

232,071.—*Process of treating spirituous liquors.* ADDISON M. SAWYER.

For the purpose of aging such liquors, air is forced through them which is "charged with the fumes of quick-lime."

Sept. 14, 1880.

232,110.—*Preparation of magnesia and the manufacture of refractory bricks therefrom.* ALFRED BRACONNIER.

Calcined dolomite is treated with a solution of chloride of ammonium, which dissolves the lime.

Sept. 21, 1880.

232,381.—*Explosive compound.* MAX TSCHIRNER.

A mixture of picric acid and chlorate of potassium.

Sept. 28, 1880.

232,615.—*Solution for nickel plating.* CHARLES G. PENDLETON.

A solution of acetate of nickel containing an excess of acetic acid.

232,685.—*Recovering sulphuric acid from sludge acid.* EDWARD CLARK.

232,755.—*Solution for the electro-deposition of nickel.* JOSEPH H. POTTS.

A solution of the acetates of nickel and of lime containing free acetic acid.

Foreign Patents.

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

F. PECHINEY, Salindres: *Recovery of sulphur from alkali waste.* (Engl. P., No. 3194, August 8, 1879.)—The yellow liquors from alkali waste are oxidized by passing a current of air through them, as has often been done before. The inventor proposes, however, to interrupt the injection of air when all the calcium monosulphide has been oxidized and before calcium sulphite has been formed. Calcium thiosulphate and polysulphide are obtained from which, upon the addition of acids, all the sulphur is precipitated and not partly evolved in the form of sulphurous acid, as is the case with lyes which have been completely oxidized.

S. G. THOMAS: *Manufacture of phosphates from slag.* (Engl. P., No. 3196, August 9, 1879.)—The slag resulting from Thomas' process of dephosphorizing iron contains 15–20 per cent. of phosphoric acid. It is pulverized and treated with hydrochloric acid. The filtered solution is oxidized with chlorine or manganese peroxide to obtain ferric phosphate, which is then precipitated from a boiling solution by lime or dolomite. The precipitated ferric phosphate is heated with sodic sulphate and coal. Air is admitted toward the end of the operation in

order to burn away the sulphur, leaving ferric oxide and trisodic phosphate. The latter is dissolved in water, and lime added, whereby calcium phosphate and sodium hydrate are obtained. (See also this JOURNAL, 2, 300.)

MORITZ FREYTAG, Bonn: *Absorption of sulphuric acid contained in gases from zinc, lead or copper furnaces.* (Germ. P., No. 9969, November 26, 1879.)—The gases enter the lower part of a tower filled with coke or stones, through which sulphuric acid trickles.

ALEX. MUELLER, Berlin: *Method of disinfecting and purifying waste waters.* (Germ. P., No. 9792, December 11, 1878.)—The waters previously freed from metallic salts and antiseptic substances and neutralized by lime, are run into large basins and kept at a temperature of 25–40° C. Fermentation is then induced by adding substances which favor the production of bacteria or other ferment organisms, in order to decompose the organic matters.

JOSEPH SCHMIDLIN, Hyde: *Printing with aniline black.* (Engl. P., No. 3161, August 6, 1879.)—The inventor adds to the mixture of aniline salt and potassium chlorate, an insoluble chromate and a per-salt of iron, to enable him to print alizarine red and other aniline reds together with black upon fabrics.

EUGEN STUTZER, Berlin: *Manufacture of shoddy wool.* (Germ. P., No. 10122, October 19, 1879.)—Vegetable fibre from jute, hemp, flax, etc., is treated successively with caustic lye at 175°, and ammoniacal sulphate of copper and caustic soda, then washed, dried and mixed with wool.

HERMANN KRUPP, Vienna: *Method of obtaining a firmer coating of silver upon metals.* (Germ. P., No. 9976, January 21, 1879.)—The objects are first nickel plated, then passed through a copper bath and finally silver plated with the battery.

NIC. STENZEL, Prague, and L. BROZ, Rokeyan: *Method of applying the enamel composition to the inner surface of moulds.* (Germ. P., No. 9921, July 12, 1879.)—The mould is first coated with plumbago and then the composition suspended in water applied evenly. (See this JOURNAL, 2, 141.)

J. M. A. DEHERRYON, Paris: *Method of dehardening glass.* (Germ. P., No. 9930, September 23, 1879.)—Glass hardened by rapid cooling is dehardened by heating and slowly cooling it in suitably constructed ovens.

A. W. KLINGHAMMER, Braunschweig: *Apparatus for extracting substances systematically by means of warm liquids of low boiling points.* (Germ. P., No. 9826, March 30, 1879.)—A system of suitably placed vessels for warming the solvents and for condensing the vapors from the extracted liquid, and for determining the gravity of the distillate.

E. C. LABOIS and L. L. LABOIS, Paris: *Apparatus for making bisulphide of carbon and sulphuric acid from iron and copper pyrites.* (Germ. P., No. 10561, November 2, 1879.)—Relates to the combination of a vertical retort with a pyrites furnace. The retort is charged with pyrites and charcoal, and part of the sulphur distilled off as carbon disulphide. After a certain time the charge is transferred to the roasting furnace, and the rest of the sulphur obtained as sulphurous acid, which is passed into lead chambers.

W. F. NAST, Paris: *Apparatus for obtaining ammonia from manure and urine.* (Germ. P., No. 10704, January 11, 1880.)—The substances are brought together with milk of lime into a boiler which can be rotated upon its axis. Superheated steam is admitted, and the ammonia evolved is washed and absorbed by an acid.

F. BRIEGLEB, Heufeld: *Apparatus for dividing a current of liquid into a number of streams of equal volume, which can be run off separately.* (Germ. P., No. 10386, November 15, 1879.)—Consists of a cone with radial projections, and is intended to replace the Barker's mill for distributing the sulphuric acid in Gay Lussac and Glover towers.

GEO. AARLAND, Stollberg, near Aix la Chapelle: *Method of decomposing sulphides of the alkaline earths with calcium chloride.* (Germ. P., No. 10486, December 24, 1879.)—Substitution of calcium for magnesium chloride in Schaffner-Helbig's process for regenerating sulphur from alkali waste.

R. HASENCLEVER, Aix la Chapelle: *Preparation of bisulphite of lime with the air of gases from fires or from pyrites furnaces.* (Germ. P., No. 10710, December 9, 1879.)—Milk of lime trickling through a tower is brought into contact with the sulphurous gases from which sulphuric acid has been previously removed.

K. & TH. MOELLER, Kupferhammer, near Brackwede: *Method of purifying waste waters containing arsenic.* (Germ. P., No. 10462, February 25, 1879.)—Waste waters containing the sulphur compounds of calcium and arsenic (from tanneries) are purified by a series of precipitations with hydrochloric acid, or with carbonic acid from flue gases, and with hydrate of lime.