the case in the Lake-district, and there does not appear to be a well-marked series of trappean rocks at the base of the group, as there is in many parts of the main area. As regards the character of the Slates themselves, they are in many respects undistinguishable from those of the Lake-country, but they are much finer grained than the latter are as a rule, and there appears to be a total absence of breccias and amygdaloidal ashes.

The traps differ more conspicuously from those of the Lake-district, though the latter would yield examples in all respects undistinguishable. I may instance especially the greenish-gray trap which usually forms the base of the Green Slate series in the Lake-district, as seen at Keld Beck near Shap, (in many places this bed departs from these characters, and becomes highly hornblendic). Speaking generally, the traps of the Ingleton section have a much greater sameness than those of the Lake-district; they are finer-grained; and they are much less often porphyritic. They are likewise much less hornblendic than the majority of the traps of the Lake-mountains, and there is nothing like a genuine diorite or amygdaloid. The presence of free quartz in one of the Ingleton traps is noticeable, since in the Lake-district this is only the case with the intrusive rocks, and does not occur in any of the interbedded felstones with which I am acquainted.

The fossiliferous shales, which complete the section here, may be the equivalent of the "Dufton Shales" of the Lake-district, or they may represent the Coniston Limestone, the latter view being, perhaps, the most probable, since they effervesce freely with acids.

The apparent thickness of the Green Slates and Porphyries in the Ingleton section is stated by Mr. Hughes to be about 10,000 feet, but I should be disposed to believe with that observer, that there must be a repetition of some of the strata by a fault or by a concealed fold, either of which it would be very difficult to detect owing to the sameness of the beds, the prevalence of cleavage, and the absence or indistinctness of bedding.

NOTICES OF MEMOIRS.

The Salt Deposits at Stassfurt, in Prussia.

At a meeting of the Chemical Section of the Glasgow Philosophical Society, held on January 18th, Messrs Bald and MacTear communicated a paper on the Salt Deposits at Stassfurt. The southern part of the North German basin is divided by the Hartz into two portions, known as the Thuringian and the Magdeburg Halbertstader basins, in which salt has been raised for a lengthened period.

In the Magdeburg basin the salt rests on New Red Sandstone; in the Thuringian basin on Muschelkalk and Magnesian Limestone. Stassfurt is situated in the Magdeburg basin. Here and at Erfurt the Salt is mined, at all the other places in the district it is obtained by means of brine wells.

In the Prussian mine at Stassfurt, Salt was reached at a depth of 816 feet, after the following strata had been passed through, namely:

Alluvial Soil	27 feet.
New Red Sandstone	576 „
Gypsum, Anhydrite, and Marl	213 „
Salt.	

At a bore-hole at Schonebeck, some distance from Stassfurt, the salt was 1,480 feet from the surface, the rocks passed through being

Alluvial Soil	25 feet
Keuper, with Lettenkohle (an impure form of Brown-coal)	211 „
Muschelkalk	1067 „
New Red Sandstone	1680 „

The brine contained but $7\frac{1}{2}$ per cent. of common salt.

Accounts are given of several other bore-holes in the same locality, showing considerable variations in the depths at which the Salt is reached, but the most important and interesting account relates to a shaft sunk at Stassfurt, which reached pure Salt at a depth of 1,066 feet from the surface. The beds penetrated were as follows:—

Alluvial Soil	27 feet.
Sandstone, with some schist and grey limestone	576 „
Gypsum and Anhydrite	192 „
Bituminous matter mixed with Anhydrite and Common Salt	21 „
Potash Salts	158 „
Rock Salt (the upper part mixed to a considerable extent with Anhydrite)	92 „

At this depth (1066 feet) lateral workings were commenced, the Salt being wrought in a manner somewhat similar to our long-wall system of coal-mining.

The total thickness of the Salts was found to be 1,197 feet; these the authors consider in detail. The lowest beds comprised 685 feet of pure Rock Salt, with thin layers of Anhydrite $\frac{1}{4}$-inch thick, dividing the Salt at intervals of from one to eight inches. Then comes a bed, about 200 feet thick, composed of

Chloride of Sodium	91·20
Anhydrite	0·66
Polyhalite	6·33
Hydrated Chloride of Magnesium	1·61

Higher up, the gradual disappearance of the more insoluble salts is manifest; the deposit contains but 2 per cent. of anhydrite, to 60 per cent. of common salt, and from 17 to 20 per cent. of Kieserite (monohydrated sulphate of magnesium), used in the preparation of Epsom Salts. In the uppermost beds the insoluble salts are entirely absent, the average composition being:—

Carnallite	55
Common Salt	25
Kieserite	16
Hydrated Chloride of Magnesium	4

In conclusion, the authors recommend the Salt mines as well worth a visit. To the scientific and non-scientific any trouble will be amply repaid, for apart from the high geological interest of the deposits, there is great attraction in the beauty of the passages and chambers in the interior of the mine, decked with magnificent crystals of the chlorides of sodium and potassium, sparkling and glistening in the light of the lamps.—Abridged from the "Chemical News," February 5th and 12th, 1869.