

by tension, as when a sheet of rock is stretched by folding, or shrinks during cooling or drying. The second kind of fissures are formed along faults, i.e. where the rock on one side of a fracture has been moved along it. Faults are usually marked by *slickensides* or scratches on the walls, and by a rubble of rock fragments known as fault-breccia. *Pug* or *fluccan* (Cornish) or *gouge* (American) is material that has been ground by the movement into clay. Faults are usually not quite straight, but curve around harder layers or masses. Owing to the curves the fault fissure usually consists of lenticular spaces, separated by the projections of the opposite walls coming into contact. The lode or vein along such a fault alternately expands and contracts

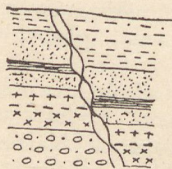


FIG. 2.—A WAVY-LODE.

A wavy lode formed along a fault in the spaces left between the projecting harder rocks.

and may consist of isolated lenticles of ore. A lode in which the sides are not parallel is known as a *block-lode* or *wavy-lode* (Fig. 2); where the lode widens it is said "to make;" where it contracts it is said to "pinch" or "peter." The thin streak along part of a fault plane on which there may be no lode matter, except perhaps a film of pug, is said to be the "lode track," as the miner expects it to lead him to the next "make" of ore. If a fault crosses a series of bedded rocks the fractures may be diverted here and there along a bedding plane, and the lode may therefore be repeatedly deflected and may consist of steps; such *step-lodes* may be due to a series of faults. Either the part along or across the bedding plane may be represented by a *lode track*, and the actual lode be reduced to a series of parallel isolated sections.

A vein parallel to the bedding of the rocks is a *bedded-vein*; a vein transverse to the country, if confined to one bed, is a *gash-vein*, but if it cut across several beds, it is a *rake-vein*.

Lodes are usually steeply inclined; if horizontal they are often known as "floors." If formed along more or less horizontal faults they are sometimes known as "slides." Floors often occur one below another in a dyke or narrow intrusion of igneous rock; these floors are formed along