

below, as at the mountain Lugnaquilla (L in Fig. 280), which rises 3039 feet above the sea.

Recent observations by Prof. Hull and Mr. Traill, of the Geological Survey of Ireland, have shown that in the Mourne Mountains, a mass of granite has in some parts risen up through highly inclined Silurian rocks, which consequently seem to be standing almost upright upon an underlying boss of granite. The strata are sharply truncated by the crystalline mass, and are indurated but not otherwise altered. The intrusive nature of the granite is well shown by the way in which numerous dikes of dark melaphyre are cut off when they reach that rock.<sup>9</sup> The accompanying dia-

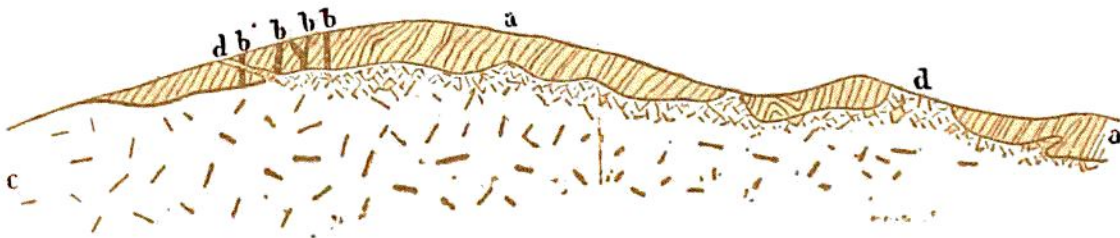


Fig. 281.—Section of Slievenamaddy, Mourne Mountains.

*a a*, Lower Silurian strata dipping at high angles; *b b*, Dikes of basalt (melaphyre), cutting these strata but truncated by the granite *c*, which along the outer margin and in extruded veins passes into a quartz-porphry, *d d*.

gram (Fig. 281) is taken from one of the sections in which this structure is portrayed by these observers.

In the Lower Silurian tract of the south of Scotland several large intrusive bosses of granite occur (Fig. 282). The strata do not dip away from them on all sides, but with trifling exceptions maintain their normal N.E. and S.W. strike up to the granite on one side, and resume it again on the other. The granite indeed has not merely pushed aside the strata so as to make its way past, but actually occupies the place of so much Silurian graywacke and shale, which have disappeared, as if they had been pushed or blown out or had been melted up into the granite. There is usually a metamorphosed belt of about a mile in width, in which, as they approach the granite, the stratified rocks assume a thoroughly schistose character. Numerous small, dark, often angular patches or fragments of mica-schist may be observed in the marginal parts of the granite. Occasionally granite-veins protrude from the main masses; in the metamorphosed zone which surrounds the Criffel granite

<sup>9</sup> Horizontal Section No. 22, Geol. Surv. Ireland.