The fleecy clouds of vapour which issue from the volcanoes are streaked with lightning, followed by continuous peals of thunder; in condensing, they discharge disastrous showers, which sweep the sides of the mountain. Many eruptions, known as *mud volcanoes*, and *watery volcanoes*, are nothing more than these heavy rains, carrying down with them showers of ashes, stones, and scoriæ, more or less mixed with water.

Passing on to the phenomena of which the crater is the scene at the time of an eruption, it is stated that at first there is an incessant rise and fall of the lava which fills the interior of the crater. This double movement is often interrupted by violent explosions of gas. The crater of Kilauea, in the Island of Hawaii, contains a lake of molten matter 1,600 feet broad, which is subject to such a double movement of elevation and depression. Each of the vaporous bubbles as it issues from the crater presses the molten lava upwards, till it rises and bursts with great force at the surface. A portion of the lava, half-cooled and reduced to scoriæ, is thus projected upwards, and the several fragments are hurled violently in all directions, like those of a shell at the moment when it bursts.

The greater number of the fragments being thrown vertically into the air, fall back into the crater again. Many accumulating on the edge of the opening add more and more to the height of the cone of eruption. The lighter and smaller fragments, as well as the fine ashes, are drawn upwards by the spiral vapours, and sometimes transported by the winds over almost incredible distances.

In 1794 the ashes from Vesuvius were carried as far as the extremity of Calabria. In 1812 the volcanic ashes of Saint Vincent, in the Antilles, were carried eastward as far as Barbadoes, spreading such obscurity over the island that, in open day, passengers could not see their way. Finally, some of the masses of molten lava are shot singly into the air during an eruption with a rapid rotatory motion, which causes them to assume the rounded shape in which they are known by the name of *volcanic bombs*.

We have already remarked that the lava, which in a fluid state fills the crater and the internal vent or chimney of the volcano, is forced upwards by gaseous fluids, and by the steam which has been generated from the water, entangled with the lava. In some cases the mechanical force of this vapour is so great as to drive the lava over the edge of the crater, when it forms a fiery torrent, spreading over the sides of the mountain. This only happens in the case of volcanoes of inconsiderable height; in lofty volcanoes it is not unusual for the lava thus to force an outlet for itself near the base of the