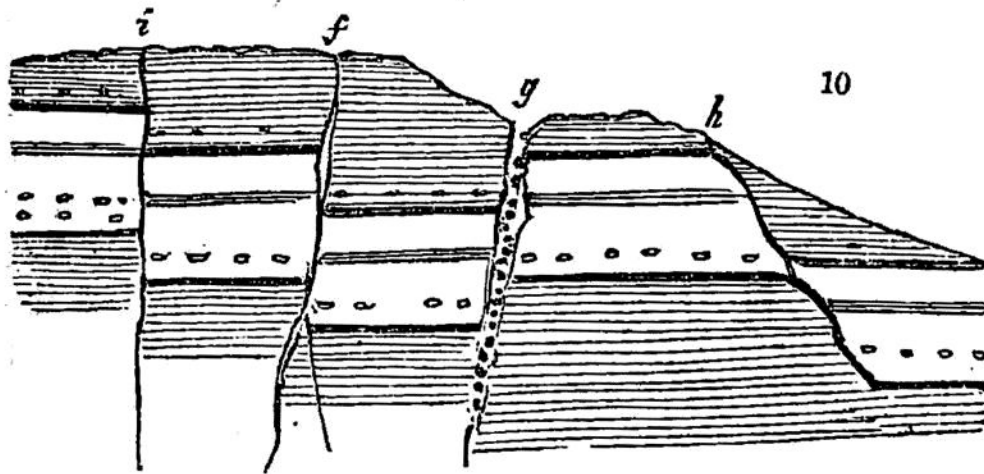


of stratified rocks. In *d* the strata bend to the fault so as to coincide with its direction. In *e* the contrary effect is seen, the strata bending so as to meet the fault at right angles, as on the line of the great Tynedale fault, which disturbs the beds 1200 feet.

In some instances the fault fissures are open, as *f*, in others full of angular dispersed fragments from the adjoining rocks (*g*); sometimes a *leader* of one or more of the softer strata follows up the fissure for a considerable distance (*h*); but frequently, as *i*, the fissure is closed.—See the annexed vertical section.



The surfaces of the fissure accompanying a fault are often remarkable, and afford good evidence in favour of the dislocation of the masses having been accomplished by great mechanical violence, and perhaps a single continued effort. Let *V* *fig. 11.* be any vertical plane crossing *f F F' F''*, the plane of a fault fissure, which is accompanied by a dislocation of strata through the extent *f F''*; *a b c*, being the corresponding beds on the two sides of the fault. The face *f F F' F''*, one side of the fissure of the fault, is often scored by grooves (*g g*) parallel to the direction of the dislocation of the strata; that is to say, deep lines are ploughed on the broken ends of the rocks in the very direction in which they must have been produced, supposing, as the other phenomena indicate, the rocks to have slipped along the plane of the fault. A magnificent example of this is