

rule, a lava-stream moves faster at first than afterward, because it has not had time to stiffen, and its slope of descent is usually steeper than further down the mountain. One of the most fluid and swiftly flowing lava-streams ever observed on Vesuvius was that erupted on 12th August, 1805. It is said to have rushed down a space of 3 Italian ($3\frac{1}{2}$ English) miles in the first four minutes, but to have widened out and moved more slowly as it descended, yet finally to have reached Torre del Greco in three hours. A lava erupted by Mauna Loa in 1852 went as fast as an ordinary stage-coach, or fifteen miles in two hours; but some of the lavas from that mountain have in parts of their course moved with double that rapidity. Long after a current has been deeply crusted over with slags and rough slabs of lava, it may continue to creep slowly forward for weeks or even months.

It happens sometimes that, as the lava moves along, the still molten mass inside bursts through the outer hardened and deeply seamed crust, and rushes out with, at first, a motion much more rapid than that of the main stream. Any sudden change in the form or slope of the ground affects the flow of the lava. Thus, reaching the edge of a steep defile or cliff, the molten rock pours over in a cataract of glowing, molten rock, with clouds of steam, showers of fragments, and a noise utterly indescribable. Or, on the other hand, encountering a ridge or hill across its path, it accumulates until it either finds egress round the side or actually overrides and entombs the obstacle. The hardened crust or shell, within which the still fluid lava moves, serves to keep the mass from spreading. Here and there, inside this crust, the lava subsides, leaving cavernous spaces and tunnels into which, when the whole is cold, one may creep,