

## Abstracts of American Patents Relating to Chemistry.

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

Issued June 7, 1897.

- 476,247.**—Food steamer. Thomas Cassaden, Jr., Waterloo, Iowa.
- 476,256.**—Method of and apparatus for extracting aluminium. Michael Emme, Atlanta, Ga.
- 476,260.**—Gas or steam generator. Jacob M. Goldsmith, Chicago, Ill.
- 476,261.**—Gas generator. Jacob M. Goldsmith, Chicago, Ill.
- 476,264.**—Magnesium light composition. Eugen Hackh, Stuttgart, Ger.
- 476,274.**—Apparatus for purifying, moistening and attemperating air. Louis C. Huck, Chicago, Ill.
- 476,276.**—Disinfectant. Henry Jackson, Chicago, Ill.  
Consists of slaked lime, sulphate of iron, crude carboic acid, caustic soda, sodium chloride.
- 476,286.**—Apparatus for skein dyeing. Alvin S. Lyon, Lowell, Mass.
- 476,320.**—Paste making machine. Francis H. Shepherd, Davenport, Iowa.
- 476,335.**—Violet azo dye. Moritz Ulrich, Elberfeld, Ger.
- 476,336.**—Black azo dye. Moritz Ulrich, Elberfeld, Ger.
- 476,337.**—Blue dye. Moritz Ulrich, Elberfeld, Ger.
- 476,371.**—Tetrazo blue dye. Carl Dinsberg, Elberfeld, Ger.
- 476,372.**—Thermostatic governor and moter. William E. Eastman, Boston, Mass.
- 476,374.**—Recording thermometer. William E. Eastman, Boston, Mass.
- 476,393.**—Dyestuff. Richard Lauch, Elberfeld, Ger.  
Process for producing a dyestuff by combining "moleculer proportions of tetrazo-diphenyl, salicylic acid, and alpha-naphthylamine, sulphouating the product thus obtained, diazotizing and further combining it with one molecular proportion of the sodium salt of alpha-naphthol-alpha-monosulphonic acid."  
A greenish black amorphous powder, readily sol. in water with deep gray black color, in soda lye with red, and in concentrated sulphuric acid with intensely blue-red color, which latter turns greenish blue on addition of a large quantity of water. It dyes un mordanted cotton in neutral or alkaline baths a greenish black or dark gray of high fastness and intensity.
- 476,413.**—Triphenylmethane dye. Friederich Runkel, Elberfeld, Ger.

**476,414.**—Triphenylmethane dye. Friederich Runkel, Elberfeld, Ger.

**476,418.**—Alizarine derivative. Robert E. Schmidt, Elberfeld, Ger.

Alizarine bordeaux is oxidized with manganese in concentrated sulphuric acid solution and the resulting diquinone then combined with salicylic acid in sulphuric acid solution. A greenish black amorphous mass with metallic luster, almost insol. in cold and hot water, sol. in sod. carbonate with reddish blue color and very soluble in soda lye with greenish blue color, in ammonia with pure blue color in conc. sulphuric acid with greenish blue color from which solution water precipitates yellowish brown flakes. It dyes wool mordanted with chromium salts in greenish blue shade.

**476,419.**—Alizarine dye. Robert E. Schmidt, Elberfeld, Ger.

A new dyestuff produced by the action of ammonia upon the anthradiquinone formed when alizarine bordeaux is oxidized in sulphuric acid solution with manganese at low temperatures.

It is almost insol. in water, but soluble in solutions of sod. carbonate with reddish violet, in soda lye with indigo blue color, in ammonia liquid with bluish violet color, by conc. sulphuric acid with dark violet color which turns at first into red and then into reddish brown when diluted with water.

**476,420.**—Alizarine derivative. Robert E. Schmidt, Elberfeld, Ger.

Alizarine bordeaux is treated with ammonia and subsequently precipitated with acids. A dark violet crystalline compound with greenish reflex, insol. in water, soluble in soda lye with bright blue color, in concentrated sulphuric acid with red color and cinnabar-red fluorescence separating on the addition of water in yellowish brown flakes. The sulphuric acid solution shows distinct and clear bands of absorption in the spectroscope. It dyes wool mordanted with chromium salts a blue color.

**476,441.**—Centrifugal apparatus for cooling or heating liquids. Carl G. Bjorlin, Stockholm, Sweden.

**476,447.**—Apparatus for making ultramarine blue. Johann Büttel, Newark, N. J.

**476,488.**—Secondary battery plate. Edward C. Paramore, Philadelphia, Pa.

**476,491.**—Alizarine dye. Robert E. Schmidt, Elberfeld, Ger.

Alizarine bordeaux in sulphuric acid solution is oxidized with manganese and the resulting anthradiquinone treated with salicylic and subsequently with ammonia.

An olive colored powder with metallic luster, sparingly sol. in water, easily soluble in sod. carbonate with blue color, in soda lye with greenish blue and in ammonia, glacial acetic acid, or alcohol with reddish blue color, in conc. sulphuric acid with reddish violet color, from which solution water precipitates reddish brown flakes. Wool mordanted with chromium salts is dyed a clear bluish green.

- 476,497.—Amalgamator. Alva M. Stetson, Oakland, Cal.  
 476,500.—Concentrator. James Tulloch, Angels Camp, Cal.  
 476,542.—Artificial stone. Johann H. Kleb, Newark, N. J.  
 476,548.—Depurator. John Nixon, Farmland, Ind.  
 476,554.—Apparatus for converting petroleum, etc., into gas and burning the same. George F. Randolph, Little Genesee, N. Y.  
 476,555.—Manufacture of soap with whey. Albert W. Rehnström, Mülhammar, Sweden.  
 476,556.—Manufacture of soap. Albert W. Rehnstrom, Mülhammar, Sweden.  
 476,557.—Soap. Albert W. Rehnström, Mülhammar, Sweden.  
 476,560.—Apparatus for burning petroleum oils, etc. Oswald R. Ruth, Jersey City, N. J.  
 476,574.—Lubricant. Wilson H. Strickler, Dodge City, Kan.  
 476,580.—Apparatus for dyeing. George M. Undy, Philadelphia, Pa.  
 476,592.—Process of making borax. Jesse Ascough, Handsworth, Eng.  
 A process for granulating borax.  
 476,599.—Process of and apparatus for the manufacture of alimentary products from corn. Herve Bates, Jr., Indianapolis, Ind.  
 476,611.—Steam generator. James Cunningham, Dushore, Pa.  
 476,645.—Method of and apparatus for aerating beverages. William Hucks, London, Eng.  
 476,651.—Apparatus for galvanizing wrought or cast iron and steel. Thomas Jones, Netherton, Eng.  
 476,671.—Beer filter. Johan Moeller, Boston, Mass.  
 476,672.—Glass furnace. Michael E. Murphy, Coraopolis, Pa.  
 476,701.—Evaporating pan. Harrison F. Thurston, Centre Bartlett, N. H.  
 476,709.—Carburetor and purifier. George W. Weaver, Greensburg, Pa.  
 476,733.—Galvanic battery. Martin M. Clark, Chicago, Ill.  
 476,737.—Filter. William M. Deutsch, Elizabeth, N. J.

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- 476,775.—Hot air furnace. Henry D. Babcock, Leonardsville, N. Y.  
 476,788.—Composition for cleaning wall paper and for other purposes. James E. Devine, Baltimore, Md.  
 A composition consisting of flour, sodium chloride, powdered naphthaline and coloring matter.  
 476,789.—Furnace for smelting zinc ores. Selwyn C. Edgar, St. Louis, Mo.  
 476,832.—Apparatus for making ice. Thomas Shipley, Cincinnati, Ohio.  
 476,837.—Evaporator. Elias Stillwell, Dadeville, Mo.  
 476,877.—Hot air furnace. Jacob Fridley, Carlisle, Pa.  
 476,891.—Process of and apparatus for evaporating sugar solutions. James A. Morrell, New Orleans, La.

**476,896.**—Soldering metal for aluminium. Alexis Rådes, Christiana, Norway.

An alloy of zinc, cadmium and tin.

**476,913.**—Process of manufacturing an alloy of iron or steel and nickel. Ezra F. Wood, Munhall, Pittsburgh, Pa.

A layer of limestone is charged into a basic furnace, "superimposing a layer of bricks composed of nickel oxide and carbonaceous material, then charging in pig iron and heating the charge, thereby causing reduction of the oxide and decarburization of the iron and producing an alloy of nickel and steel."

**476,914.**—Process of and apparatus for the extraction of aluminium. Myrthil Bernard and Ernest Bernard, Paris, France.

An electrolytic process. Cryolite and sodium chloride are melted together "in such proportions as to form a bath which is specifically lighter than aluminium and then passing the main portion of an electric current through the bath between an anode and a cathode to the exclusion of the containing vessel and the remaining fraction of the current through the bath between the anode and the containing vessel as a fractional cathode, whereby pure aluminium is liberated at the cathode and aluminium alloy is formed upon the containing vessel."

**476,917.**—Confectioners' kettle. Thomas Burkhard, Brooklyn, N. Y.

**476,930.**—Distilling and rectifying apparatus. Jean Schafhaus, New York, N. Y.

**476,934.**—Fluid meter. Emanuel Spin. Kruman, Austria-Hungary.

**476,955.**—Amalgamator. William J. Gard, Samuel S. Dalzell and William A. Shafer, Moab, Utah.

**476,979.**—Centrifugal apparatus. Charles L. Cairns, Jersey City, N. J.

**476,983.**—Pyromagnetic generator. Thomas A. Edison, Llewellyn Park, N. J.

**476,991.**—Method of and apparatus for separating ores. Thomas A. Edison, Llewellyn Park, N. J.

**477,023.**—Apparatus for melting tallow, wax, etc. August Seiffert, Frankenstein, Ger.

**477,026.**—Apparatus for treating ores. William H. B. Stout, Chicago, Ill.

**477,061.**—Apparatus for purifying oil. Emil Noppel, Philadelphia, Pa.

**477,063.**—Churn. Daniel H. Parker, Pleasantville, Pa.

**477,072.**—Measuring funnel. Thomas F. Scollay, Memphis, Tenn.

**477,089.**—Process of purifying ammonia. Hans von Strombeck, New York, N. Y.

The crude ammonia gas is exposed to the action of metallic sodium, the gas purified, separated from the impurities and finally liquified.

**477,111.**—Concentrator. George Gates, Jackson, Cal.

**477,121.**—Automatic temperature regulating system. Warren S. Johnson, Milwaukee, Wis.

**477,188.**—Process of extinguishing fire. Hiram S. Millis, Detroit, Tex.

**477,148.**—Oven thermometer. Harvey Murdock, Brooklyn, N. Y.

**477,153.**—Distillation of hydrocarbon or other oils. Carl M. Pielsticker, London, Eng.

**477,182.**—Secondary battery. Henry H. Lloyd, Philadelphia, Pa.

*Issued June 21, 1892.*

**477,208.**—Beer filter. Heinrich C. J. Gehake, Berlin, Ger.

**477,213.**—Filter. Omor H. Jewell, Chicago, Ill.

**477,220.**—Process of recovering tin from scrap. John J. Naef, Pater son, N. J.

The process consists in "suspending the scraps in a stannic salt solution containing lead plates, and then passing an electric current from the tin scraps to the lead plates, whereby the tin will be dissolved from the scraps and precipitated on the lead plates."

**477,231.**—Apparatus for casting metals. John J. C. Smith and Victor E. Smith, Passaic, N. J.

**477,238.**—Filter. Claes E. Winterros, Brooklyn, N. Y.

**477,247.**—Rheostat. George K. Cummings, Chicago, Ill.

**477,281.**—Apparatus for purifying oil. Ole K. Thomasen, Christiana, Norway.

**477,286.**—Retort furnace. John A. Yeadon and William Adgie, Leeds, Eng.

**477,313.**—Heat indicator. Frederick W. Sears.

**477,326.**—Method of manufacturing artificial granite and marble. Charles George, Berlin, Ger.

Finely ground silicates are mixed with argilliferous sand, and in special cases with fragments of marble, the mixture melted in a furnace and the bath then mixed with a similar one prepared separately in the same manner and kept in tough state and colored by the addition of metallic oxides, and then casting the resulting mixture in molds.

**477,348.**—Process of recovering tin from scraps and waste tin plate. Camille L. C. Berton, Paris, France.

The process consists in placing the scraps or waste in a bath of a temperature of about 50° C. composed of hydrochloric acid containing 6 per cent. of its weight of a nitrate, then adding more of the scraps or waste in successive charges, and in the meantime gradually raising the temperature of the bath to a point not exceeding 90° C. as it becomes more and more saturated with tin and weaker in the nitrate.

**477,350.**—Process of electroplating with alloys. Edward T. Burrows, Portland, Me.

Wire netting is placed in a solution containing sulphite of copper, caustic potash, zinc sulphate, chloride of tin, sal. ammoniac and muriate of iron and passing a current to it from an anode of copper, tin and zinc.

- 477,354.**—Process of and apparatus for generating fuel gas. John W. Culmer, New Brighton, Pa.
- 477,357.**—Incrustation preventive. John B. Dodds, Newcastle-on-Tyne, and John R. Fothergill, West Hartlepool, Eng.  
A solution of an alkaline zincate is introduced into the boiler.
- 477,374.**—Brick kiln. James Henry, Cloverport, Ky.
- 477,375.**—Process of making nitric acid. Julius Lang, Griesheim, Ger.
- 477,381.**—Air compressor. Arthur O'Brien, Helena, Mont.
- 477,418.**—Brick kiln. Michael J. Hynes, Toronto, Canada.
- 477,442.**—Evaporator. George M. Newhall and Teile H. Müller, Philadelphia, Pa.
- 477,471.**—Condenser. Edward Theisen. Sinzig-on-the-Rhine, Ger.
- 477,486.**—Photographic developer. Morume Andersen. Berlin, Ger.  
The sensitive plates are treated with paramido-phenol or a derivative thereof.
- 477,519.**—Hot air furnace. James Cunningham, Dushore, Pa.
- 477,527.**—Apparatus for vaporizing acids in the manufacture of white lead. Edward V. Gardner, London, Eng.
- 477,568.**—Method of producing ornamental enamel designs. Frederick B. Nichols and Abbie T. Crane, New York, N. Y.
- 477,615.**—Water purifier and boiler cleaner. William V. Walker, Moravia, N. Y.
- 477,623.**—Metallurgical furnace. Michael R. Conley, Brooklyn, N. Y.
- 477,624.**—Atomizer for liquid fuel. Stephen Cox, Jr., Bridgeton, N. J.

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- 477,632.**—Composition of matter for bricks. Ambrose S. Baker, Sandy Creek, N. Y.  
A composition of gravel and sand, Portland cement, pulverized iron ore, salt and graphite.
- 477,645.**—Battery. William A. Childs, Englewood, N. J.
- 477,647.**—Non-conducting covering for steam pipes, etc. Benjamin J. Christie, Leadville, Colo.
- 477,670.**—Process of refining raw sugar. Franz O. Matthiessen, Irvington, N. Y.
- 477,722.**—Color grinding machine. Hermann J. Weckauf, Rheydt, Germany.
- 477,725.**—Apparatus for making gas. Joseph Williams, Jr., and Erasmus O. Peoples, Allegheny, Pa.
- 477,727.**—Filtering apparatus. David Williamson, New York, N. Y.
- 477,735.**—Process of making white pigments. John Blair, Spokane, Wash.
- 477,755.**—Boiling and precipitating tower. Gustav S. Hanisch, Ben-then, Germany.

- 477,759.**—Fire indicator. Malvern W. Iles, Denver, Colo.
- 477,792.**—Furnace for alloying metals. William A. Baldwin, New York, N. Y.
- 477,794.**—Machine for breaking and cleaning hemp. Joseph Breslin, Newport, Ky.
- 477,812.**—Sectional surface condenser. Elihu Nelson, New York, N. Y.
- 477,813.**—Sectional surface condenser. Elihu Nelson, New York, N. Y.
- 477,814.**—Feed water heater and condenser. Elihu Nelson, New York, N. Y.
- 477,815.**—Feed water heater and condenser. Elihu Nelson, New York, N. Y.
- 477,816.**—Sectional feed water heater. Elihu Nelson, New York, N. Y.
- 477,823.**—Method of preparing malt for brewing. Ernst Richter and Adam Schaefer, New York, N. Y.
- 477,834.**—Gas retort. André Coze, Rheims, France.
- 477,844.**—Preservation of meat. William Laubheimer and Henry Salzer, Baltimore, Md.
- “The process of preserving meat by successive steps of steaming, cooling, compressing while cold, enveloping in a shell of fabric and plaster of paris, and when the latter has hardened placing in a can, with the natural fat of the meat surrounding the package, heating and sealing the can.”
- 477,847.**—Manufacture of artificial stone. Wilhelm Reissig, Munich, Germany.
- 477,850.**—Art of preserving meat. Henry Salzer, Baltimore, Md.
- “Improvement consisting in surrounding a piece of meat in a shell composed of fabric and plaster of paris, heating in a bath of animal fat, wrapping it in a pliable material impermeable to air and water, and finally subjecting a second time to a sterilizing heat.”
- 477,856.**—Fruit evaporator. Joseph W. Doty, Lockport, N. Y.
- 477,859.**—Spraying device for cooling beer, etc. Clarence C. Hanford, Medford, Mass.
- 477,872.**—Hydrocarbon oil vaporizer and burner. Henry P. Roberts, Jamestown, N. Y.
- 477,875.**—Method for arresting and extinguishing combustion in charcoal kilns. Albert Vickers, Baltimore, Md.
- 477,893.**—Apparatus for cooling water. Henry B. Ford, Philadelphia, Pa.
- 477,909.**—Process of and apparatus for dampening grain preparatory to grinding. Bert Meier and Louis E. Fritsche, Minneapolis, Minn.
- 477,910.**—Gas meter. William N. Milsted, New York, N. Y.
- 477,914.**—Secondary battery. William L. Silvey, Lima, Ohio.
- 477,934.**—Ore concentrator. Horatio F. Hicks, Ashland, Ore.
- 477,936.**—Ore concentrator. Edgar A. Hockley, Ouray, Colo.

**477,990.**—Manufacture of stained glass for windows, etc. Arthur R. Carter and Henry C. Hughes, London, Eng.

**477,993.**—Brick kiln. Joseph Conley and James M. Wolfe, Tarkio, Mo.

**477,994.**—Brick kiln. Joseph Conley and James M. Wolfe, Tarkio, Mo.

**478,001.**—Hot air furnace. John N. Frizzell, Brainerd, Minn.

**478,005.**—Violet dye. Robert Guehm and Jacob Schnid, Basle, Switzerland.

**478,039.**—Artificial fuel. Henry Zahn, Denver, Colo.

**478,048.**—Process of purifying water. Coles G. Collins, Kearney, N. J.

**478,051.**—Apparatus for coating tin plates. Albert T. Davies, Morriston, England.

**478,066.**—Washer for paper stock. Walter Moorhouse, Philadelphia, Pa.

**478,067.**—Method of manufacturing ammonium nitrate. Russell S. Penniman, Dover, N. J.

J. F. G.