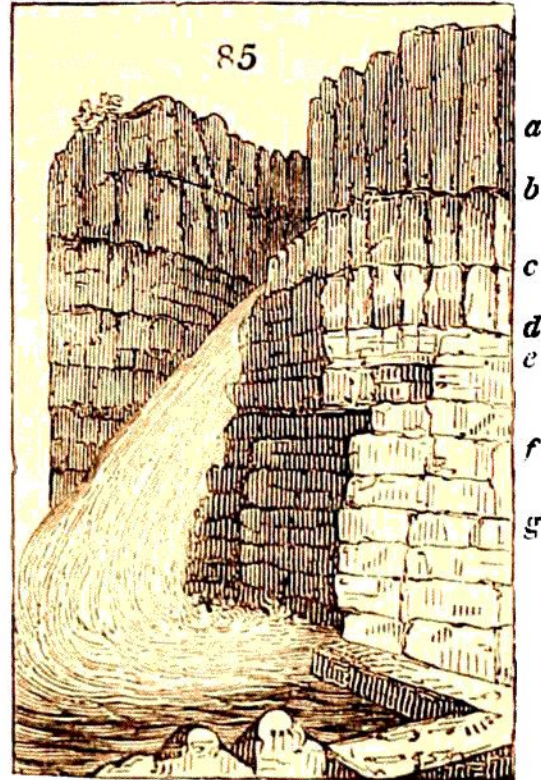


at the celebrated waterfall called the "High Force," in the upper end of Teesdale, Yorkshire, will first require attention. At this romantic spot the river Tees dashes down a precipice of 69 feet, which to the artist shows two distinct forms of rocks: the upper part is boldly prismatic, and the lower part stratified. Across the prisms run bands of stratification, and to the hasty observer this will appear a case of stratified basalt. But careful inspection demonstrates a more curious truth. The annexed sketch (taken from the Illustrations of the Geology of Yorkshire, vol. ii. pl. xxiii.) will explain the peculiar circumstances alluded to.



- a. Basalt, rudely prismatic, grey with lichen.
- b. Thin "plate," not very much indurated.
- c. Bed of plate, *sub-prismatic*.
- d. Beds of plate, *laminated*.
- e. Thin limestone bed with a superficial layer of pyrites.
- f. Bed of hard pyritous limestone.
- g. Several beds of common dark limestone, with white shells and corals.

Here we see a new structure, commonly found in great masses of igneous rocks, communicated to the adjoining strata; but this is not very obvious in Teesdale, except where the basaltic rock is in very great quantity and thickness. At a distance from the heated rock, the shale or "plate" resumes its usual divisional surfaces, caused by nearly vertical joints which cross and intersect in rhomboidal or rectangular figures. (Compare cuts No. 86. and No. 87.) Both of these differ from those produced by the local application of heat, but neither of them is the effect of violent disturbance; both arise from the condensation of the matter of the