Abstracts of American Patents Relating to Chemistry.

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

Issued February 10, 1891.

445,977.—Pad for rapid copying. Louis Neuhaus and Felix F. Daus, New York, N. Y.

Pad composed of mixture prepared by mixing three parts of dry and powdered china clay No. 1, one part of French powdered chalk and one-half part of plaster of paris, and adding to this mixture, by kneading or otherwise, the composition resulting from mixing three-quarter parts ordinary starch, three-quarter parts dissolved dextrine, one sixty-fourth part of chloride of calcium in the pure crystal, one-sixteenth part of ordinary sugar, and one and one-quarter part of liquid glycerine.

445,982.—Apparatus for the reduction of petroleum into gas. Fritz Dürr, Munich, Germany.

446,004.—Method of producing colored impressions. Robert Schorr, Würtemberg, Germany.

446,009.—Yellow dye. William Pfitzinger, Elberfeld, Germany.

A dye prepared by treating the diazo compound of thioparatoluidine sulpho-acid with the sulpho-acid of the same thio derivative of the paratoluidine.

The coloring is easily soluble in water with a clear greenish-yellow color, turning red on the addition of acetic acid, precipitating as a red powder by adding mineral acid; it is destroyed by concentrated sulphuric acid or boiling diluted mineral acid with evolution of nitrogen, and it dyes unmordanted cotton a bright greenish yellow in alkaline soap bath.

446,018.—Paint from residuum of vegetable oils. George W. Scollay, New York, N. Y.

446,019.—Art of making paint. George W. Scollay, New York, N. Y.

446,021.—Apparatus for storing and preserving food. Lyman Smith, Chicago, Ill.

An hermetically sealed box, in which food can be treated with carbonic acid.

446,041.—Paper pulp boiler. Solomon R. Wagg, Appleton, Wis.

446,046.—Photographic camera. Frank Whitney, Chicago, Ill.

446,050 and **446,051.**—Apparatus for dyeing straw goods, etc. James A. Young, Boston, Mass.

446,055.—Ore concentrator. Marcelin Castelnau, Paris, France.

446,060.—Apparatus for making sulphuric acid. Emil Delplace and Jules Delplace, Aubervilliers, France.

446,064.—Brick machine. Collier V. Hemenway, Wellington, Ohio.

446,077.—Machine for liquidizing milk. George Roth, Highland, Ill.

446,087.—Phosphate and process for making the same. Joseph Van Rumbeke, Chicago, Ill.

Iron and alumina phosphate are first treated with sulphuric acid, then treated at a temperature of 400°–800° Fahr., until the acid phosphate is changed into metaphosphate, usually indicated by the product assuming a gray color.

446,088.—Nitrogenous fertilizer. Joseph Van Ruymbeke, Chicago, Ill.

446,117.—Process of and apparatus for purifying grease. George Race, Norwich, N. Y.

The grease is floated while in a liquid state over currents of water running in the opposite direction and jets of steam and air are forced successively through the water and liquid grease.

446,145.—Roofing paper. Henry Cunningham, Bachtown, Ill.

A roofing paper having a coating of linseed oil and charcoal.

446,149.—Sizing apparatus for slime, etc. Carl A. E. Mimicke, Clausthal, Prussia, Germany.

446,153.—Filter. John S. Roake, Brooklyn, N. Y.

446,191.—Decorating sheet metal for ceilings, etc. Edward Püttmann, Schivelm, Germany.

446,205.—Ice machine. Edward J. Hardy, Brooklyn, N. Y.

446,248.—Milk testing and separating machine. Dyer Cooper, Philadelphia, Pa.

446,252.—Freezing apparatus. Jacob Erny, Zach. T. Subers, William Hoos, Philadelphia, Pa.

446,265.—Wall and ceiling polish. Thomas J. Neavitt.

Composed of white spirits of turpentine, light colored mastic, and light colord sandarac in equal quantities, oil of lavender, powdered glass, and white oil of poppy..

446,285.—Disinfecting paving composition. John Fottrell, New York, N. Y.

446,294.—Method of preparing water proof material. Harry A. Schlessinger, London, England.

446,344.—Lubricating oil. Robert R. Graf, Baltimore, Md.

A fireproof lubricating oil consisting of a mixture of an ordinary lubricating oil with sodium tungstate, ammonium sulphate, ammonium phosphate, sal ammoniac and sodium monocarbonate.

446,351.—Aluminum alloy. John A. Jeancor, Newport, Ky.

A bronze or alloy of copper, aluminum and manganese in about the proportions of seventy-five to eighty-five per cent. of copper, twelve to twenty-five per cent. of aluminum, and two to five per cent. manganese.

446,382.—Composition for plastering. Reuben G. Farnham, Elbridge. Composed of jute, Portland cement and marl.

Issued February 17th, 1891.

446,458.—Cement for joining the ends of driving belts. Carl Löchert, Berlin, Germany.

A mastic or cement for joining straps or driving belts, consisting of a mixture of glue, vinegar spirit, alum, spirits of turpentine, shellac and potassium chromate.

446,469.—Milk testing device. Alban H. Reed, Philadelphia, Pa.

446,500 and **446,501.**—Apparatus for vulcanizing wood. James P. Whiterow, Pittsburg, Pa.

446,502.—Composition of matter for cable-filling. Edward G. Wright, Kansas City, Mo.

The composition consists of crude petroleum, tallow, gypsum, whiting, pine tar and paraffine wax.

446,505.—Composition for combustible briquettes. Hayden M. Baker, Brooklyn, N. Y.

Composition consists of finely divided organic waste, a sodium di-or trisilicate in aqueous solution and of a sp. gr. of 30°—65° Beaumé, and an alkaline nitrate or its described equivalent.

446,527.—Secondary battery. Arthur M. F. Laurent-Cély, Paris, France.

"The process of forming material for secondary battery plates, consisting in fusing or melting lead chloride, adding metallic zinc thereto, and subsequently running the mass into a large receiver and allowing the impurities of the mixture to fall to the bottom of receiver," etc.

446,544.—Battery compound. William Wright, New York, N. Y.

An electrolyte containing a salt of alumina or other aluminum compound treated with sulphuric acid and sodium bichromate.

446,572.—Dyeing vat. Josiah R. Proctor and William B. Keefer, Philadelphia, Pa.

446,604.—Composition of matter for restraining the setting of plaster compounds. Edward Watson, Grand Rapids, Mich.

The composition consists of a leguminous substance, such as peas, beans, lentils, etc., slaked lime, sodium carbonate, an alkaline earth, or a salt of an alkaline earth, or a salt of a caustic alkali.

446,651.—Extractor churn. Adolph Wahlin and Carl Lundström, Stockholm, Sweden, and Thomas Collins, Winchester, N. H.

446,652.—Apparatus for making sulphite lye. Alexander Wendler and Jul. Spiro, Watertown, N. Y.

446,654.—Compound for paving, roofing and building purposes. Henry F. Williams, San Francisco, Cal.

Consists of a mixture of asphalt and refined lard or lard oil.

446,658.—Ore or rock breaker. Charles G. Buchman, Rockaway, N. J.

446,660.—Carbon for electric lamps. William H. Burns, Los Angelos, Cal.

Composed approximately of ninety parts of triturated purified maltha coke and ten parts of semi-liquid purified maltha thoroughly incorporated therewith.

446,669.—Manufacture of filaments for incandescent electric lamps. Thomas A. Edison, Menlo Park, N. J.

446,683.—Method of coloring clay ware. Gustav Hotlinger, Chicago, Ill.

The method consists in introducing into the kiln after the burning of the ware is complete a coloring agent in a liquid form and in the presence of a moistened atmosphere.

446,706.—Amalgamating apparatus. Thomas Gemmel, London, England.

446,727.—Pyro-chemical battery. John Blair, North Orillia, and Alex. G. Hunter, Dundalk, Ontario, Canada.

446,815.—Process of making alkaline phosphates. Charles Glaser, Baltimore, Md.

A salt of an alkali and an acid volatile at higher temperature are fused with crude commercial phosphoric acid in excess of an amount required to form a pyro-phosphate: secondly, the fused mass is dissolved in water and boiled until conversion of meta and pyro-phosphoric acid is effected; thirdly, the product is treated with the carbonate of an alkali (or free alkali) till alkaline reaction is obtained, and finally the solution is filtered and the salts are crystallized.

446,818.—Marine paint. John N. Longden, New York, N. Y.

Moist precipitated copper is incorporated with a paint vehicle and the mixture stirred at a temperature sufficiently high to drive off the water.

Issued February 24th, 1891.

446,845.—Artificial fuel. Isidore C. Bandman, Atlanta, Ga.

A compound composed of fragments of coal or other similar solid fuel cemented into a block by means of an inflammable compound composed of rosin, sawdust and black or peroxide of manganese.

446,854.—Dyeing machine. Joseph P. Delahunty, West Pittston.

446,860.—Covering for steam or hot water pipes. Charles E. Gilman, Eldora, Iowa.

The covering consists of burned porous earthenware having incorporated therein an incombustible fibrous mineral substance, the covering being united to the pipe by a layer of cement.

446,875.—Compound of iodine with thymol. Joseph Messinger and George Vortmann, Aix-la-Chapelle, Germany.

"A new iodine substitution product of thymol, which is an amorphous odorless powder of a brown-red color, insoluble in water and alkali and difficultly soluble in alcohol, more easily in ether, and easily in oil, melting at about 110° centigrade under decomposition.

446,877.—Composition for coating bricks. John Miller, Cincinnati, Ohio.

Compound composed of beeswax, paraffine, and an alcoholic solution of shellac.

446,887.—Preparing food from milk curd. Albert W. Rehnström, Mülhausmar, Sweden.

446,892.—Alizarine Derivative. Robert E. Schmidt, Elberfeld, Germany.

Derivative obtained by "oxidizing alizarine bordeaux (tetraoxyanthraquinone) in sulphuric acid solution with oxidizing agents, such as manganese or arsenic acid, then boiling, filtering and washing and subsequently dissolving the precipitate in hot dilute alkali and filtering and precipitating the coloring matter with acid.

The coloring matter said to form a red-brown paste, or when dried a brown powder, insoluble in water, easily soluble in soda lye with blue color tinged with violet; it dissolves in concentrated sulphuric acid with a pure blue, the solution showing a beautiful fluorescence, and in glacial acetic acid or alcohol it dissolves with a more yellowish or bluish-red color of moss-green fluorescence and crystallizes from it in beautiful dark or blackish-brown glittering needles.

446,893.—Alizarine Derivative. Robert E. Schmidt, Elberfeld, Germany.

Obtained by oxidizing dried alizarine (dioxyanthraquinone) with large quantities of fuming sulphuric acid of a high precentage of anhydride at a low temperature, pouring the melt on ice and filtering the intermediate product from the yellowish-brown deposit formed, dissolving the same in soda-lye, and adding diluted mineral acid to the boiling solution to precipitate the coloringmatter; this is a yellowish red paste insoluble in water, easily soluble in soda-lye and in concent. sulphuric acid with a blue-viloet color, and crystallizing from glacial acetic acid or nitro benzole in garnet-red needles not melting at 280° C, and having the composition $C_{14} H_8 O_6$.

446,911.—Process of manufacturing Portland cement. Henry C. Baum, Denver, Colo.

Wet marl is united with quicklime whereby the mixture resulting from the chemical reaction is rendered perfectly dry preparatory to grinding.

446,922.—Fireproof paint. Isaac L. Merrell, San Francisco, Cal.

The composition consists of "aluminum, asbestus, soapstone, sodium silicate, magnesia, mica, fireproof clay, lime water, and a cohesive liquid, such as glue in solution, with or without coloring matter or substance.

446,971.—Roasting and smelting furnace. William Heckert and others, Findlay, Ohio.

446,983.—Chemical retting and ungumming of textile fibres. Charles De La Roche, Paris, France.

446,996.—Ore roasting furnace. George N. Phelp, Brooklyn, N. Y.

446,998.—Making phosphatic fertilizers. Joseph Van Ruymbeke Chicago, Ill.

Iron and alumina phosphate are pulverized, mixed with muriate of potash, or preferably low grade sulphate of potash, the mixture treated with sulphuric acid and then subjected to heat until the acid phosphate contained therein is converted into metaphosphate.

447,063.—Process for making artificial cryolite. Englebert Richters, Sauran, Germany.

447,087.—Process of printing in colors. William Schumacher, Brooklyn, N. Y.

447,121.—Sticky fly paper. Henry W. Steeher, Cleveland, O.

447,131.—Process of making malt liquor. John Griffiths, Brooklyn, N. Y.

447,138.—Artificial fuel. Rudolph J. Schmpeo, Jersey City, N. J.

Powdered charcoal saturated with solution of lead acetate, with lime and gypsum, and compressed into blocks.

447,155.—Apparatus for the calcination of cement. Paul Krotnaurer, White Hall, Pa.

447,189.—Red dye. Paul Julius, Ludwigshafen-on-the-Rhine, Germany.

Substantive red dyestuff (sodium salt of diamidodiphenyleneketoxime diazo-naphthionic acid) which appears in the form of a dark colored powder giving a brown streak on rubbing. It is readily soluble in both cold and hot water, yeilding bluish red solutions; it is almost insol. in alcohol even on boiling; insol. (or practically so) in benzine and ether; it dissolves readily in conc. H_2SO_4 giving blue solution, which on addition of water gives a blue precipitate. Calcium chloride gives a brownish red precipitate and copper chloride a dark brownish purple one.

J. F. G.