

feet deep, with an outer circle no less than from two to three miles in diameter), in which lava is usually seen, Mr. Dana tells us, to boil up at the bottom of a lake, the level of which varies continually according to the active or quiescent state of the volcano. The cone which supports these craters, and which is designated the *cone of ejection*, is composed for the most part of lava or *scoriæ*, the products of eruption. Many volcanoes consist only of a *cone of scoriæ*. Such is that of Barren Isle, in the Bay of Bengal. Others, on the



Fig. 11.—Fissures near Locarno.

contrary, present a very small cone, notwithstanding the considerable height of the volcanic chain. As an example we may mention the new crater of Vesuvius, which was produced in 1829 within the former crater (Fig. 10).

The frequency and intensity of the eruptions bear no relation to the dimensions of the volcanic mountain. The eruption of a volcano is usually announced by a subterranean noise, accompanied by shocks, quivering of the ground, and sometimes by actual earthquakes. The noise, which usually proceeds from a great depth, makes itself heard, sometimes over a great extent of country, and resembles a well-sustained fire of artillery, accompanied by the rattle of musketry.