may at least be able to show the improbability of some conjectures which have been propounded.

I shall now give a very brief account of some of the attempts made in these various departments of this province of our knowledge; and in the present chapter, of Inorganic Changes.

### *Sect. 2.—Aqueous Causes of Change.*

The controversies to which the various theories of geologists gave rise, proceeding in various ways upon the effects of the existing causes of change, led men to observe, with some attention and perseverance, the actual operation of such causes. In this way, the known effect of the Rhine, in filling up the Lake of Geneva at its upper extremity, was referred to by De Luc, Kirwan, and others, in their dispute with the Huttonians; and attempts were even made to calculate how distant the period was, when this alluvial deposit first began. Other modern observers have attended to similar facts in the natural history of rivers and seas. But the subject may be considered as having first assumed its proper form, when taken up by Mr. Von Hoff; of whose *History of the Natural Changes of the Earth's surface which are proved by Tradition*, the first part, treating of aqueous changes, appeared in 1822. This work was occasioned by a Prize Question of the Royal Society of Göttingen, promulgated in 1818; in which these changes were proposed as the subject of inquiry, with a special reference to geology. Although Von Hoff does not attempt to establish any general inductions upon the facts which his book contains, the collection of such a body of facts gave almost a new aspect to the subject, by showing that changes in the relative extent of land and water were going on at every time, and almost at every place; and that mutability and fluctuation in the form of the solid parts of the earth, which had been supposed by most persons to be a rare exception to the common course of events, was, in fact, the universal rule. But it was Mr. Lyell's *Principles of Geology, being an attempt to explain the former Changes of the Earth's Surface by the causes now in action* (of which the first volume was published in 1830), which disclosed the full effect of such researches on geology; and which attempted to present such assemblages of special facts, as examples of general laws. Thus this work may, as we have said, be looked upon as the beginning of Geological Dynamics, at least among us. Such generalizations and applications as it contains give the most lively