

steep, before it reaches the horizon in its fall : so that, within a very few miles, the inhabitants have the rising Sun, when he has, in fact, passed his meridian, and the setting Sun twice on the same evening. There is a beautiful description of one of the rocky dales which characterise this chain in Rokeby, Canto II. stanzas 7 & 8.

Having thus given a general and collective view of the structure of the Penine chain, we shall next proceed to consider more in the detail the disposition and phænomena of the several rock series composing it ; beginning with the exterior ridges of coal, and proceeding regularly to the old red sandstone.

Section I.

Particular view of the Coal District north of Trent, or Grand Penine Chain.

We now proceed to consider more in detail the disposition of each of the four great assemblages of strata entering into the composition of the coal districts, throughout the tracts connected with the Penine chain of mountains already generally described, and thus forming the first great division of our coal districts ; that, namely, north of the Trent.

In pursuance of our plan, we must begin with the first of these series of strata, the great coal-formation. This, as has already been stated, encircles the whole Penine chain on the east, south, and north ; not, however, in one continuous line, but in a series of detached coal-fields, often of very considerable extent. These it will now be our business to trace around the chain, beginning on the north-east, proceeding thence down its eastern side to the south, and thence re-ascending by the western side again to the north. The coal-fields we shall have thus to notice will occur in the following order. On the eastern side, (a) *The great coal-field of Northumberland and Durham.* (b) *Some small detached coal-fields in the north of Yorkshire.* (c) *The great coal-field of South Yorkshire, Nottingham, and Derby.* On the south we find only, (d) *some successful trials for coal in the neighbourhood of Ashborne, which have, however, never been further prosecuted.* On the west, (e) *the coal-field of North Stafford.* (f) *The great Manchester, or South Lancashire coal-field.* (g) *The North Lancashire coal-field.* (h) *The Whitehaven coal-field.* (i) *The indications of coal at the foot of the western escarpment of Cross Fell.* Of these we now proceed to treat in order.