

within the earth's crust. They play an important part in volcanic activity, showing themselves in the earliest stages of a volcano's history, and continuing to appear for centuries after all other subterranean action has ceased. By much the most abundant of them all is water-gas, which, ultimately escaping as steam, has been estimated to form $\frac{1}{1000}$ ths of the whole cloud that hangs over an active volcano (Fig. 40). In great eruptions, steam rises in prodigious

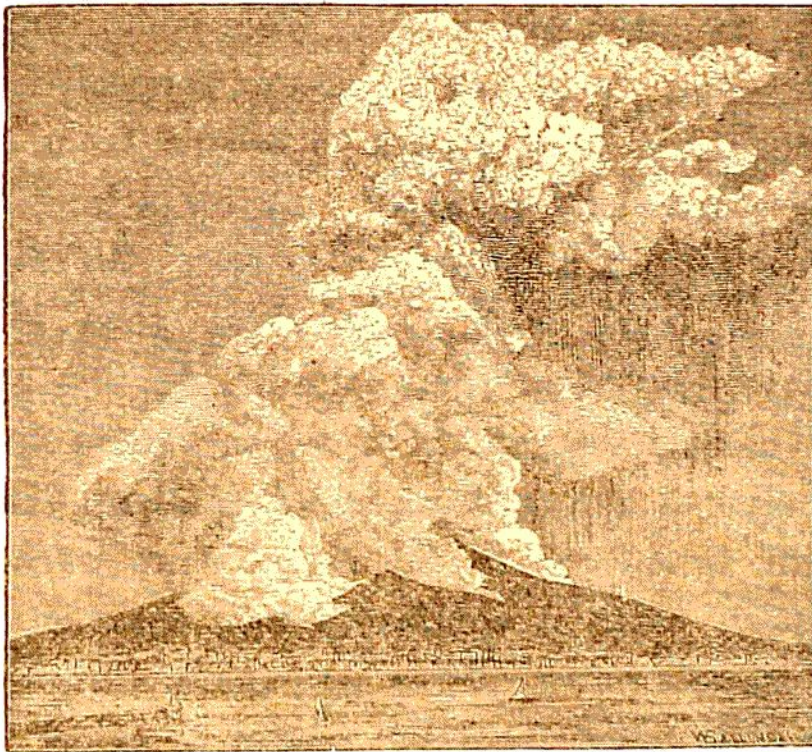


Fig. 40.—View of Vesuvius as seen from Naples during the eruption of 1872, showing the dense clouds of condensed aqueous vapor.

quantities, and is rapidly condensed into a heavy rainfall. M. Fouqué calculated that, during 100 days, one of the parasitic cones on Etna had ejected vapor enough to form, if condensed, 2,100,000 cubic mètres (462,000,000 gallons) of water. But even from volcanoes which, like the Solfatara of Naples, have been dormant for centuries, steam sometimes still rises without intermission and in considerable volume. Jets of vapor rush out from clefts in the