plateaus and valleys, as in the case of Greenland, before described (p. 235), or be confined to the bottoms of great valleys, as now in the higher Alps), must often, by their grinding action, produce depressions, in consequence of the different degrees of resistance offered by rocks of unequal hardness. Thus, for example, where quartzose beds of mica schist alternate with clay-slate, or where trap-dykes, often causing waterfalls in the courses of torrents, cut through sandstone or slate—these and innumerable other common associations of dissimilar stony compounds, must give rise to a very unequal amount of erosion, and consequently to lake-basins on a small scale. But the larger the size of any lake, the more certain it will be to contain within it rocks of every degree of hardness, toughness, and softness; and if we find a gradual deepening from the head towards the central parts, and a shallowing again from the middle to the lower end, as in several of the great Swiss and Italian lakes, which are thirty or forty miles in length, we require a power capable of acting with a considerable degree of uniformity on these masses of varying powers of resistance.

2ndly. Several of the great lakes are by no means in the line of direction which they ought to have taken had they been scooped out by the pressure and onward movement of the extinct glaciers. The Lake of Geneva, for instance, had it been the work of ice, would have been prolonged from the termination of the upper valley of the Rhone towards the Jura, in the direction from F to G of the map, fig. 42, p. 299, instead of running from F to I.

3rdly. It has been ascertained experimentally, that in a glacier, as in a river, the rate of motion is accelerated or lessened, according to the greater or less slope of the ground; also, that the lower strata of ice, like those of water, move more slowly than those above them. In the Lago Maggiore, which is more than 2,600 feet deep (797 metres), the ice,