

Hardinghen near Boulogne (only a few miles from the coast of the channel) by Valenciennes, and thence up the Scheldt and down the Meuse to Eschweiler beyond Aix la Chapelle; and still further west, many of the coal districts of Northern Germany may with great probability be considered as a prolongation of it.

On the east and north, the great deposits of chalk and the strata above the chalk, skirt and partially (particularly within the limits of France) overlie this tract. On the south it is bounded by the transition ridges (of slate, grauwacke, &c.), which occupy the forest of Ardennes, overhang the magnificent defile of the Rhine from Bingen to Bonn, and thence extend to the Westerwald. This tract does not consist of a single continuous coal-field, but of many insulated and basin-shaped deposits of this formation, encircled by carboniferous limestone and old red sandstone. In many respects it bears, even down to the character of its picturesque scenery, a remarkable analogy to the coal districts (likewise consisting of many insulated basins) in the south-west of England.

We find the most westerly point of this extended chain of coal-fields at Hardinghen, in the great denudation exposing the beds beneath the chalk, which comprises the Boulonnais on the French side of the channel and the Weald of Kent and Sussex on the English; of this we have before given a general description. These coal-mines, and the quarries of the carboniferous limestone associated with them, which appear at Marquise, are situated at the very foot of the escarpment of the enviroing zone of chalk hills; for the outcrop of all the intermediate formations crosses this part of the denudation to the south, and as it were withdraws to expose the coal; proceeding westwards, the coal is worked at several places within the general limits of the overlying chalk-formation. The environs of Aniche near Douay, and of Monchy le preux near Arras, present deposits of this nature; the mines surrounding Valenciennes are still more extensive.

In the environs of Mons, Charleroy, and Namur, in a tract surrounding Liege, and lastly close to Eschweiler on the east of Aix la Chapelle, other very considerable coal-fields are worked.

A general account of this line of coal-formation, may be found in Omalius d'Halloy 'Geologie du Nord de la France,' Journal des Mines, and in Von Raumer's 'Geognostich Versuche'; many interesting details are also given in Villefosse sur la richesse minerale, (tom. 2. p. 432 & seq.) and illustrated in the magnificent atlas of that work by sections exhibiting the