

has been obtained, and the fact is familiar that the present surface of the earth contains the record of a vast succession of terrestrial changes, the influence of the old fondness for cutting the gordian knot of geological problems by recourse to earthquake and upheaval, still makes itself felt. Men are unwilling to recognise that the question of the origin of scenery is really so complex as those who have most closely studied it maintain it to be. And so they make short work of the difficulties, referring all the intricacies in the configuration of the land to the results of subterranean convulsion.

Now it must be frankly conceded that by far the larger part of the dry land has once been under the sea; that, indeed, it mainly consists of materials—hardened mud, sand, gravel, and limestone—which accumulated on the floor of the sea in vast sheets many thousands of feet in thickness, and that its present position above the sea-level is due to underground movements. The sea-bed has again and again been ridged up into land, and even on the flanks of the highest mountain-chains, portions of that old sea-bed may be seen towering into lofty crags, where glaciers creep and snow-fields lie. But when it is further asserted that the existing topographical features are the direct consequence and memorial of that upheaval, the trained geologist at once and emphatically answers No. If this alleged relation between the present configuration and former earth movements really exists, it must be proved and not assumed. The ground must be examined, and made to tell its story. The mere fact that it consists mainly of marine sediments demonstrates the fact of upheaval. But the effect of the upheaval on the ultimate topographical detail is a question of geological physics which must be worked out by an appeal to the available facts.

Now if we consider thoughtfully the system of contours of any portion of the land, we cannot but be struck with the