

embedded in the ice ; these fragments having acted like a burin or graving-tool on the pebbles rolled underneath them. The stones being movable in the moraines, are scratched in every direction ; while the fixed rocks over which a glacier has glided present a series of parallel and rectilinear streaks in the direction of the glacier's movement.

The environs of glaciers are literally sown with rounded rocks, polished and striated like those which have been found underneath the "frozen rivers," whenever explorers have succeeded in penetrating thither. De Saussure called them *roches moutonnées*, on account of their rude resemblance to a flock of sheep. Ebel compares them to haycocks scattered over a meadow.

The finest examples of rocks wrought by glaciers are found in Scandinavia and the Alps, and in the neighbourhood of the glaciers of the Aar, of Zermatt, and Rosenlaui. Where the Aar pours forth its flashing waters in the bright cascade of the Handeck, all the rocks dominating over the gulf are rounded domes, bare, and so highly polished that one cannot cross them without a shudder. They are the most beautiful *roches moutonnées* in Switzerland.

When the ice in its movement of progression, encountering an obstacle, cannot surmount all the ruggednesses of the soil, it turns aside, and attacks them in flank. You can then distinguish in the furrows of the rock which side the ice has touched. The preserved side retains, in effect, its natural surface, while the side assailed by the ice is worn and channelled. Thus it is that at the promontory of Pavillon, on the glacier of the Aar, the upper surfaces are polished and striated, while below the rocks are wholly unaltered.

The nature of the modifications undergone by the rocks depends upon the mineralogical constitution of the soil. The limestones of Rosenlaui and Grindelwald are covered with fine deep furrows by the action of the fragments of gneiss and granite flung down from the higher amphitheatres ; but they are only polished very imperfectly. When a glacier-bed is formed of argillaceous, soft, or friable rocks, their surface is triturated and levelled, but presents neither the chan-