

in snow-white crystals as it cools. Sublimation, however, can hardly be conceived as having operated in the formation of rocks, save here and there in the infilling of open fissures.

§ 2. Influence of Heated Water

In the geological contest fought at the beginning of the century between the Neptunists and the Plutonists, the two great battle-cries were, on the one side, Water, on the other, Fire. The progress of science since that time has shown that each of the parties had some truth on its side, and had seized one aspect of the problems touching the origin of rocks. If subterranean heat has played a large part in the construction of the materials of the earth's crust, water, on the other hand, has performed a hardly less important share of the task. They have often co-operated together, and in such a way that the results must be regarded as their joint achievement, wherein the respective share of each can hardly be exactly apportioned. In Part II. of this Book the chemical operation of infiltrating water, at ordinary temperatures at the surface, and among rocks at limited depths, is described. We are here concerned mainly with the work done by water when within the influence of subterranean heat, and the manner in which this work can be experimentally imitated.

Presence of water in all rocks.—Besides its combinations in hydrous minerals, water may exist in rocks either (1) retained interstitially among minute crevices and pores, or (2) imprisoned within the microscopic cells of crystals.

(1.) By numerous observations it has been proved that all rocks within the accessible portion of the earth's crust contain interstitial water, or, as it is sometimes called,