

Abstracts of American Patents Relating to Chemistry.

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

July 7, 1891.

455,308.—Apparatus for defecating and evaporating saccharine juices. Ramon F. Cordero, Rubio, Venezuela.

455,376.—Manufacture of cement. Herbert H. Wing, Buffalo, N. Y.
A mixture of a phosphate and silicate is calcined, the resulting product forming hydraulic cement.

455,420.—Method of electric welding. Elihu Thompson, Swampscott, Mass.

455,442.—Betadeltaamidonaphthol. Jacob Schmid, Basle, Switzerland.
This new product is derived from the sodium salt of beta-naphthyl-aminodeltamonosulpho acid, melting at about 200°C, crystallizing from alcohol in small white needles, scarcely soluble in water, more so in benzine, easily soluble in ether and alcohol.

455,458.—Process of and apparatus for the reduction of ore. Charles J. Eames, New York, N. Y.

455,471.—Condensing apparatus. John Caven, Indianapolis, Ind.

455,491.—Cooling apparatus for calcined material. Amable B. Bonneville, Allentown, Pa.

455,529.—Process of coating wire with other metal. John Coffin, Johnstown, Pa.

455,531.—Ore separator. Edward G. Good and James Thorne, Portland, Ore.

455,580.—Treatment and preparation of gypsum. Frederick G.H. Rothe, Berlin, Ger.

455,611.—Process of reducing kaolins and clays to their component oxides. Philip A. Emanuel, Aiken, S. C.

The clay is treated with sulphuric acid and heated for the conversion of the alumina into aluminium sulphate. This sulphate is then separated from the silica, and heated with sulphur.

455,631.—Apparatus for the defecation of saccharine juices by electricity in the manufacture of sugar. Elias Maigrot and José Sabates, Havana, Cuba.

455,654.—Ore washer. James O. Campbell, Colton, Utah.

455,674.—Process of treating hides. George C. Walter, Hastings, Mich.

455,675.—Purification and manufacture of sugar. Moriz Weinrich, St. Louis, Mo.

455,693.—Galvanic battery, Henry C. Sample, Ravenswood, Ill.

July 14, 1891.

455,768.—Manufacture of tartaric acid. Robert W. Shedler, Brooklyn, N. Y.

Solutions of tartaric acid concentrated to the point of crystallization are subjected to an addition of sulphuric acid whereby the quantity of crystallized tartaric acid as the result of the first crystallization is increased. The mother liquor is then used for the further treatment of calcium tartrate and thus a second charge of tartaric acid is obtained in solution.

455,802.—Apparatus for the treatment of city refuse. John C. Stanley and Joseph Russell, London, Eng.

455,808. } —Electro-magnetic ore separator. Jonas Wenström, Örebro,
455,809. } Sweden.

455,952.—Brown dyestuff. Christopher Ris, Basle, Switzerland.

A brown dye derived from a mixture of paranitro-tolnol sulpho-acid with paraphenyldiamine in a solution of caustic alkalies. The dye is soluble in water and alcohol.

456,047.—Process of producing surprise pictures. Otto Meyer, New York, N. Y.

Drawings are made upon suitable material with solutions of phenolphthalein, ceroline, or any other indicator of alkaline reaction, and subsequently subjecting the same to the reaction of an alkali to develop the lines, words or figures.

456,081.—Red dyestuff. Maurice Ceresole, Neuville, France.

The new dye base, symmetrical diethylrhodamine, derived from monoethylmetaamidophenol and phthalic anhydride, is a bluish red, crystalline powder, slightly soluble in water, alcohol, ether, and benzene, readily soluble in wood spirit with greenish fluorescence, forming a basic hydrochloride readily soluble in alcohol with intense green yellow fluorescence, soluble in strong hydrochloric and sulphuric acids, and slightly soluble in water, with subsequent decomposition and separation of the base.

July 21, 1891.

456,140.—Apparatus for the manufacture of coal gas. James Elliott, Ludlow, Eng.

456,172.—Method of measuring electric currents. Elihu Thompson, Lynn, Mass.

The method consists in generating heat by the electric current, evaporating a liquid by the heat so generated and from the amount of evaporation ascertaining the amount of current.

456,183.—Process of obtaining iodine. Hubert H. Wing, Buffalo, N. Y.

The mother liquor from the purification of sodium nitrate is mixed with silicious material and the mixture is calcined. The sublimed iodine is collected in suitable chambers.

456,204.—Manufacture of galvanized iron. Joseph W. Richards, Philadelphia, Pa.

Metallic aluminium is diffused throughout a bath of metallic zinc and the metallic iron then dipped into this bath.

456,241.—Process of treating cocoanut husks. John T. Davis, San Francisco, Cal.

The husks are first digested in an alkaline solution under heat and then subjected to the action of crushing rollers, etc.

456,294.—Manufacture of soda-alm. Francis M. Spence and David D. Spence, Manchester, Eng.

456,297.—Plastering composition. Aaron Anthony, Springfield, Ill.

456,311.—Flux for smelting or reducing ores. Thomas Miller, Salt Lake City, Utah.

456,314.—Manufacture of plated stock for jewelry. John S. Palmer Providence, R. I.

456,323.—Ore leaching machine. Pierre L. Gibbs, Clinton, Iowa.

456,481.—Manufacture of glucose or sugar. Julius Dubiel, Waukegan, Ill.

456,499.—Apparatus for evaporating liquids containing salt. Sigismund Pick, Szezakowa, Austria-Hungary.

456,508.—Celluloidal explosive and process of making the same. Alfred Nobel, Paris, France.

A dense, horny, granular substance, solid at ordinary temperature, and composed of nitro-cellulose, nitro-glycerine and suitable oxidants.

456,516.—Process of treating copper matte. Pierre Mannes, Lyons, France.

456,517.—Ore-roasting furnace. Patrick Marley, Idaho City, Idaho.

456,540.—Method of welding by electricity. John H. Bassler, Myerstown, Pa.

456,541.—Method of and apparatus for electric-welding. S. Lloyd Wygaud, Philadelphia, Pa.

July 28, 1891.

456,589.—Method of preparing sterilized chocolate. Gustav H. Neuhauss, Johann F. H. Gronwald, and Emil Oehlmann, Berlin, Germany.

456,606.—Process of and apparatus for expressing oil and regulating the action of hydrostatic presses. John H. Vaile, Dayton, Ohio.

456,622.—Magnetic separator. David E. Laim, Yonkers, N. Y.

456,627.—Process of making azo dyes. Carl A. Martins, Berlin, Germany.

The process consists "in first forming an alpha-naphtholdisulphonic acid by treating naphthaline disulphonic acid with nitric acid, reducing the alpha-nitronaphthaline disulphonic acid and conveying said alpha-amidonaphthaline disulphonic acid into the corresponding compound alpha-

naphthol disulphonic acid; secondly, forming a diazo derivative of an amido compound, such as xylydine, cumidine, alpha-naphthylamine, etc.; and, thirdly, adding the said alpha-naphthol disulphonic acid to the diazo compound so formed."

456,629.—Process of making azo dyes. Carl A. Martius, Berlin, Germany.

Process somewhat similar to the above except from second stage, when a tetrazo derivative of an amido compound is formed, such as diamidostilbene, benzidine, etc.; thirdly, adding to the solution of the tetrazo compound so formed the alpha-naphthol disulphonic acid in certain proportions to form a compound of one molecule of the tetrazo compound combined with one of the alpha-naphthol disulphonic acid; and, fourthly, adding to this compound a portion of naphthol or naphthol-sulphonic acid in the proportions about as stated; and, fifthly, precipitating the dye stuffs from the solution.

456,659.—Vulcanized paint. Lutke W. Osborn, Joliet, Ill.

456,663.—Reverberatory furnace. William Stubblebine, Bethlehem, Pa.

456,730.—Machine for decorticating fibrous plants. John H. Lorimer, Philadelphia, Pa.

456,772.—Composition to be used as a varnish, lacquer, or glue. Thomas B. Osborne, New Haven, Conn.

Consists of zein, a resinous gum and mutual solvent thereof.

456,773.—Process of extracting zein. Thomas B. Osborne, New Haven, Conn.

The nitrogenous matter left after the manufacture of starch from corn is treated with a suitable solvent to extract the zein.

456,791.—Apparatus for making bisulphites. Norman H. Rippan, Kankauna, Wis.

456,821.—Process of waterproofing and preserving textures and other materials. Charles F. Hinie and John H. Ward, London, Eng.

The fibrous materials are treated with a solution of cellulose and ammonia zinc.

456,844.—Gold chlorinating process. James H. Pollock, Glasgow, Scotland.

456,852.—Concentrator and amalgamater. Jacob Rodermond, New York, N. Y.

456,872.—Process of manufacturing malt. Frederick W. Wienbrock, New York, N. Y.

456,890.—Drying oil and method of making the same. Norval H. Finley, Rochester, Pa.

456,897.—Azo dye. Carl A. Martins, Berlin, Germany.

To a tetrazo derivative of diphenylidene add alpha-naphthol disulphonic acid (see Pat. 456,627) in certain proportions to form a compound of one

molecule of tetrazodiphenilidine with one $\frac{2}{3}$ of the alpha-naphthol disulphonic acid, then adding to this compound another portion of the alpha-naphthol disulphonic acid, and then precipitating the dyestuff.

456,903.—Food compound. George F. Ordway, Boston, Mass.

A food candy consisting of a proteid substance, fat, sugar, sodium phosphate, magnesium carbonate and flavoring materials.

456,967.) —Ore concentrator. Charles E. Seymour, Hurley, Wis.

456,968.)

457,002.—Process of making nitro-glycerine. Ebenezer K. Mitting, Chicago, Ill.

457,028.—Process of making chrome yellow. Frederick W. Ilme, Kansas City, Mo. Pulverized galena is treated with nitric acid to make lead nitrate and the solution is precipitated by a soluble chromate, etc.

457,029.—Process of treating tobacco leaves. William E. Johns, High Point, N. C.

457,063.—Apparatus for charging furnaces. George R. Ward, Muncie, Pa.

457,097.—Process of evaporating sirup. Lorin R. Tabor, Westford, Vt.

457,145.—Ore sampling machine. Henry L. Bridgman, Blue Island, Ill.

457,205.—Alloy and method of producing it. Henry Marbeau, Paris, France. A method of producing alloys of iron and steel with nickel.

457,231.—Method of manufacturing rock faced, artificial stone. Charles W. Stevens, Lansing, Mich.

457,250.—Furnace. Nicholas Brayer, Rochester, N. Y.

457,256.—Process of obtaining zinc sulphate from zinciferous ores. Charles E. Crosehire, Newark, N. J.

August 11, 1891.

457,342.—Anti-corrosive and anti-fouling compound. Max E. Dejonze, Stapleton, N. Y. A compound consisting of zinc dust six parts and paraffine one part by weight.

457,465.—Potting kiln. John McCloskie, Massillon, Ohio.

457,471.—Preserving apparatus. Leopold Breggher, Ober Döbling, near Vienna, Austria.

457,487.—Apparatus for the manufacture of gas. John H. W. Stringfellow, London, Eng.

457,488.—Process of dyeing. Alfred Fischliesser and Joseph Pokorny, Lutterbach, Germany. The improvement consists in alternately impregnating or coating the fiber or fabric with a diazotized amido substance and with betaoxynaphthoic acid, the melting point of which is 216° C.

457,541.—Apparatus for grinding and amalgamating ores. Frederick Stahl and John S. Rew, St. Armand, Victoria.

457,589.—Rotory furnace for burning cement, lime, etc. José F. de Navarro, New York, N. Y.

457,712.—Process of photographing. Israel H. Hamburger, New York, N. Y. A process for producing a photographic picture in relief upon the surface of a sheet or block of zylonite or other pyroxyline material. "A sheet of the material is coated with a solution of albumen acidulated with acetic acid, applying to this surface a paper sensitized in any suitable manner and having a pigment or dye mingled with the sensitized coating, the latter containing an undeveloped photographic image or picture, immersing the coated surface with the paper applied in cold water, pressing the paper closely upon said surface, then immersing the same with the paper in contact in warm water, removing the paper and the soluble parts of the sensitized coating, hardening the insoluble adhering parts by immersion in cold water, fixing the picture by immersion in a strong solution of alum and drying."

August 18, 1891.

457,799.—Method of producing Alcohol. Alfred Springer, Cincinnati, Ohio. Grain or farinaceous material is treated with dilute nitric acid for the conversion of the starch into dextrose, and the mash afterward fermented while wholly or partially retaining the acid, then neutralizing and distilling the mash.

457,803.—Carburetor. Oliver Vanorman, Los Angeles, Cal.

457,817.—Method of preparing photographic plates. Oswald Moh, Görlitz, Germany.

A plate of moscovite or mica, "previously submitted to a treatment by a solution of chromic alum and gelatin for removing the mineral grease, from the natural mica and enabling the same to receive in fixed and solid adherence a sensitive coating."

457,821.—Enameling oven or kiln. David O. Paige, Detroit, Mich.

457,831.—Soda motor. Robert R. Zell, Baltimore, Md.

457,832.—Method of operating motors. Robert R. Zell, Baltimore, Md.

457,863.—Process of making isoeugenol. George de Laire, Paris, France.

Eugenol or essence of cloves is heated with potassium hydrate and alcohol until a reaction is effected, the alcohol is then expelled with steam and the mass is treated with acid to separate the isoeugenol.

457,864.—Process of making compounds of isvengenol. George de Laire, Paris, France.

457,914.—Soap making apparatus. William A. Grant, Houston, Tex.

457,917.—Apparatus for purifying water. Thomas Shaw, Philadelphia, Pa.

457,953.—Composition for artificial stone. Edward Gallagher, Lock Haven, Pa.

Consists of cement sand, plaster of paris, powdered soapstone and salt mixed in a dry state and then rendered plastic by the admixture of lime-water.

458,020.—Indelible print or picture. Joseph R. France, New York, N. Y.

458,075.—Oil filter. Thomas W. Shelton, Cleveland, Ohio.

458,102.—Furnace for calcining ores. James Douglas, New York, N. Y.

458,132.—Process of impregnating leather. George C. Seeberger, Munchberg, Germany.

The leather is first impregnated with an oil, the latter then partially oxidized and finally the whole coated with a resinous varnish.

458,134.—Chemical fire extinguisher. Ernest F. Steck, Chicago, Ill.

458,135.—Process of making paper stock. John D. Tompkins, Nassau, N. Y.

Aug. 25, 1891.

458,157.—Composition of matter for use as a substitute for glass, etc. Freiderich Eckstein, Vienna, Austria-Hungary.

A composition of matter consisting of collodion wool, a non-resinous oil, a castor oil, and a balsam or soft rosin.

458,174.—Apparatus for pneumatic malting. Johannes Küntze, Nordhausen, Germany.

458,193.—Milk testing apparatus. David T. Sharples, Elgin, Ill.

458,194.—Centrifugal milk testing apparatus. David T. Sharples, Elgin, Ill.

458,244.—Litmus pencil. Josiah S. Tyree, Washington, D. C.

458,281.—Induline dye. Benno Homolko, Höchst-on-the-Main, Germany.

Process of heating a mixture of soluble indulines together with paraphenylenediamine and hydrochlorate of paraphenyldiamine, and, after filtering, precipitating by means of common salt and zinc chloride. The process yields a blue coloring matter of the induline series, a zinc chloride double salt in form of a brown powder with metallic lustre, insoluble in ether, benzole and chloroform, somewhat soluble in alcohol, of very easy solubility in water, showing violet blue coloration, nearly insoluble in hydrochloric acid, but soluble in cold sulphuric acid, and precipitated by alkalies and oxidizing agents from aqueous solutions.

458,283.—Azo dye. Hans Kuzel, Höchst-on-the-Main, Germany.

Process for producing an azo coloring matter by diazotizing 93 parts of aniline with 267.7 parts of hydrochloric acid thirty per cent., and 69 parts of sodium nitrite (all by weight), at a temperature between 0° and

5° C. and, while stirring, introducing it into a paste made from 404 parts of the disodium salt of naphthaline disulphonic acid and 340 parts of sodium acetate (all parts by weight) and finally precipitating the color by means of common salt, filtering, and drying it.

The coloring matter is a brown powder easily soluble in cold water and dilute acids, freely soluble in hot alcohol of 75° Tralles, insoluble in ether and ligroine, and adapted for dyeing wool in greatly differing shades, ranging from bluish red to deep black, depending upon the use of acids or the latter in combination with metallic mordants.

458,284.—Azo dye. Hans Kuzel, Höchst-on-the-Main, Germany.

A dark reddish brown powder derived from naphthol trisulphonic acid-monomide and diazo bodies.

458,285.—Amido-naphthol monosulphonic acid. Hans Kuzel, Höchst-on-the-Main, Germany.

Method consists in melting the salts of beta-naphthylamine disulphonic acid with caustic alkalis. The amido-naphthol monosulphonic acid is a crystalline powder of difficult solubility in water and of less solubility in alcohol of 60° Tralles, insoluble in absolute alcohol, ether, and ligroine. The solution of the acid or its salts show violet blue fluorescence, with Fe₂Cl₃ solution a dirty red coloration, and with chloride of lime a dark red brown coloration, which, on the addition of an excess disappears gradually, and the diazo compound is yellow.

458,286.—Amido-oxynaphthaline disulphonic acid. Hans Kuzel, Höchst-on-the-Main.

Long pearly needles slightly soluble in alcohol, ligroine and ether, easily soluble in water with violet fluorescence, turning green by the addition of alkali, brown by ferric chloride and bleaching powder, but decolorized by an excess of the latter.

458,419.—Substitute for white of eggs. John E. Furber, Lawrence, Mass.

A powder composed of soluble vegetable or animal albumen, corn starch, dextrine, sodium bicarbonate, sodium chloride, sulphur and phosphates.

458,420.—Compound as a substitute for yolks of eggs. John E. Furber, Lawrence, Mass.

Similar to No. 458,419 but with addition of animal or vegetable oil.

458,440.—Ice making and refrigerating machine. William H. Appleton, New York, N. Y.

458,502.—Amalgamator. Thomas Shannon, Whitewood, S. D.

458,534.—Composition for water-proofing pulp and other fibrous articles. Frank E. Keyes, Lockport, N. Y.

A mixture of rosin, linseed oil, and cottonseed oil.

458,551.—Insulating compound. James L. Marmand, Malden, Mass.

J. F. G.