as we now witness in some of the *granites*, which are mixtures of quartz, feldspar, and mica; or the *syenites*, which are mixtures of quartz, feldspar, and hornblende; or the *diorites*, which are mostly mixtures of feldspar and hornblende. Or, perchance, the solidification took place under such circumstances that the crystallization was more obscure, as in the various *dolerites*, which every one admits to have been born of fire. We say that the process of refrigeration must have resulted in such rocks as these; and it is a curious and instructive fact, that when we turn our attention to an examination of the oldest rocks, we find granites, and syenites, and diorites, and dolerites resting where we expected them, underneath the rocks that came into being after water existed upon the earth, spreading out their bases in every direction, and constituting the very abutment which supports the lithological pile. We thus trace a certain succession of events which must occur in accordance with the established laws of physics, and find the series of sequents confirmed by the facts of the rocks themselves. Though this mode of reasoning is not in the spirit of modern natural science, it must always lead us to the truth if we reason correctly. Nevertheless, it is seldom the case that we are justified in the attempt to predicate the phenomena from the laws which involve them, as long as it is our privilege to confirm the laws by a study of the phenomena. In the present instance, the history of science shows that the laws were first arrived at by a careful induction from facts; and the little deductive reasoning in which we have indulged is but tracing the thread a little farther back, with the phenomenon it hangs upon all the time in full view.

In the process of refrigeration the stiffening crust would become too large for the nucleus within. This would necessarily result from the more rapid contraction of the more