CHAPTER XV.

DO THE PRIMARY ROCKS AFFORD PHYSICAL EVIDENCE THAT THEY HAVE EXPERIENCED FISSURES, DISLOCATIONS, AND OTHER MECHANICAL MOVEMENTS?

The apparent indications of displacements. — The curvatures of rocks. — Alternations of curved and straight strata. — Veins often tortuous in straight beds. — The colouring ingredients of rocks arranged in undulating and contorted lines. — Similar appearances in agates and alabaster — also in igneous rocks. — Sir James Hall's explanation of curved strata. — The moving power imaginary. — The spheroidal structure of rocks. — Primary conglomerates not fragmentary — the secondary, sometimes mechanical, at others concretional. — Igneous and aqueous rocks also conglomerated. — Granite-veins — their structure and composition incompatible with theory — analogous to slate-veins — and to certain arrangements in crystalline rocks. — Mineral veins — different kinds of — veins of segregation in Cornwall. — Definition of true veins — objected to. — Intersections of veins no criterion of their relative ages. — Remarks on the heaves and other supposed movements of veins. — Conclusion.

The subject of this chapter has been in part anticipated in the discussion on the supposed elevation of the primary strata; and, certainly, on the determination of that question the nature of some of the phenomena about to be considered in a great measure depends; for these are generally presumed to be lesser movements, the concomitants of those vast catastrophes by which the stratified deposits of all ages were upraised from a horizontal position.

The effects, however, of these supposed subordinate movements present such varied appearances, and require to be combated by such different arguments, that their individual consideration cannot fail to elicit some instruction; and, indeed, unless they are passed under review, both by the supporters and the opponents of the prevailing theory, the discussion will not be satisfactory.