

what answer do THEY give? With one mouth they say, No; IT IS IMPOSSIBLE.

There are thirty, or rather more, well defined *beds, layers, or strata, of different\** mineral masses, lying upon each other so as to form the surface of the globe on which we dwell. These combine themselves, by natural characters, into three or four grand groups. Compare them to a set of books, in 30 or 40 volumes, piled up on their flat sides. No where, indeed, can *the whole* set of the earth's strata be displayed, lying each upon the other, for reasons which will presently appear; and, if it were so at any spot, all the power and art of men could never penetrate through more than one, two, or three of the layers. They are placed one over the other, in a *sure and known* order of succession; that is, though in *no* locality are *all* to be found, or (which is saying the same thing conversely) in *every* locality *some* are wanting, the order of position is never violated. Let the letters of the alphabet represent the strata, thus; the TERTIARY, *a, b, c, d, e*; the SECONDARY, *i. e.* all from the chalk to the old red sandstone, inclusive, *f* to *z*; the PRIMARY, *aa, bb, &c.* to *jj*: then observe that any member or several members of the series may be *absent*, for example, *d* or *f*, or *l* or *p*; but *b* is never above *a*, nor *m* above *k*, nor *s* above *q*. When this fact is rightly conceived of, let it be further observed, that the strata do not lie over each other in continuous concentric spheroids; like the coats of an onion; but may rather be compared to a vast number of wafers, of irregular forms, laid on a globe, and patched upon each other in different sets as to thickness, and variously under-passing, out-cropping, and over-lapping. Now, let the mind imagine mighty forces from below, acting upon certain points and along certain lines: then the wafer-patches will be raised to all angles, bent, broken, their edges often turned up, so that the edges of lower strata stand in some places over the higher ones which had been thus shattered. Further, let the mind conceive, of a mass of melted matter, suppose pitch, having lain for some time quietly underneath the lowest of the wafer-patches; then boiling up, bursting forth, and in many places raising the wafers, piercing them, passing through them, and finally hardening in fantastic shapes, and towering over the upheaved and fractured outside. This little play of imagination will present a pretty fair idea of the *real stratification* of the earth's surface, the eruption of the *non-stratified* (granitic and similar) rocks

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\* *Different* in mineral composition: for it must be observed, that many a homogeneous stratum of great thickness is itself laminated or stratified, like the leaves of a book or a number of pasteboards closely pressed together.