

either hand, and should an extra steep descent occur in its channel, as in the glacier of the Rhone, the ice becomes troubled and shattered, like a silent frozen cataract, to re-unite below in a more tranquil sheet. So also in the valley of Hinter Rhine, above the source of the river, a tall cliff bounds the eastern side of the Rhine glacier, above which another large ice-sheet presses to the edge of the precipice, from whence in summer, constant avalanches, now here, now there, fall with a sheer descent and a recurrent roar like that of a great waterfall.

All glaciers are traversed by cracks termed *crevasses*. Now the mountain peaks that rise above the surface of a glacier are in places so steep that the snow refuses to lie upon them, even when they may happen to be above the limits of the average line of perpetual snow, so that masses of rock being severed by atmospheric disintegration, constantly fall from the slopes and find a temporary resting-place on the surface of the ice at the margin of the moving glacier, and, as it were, float upon its surface in long continuous lines; for the motion of a glacier is so slow, that the stones that fall upon its surface are sufficiently numerous to keep up a continuous line of blocks, earth, and gravel, often of great width. In like manner if an island-like boss of rock rises through the ice in the middle of a glacier, a line of stony *débris* travels on the surface of the glacier from the lower end of the island, which, often buried in the winter's snow, becomes again exposed during the heat of summer. These stones, when two glaciers combine to form one stream of ice, as in the lower glacier of the Aar, meet at the V-shaped angle of junction, and form one grand line running down the centre of the glacier (fig. 78). Such lines of *débris*,