

pointed out, the sand that escapes from the end of a glacier appears in sharp freshly-broken grains, and not as rounded water-worn particles.²⁴⁰

The surface of a glacier being often strewn with earth and stones, these materials are frequently precipitated into the crevasses, and may thus reach the rocky floor over which the ice is moving. They likewise fall into the narrow space which sometimes intervenes between the margin of a glacier and the side of the valley (*a* in Fig. 156). Held by the ice as it creeps along, they are pressed against the rocky sides and bottom of the valley so firmly and persistently as to de-



Fig. 156.—Section of a Glacier in its rocky channel,

With a medial moraine at *d*, a lateral moraine partly on the ice and partly stranded on a sloping declivity (*b*), a mass of rocks fallen between the ice and the precipitous rocks at *a*, and a group of perched blocks at *c* (J. D. Forbes).

scend into each little hollow and mount over each ridge, yet all the while moving along steadily in one dominant direction with the general movement of the glacier. Here and there the ice, with grains of sand and pieces of stone imbedded in its surface, can be caught in the very act of polishing and scoring the rocks. In Fig. 157 a view is given of the "angle" on the Mer de Glace, Chamouni, where blocks of granite are jammed between the mural edge of the ice and the precipice of rock along which it moves, and which is scored and polished in the direction of motion of the blocks. Under the slow, continuous, and enormously erosive power of the creeping ice, the most compact resisting rocks are ground down, smoothed, polished, and striated (Fig. 158). The striæ vary from such fine lines as may be made by the smallest grains of quartz up to deep ruts and grooves. They