cerned in the origin of the dislocations of a much-fractured area.

Normal Faults.—In the vast majority of cases, faults hade in the direction of downthrow, or in other words, they slope away from the side which has risen. These are *Normal Faults*. The explanation of the structure is doubtless to be found in the fact that the portion of the terrestrial crust toward which a fault hades presents a less area of base to pressure or support from below than the mass with the broad base on the opposite side. The mere inspection of a fault in any natural or artificial section suffices, in most cases, to show which is the upthrow side. In mining operations, the knowledge of this rule is invaluable, for it decides whether a coal-seam, dislocated by a fault, is to be sought for by going up or down. In Fig. 264, a miner working from the left, and meeting with the fault at *c*, would know from its hading toward him that he must ascend to find the coal. On the other hand, were he to work from the right, and catch the fault at *d*, he would see that it would be necessary to descend. According to this rule, a normal fault never brings one part of a bed below another part, so as to be capable of being pierced twice by the same vertical shaft.

Reversed Faults are those in which lower rocks on one side have been pushed over higher rocks on the other. In these cases, the same stratum may be pierced twice by a vertical shaft. The hade is therefore in the direction of upthrow. Faults of this kind chiefly occur in regions where the rocks have been excessively plicated, and especially where one-half of a fold has been pushed over another (Figs. 263 and 265, section 4).[3] They are closely connected

[3] If faults were generally due to rupture from compression we should expect the "reversed" to be the ordinary form. The normal hade of faults points to