casual minerals, is the result of crystallization. Hornblende schist is the produce of fused clayslate; being compound or simple under different modes of cooling, as, possibly also under some difference of materials; and though quartz rock has been exposed to heat, it has not suffered fusion. Argillaceous schist has been in the same state as micaceous schist, where it contains crystallized minerals, and, possibly, always; since even shells would not be destroyed in clay, though they are in limestone. Primary limestones have been in fusion wherever they contain crystallized minerals, and probably always; with the obliteration of their shells. Diallage rock appears to be analogous, both to granite and gneiss: that is, to have been fused, either *in situ*, or with effusion; and this appears true also of serpentine. And pitchstone is a trap, essentially; but the causes of its peculiar character and limited place are not quite apparent.

It having been long admitted that the action of heat, through igneous rocks, affects strata in contact, I have shown that it also produces several concretionary structures; among which, the columnar and the spheroidal are most particularly demonstrated; as is the fibrous, and also the schistose, if less common: and further, that under any cause, the schistose structure of the primary slates is concretionary. I have also proved that such concretionary structures occur in rocks heated short of fusion, and, moreover, that this passes gradually into the crystalline; proving a connection, rather than an analogy, which adds to the difficulty of all our theories on the subject of crystallization. If I have further shown that flexures might have been produced under the influence of water and fire both, so have I proved, that the crystalline polarity extends through large masses; whence, as I have just said, the parallelism of mica in the early rocks depends on this cause.