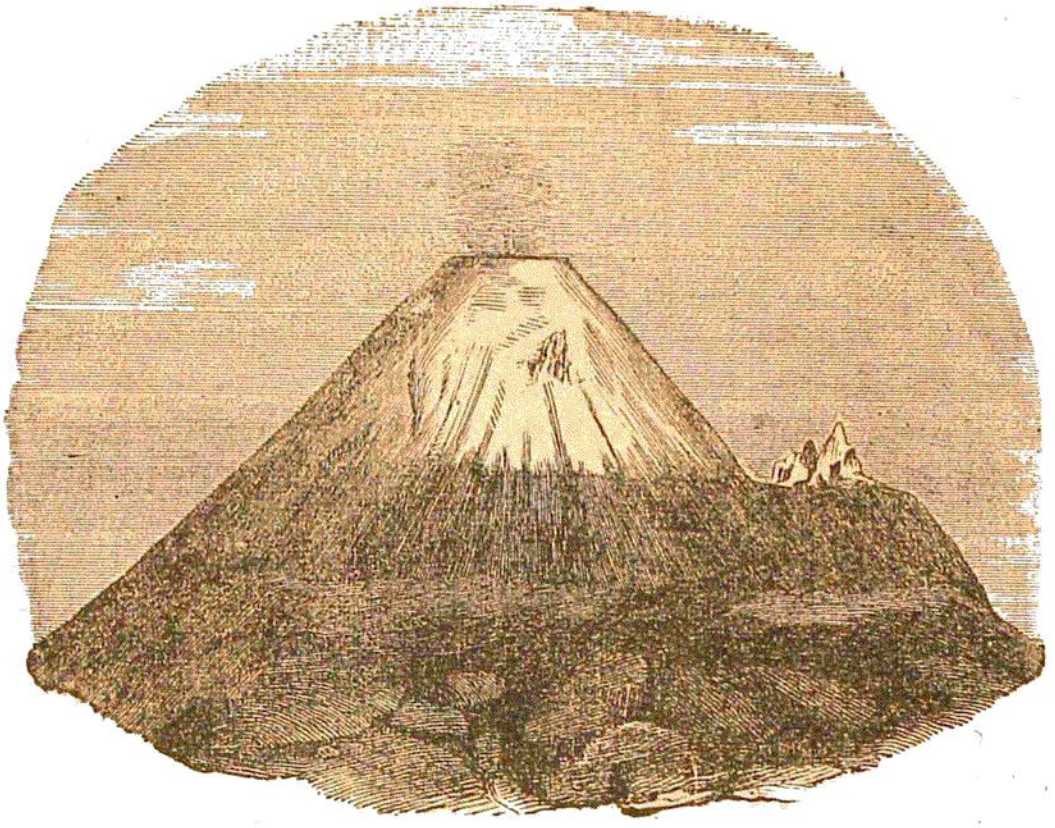
Fig. 119.



Cotopaxi.

Taking the specific gravity of lava at 2.8, the following table will show the force requisite to cause it to flow over the tops of the several volcanoes whose names are given, with their height above the sea. The initial velocity which such a force would produce, is also given in the last column.

Name	Height in feet.	Force exerted upon the Lava.	Initial velocity per second.
Stromboli, (Chicciola) . . .	2947	231 Atmospheres.	371 feet.
Vesuvius	3948	320	496
Etna	10874	884	832
Teneriffe	12182	990	896
Mauna Kea, Sandwich Islands	13645	1109	966
Cotopaxi, Quito	18875	1493	1104
Aconcagua, Chile	23910	1943	

There can be but little doubt but the chimney of a volcano extends generally as much below the level of the sea as it does above; and often probably fifty times as deep; so that the actual force pressing upon the lava in its reservoir, may be far greater than the second column of the preceding table represents; and the initial velocity much greater than in the third column.

The amount of melted matter ejected from Vesuvius in the eruption of 1737, was estimated at 11,839,168 cubic yards; and in that in 1794, at 22,435,520 cubic yards. But these quantities are small compared with those which Etna has sometimes disgorged. In 1660, the amount of lava was twenty times greater