INDUSTRIAL CHEMISTRY.

Superphosphates and Superphosphates. F. J. Lloyd.

The author criticises the results obtained in the agricultural experiments of T. Jamieson carried on for several years in Aberdeenshire and Sussex, England. The analyses of superphosphates used by Jamieson show so large an excess of free sulphuric acid that conclusions against the use of superphosphates in general are not warranted by the results of these experiments. (*Chem. News*, *XLIX*, 229.) A. A. B.

Notes on a Recent Discovery of a Paraffine Shale Deposit in Servia. A. B. Griffiths. (*Chem. News*, *XLIX.*, 107.) A. A. B.

On a New Form of Gas Assay Furnace. W. L. Brown.

Not intelligible without the accompanying cut. (*Chem. News*, *XLIX.*, 108.) A. A. B.

Notes on the Concentration of Sulphuric Acid. By Peter Hart.

An historical review of methods. Early in this century glass retorts were set in a sand bath, boiled to concentration, allowed to cool, and "*removed in their arms by men* wearing sheepskin aprons," emptied and refilled, to go through the same course. Platinum came very slowly into use. Tennants & Co., of Glasgow, had a platinum retort in use from 1852 to 1864, when it was replaced by the large glass retorts now used. Gossage in 1857 experimented with a tower filled with flints and heated by furnace gases, the forerunner of the present Glover's tower, but it was not successful. Constant-flow systems with glass, earthenware or platinum have not been a success. Concentration *in vacuo* at 300° F. has been proposed. The latest and most remarkable proposal is concentration in *cast iron*. Iron is not attacked by boiling, concentrated acid, and may be used for the later stages of concentration if the acid be saturated with ferrous sulphate, of which it retains only a trace at 66° B. Acid is introduced at 60° B. into a

retort containing a large quantity of hot acid at 66° B., at such a rate that the density of the mixture does not pass below 65° B. This property of sulphuric acid has long been known and is largely applied in the "parting" process for gold alloys. It is remarkable that it should have remained so long without being utilized. (*J. Soc. Ch. Ind. III.*, 6,355.) A. A. B.

On the Quantuative Estimation of Oils and Fats. (Part II.) E. J. Mills and T. Akitt.

Dissolves the oil in CS_2 or CCl_4, preferably the latter, and titrate with Br in solution in the same solvent. Tetrachloride solution of Br is stable for at least twelve weeks. The oil should be as nearly as possible free from water, as the latter increases absorption of Br. 0.5 grm. of the oil is taken, dissolved in 50 c.c.CCl_4. Standard Br is added until a permanent coloration (remaining 15 minutes) is produced. β Naphthol is used to titrate back excess of Br. It forms a monobromo-derivitive in presence of CCl_4. Average probable error is 0.62%, or, with β naphthol 0.46%. Mean strength of standard Br solution, .00644 c.c. grm. per c.c. (*J. Soc. Ch. Ind. III.*, 6,367.)

A. A. B.