

a lake to form. This result may be observed at the Märjelen See, on the great Aletsch Glacier, and elsewhere on the Alpine chain. If this arrest of the water is temporary, great damage may be done by the bursting of the ice-dam and the consequent sudden rush of the liberated water. If, on the other hand, the glacier is massive enough to form a permanent barrier, the water may rise behind it so as to fill the tributary valley, and even escape by a pass at its head. Successive diminutions of the mass of ice will lead to corresponding lowerings of the level of the lake, each prolonged rest of the water at one level being marked by a shelf or terrace formed as a beach-line along the shore.

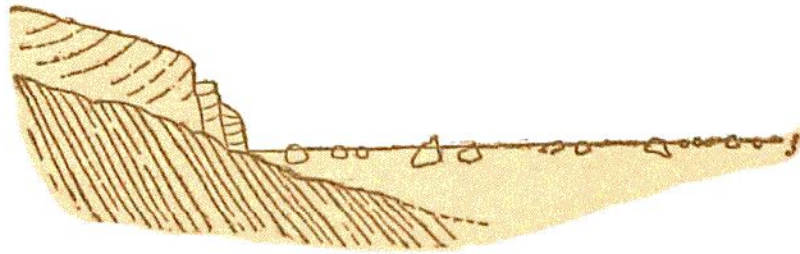


Fig. 148.—Section showing the production of Icebergs at the foot of the Jokuls Fjord Glacier.

The famous "parallel roads" of Glen Roy are a striking illustration of this kind of geological history. (Book VI. Part V. Sect. i. § 1.)

Work done by Glaciers.—Glaciers have two important geological tasks to perform—(1) to carry the débris of the mountains down to lower levels; and (2) to erode their beds.

(a) *Transport.*—This takes place chiefly on the surface of the ice. Descending its valley, the glacier receives and bears along on its margin the earth, stones, and rubbish which, loosened by frost, or washed down by rain and rills, slip from the cliffs and slopes. In this part of its work, the glacier resembles a river which carries down branches