

228,004.—*Process for recovering precious metals from liquids in which they are suspended.* JOHN TUNBRIDGE.

Claim: The process of separating metals from jewelers' waste, mining waters, etc., by treating said waters with soapy solutions and subsequent filtration.

228,005.—*Insulating compound for telegraph wires.* JOHN VAN WINKLE and FELIX DONELLY.

Consists of coal-tar, pitch, tallow and potash.

228,016.—*Compound for preserving meat.* FILIPPO ARTIMINI.

A compound called "boric tartrate," the composition of which is not given in the claim.

228,028.—*Coating the interior of vessels for holding oils.* DANIEL F. BOWKER.

After two coatings with a mixture consisting of glue, molasses, alum, glycerine, potter's clay and water, a solution of bichromate of potash is applied to the surface of the coatings.

228,029.—*Asphalt varnish.* JULIUS BRACE.

A solution of asphaltum in naphtha and some heavier part of petroleum.

228,140.—*Process of obtaining gold from its ores.* ANSON C. TICHENOR.

Claim 2: The process of treating gold ores for the subsequent recovery of the precious metals, said process consisting in subjecting the the said ores to the action of a chloride of gold.

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## Foreign Patents.

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

by OTTO H. KRAUSE.

H. BUESSING, Braunschweig: *Precipitation of white lead from solutions of basic acetate of lead.* (Germ. P., No. 4505, June 16, 1878.)—Carbonic acid is admitted to a vessel having a conical bottom fitted with pipes for heating the lead solution it contains. A shaft, to the arms of which blades of wicker work are attached, stirs the liquid, and an endless screw conveys the precipitated white lead to the discharge opening.

RAPHAEL MELDOLA, Hackney Wick: *Coloring matters from the sulphonic acids of phenols and from diazosulphonic acids derived from amines.* (Engl. P., No. 1864, May 10, 1879.)—The diazosulphonic acids of benzole, naphthalene, &c., are made to react on phenol-, naphthole-, resorcine-, etc., sulphonic acids. Various shades of orange and scarlet dyes are formed. Orange, for instance, by dissolving 10 parts sulphanilic acid in 20 times its weight of water, and treating with 4 parts sodium nitrite and hydrochloric acid. The diazobenzenesulphonic acid produced, is poured into a solution of 19 parts of sodium  $\beta$ -naphtholedisulphonate in 8 times its weight of water. After neutralizing with ammonia, the coloring matter is precipitated with sodium chloride. Scarlet is prepared in a similar manner from xylydinesulphonic acid and  $\beta$ -naphtholesulphonic acid.

H. GUENTHER, Berlin: *Black printing ink and etching ground.* (Germ. P., No. 9566, October 28, 1879).—Composed of 40 parts pitch or asphaltum, 28 parts rectified turpentine, 8 parts aniline violet, and 24 parts of the residue from the distillation of rosin oil.

F. GRAESSLER, Canstatt: *Preparation of amidoazobenzinesulphonic acid.* (Germ. P., No. 9384, September 28, 1879; addition to Germ. P., No. 4186, May 12, 1878.) (See also this JOURNAL, I, 499).—The inventor claims the use of oil of vitriol for this purpose, and also the employment of sulphuric anhydride and sulphuric chlorhydrate.

HENRY PARKES, Birmingham: *Improvements in the methods of working nitro-cellulose.* (Engl. P., No. 1869, November 10, 1879).—Nitro-cellulose is made plastic by the addition of different substances: carbon tetrachloride and camphor, equal parts; carbon disulphide and camphor, also the liquid obtained by the action of sulphurous acid upon camphor; finally, solutions of camphor in benzine, gasoline, naphtha, turpentine, paraffine, oil, &c. The softened mass, with or without addition of coloring matters and resins, is pressed in heated moulds. In a second patent (Engl. P., No. 1866, May 10, 1879) he claims the use of nitro-cellulose, softened by means of the above mentioned substances, in combination with shellac and glycerine or castor oil, as a varnish.

ALEX. SCOTT, J. D. SCOTT and T. R. OGILVIE, Greenock: *Purification of sugar solutions.* (Engl. P., No. 1809, November 10, 1879).—To remove the salts from the sugar solution, the latter is run into a mixture of sulphuric acid and alcohol. Should the liquid, separated from the precipitate, still contain organic impurities, lime is added to alkaline reaction, or a larger amount of lime is added to precipitate saccharate of lime. According to another process, alcohol is added to the sugar solution, and then saccharate of lime precipitated. Neither process is new.

MATTHEW BIRD, London: *Substitute for leather.* (Engl. P., No. 1879, May 13, 1879).—Comminuted leather waste is mixed with vegetable fibres, preferably spent tan bark, talc, asbestos and isinglass added, and the mixture pressed into moulds, or between rollers.

R. M. ATWATER, Melville, and JAMES WHITALL, Philadelphia: *Improvements in glass furnaces, and in the manufacture of glass.* (Germ. P., No. 8387, February 29, 1880).—The composition is melted at a high temperature, in a separate, rotary furnace. The finished glass metal is then run into a working furnace, which is kept at a much lower temperature. The heat passing off, is first utilized in keeping the annealing ovens at the proper heat.

ADOLPH ROSE, Braunschweig: *Manufacture of barium hydrate from barium sulphide.* (Germ. P., No. 9828, June 7, 1878).—Barium sulphide, reduced from the sulphate, is placed in a suitable apparatus, and extracted with the aid of water and steam, whereby a very concentrated solution results. If this solution, in a less concentrated state, be exposed for some time to a temperature of 50–60° C., barium hydroxide, and a higher sulphide of barium is formed. The barium hydrate crystallizes from the hot solution, and the small quantity of barium sulphide, with which the crystals are contaminated, is removed by a solution of zinc oxide, in baryta water. Solution of the reduced sulphide with steam and water is essential, as, otherwise, barium monosulphide is chiefly extracted, and little barium hydroxide obtained.

T. FLEITMANN, Iserlohn : *Preparation of nickel containing zinc.* (Germ. P., No. 9405, September 6, 1879.)—A mixture of nickel oxide and zinc oxide is reduced. The zinc is incompletely volatilized, about 10 per cent. uniting with the nickel. The mixture of the oxides is obtained either by precipitating a mixed solution of these metals, or by calcining the sulphates, or oxalates, of nickel and zinc.

J. B. SPENCE, London : *Treatment of metallic sulphides.* (Engl. P., No. 2006, May 20, 1879.)—Instead of heating the sulphides to redness, as described in his previous patent, No. 1855, of 1879, treating with sulphuric acid, and again heating (see this JOURNAL, 2, 193), the inventor now omits the calcination, and boils the very finely pulverized ores with sulphuric acid. Hydrogen sulphide is evolved, if dilute acid be employed; sulphurous acid is obtained, if concentrated acid be used. The sulphates thus obtained from ores mainly composed of lead and zinc sulphides, are finely pulverized, and used as pigments.

GEBRUEDER RAMDOHR, Wansleben : *Basic lining for furnaces.* (Germ. P., August 19, 1879.)—Bricks made of magnesium chloride, clay and iron ore, are calcined in the oxidizing flame, or in presence of superheated steam, whereby magnesia is produced. The inventors make use of this (long known) reaction, to produce a highly magnesian material, for lining furnaces.

ROMAIN JOLY, Elboeuf : *Carbonisation of vegetable fibres, &c., contained in woolen fabrics.* (Germ. P., No. 9263, February 12, 1879.)—Claims the use of the chlorides of aluminium, zinc and magnesium, for this purpose. (These substances have all been employed before with the same object. See Wagner's Jahresber., 1878, 1024 : also, as regards magnesium chloride, A. Frank, Germ. P., No. 2301.)

JUL. ATHENSTAEDT, Bad Essen : *Method of preparing acetotartrate of alumina as an antiseptic.* (Germ. P., No. 9790, November 24, 1879.)—This compound acts as a mild astringent. It can be obtained as a dry powder, or as a gummy mass, by dissolving basic acetate of alumina in tartaric acid, or by mixing a solution of acetate of alumina with tartaric acid, and evaporating. Its quantitative composition is not constant.

VICTOR VON OFENHEIM, Vienna : *Method of bleaching ceresine, paraffine, petroleum, stearine, and other fatty matters, by means of the hydroxides of aluminium, iron, manganese and magnesium.* (Germ. P., No. 9291, August 21, 1879.)—Ozokerite is heated to 170–200° C., and about 20 per cent. of the above mentioned substances added to the molten mass. This treatment is repeated several times, with the clear liquid which separates upon standing. The residues are treated with steam to remove ceresine, and to restore the hydroxides.

L. DANKWERTH and F. SANDERS, St. Petersburg : *Artificial caoutchouc.* (Germ. P., No. 9620, June 18, 1879.)—Composed of equal parts by weight of wood-tar oil, coal-tar oil, hemp oil and linseed oil, to which are added small quantities of ozokerite, spermaceti and sulphur.

WILLIAM GARTON, Southampton : *Improvements in the manufacture of starch, and recovery of the ammonia employed.* See this JOURNAL, 2, 105.

F. W. MARQUARDT, Hanover : *Preparation of yeast.* (Germ. P., No. 9534, September 19, 1879.)—The albuminoids of malt germs are converted into peptones, by means of acidified glucose, or syrup, or acidified water only. The extracted peptones are used in making compressed yeast.

SPORMANN, Hamburg : *Treatment of rancid butter.* (Germ. P., No. 9483, October 2, 1879.)—The butter is kneaded with lime-water.