Report on Foreign and American Patents relating to Chemistry.

Foreign Patents.

Condensed from R. BIEDERMANN'S Report to the German Chemical Society, by H. ENDEMANN.

JAMES MACTEAR, Glasgow : *Utilization of by-products in the manufacture of soda.* (Engl. P., No. 815, Feb. 28, 1878.)—Treats on the preparation of calcium bisulphite.

JOHN HOLLWAY, London : *Sulphur from pyrites.* (Engl. P., No. 500, Feb. 6, 1878.)—The pyrites are brought to a red heat and then decomposed by the action of superheated steam. Sulphur and hydrogen sulphide are formed. In the case of copper pyrites the residue consists of CuS and Fe_2O_3. Arsen tersulphide is removed from the distilled sulphur by means of soda or sodium sulphide.

A. CLEMM, Mannheim : *Preparation of potassium and sodium phosphate from potassium or sodium sulphate and phosphoric acid.* (Germ. P., No. 3588, July 9, 1878.)—The sulphates are reduced by heating with charcoal, then partially oxidized by a current of air when moistened with water, and perhaps also by allowing sulphurous acid to act upon the solution until only hyposulphites are present, which are decomposed by phosphoric acid.

PETER STUART BROWN, Carrickfergus, Ireland : *Preparation of ammonium sulphate.* (Engl. P., No. 804, Feb. 27, 1878.—To allow of the use of iron vessels, the gas-water is but partially saturated, and during evaporation always kept alkaline. Ammonium sulphate is obtained as first crystallization. Cyanide and sulpho-cyanide from the mother liquors.

JOHN BARROW, Clayton, near Manchester. *Manufacture of ammonium salts and utilization of by-products.* (Engl. P., No. 891, March 5, 1878.)—Gas-water is distilled with calcium sulphide from the purification of illuminating gas or other sources, and the distillate is brought into sulphuric or muriatic acids. The sulphuretted hydrogen is then utilized by converting it into sulphur or sulphurous acid. Bisulphide of carbon is obtained by using an oil-scrubber.

JOHN ALFRED STEPHAN, Worcester : *Manufacture of illuminating gas.* (Germ. P., No. 3856, March 19, 1878.)—Peculiar apparatus for the manufacture of carburetted water-gas.

MYRON HOPKINS STRONG, Brooklyn : *Apparatus for the preparation of water-gas, and carburetting the same.* (Germ. P., No. 3174, Dec. 18, 1877.)

PAUL PAVLOWITSCH TIMOFEEFF, St. Petersburg : *Method and apparatus for the manufacture of illuminating gas.* (Engl. P., No. 2350, June 13, 1878; Germ. P., No. 3987, June 7, 1878.)—Hydrogen, prepared by zinc and sulphuric acid, is carburetted by a layer of petroleum ether covering the acid.

HENRY BAGGELEY, London : *Treatment of sewerage and preparation of a manure therefrom.* (Engl. P., No. 511, Feb. 7, 1878.)

ROBERT PUNCHON, Brighton : *Treatment of sewerage.* (Engl. P., No. 581, Feb. 12, 1878.)