

conformed in direction to some that have been mentioned before.

With such uncertainty in the data for reasoning and such contrariety and complexity in their indications, it is obvious that no definite and satisfactory conclusion can be at present adopted on the question of the parallelism of mountain elevations which belong to one geological age.

The great ranges of mountains, &c. marking the dislocations of the strata, cannot at present be accommodated to the strictness of a general geographical system ; it is, however, not the less desirable to examine the same question on a smaller scale, with the aid of mechanical science and rigorous observations.

The well-established facts of the local parallelism of particular classes of mineral veins, already put in evidence in a preceding chapter, leave no doubt of the existence of some real symmetry of the systems of dislocation in every limited district. In several instances approximate parallelism has been observed between mineral veins and the numerous divisional planes of stratified rocks ; and in others a peculiar dependence has been traced between the direction of a vein-fissure and that of an axis of elevated strata. Phenomena of this nature would for ever remain unexplained, if mathematical methods of research could not be applied to them ; nor can they be applied except upon certain assumed conditions of mechanical action.

The first step in this career of discovery has been taken by Mr. Hopkins, whose memoir in the Cambridge Philosophical Transactions is remarkable for the simplicity and probability of its fundamental postulates, and the ready applicability of its conclusions to the results of observation. That the crust of the earth is elastic and capable of extension, earthquakes demonstrate ; that cavities exist below parts of it is certain ; and that these have a considerable horizontal extent is probable. There is no room for doubt that similar conditions existed in early geological times ; for such cavities