

are more readily broken up by frost. Granite, for instance, is remarkable for the perfection of its jointing and also generally for its toughness. It may crumble away on the surface, but otherwise may remain coherent and durable, though there are some varieties that decay far down into their mass. Its numerous joints, however, afford admirable scope for the action of frost. On lofty mountain crests, accordingly, granite frequently presents a most impressive array of splintered crags. Pinnacles and buttresses of the most varied forms and dimensions rise along the face of the precipices. Vast rifts, descending for several hundred feet, show where the joints have most easily opened, and naked vertical walls mark where the ice-wedges, driven home by the winters of centuries, have at last detached huge slices from the face of the cliffs. The tourist who has climbed Lochnagar will well remember the grim precipice that yawns beneath him as he gains the crest of the mountain and looks northward to the valley of the Dee (Fig. 37). There, screened from the sun, the snow lingers long into the summer, and frost finds a congenial home. Inch by inch the vertical joints are there being opened farther into the face of the cliff. Along the edge one can, as it were, watch all the stages of the process from the fine rift just starting like a crack in a window pane, up to the loosened pillar which now stands gaunt and alone in front and awaits the fate that is eventually to hurl it into the gulf below. Far down, between the base of the precipice and the little tarn that lies gleaming in the shadow of the mountain, we can see the grey slopes cumbered with debris, and can hardly believe, so much does height deceive us, that these long slopes are not mere trails of sand but avalanches of blocks, many of them hundreds of tons in weight, which, in the course of ages, have been wedged off from the cliffs,