Trap, porphyry, and pitchstone, have long been consigned over to an igneous origin, and as there is no longer any difference of opinion on this subject, it is not necessary here to enter into the discussion.* Nor is it important to our argument, to adduce the proofs in favor of the extension of the agency of fire, to the formation even of granite itself, with all its family of rocks. The igneous origin of granite is now generally, although not universally, admitted. It is, however, of no importance to this discussion, whether granite, as well as the other unstratified rocks, is of aqueous or igneous origin, since the proofs of geological succession, which is all that our argument requires, are, in either case, sufficiently decisive.

The intrusion of the rocks supposed to be of igneous origin, among those that are superincumbent, producing dykes and veins, often much ramified; the elevation and disruption of the upper strata; the confusion often induced among them; the chemical changes produced upon the contiguous masses, and the profuse and rich crystallization of many of the primitive rocks, both in the minerals proper to their constitution, and in those foreign ones which they contain imbedded: all these afford decisive proofs of geological order, event, succession, and time sufficient for the phenomena.

Crystallization in Rocks.

No person in the least acquainted with the subject, hesitates to admit that crystallization implies a previous state of corpuscular mobility either in fluid, in fusion, in vapor, or at least in a state of softness and diminished cohesion. Although crystallization is not confined to any one geological period, it is eminently conspicuous in the primitive rocks.

They present to the eye of one who has been accustomed to examine the results of chemical deposition, very decisive proofs that their particles have been in that state of *mobility*, which leaves them at liberty, to unite according to the laws of corpuscular attraction; the heterogeneous particles being connected by chemical, and the homogeneous by mechanical attraction. Thus in feldspar, (if we include both its necessary and occasional constituents) oxygen is an element in all the binary compounds that enter into its constitution; in the silex it is united to silicon; in the potassa to potassium; in

* For a view of this subject, the reader is referred to Dr. Cooper's lecture, in the fourth volume of the American Journal of Science.