successively out of one or more higher vents near the summit of a great dome, than to imagine them to have proceeded from lateral dikes. In the Sandwich Islands, we have examples of volcanic domes 15,000 feet high, produced by successive outpourings from vents at or near the summit. One of these volcanos, Mount Loa, has a slope in all directions, of 6° 30'; another, Mount Kea, a mean inclination of 7° 46'. That their lavas may occasionally consolidate on slopes of 25° , and even more, and still preserve considerable solidity of texture, has been already stated, see above, p. 367.

We know not how large a quantity of modern lava may have been poured into the bottom of the Val del Bove, yet we perceive that eruptions breaking forth near the centre of Etna have already made some progress in filling up this great hollow. Even within the memory of persons now living, the rocks of Musara and Capra have, as before stated, lost much of their height and picturesque grandeur by the piling up of recent lavas round their base (see fig. 36. p. 392.), and the great chasm has intercepted many streams which would otherwise have deluged the fertile region below, as has happened on the side of Catania. The volcanic forces are now labouring, therefore, to repair the breach which subsidence has caused on one side of the great cone; and unless their energy should decline, or a new sinking take place, they may in time efface this inequality. In that event, the restored portion will always be unconformable to the more ancient part, yet it will consist, like it, of alternating beds of lava, scoriæ, and conglomerates, which, with all their irregularities, will have a general slope from the centre and summit of Etna towards the sea.

I shall conclude, then, by remarking that I conceive the general inclination of the alternating stony and fragmentary beds of the Val del Bove, from the axis of Etna towards its circumference or base, and the greater thickness of the volcanic pile as we approach the central parts of the mountain, to be due to the preponderance of eruptions from that centre. These gave rise, from the first, to a dome-shaped mass, which has ever since been increasing in height and area, being fractured again and again by the expansive force of vapours, and the severed parts made to cohere together more firmly after the solidification of the lava with which every open fissure and chasm has been filled. At the same time the cone may have gained a portion of its height by the elevatory effect of such dislocating movements, and the sheets of lava may have acquired in some places a greater, in others a less, inclination than that which at first belonged to them.

But had the mountain been due solely, or even principally, to upheaval, its structure would have resembled that which geologists have so often recognized in certain dome-shaped hills, or elevated regions, which all consider as having been thrust up by a force from below. In this case there is often an elliptical cavity at the summit, due partly to the fracture of the upraised rocks, but still more to aqueous denudation, as they rose out of the sea. This central cavity, or valley, exposes to view the subjacent formation c, fig. 39., and the