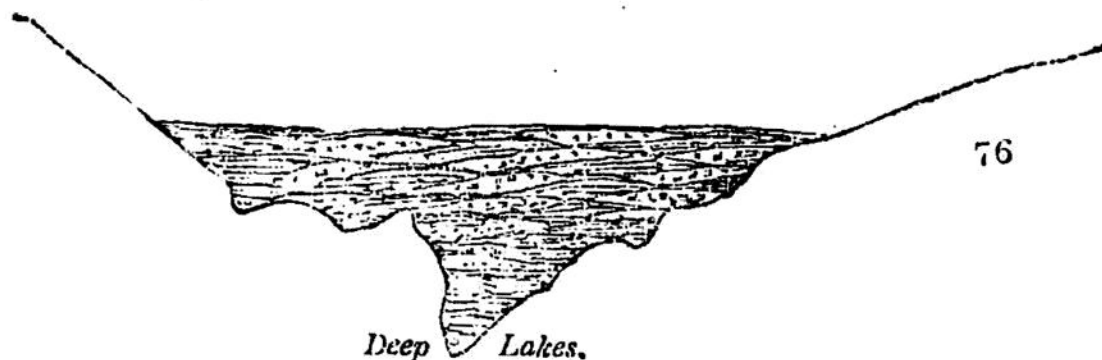


filling it, to about the same height, with a mass of partial deposits, related to the successive positions of the channel, which, when unconfined by man, seeks always the lowest passage. On a cross section of such a valley, these many distinct streams of gravel and sands appear nearly as in the annexed diagram.



But such a distribution of materials appears not to occur in lakes; whether they receive sediments from gentle streams, rapid rivers, or sudden inundations. The reason of this is the great lateral diffusion of motion in water. Where any great depth of quiet water is interposed on the path of a river, the lacustrine sediments assume various modes of arrangement, depending on their own fineness, and the velocity of the water by which they are hurried along.

*Deep Lakes on the Course of a River.*—On entering a deep lake, the mingled sediment of a river is subjected to a new influence,—the descending force of gravity, in addition to the direct horizontal force imparted by the current, and the lateral movements which it occasions. Each particle, in consequence, tends to fall from the surface of the water, as it moves forward, or to the right and left of the point of entry of the river, and with an accelerated velocity in the lower part. The path of each particle will be more or less influenced by the direct, lateral, or vertical forces, according to its magnitude and weight. Thus, in the diagram No. 77., which is to represent a vertical section along the path of the river as it enters the lake at the point *o*, *P p p*, particles of unequal magni-