

The strata of this limestone often present very singular contortions. The most remarkable example of which may be seen two miles and a half east-north-east of Ashbourne.

Section III.

Carboniferous Limestone of the Penine Chain.

The chain we have been so long considering exhibits the rocks of this formation wherever its lowest beds are brought to view, either along the line of its western escarpment, or by the deep excavation of the vallies traversing it, for nearly 100 miles from its northern extremity as far south as Clitheroe; and two calcareous branches detached from this part of its course embrace and encircle the transition mountains of the Cumbrian group: hence, after remaining concealed through an interval of about 40 or 50 miles, it again emerges in Derbyshire, where it forms a mountain plain about 20 miles in length.

The section published by Mr. Forster, and those inserted in Mr. Winch's paper, afford the best materials for the description of this formation, in the most northerly part of its course; as in this district the limestone beds repeatedly alternate with others of siliceous grit and slate-clay, and bear to these the proportion only of 1 to $2\frac{1}{2}$, it is here a matter of much greater difficulty than in Derbyshire, to draw an exact line of demarcation between this and the preceding formation. The reasons which have induced us, however, to draw such a line, have been sufficiently explained in the foregoing article. According to this division the strata assigned to the present formation, beginning with the first important bed of limestone (that distinguished locally as the Tumblers and great Limestone, which exceed 10 fathom in thickness,) and extending thence to the lowest limestone yet discovered in the chain, will constitute and aggregate of about 254 fathoms in thickness; of which about 93 fathoms is formed by 19 beds of limestone, the remainder being clay-slate and grit. We subjoin an abridgement of Mr. Winch's section, which will give a clear and precise view of the internal structure of this portion of our chain.

	Fs.	Y.	F.	In.
1. Tumblers and great lime . . .	10	1	—	—
Slate slay and sandstone	14	1	—	—
2. Limestone	4	—	—	—
Slate-clay and sandstone	9	—	—	—
3. Limestone	2	—	—	—
Slate-clay and sandstone	6	—	2	—