

CHAP. VII.

UNSTRATIFIED ROCKS IN THE CRUST OF THE EARTH.

General Remarks.

IN a former part of this work* a general view is given of the reasons which have guided modern geologists in ascribing to a large class of rocks in the crust of the earth an original state of igneous fusion; and in connection with each system of strata some notice is taken of the distribution and characteristic phenomena of the igneous rocks locally associated therewith. We must now take up the subject in a comprehensive point of view, and elucidate its bearings on the general problem of the effects of heat in the crust of the globe. We must unite into one contemplation the history of the whole series of igneous rocks of every age, from the supposed "fundamental granite" to the volcanic mounds, heaped up under daily observation. And in this review care must be taken, both to combine and to analyse the knowledge of igneous effects, so as to obtain from the whole investigation trustworthy conclusions regarding the true condition of the globe, in respect of heat, at and below the surface, in successive geological periods.

Igneous Origin. — In asserting, concerning granite, basalt, porphyry, and other rocks, that they are of igneous origin, we must be careful to explain that it is not meant to affirm, that the materials of which these rocks consist have not existed together in any other combination, or been subject to other conditions previously.

* See Vol. I. p. 45.