



Mountains thus constituted have been, doubtless, formed by successive eruptions; they may be called "craters of eruption;" but still the question recurs, — What was the *origin* of the opening through which those ejections began, which in their continuance have formed craters of eruption?

In several cases which have occurred within the reach of authentic history, eruptions on Etna and Vesuvius have commenced in the opening of a *fissure* through the previously aggregated masses of volcanic substances. This happened in 1538, when the Monte Nuovo rose (the greater portion in a day and a night) on the shore near Puzzuoli, which had been previously (for two years) disturbed by earthquakes. Fissures appeared on Etna in 1669, when the Monte Rossi, which is a double cone of 450 feet in height, was formed by explosion, and lava currents ran down the mountain.

The year 1759 witnessed the formation of a new volcanic vent, and the accumulation of the new mountain of Jorullo (1695 feet high), west of the city of Mexico. According to Humboldt's relation, "a tract of ground from 3 to 4 square miles in extent rose up in the shape of a bladder;" and the bounds of this convulsion are still distinguishable from the frac-