

sea, and to rise again in Ireland, France, Sweden, and Germany, and thus to be connected with all the granitic ranges of the old continent. It is scarcely requisite to remark, that, in presenting a general view of the arrangement of the different classes of rocks in this manner, the partial wavings or irregularities of the strata, and the inequality of surface, presented by hills and valleys, must be necessarily disregarded.

The primary rocks of England and Wales are described in various parts of Chaps. V. and VI. in the present volume. The transition rocks, including mountain limestone, are described in Chapter VII. The coal formations in England, within the middle district (coloured green in the map), extend on the eastern side of Northumberland and Durham, from Berwick-on-Tweed to the river Tees; but from thence to the river Air (near Leeds), only the lowest beds of the coal formation occur, which contain but little workable coal. The Yorkshire and Derbyshire coal-field commences a little north of Leeds, and extends in breadth east and west about twenty-five miles, from Halifax to Abberford, and in length about seventy miles, from Leeds to near Nottingham and Derby. The breadth decreases southward, being little more than twelve miles in Derbyshire.

South-west of Derbyshire, there are a few small coal-fields near Ashby-de-la-Zouch, and near Tamworth, Atherstone, and Coventry. The latter coal-field, is the most southern situation in which mineral coal has been discovered in the midland counties.

On the north-west side of England, there is a small coal-field bordering the sea in Cumberland, which extends from Whitehaven to the north of Maryport. This coal-field, though small in extent, contains seven beds of excellent workable coal. From its contiguity to the sea, and its remoteness from other coal-fields, it may be considered, in proportion to its extent, as one of the most valuable coal districts in England. In one mine, the coal is worked at the depth of 298 yards. The workings of some mines have been extended under the sea. The next considerable coal-field is that of Lancashire: it is separated from the Yorkshire coal-field by a range of lofty hills, on the borders of the two counties, extending, on the west side of Colne, to Blackstone Edge, and from thence to Axe Edge, on the border of Derbyshire. These hills are principally composed of millstone grit and shale, but are not covered by coal strata. On the western side of these hills, the coal strata of the Lancashire coal-field commence, dipping westward; but they are broken and deranged by numerous faults. The principal beds of coal are,—one of six feet in thickness, and a lower one called the three-quarter bed. In some parts the sandstone strata are of a deep red colour. The breadth of this coal-field, from Macclesfield to Oldham, does not exceed five or six miles; but from Oldham it extends westward to Prescott, near Liverpool, and from Prescott it extends in a north-east direction to Colne.

Not far from the southern extremity of the Lancashire coal-field, there is a small but valuable coal district, which supplies the potteries near Newcastle in Staffordshire: this may properly be considered as an extension of the Lancashire coal-field. The next important coal-field is that of Dudley and Wolverhampton: it is about twenty miles