

cone. In minor volcanoes, on the other hand, where the explosions are less violent, and where the thickness of the cone in proportion to the diameter of the funnel is often greater, the lava very commonly rises into the crater. Should the crater-walls be too weak to resist the pressure of the molten mass, they give way, and the lava rushes out from the breach. This is seen to have happened in several of the puys of Auvergne, so well figured and described by Scrope (Fig. 48).⁶⁷ But if the crater be massive

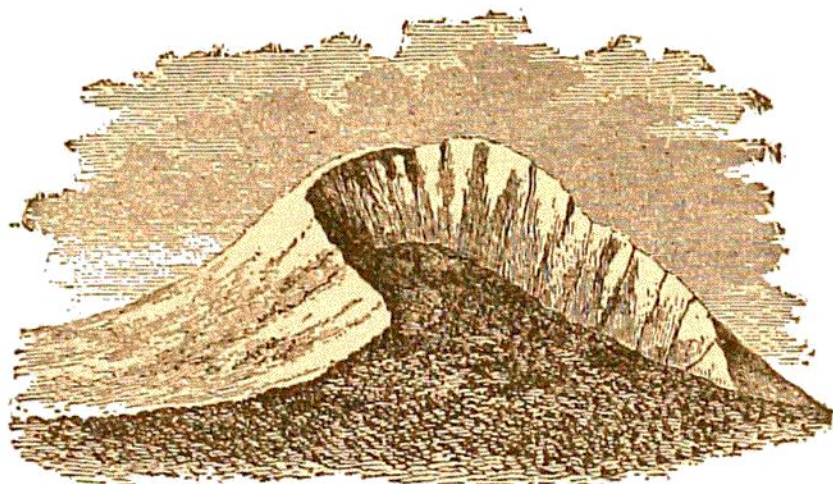


Fig. 48.—View of one of the Tuff-cones of Auvergne, broken down on one side by the escape of a stream of Lava. (After Scrope.)

enough to withstand the pressure, the lava may at last flow out from the lowest part of the rim.

In a tall column of molten lava, there may be a variation in the density of its different parts, the heaviest naturally gravitating to the bottom. It has been observed by Ch. Vélain that at the Isle of Bourbon (Réunion), the lavas escaping from the base of the volcanic cone are denser

⁶⁷ For descriptions of this region, see Scrope's "Geology and Extinct Volcanoes of Central France," 2d edit. 1858. H. Lecoq's "Epoques géologiques de l'Auvergne," 1867. Michel-Lévy, Bull. Soc. Geol. France, xviii. (1890), p. 688. The succession of volcanic rocks in Velay is described by M. Boule, Bull. Soc. Geol. France, xviii. (1889), p. 174, and in Bull. Carte Geol. de la France, No. 28 (1892); see also op. cit. No. 13 for a memoir by P. Termier.