy of Sciences of Munich in 1861; H. Herrman von Meyer described it in "*Jahrbuch für Mineralogie*," 1861, p. 561; Wm. H. Woodward, in "*Intellectual Observer*," Dec. 1862 (with plate); Prof. J. D. Dana, in "*Amer. Jour. of Science and Arts*," 2d ser., xxxv., May, 1863, p. 129, and "*Manual of Geology*," Appendix to later editions; Prof. R. Owen, in "*Philosophical Transactions*," cliii., part i., 1863, p. 33, pl. 1 to 4.