

Fig. 3

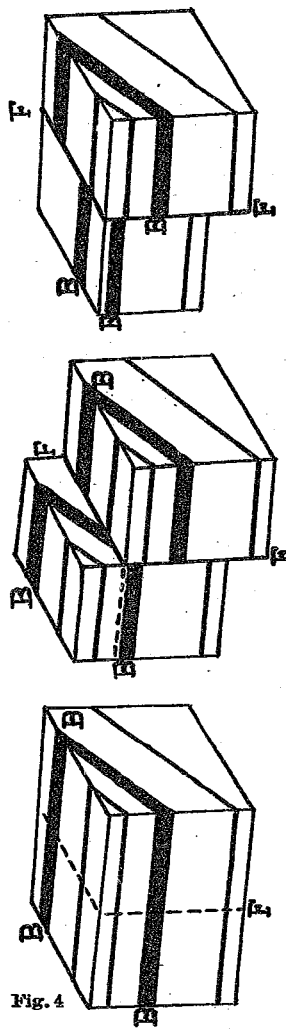


Fig. 4

Figure 3 illustrating a strike, and figure 4 a dip fault. FF is the fault plane, AA, BB, and EE indicate the dipping rock layers. In the former figure the fault plane cuts the surface parallel to the strike, causing a strike fault. In the latter the strike is cut at right angles, producing a dip fault. On the left the unfaulted block is shown, with the position of the fault dotted. In the center the conditions prevailing shortly after completion of the faulting are shown, the downthrow block on the right, and with the prominent fault scarp. On the right the conditions prevailing after sufficient time has elapsed for wearing away the upthrow block down to the level of the other side, or rather for wearing the two sides down to a uniform level, are indicated, this being approximately the condition of most of the faults of the region at the present time. In the strike fault this results in the entire disappearance from the surface of the stratum BB, in the vicinity of the fault, the actual thickness of rock so disappearing being comprised in the space between the dotted lines on either side of BB. By varying the amounts of hade and dip, or their directions, repetition of strata at the surface, instead of disappearance, may result. In the dip fault the effect is to shift the outcrop of a given stratum, so that in an old fault, the surface having been worn down, the ends are shifted forward or back, as the case may be, on opposite sides of the fault, as BB is shifted in the diagram. The amount of this shifting increases with increased throw of the fault, and diminishes with increased dip of the rocks. Few faults meet these conditions of correspondence with dip or strike direction exactly, but many make such slight angles with these directions that they are practically fulfilled.