For this reason the defenders of the upheaval hypothesis are consistent with themselves in assigning the whole movement by which the strata, whether solid or incoherent, have been tilted, exclusively to one terminal catastrophe. The whole development of subterranean force is represented as the last incident in every series of volcanic operations, the closing scene of the drama; and the sudden and paroxysmal nature of the catastrophe is inferred from the absence of all signs of successive and intermittent action so characteristic of the antecedent volcanic phenomena.

I have alluded to an opinion entertained by some able geologists, that no lava can acquire any degree of solidity if it flows down a declivity of more than three degrees. This doctrine I believe to be erroneous. The lava which has flowed from the cone of Llarena near Port Orotava, in Teneriffe, is very columnar in parts, and yet has descended a slope of six degrees. Another stream of recent aspect near the town of El Passo, in Palma, has a general inclination of ten degrees, and is remarkable for the depth and extent of the large basin-shaped hollows, 20, 30, and 35 feet deep, seen everywhere on its surface. Whenever another lava-current shall flow down over this one, although its average inclination will be the same, it must fill up all these inequalities, and in doing so must give rise to masses of compact and solid rock 20 or 30 feet thick, resting upon and encircled by vesicular lava. Other lavas northeast of Fuencaliente at the southern extremity of Palma, so modern as to be still black and uncovered with vegetation, descend slopes of no less than 22 degrees, and yet contain large masses of compact stone, formed chiefly on the sides of tunnel-shaped cavities, 15 or 20 feet deep, in which one layer has solidified within another on the walls of these channels, while in the central part the lava seems to have remained fluid so as to run out of the tunnel, leaving an arched cavity, the roof of which has in most cases fallen in. The strength of the enveloping crust of scoriæ at the lower end of a lava-current in which one of these tunnels existed may have been sufficient to arrest the progress of the stream for hours or days, and during that time solidification may have occurred under great hydrostatic pressure.

Before taking leave of Palma, we have yet to consider another distinct point, namely, what amount of denudation has taken place in the Caldera, and its environs. Assuming that the great cavity or some part of it may have originated in the truncation of a cone in the manner before suggested, to what extent has its shape been subsequently enlarged or modified by aqueous erosion? It will be remembered that a conglomerate of well-rounded pebbles, no less than 800 feet thick, was spoken of as visible in the great Barranco (see description of section, pp. 497, 498). That conspicuous deposit, 3 or 4 miles in length, was evidently derived from the destruction of rocks like those in the Caldera, for the present torrent brings down annually similar stones of every size, some very large, and rounds them by attrition in its channel. By what changes in the configuration of the island after