

Abstracts of American Patents Relating to Chemistry.

(From the U. S. Patent Office Gazette.)

Issued June 2d, 1891.

453,227.—Process of making steel. Riley P. Wilson, New York, N. Y.

453,295.—Tanning composition. John T. Smith, San Francisco, and John W. Copeland, Redding, Cal.

A mixed decoction from the twigs, leaves and bark of the manzanita, eucalyptus, and madrona.

453,299.—Process of making phosphate of alumina. Charles Glaser, Baltimore, Md.

Insoluble phosphates of alumina or minerals containing same are first digested with a solution of an alkali so as to dissolve the phosphate of alumina. The resulting solution is separated from the insoluble matter and treated with carbonic acid which reprecipitates the phosphate of alumina, etc.

453,300.—Process of separating alumina from phosphates.

“The process of dissolving phosphate of alumina out of phosphatic material by the hot solution of a carbonate of an alkali, separating said phosphate of alumina as a precipitate from said solution by cooling, and using the remaining solution as a solvent for repetition of the operation.”

453,304.—Apparatus for tinning plates. Henry F. Taylor and William P. Struve, Briton Ferry, England.

453,334.—Soda motor. Robert R. Zell, Baltimore, Md.

453,355.—Process of coating metals with oxides. Alex. E. Haswell and Arthur G. Haswell, Vienna, Austria-Hungary.

Iron or steel is immersed in a bath of nitrate of lead and nitrate of ammonia solution, and an electric current passed through the bath whereby binoxide of lead is deposited upon the metal. Addition of manganous nitrate to the above bath will cause deposition of both binoxide of lead and binoxide of manganese when the electric current is passed through the bath.

453,364.—Cereal food and process of manufacturing it. Thomas B. Taylor, Jackson, Mich.

453,386.—Apparatus for producing coal tar and coke. George Poterie, Alleghany, Pa.

453,388.—Composition blackboard. George W. Henry, Cherokee, Iowa.

Composition consists of sand, stucco, slaked lime, cement, lamp black, hair, black antimony, glue, marble dust, emery dust and water, etc.

453,444.—Method and apparatus for operating aqua-ammonia engines. Charles L. Horack, Brooklyn, N. Y.

453,477.—Blue-green dye. Albert Herrmann, Höchst-on-the-Main, Germany.

A blue-green coloring matter produced by converting metadiazotetralkyldiamidotriphenylmethanchloride into the corresponding metachlor leuco base by treatment with copper or cuprous chloride, sulphonation of the chlor leuco base and oxidation of the leuco-sulphonic acid thus obtained by means of peroxide of lead. The coloring matter is the "sulphonic acid of metaclortetralkyldiamidotriphenylcarbinol, a copper-red powder with metallic lustre, easily soluble in water, giving green coloring of difficult solubility in alcohol, not soluble in benzine, the green coloring of the aqueous solution turning yellow-green on the addition of an acid, and blue-green on the addition of ammonia or an alkali, and dyeing wool and silk blue-green shades in an acid bath."

453,529.—Process of smelting sulphides. William L. Austin, Toston, Mont.

453,559.—Method and apparatus for coating metals. George and William T. Leyshon, Tipton, England.

Issued June 5th, 1891.

453,606.—Apparatus for distilling wood. Alfred E. Badgley, Susquehanna, Pa.

453,646.—Apparatus for dyeing. Charles L. Klauder, Philadelphia, Pa.

453,658.—Device for steaming and bleaching fruit. Charles Phelan and Hackley Eldridge, Portland, Oreg.

453,678.—Apparatus for extracting lupuline. Jacob F. Theurer, Milwaukee, Wis.

453,695.—Secondary battery. William W. Griscom, Haverford College, Pa.

453,735.—Apparatus for the treatment of cane juice by filtration. Leon Boyer, New Orleans, La.

453,749 and **453,750.**—Phosphatic fertilizers. Joseph Van Ruymbeke, Chicago, Ill.

453,752.—Process of an apparatus for the manufacture of gas. John F. Allen, New York, N. Y.

453,753.—Manufacture of Portland cement. Enil F. Baude, Cincinnati, Ohio.

453,769.—Ore roasting furnace. Joseph L. Giroux, Jerome, Ariz.

453,774.—Lime kiln or furnace. Hans Hanenschild, Berlin, Germany.

453,801.—Sulphuric acid concentrator. James B. Ackerson, Passaic, N. J.

453,806.—Apparatus for treating zinc ores. Eduard Grutzner, Romgne Grube, near Loslau, and Oscar Koehler, Czernitz, Germany.

453,829.—Process of recovering glycerine and salt from spent soap-lye. Albert Domeier and Otto C. Hagemann, London, Eng.

453,834.—Process of purifying and concentrating glycerine. Otto C. Hagemann, London, Eng.

453,835.—Recovering glycerine from spent soap-lye. Otto C. Hagemann, London, Eng.

453,928.—Ore concentrating and separating apparatus. Calvin M. Fitch, Chicago, Ill.

453,975.—Apparatus for bleaching vegetable and animal matter. Honore K. de Pawlowski, Paris, France.

454,986.—Process of distilling hydrochloric acid. Ernest Solvay, Brussels, Belgium.

Issued June 16th, 1891.

454,061.—Apparatus for distilling. Thomson McGowan, Cleveland, Ohio.

454,071.—Process for grading and concentrating ores. Hannibal Scovell, Portland, Colo.

454,079.—Process of vulcanizing rubber dentures. George B. Snow, Buffalo, N. Y.

454,108.—Manufacture of ammonia from sodium nitrate. Henry E. Boudouin and Elie T. Deloit, Paris, France.

Nitrate of soda is subjected to the action of nascent hydrogen at a given temperature whereby the nitrate is decomposed, also by mixing the nitrate of soda with a suitable hydrocarbon and then subjecting the mixture to heat sufficient to decompose the hydrocarbon. In this operation sodium carbonate is obtained as a by-product.

454,186.—Manufacture of caustic alkali. Adolf Kayser, Buffalo, N. Y.

454,187.—Process of making sodium aluminate. Adolf Kayser, Buffalo, N. Y.

454,189.—Process of making soda-alum. Francis M. and David D. Spence, Manchester, and Alex. Esilman, Southport, Eng.

A concentrated solution of sulphate of alumina of sp. gr. 1.3 is first prepared, then sufficient sulphate of soda is added to the hot solution to form with the sulphate of alumina soda-alum. The suspended impurities are removed and the solution then concentrated to 1.425 to 1.450 cooled and crystallized.

454,209.—Process of melting iron. Henry J. Graf, St. Louis, Mo.

454,223.—Compound of antipyrine and iodine. Eugene Ostermayer, Erfurt, Germany.

In the crude state a yellowish-brown powder, in the pure state brilliant white prismatic needles melting at 158° to 160° C., nearly insoluble in water, readily soluble in alcohol, having the formula $C_{11}H_{11}IN_2O$.

454,239.—Explosive. Paul Ward and Edward M. Gregory, London, Eng.

A detonating composition consisting of powdered coke, amorphous phosphorous, chlorate of potash and paraffine oil.

454,281.—Method for making gun cotton. Hiram S. Maxim, London, Eng.

454,340.—Filter. Jacob A. Fulton, Astoria, Oreg.

454,346.—Artificial stone. George E. Hagerman, Brooklyn, N. Y.

Sand or rock is reduced to a molten state, run into suitable molds and mixed with fresh sand.

454,381.—Process of electro-deposition and cathode therefor. Alex. C. Reinfield, Vienna, Austria-Hungary.

454,409.—Apparatus for the manufacture of gas. John L. Stewart, Philadelphia, Pa.

454,442.—Production of waste rubber goods. Nathaniel C. Mitchell, Philadelphia Pa.

Issued June 23d, 1891.

454,581.—Apparatus for the manufacture of gas. Charles Stilwell, Trenton, N. J.

454,585.—Gray dye. Albert Cobenzl, Höchst-on-the-Main, Germany.

A gray coloring matter derived from nitroso-diethylaniline and the betanaphtholmonosulphonic acid of Schaffer; a black amorphous powder readily soluble in water with violet coloration insoluble in acetone, benzine and alkaline solution. An addition of acid to the hot dilute aqueous solution turning the color of the solution into blue-green and in concentrated solutions forming a green-blue precipitate, the filtered colorless solution exposed to the air rapidly reassuming the violet coloration, this violet solution acidulated turning into green and forming a green-blue precipitate.

454,575.—Pepsin. Joseph Le R. Webber, Detroit, Mich.

454,645.—Amidonaphtholmonosulphonic acid. Leo Gans, Frankfort, Germany.

454,759.—Ore roasting dish. William F. Oden, Butte City, Mont.

454,777.—Process of solidifying liquid hydrocarbons.

A pulverized vegetable saponifier is first added to the hydrocarbon and then water is added and intimately mixed with the mixture.

454,817.—Filtering apparatus. John E. Warren, Cumberland Mills, Me.

Issued June 30th, 1891.

454,885.—Process of making artificial leather. Alfred E. Arnold, Marickville, New South Wales.

454,840.—Orange dye. Otto Borgmann, Berlin, Germany.

454,856.—Apparatus for the manufacture of ultramarine. Frederick Curtius-Brockhoff, Duisberg, Germany.

454,925.—Process of manufacturing gas. William G. Wood, Windsor, Canada.

455,078.—Process of manufacturing lactic acid. Charles N. Waite, Newton, Mass.

455,102.—Process of carbonating liquids. Hermann Hübener, Berlin, Germany.

455,164.—Apparatus for extracting gold and silver from their ores by electrical amalgamation. George Button and William E. Wyeth, Kimberley, Griqualand, West Africa.

455,210.—Milk wine and process of making the same. John H. Hooker, Winslow, Eng.

455,217.—Explosive compound. Carl Lamm, Stockholm, Sweden.

An explosive compound composed of a nitrate salt and dinitro-benzine or dinitro-benzol.

455,227.—Process of making compounds of nickel and carbon monoxide. Ludwig Mond, London, Eng.

455,228.—Process of obtaining metallic nickel. Ludwig Mond, London, Eng.

455,229.—Compound of nickel and carbon monoxide. Ludwig Mond, London, Eng.

A new compound of nickel and carbon monoxide of the formula NiC_4O_4 , a liquid boiling at about $43^\circ C.$ under atmospheric pressure, but very volatile in the presence of other gases, at ordinary temperature.

455,230.—Process of depositing nickel. Ludwig Mond, London, Eng.

455,245.—Manufacture of pyroxyline. Hilaire de Chardonnet, Besancon, France.

455,286.—Process of making water proof compositions from linseed oil. Henry Kellogg, New Haven, Conn.

455,295.—Method of treating molasses to improve its flavor. James Duncan, Selby, Eng.

J. F. G.