able size are thrown out by the volcanic forces, and sometimes take their course with the drifts of mud, so as to form part of the re-aggregated mass of trass, or constitute a volcanic conglomerate.

The last class of volcanic products which come to the surface are the gaseous and vaporous substances, to which much of the grandeur of the exhibition, as well as much of its general power and momentary energy, is owing. The most abundant of these is steam, which rises in white clouds over the craters of active, and from rents in extinct, volcanos. The most abundant of the gases are muriatic acid, sulphuretted hydrogen, sulphurous acid, carbonic acid, and nitrogen. (*Daubeny.*) Sublimations of particular solids occur, as boracic acid in the crater of Volcano, muriate of ammonia, muriate of soda, specular iron ore. The boracic acid cannot be sublimed by the heat of our furnaces; but Dr. Daubeny has shown by experiment, that, when heated and traversed by steam, a portion is taken up and carried with the steam.

Extinction of Volcanos.

The suppression of volcanic excitement lasts so long in some cases, that the long and quiet sleep is not to be distinguished from a real extinction of the local energy of heat. Between two eruptions in Ischia seventeen centuries elapsed. In this respect the history of Vesuvius is very instructive, especially when compared with the aspect of the long decayed volcanic mounds of the Eifel and Auvergne, whose fires were, perhaps, never beheld by man.

The cone of Vesuvius is of comparatively modern date, formed within the larger and more ancient crater of Monte Somma. The descriptions given by Latin writers seem applicable to this latter mountain, up to the great eruption of A. D. 79, which Pliny's narrative has rendered famous. Previous to that event the mountain was cultivated; its crater, perhaps, served as