

rocks melt at unequal degrees of heat ; as in the constituents of granite, which are quartz, mica, and felspar, the last of these ingredients is fused at about half the temperature which the first requires.

But they who make this objection overlook the fact of the extreme pressure under which the power of heat was exerted ; which would prevent the most fusible substance from being volatilized at the highest point that could exist : neither can they argue from the inequality of the points of fusion of the minerals when extricated, that the compound would not melt even in far less favourable circumstances ; for most persons are acquainted with the ready fusion of metallic compounds, though at a point considerably different from that which each ingredient would require singly.

IV. The rocks which lie above these, though partial crystallization, generally aqueous but sometimes igneous, is found in them, are demonstrably of a different origin. They are all composed of earthy matter, that is, different mixtures of sand, clay, and lime, with minor proportions of some other interspersed minerals. These have been washed away from the previously elevated rocks, by the action, first, of the atmosphere and variations of temperature, disintegrating and loosening the surfaces ; and then of dropping rain and running rills and streams, washing off the materials, in fine particles or coarser grain, through all degrees of attenuation ; carrying them down into lower situations ; and finally, after perhaps a very long succession of these transporting and sedimentary processes, depositing them on levels of rest, in the quiet bottoms or local depressions of lakes and seas. Each sediment or deposit is called a layer, or bed ; for convenience using the Latin word *stratum*. These stratified formations may be called about forty in number ; in thick-