sometimes been concerned in the production of the structure is instructively shown in some conglomerates, where the joints traverse the inclosed pebbles, as well as the surrounding matrix, in such a way that large blocks of hard quartz are cut through by them as sharply as if they had been sliced in a lapidary's machine, and the same joints can be traced continuously through many yards of the rock (Fig. 227).[3] Indication of relative movement of the sides of a joint is often supplied by their rubbed and striated sur-

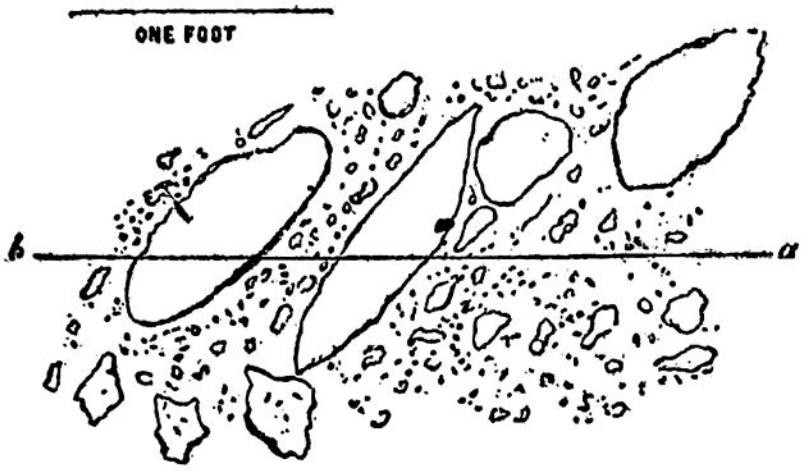

Fig. 227.—Plan of coarse conglomerate of blocks of Cambrian rocks in Carboniferous Limestone, traversed by a line of joint cutting the individual bowlders in the line *a b*. Coast near Skerries, Dublin County (*B.*).

faces, termed *slickensides*, which have evidently been ground against each other. They are often coated with hæmatite, calcite, chlorite, or other mineral, which has taken a cast of the striæ and then seems itself to be striated.

The cause of jointing has not been satisfactorily explained. Various theories have been proposed to account for the structure; but as no one will explain every case, it is probable that what we call joints may have originated in several different ways, or, in other words, that the results of several distinct natural processes are all indiscrimi-

[3] De la Beche, "Geol. Observer," p. 628.