

There are several other dykes of the same kind, which, following the same law as the cross veins in the lead mines district, *elevate the strata on the side to which they dip.*

The dykes are an endless source of difficulty and expense to the coal-owner, throwing the seams out of their levels, and filling the mines with water and fire-damp. At the same time they are not without their use; when veins are filled, as is often the case, with stiff clay, numerous springs are dammed up, and brought to the surface; and by means of those dykes which throw down the strata, valuable beds of coal are preserved within the field, which would otherwise have cropped out, and been lost altogether. Several valuable beds of coal would not now have existed in the country to the north of the main dyke, but for the general depression of the beds occasioned by that chasm.

In many instances dykes occur, filled by rocks of the trap formation; but these will be treated of in a separate article in the appendix.

Having treated so copiously of this important coal-field, the others which we have to notice may be dismissed more briefly, since in general circumstances they all agree.

(b) DETACHED COAL-FIELDS IN THE NORTH OF YORKSHIRE.

Proceeding into the north of Yorkshire, the superincumbent beds of magnesian limestone, extending themselves far to the west, overlie and conceal the coal formation, coming immediately into contact with the inferior strata of the millstone grit and carboniferous limestone formations. Near Middleham, and at Scafton, Leyburn, Throp, Fell near Burnsall, and as far west as Kettlewell, on a hill called centre lights, there are several small detached coal basins provincially termed swilleys, lying in hollows in the gritstone. They are of limited extent, and the seam is seldom more than twenty inches thick. At Hudswell Moor, the lowest and thickest part of the coal is one yard, but the stratum diminishes and vanishes at the edges. The extent of this coal is about one mile in each direction. (Bakewell, p. 370.) It may be doubted however, whether these unimportant beds should not rather be referred to the thin coal seams subordinate to the millstone grit series, than to the principal coal measures.