great physician in the accuracy of his diagnosis. In our own days, the Abbé Paramelle has made of hydroscopy an absolute profession. By examining the direction and nature of the superficial strata, the vegetation by which they are covered, the position of wells or natural watercourses, he frequently succeeds in divining the traject of the subterranean waters, and excavations made according to his instructions have often proved his sagacity. A rival of the Abbé Paramelle is the Abbé Richard, who for some years has pursued the same career, and has displayed in many foreign lands his *hydroscopic* skill.

Natural *mineral waters* are those which hold in solution recognizable quantities of mineral substances, with which they become charged during their subterranean traject. They may be divided into four classes :—1. *Saline Waters*, as those of Carlsbad and Kissingen; 2. *Alkaline Waters*, as those of Vichy and Tœplitz; 3. *Chalybeate Waters*, as those of Bath, Spa, and Pyrmont; and 4. *Sulphurous Waters*, as those of Baréges and Aix-la-Chapelle. The medicinal properties of these various categories of mineral waters are known to everybody.

When the temperature of the natural waters exceeds that of the surrounding atmosphere, they are called *Thermal Waters*. Sometimes their degree of heat is very elevated, as may be seen in a previous chapter. Humboldt discovered in the neighbourhood of Valencia, in America, a spring which raised the thermometer to 210°. M. Boussingault, in the same part of the world, observed three springs situated at different heights : that of Trincheras, near Puerto-Cabello, almost on the sea-level, showed a temperature of 206°; that of Mariana, nearly 2000 feet above the sea, a temperature of 148°; and that of Onoto, at 2300 feet, only 113°.

Thermal waters bubble up in every variety of soil, and originate even in the midst of rivers and in the bosom of the sea. The Rhone, near St. Maurice, and the Gulf of Naples, offer examples of these remarkable locations.

Their heat arises from the following cause : penetrating deeply into the interior of the earth, they become heated by contact with the rocks which the vicinity of the central fire renders burning. At a depth of 9000 feet, as we have said in a preceding chapter, the strata