the strata are composed of *laminæ* which run obliquely across the stratum. This is *oblique lamination.* It is of the same nature as we saw in the semi-stratified drift. We concluded that such mode of arrangement was caused by torrential action. A similar explanation is allowable here, but the water was less turbulent; it was, perhaps, wave action along a beach.

At Watkins' Glen, at the south end of Seneca Lake, is a wild, deep gorge cut by a stream which rushes down from the highland on its way to the lake. It is a striking example of erosion, and the materials carried away are deposited in Seneca Lake. The rocks here are shales. They are *thin-bedded,* and soft enough to be cut with a knife. We see no oblique lamination. This is a fine example of another sort of strata. At Rochester, where the Central Railroad crosses the Genesee river, a few rods above the Falls, we look down into a gorge eroded by the river. The high walls of the gorge are distinctly stratified; and here many of the strata are composed of limestone. No traces of oblique lamination can be found in limestones. If we go to Portland, in Connecticut, we may look down into wide and deep excavations in a sand-stone rock of a brownish color, and very evenly bedded. Near Cleveland, and at Berea, Ohio, are extensive quarries in a grayish and bluish gray sort of sandstone. At Cincinnati, back of the city, we find a steep slope formed of beds of lime-stone, shale, and clay. Descending the Mississippi from St. Paul to St. Louis, we see high cliffs of buffish strata overlook-ing the river at frequent intervals—now on the west, now on the east. At St. Paul the rocks are distinctly stratified lime-stone. At Davenport and St. Louis we find other kinds of limestones.

Now, I have directed your attention to these few exam-ples out of hundreds for the purpose of enabling you to un-derstand that everywhere solid rocks underlie the Drift; and that they are, at least very generally, stratified rocks, and are composed chiefly of sandstones, limestones, and shales. Let us consider how these solid strata have been produced. None