

are described in Chaps. XVI. and XVII. The basalt dyke of Cleveland, which runs through the North Riding of Yorkshire into Durham, is described, with other basaltic rocks in England, in Chap. IX., and the alluvial beds, marked 1 1 1, are described in Chap. XXI. A description of many of the mining districts of England and Wales will be found in the chapter on metallic veins.

It now remains to notice the sections in different parts of England. A section, to possess much value, should be made as nearly as possible along the true line of the dip and rise of the strata. We possess no true line of dip in England, which passes through all the different classes of rock; and it is only misleading the reader, to represent the succession of rocks out of their true situation. The section of the secondary strata, with a small portion of the tertiary, given at page 160, represents the succession of the different secondary formations, from chalk to the lowest new red sandstone, taken in a line from the chalk hills north-west of London, to the transition rocks south of the Malvern Hills, in Herefordshire. But in this line, the lower red sandstone, and magnesian limestone are wanting.

If we draw another line across England, through Durham and Cumberland, from the German Ocean, near Sunderland, to the Irish Channel, (see section, Plate VII.) we may observe the magnesian limestone *a* forms the uppermost rock of the series; all the secondary strata above this formation are here wanting; it is, however, probable that they may once have extended into the German Ocean, in the order represented at page 160. The magnesian limestone *a* lies unconformably upon the coal strata, which rise to the west *b b*; at *x* the strata are broken by the Burtreeford Basalt Dyke. *c c* represents the lower beds of the coal strata, with mountain limestone; they terminate at the mountain called Cross Fell, 5. The lower part of this mountain is composed of mountain limestone and greywacke; a little to the west, the beds are broken, by nearly vertical beds of trap and sienite. In the Vale of Eden is Penrith Beacon, 4. This vale is covered by beds of conglomerate and red sandstone. The lofty mountains, *e e*, that surround the lakes of Cumberland and Westmoreland, are skirted by beds of mountain limestone; but the higher mountains are chiefly composed of slate, felspar, porphyry, and greywacke. Granite occurs at the base of Skiddaw and Saddleback, and at Coldback Fell. 1, is Sea Fell, the highest mountain in this group; 2, Skiddaw; and 3, Helvellyn. Farther west we come upon the coal strata of Whitehaven, dipping west, and covered by unconformable secondary strata. Some of the more remarkable rocks in the mountains round the lakes are described in Chap. VII. Plate II. fig. 4, represents the arrangement of the strata in the central part of England, passing in a line nearly east and west, through the low granite range at Charnwood Forest, in Leicestershire: *e*, on the right-hand side of the plate, represents lias resting on red marl and sandstone, *a*. The granite and slate rocks are represented, *b b c c*, partly covered by horizontal beds of red marl and sandstone: *d d* are the coal strata, near Whitwick, much elevated as they approach the Forest Hills. A little out of the line of section, are represented the elevated beds of mountain limestone at Breedon and Clouds Hill, part of which limestone is contin-