

the atmosphere among the frosts and clouds, which show angular spiry forms, that contrast strongly with the smoothed flowing contours of the lower slopes. These summits are formed of precisely the same rocks as the roots of the hills. Why then should they present contours so different?

With these features fresh in his memory, let the observer transport himself in imagination to the west coast of Norway. His first impression there will probably be almost one of doubt whether he really has quitted the Scottish shores, so precisely similar in their essential features, and even in their details, are those of Western Scandinavia. As he ascends one of the fjords, he sees around him the same smoothed and polished islets, the same flowing outlines on all the lower hills, and the same craggy crests against the sky. But at the far head of the winding inlet, he will find that, in the northern part of Norway, the sea-filled valley passes inland into a deep glen, down the centre of which a glacier creeps, while snow-fields descend to the very edges of the precipices all around (Fig. 18). He will discover that the smoothed rock-surfaces pass under the glacier, and he may then, as it were, catch the ice in the very act of producing them. A glacier one thousand feet thick—and many modern glaciers attain greater dimensions—exerts on each square foot of its rocky floor a pressure equal to about twenty-five tons. Pressing onward the sand and stones that lie between it and the rocks over which it moves, it is a powerful grinding machine, that wears down, smooths, polishes, and grooves even the hardest rock (see Fig. 84). The rounded polished domes of rock in these Norwegian valleys have all been ground down by the passage of the glaciers across them, and the abundant scratches traced upon them show the direction in which the ice moved as it held in its grip the sand and stones which it pressed steadily upon the rocks