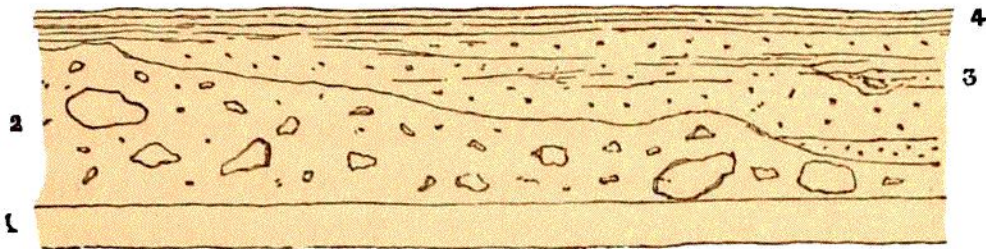


of Carboniferous rocks have travelled from the widespread Carboniferous country to the north, that the smaller percentage of Magnesian Limestone fragments must have been derived from the small area immediately

FIG. 82.



1. Rotten nodular Magnesian Limestone.
2. Stiff brown Till with blocks and scratched stones. The largest are of Carboniferous Limestone and Magnesian Limestone, from 1 to $1\frac{1}{2}$ yards in diameter, and 1 block $2\frac{1}{2}$ feet of Lammermuir grit.
3. Sand and loamy beds with scratched stones, rare.
4. Finely laminated clay.

north of Sunderland, occupied by that formation for a distance of about 9 or 10 miles, and the decreased proportion of Lammermuir rocks have had to travel not less than 70 miles.

Somewhat further south we find 57 per cent. of Carboniferous rocks, 32 per cent. of Magnesian Limestone, and only 9 per cent. of Lammermuir grits.

About half way between Sunderland and Seaham, where on a sea-cliff stiff Boulder-clay or Till lies on the Magnesian Limestone, the latter is covered with glacial groovings which run from NNW. to SSE. and all along the sea-cliffs of this neighbourhood there is a lower Boulder-clay with a very irregular surface, on which there lies sand and gravel, often very much contorted, which in its turn is overlaid by patches of an upper Boulder-clay.