

(2) The depositions of a mountain stream where it abruptly reaches a plain make a broad low cone, stratified parallel to its surface, called an "alluvial cone." See page 194, under Rivers. Such fresh-water accumulations have thus far been found only among recent formations.

(3) The deposits of sand constituting a sea-beach, as stated on page 93, take the slope of the beach, which may vary from 3° and less to 18° ; and they have distinct bedding parallel to the sloping surface.

These cases of an inclined position are relatively of limited extent. They do not affect the truth of the general proposition that the original position of the earth's great stratified rocks is essentially horizontal.

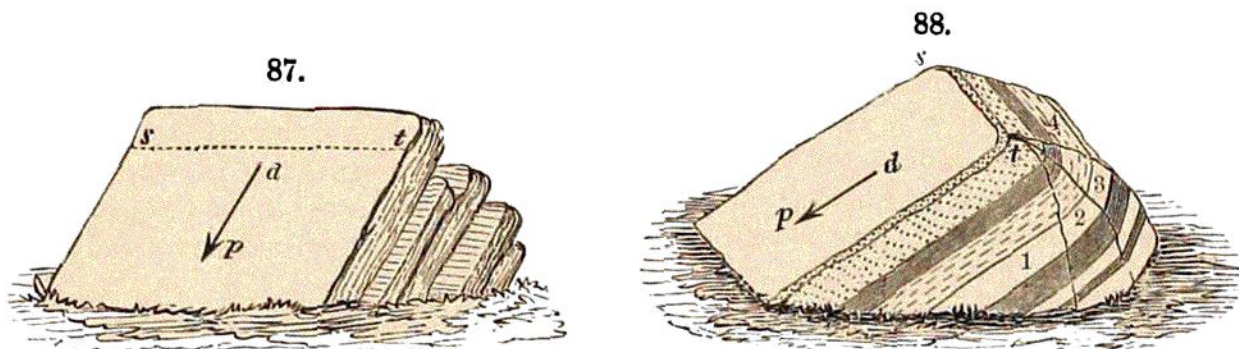
(4) Another example of inclined stratification is afforded by the volcanic mountains of the globe, whose lava-streams usually have a pitch between 3° and 20° , but may have a less or a much greater pitch. In the volcanic mountain the stratification is *pericentric*, more completely so than in the alluvial cone.

3. *Fractured and Displaced Strata.*

Strata, however continuous and horizontal when first formed, are, at the present time, more or less divided up by planes of fracture, and sometimes profoundly so. In general, also, they have lost their original horizontality, and instead the beds have a pitch, small or large, sometimes rising to verticality or even beyond. In many mountain regions the strata are in great flexures, each flexure miles in sweep. Further, fractured and flexed strata have often been displaced along a fracture, either upward or downward, in some cases a few inches, in others miles, the rocks on one side of the plane of fracture being dropped down or shoved up to this extent. In addition, all regions, especially mountain regions, have lost a vast amount of rock through the long-continued wear of flowing waters, which has reduced flexures to ledges and level surfaces, concealing displacements and disguising greatly the original features of a region.

The following are explanations of terms used in describing upturned and displaced rocks:—

An *outcrop* is a projecting ledge of rock (Fig. 87).



The *dip* is the angle which the beds make with a horizontal surface; and its *direction* is down the sloping surface, in the direction in which the angle is greatest — *dp* in Figs. 87 and 88. The *inclination* of a sloping bed or of a wall