

*Origin of Volcanos.*

A mountain which has long been silent, and on whose slopes the cultivation has spread for ages, is yet the centre of great subterranean disturbance, shaken by earthquakes, and surrounded by hot springs and sulphureous exhalations. It cannot be known, from such phenomena alone, whether the volcanic energy of this particular region is sinking slowly to the entire decay, which the perishing craters of the Eifel indicate, or re-awakening to violent efforts, like those which Vesuvius made in the year 79 of our era, after many centuries of entire repose, while the older crater of Monte Somma was falling in decay.

The renewal of action in an old volcano, after a long period of repose, may be looked upon as exhibiting, in a considerable degree, the phenomena which accompany the first origin of a volcanic vent. Earthquakes, subterranean noises, the bursting forth of new springs, and the suppression of old sources, are symptoms of a particular kind of subterraneous disturbance, of which they record the violence, and in some degree moderate the effects. Volcanic *forces* are in action wherever such phenomena appear ; and, unless the imprisoned powers acquire an extraordinary intensity, these are their only effects ; volcanic *eruptions* are the consequence of forces which have accumulated beyond the relief afforded by displacements of the crust of the earth.

The terrific aspect of a burning mountain, and the immense volumes of melted rocks and scattered ashes which remain as measures of its fury, affect the imagination too strongly ; and in this scene of temporary violence we forget the less marked, but really important, changes occasioned by the disturbance of interior temperature, which in sudden earthquakes, or more gradual and extensive changes of position among the masses of matter, is slowly modifying the aspect of the globe.

But, independent of the information to be gathered from the renewed activity of particular volcanos, like