the year 1807," he says, "at the time of the bombardment of the Danish fleet, an English sloop of war, riding at anchor in the roads at Copenhagen, blew up. In 1844, or thirty-seven years afterwards, one of our divers, known to be a trustworthy man, went down to save whatever might yet remain in the shipwrecked vessel. He found the space between decks entire, but covered with blocks from 6 to 8 cubic feet in size, and some of them heaped one upon the other. He also affirmed, that all the sunk ships which he had visited in the Sound, were in like manner strewed over with blocks."

Dr. Forchhammer also informs us, that during an intense frost in February, 1844, the Sound was suddenly frozen over, and sheets of ice, driven by a storm, were heaped up at the bottom of the Bay of Täarbeijk, threatening to destroy a fishing-village on the shore. The whole was soon frozen together into one mass, and forced up on the beach, forming a mound more than 16 feet high, which threw down the walls of several buildings. "When I visited the spot next day, I saw ridges of ice, sand, and pebbles, not only on the shore, but extending far out into the bottom of the sea, showing how greatly its bed had been changed, and how easily where it is composed of rock, it may be furrowed and streaked by stones firmly fixed in the moving ice." *

CHAPTER XVII.

PHENOMENA OF SPRINGS.

Origin of springs — Artesian wells — Borings at Paris — Distinct causes by which mineral and thermal waters may be raised to the surface — Their connection with volcanic agency — Calcareous springs — Travertin of the Elsa — Baths of San Vignone and of San Filippo, near Radicofani — Spheroidal structure in travertin — Bulicami of Viterbo — Lake of the Solfatara, near Rome — Travertin at Cascade of Tivoli — Gypseous, siliceous, and ferruginous springs. — Brine springs — Carbonated springs — Disintegration of granite in Auvergne — Petroleum springs — Pitch lake of Trinidad.

Origin of springs. —THE action of running water on the land having been considered, we may next turn our attention to what may be termed "the subterranean drainage," or the phenomena of springs. Every one is familiar with the fact, that certain porous soils, such as loose sand and gravel, absorb water with rapidity, and that the ground composed of them soon dries up after heavy showers. If a well be sunk in such soils, we often penetrate to considerable depths before we meet with water; but this is usually found on our approaching the lower parts of the formation, where it rests on some impervious bed; for here the water, unable to make its way down-

* Bulletin de la Soc. Geol. de France, 1847, 4. pp. 1182, 1183.