

Abstracts of American Patents Relating to Chemistry.

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

April 1, 1884.

295,931.—Manufacture of artificial stone.—M. McNamara.

Portland cement, sand, ground glass, plaster of Paris, pitch, paper-pulp, salsoda, litharge and alum.

295,968.—Coffee substitute and process of preparing the same.—C. Alvord.

Extract of willow bark or tulip tree bark with corn, barley, wheat, rye, peas, or other amylaceous substance. The latter are saturated with the former and then dried and roasted.

295,988.—Metallurgical gas-furnace.—W. F. Durfee and T. Egleston.

296,000.—Apparatus for separating solid and liquid portions of starch refuse, &c.—P. H. Grimm.

A combination of mechanical devices for obtaining the above result.

296,033.—Reverberating gas-furnace.—W. L. McNair.

296,040, 296,041 and 296,042.—Apparatus for and process of cooling and drying sugar.—H. E. Niese and G. Dinkel.

The soft sugar, upon its discharge from the centrifugal machine, is immediately conveyed to suitable shutes and nozzles where it comes in contact with a strong blast of cold air, by means of which the particles of sugar are scattered, cooled and partially dried.

296,112.—Polishing compound.—H. H. Becker.

Bone-ashes and slate.

296,116.—Process of roasting and disintegrating gold, silver and copper ores.—D. W. Birmingham.

Prepares refractory ores for amalgamation by combining therewith lime, carbon, and common salt, or equivalents, roasting the mixture and then subjecting the same to a suitable bath.

296,159.—Lubricating oil.—J. E. Gill.

A lubricating oil composed of a compound of mineral or vegetable oil, and either an oxide or carbonate of lead, to which mineral oil is subsequently added, said compound being first raised to a temperature of 480° to 500° Fahrenheit, then reduced about 20° by adding mineral oil, and then raised again to the first high temperature before the rest of the mineral oil to be added is introduced.

296,187.—Apparatus for extracting oil from oleaginous substances.—W. Krutzsch.

Not intelligible without the drawing.

296,197.—Liquid for and process of generating a compound vapor as a motive power.—W. L. Lowrey.

Employs the vapor from mixtures of water and various alcohols in different proportions for operating steam or vapor engines.

296,200 and 296,201.—Process of manufacturing and apparatus for the manufacture of hydrocarbon gas.—W. F. M. McCarty.

Consists in passing superheated steam through or in contact with heated sulphate of lime and through or in contact with heated finely-divided metallic iron or copper, then mixing the gas so obtained with a liquid hydrocarbon, and converting the mixture into a fixed gas by heat.

296,206.—Process of enameling iron ware.—H. C. Milligan.

Adds to the paste after it has been prepared in any of the well-known ways. an additional supply of alkali solution sufficient to neutralize any acid which may be present in the paste.

296,258.—Rubber-surfaced fabric and composition therefor.—N. N. White.

A close textured fabric is surface-coated with a composition consisting of dissolved india-rubber and gutta-percha and a filling of zinc-white, sulphur or sulphide and aniline pigments consisting of aniline, china clay and precipitated silicate of soda. Other compositions are proposed, together with the methods of preparing them and fixing them to the fabric.

296,260.—Apparatus for the manufacture of bicarbonate of soda.—C. Wigg.

In a plant or apparatus for the manufacture of bicarbonate of soda, the combination of a series of absorbers, each provided with rotating perforated gas distributors and rotating cooling beaters, the absorbers connected by circulating pipes, a brine-purifying tank provided with a perforated diaphragm and connected with the absorbers by a brine-delivery pipe and a gas-inlet pipe, a carbonic acid gas generator provided with a vertically adjustable cage and connected with the absorbers by suitable gas-delivery pipes, and a series of filters, each connected with its respective absorber, and with an exhaust pump for maintaining a partial vacuum in the filters.

296,262.—Manufacture of spongy lead.—F. T. Williams and J. C. Howell.

Consists in inserting a perforated mould of the size and pattern of the block or plate required into a bath of the crystallized and molten metal, then removing the mould from the bath and allowing the liquid metal to drain through the perforations.

296,263.—Water-proofed textile fabric.—I. F. Williams.

296,289.—Process of generating gas.—G. Jones.

Petroleum is fed in a small stream before a blast of superheated steam. Heat is applied at the moment of vaporization to prevent condensation.

296,290.—Gas generator.—G. Jones.

Oil is vaporized by steam, and oil vapor is mixed with steam in a hot retort. The oil vapor pipe leading from the spraying injector is provided with a steam jacket to prevent condensation of vapor before reaching the hot retort.

296,303.—Polishing liquid.—E. Ludwig.

Composed of Vienna lime, oil of turpentine, linseed oil and gasoline.

April 8, 1884.

296,324.—Fire and water-proof paint.—M. O. Fisher.

Coal tar, yellow ochre, mineral paint, sulphur, alum and talc.

296,326.—Depurated composite sugar, &c.—J. Gandolfo.

Compounded of cane sugar and grape sugar which has been liberated of its deliquescent salt and then reduced by shaving, sifting and drying.

296,337.—Apparatus for the purification of water.—A. R. Leeds.

Not intelligible without the specification and drawings.

296,357.—Process of and apparatus for reducing metals by electrolysis.—A. J. Rogers.

Electrolyses sodium or potassium chloride while in a fused condition and contained in a vessel with close-fitting covers having gas-tight passages leading therefrom; condensing apparatus, &c.

296,365.—Galvanic battery.—H. Thame.

Employs chlorochromic acid ($\text{Cr O}_2 \text{ Cl}_2$) for charging the carbon cells.

296,709.—Process of separating precious metals from ores, &c.—E. H. Russell.

The process of separating from ores and metallurgical products gold, silver and copper free from lead, which consists in leaching the ore or product with a hyposulphite solution containing a soluble carbonate.

296,710.—Process of separating metals from ores and metallurgical products and from each other.—E. H. Russell.

First dissolves out the precious metals and lead from the ore or product by means of a hyposulphite solution, and subsequently adds to the mixed solution a soluble phosphate to cause the precipitation of the lead.

April 15, 1884.

296,722.—Fire proof paper.—D. N. Brown.

Asbestos and infusorial earth.

296,765.—Manufacture of white lead.—J. C. Martin.

Produces solutions of lead salts by dropping molten lead upon stationary or wetted surfaces, kept wet by jets or sprays of water or by occasional immersion in water, and dissolving the very small flakes or splashes of metallic lead so formed in a solvent.

296,816.—Triturating machine.—F. E. Boericke and G. Goll.

296,858.—Process of making zinc sulphide anhydrous.—T. Macfarlane.

Consists in heating hydrated sulphide of zinc to redness in the presence of chloride of zinc, whereby excess of air and oxidation are prevented by the fumes of the chloride of zinc, and discoloration and loss of covering power are avoided.

296,935.—Process of manufacturing cellulose from wood, &c.—C. F. Dahl.

Boils the same under pressure in a watery or hydrated solution containing sulphate, carbonate or hydrate of soda or sodium sulphide.

Also recovers some of the salts used by boiling with lime.

296,967.—Art of manufacturing celluloid and other compounds of pyroxyline.—J. W. Hyatt.

Consists in effecting the displacement of the aqueous particles by means of pressure applied to a suitable liquid (alcohol, &c.) whereby the aqueous particles are caused to leave the pulp, their places being occupied by the unobjectionable liquid particles which can afterward be utilized as a solvent.

296,968.—Process and apparatus for effecting the desiccation of pyroxyline pulp.—J. W. Hyatt, W. H. Wood and J. H. Stevens.

Improvement on the Letters Patent No. 133,229, Nov. 19, 1872.

Form the pulp into a cake, which is repeatedly subjected to great pressure in contact with a surface of bibulous material.

296,969.—Manufacture of pyroxyline material.—J. W. Hyatt, J. H. Stevens and J. Everding.

Consists in first forming it into cakes or plates; second, causing liquid solvents to flow over the cakes until a sufficient amount has been absorbed while the cakes are held apart; and third, allowing the material to remain in an air-tight case for a proper length of time.

296,970.—Manufacture of celluloid and other compounds of pyroxyline.—J. W. Hyatt, J. H. Stevens and W. H. Wood.

A process in which pyroxyline is first ground to a pulp, then pressed into cakes and dried, and the cakes softened with the required amount of liquid solvent by being formed into a pile with the solvent between the cakes, and then mixed or masticated in heated rolls or other suitable apparatus.

297,039.—Method of and apparatus for bleaching sugar.—O. B. Stillman and J. M. Stillman.

The granular sugar is subjected to the action of sulphurous acid gas in a rotating cylinder.

297,074.—Paint.—E. H. Hague.

For preserving materials and rendering them fire and water proof, consists of coal tar, sulphur, china clay, alum, salt and black oxide of manganese.

297,095.—Washing raw sugar and apparatus therefor.—J. H. Tucker.

Consists in forcing fine sprays of water or syrup against and into a falling shower of finely divided raw sugar. The magma so obtained is then heated and subsequently run into the centrifugal machine.

297,098.—Application of celluloid for enameling textile fabrics, &c.—W. H. Wood and J. H. Stevens.

Enamel cloth, leather or textile fabrics by means of sheets or veneer of pyroxyline material, and effect the adhesion of the sheet or veneer by subjecting it to heat and pressure while in contact with a dried surface of a cement containing oxidizable or drying oil.

Reissue No. 10,469. Original No. 105,338, dated July 12th, 1870; Reissue No. 5,928, dated June 23, 1874.—Treating and molding pyroxyline.—J. W. Hyatt and I. S. Hyatt.

The use of finely comminuted camphor gum mixed with pyroxyline pulp, and rendered a solvent thereof by the application of heat.

April 22, 1884.

297,105.—Process of and apparatus for separating metals from their ores.—A. H. Bliss.

Mechanical arrangements for moving and retaining the triturated ore under the surface of the mercury in an amalgamator.

297,105.—Liquid Paint—G. T. Lewis.

White lead, oil and an alkaline solution of resin.

297,162.—Process of generating gas.—H. Pratt and J. J. Ryan.

Carbonic acid is reduced to carbonic oxide by incandescent coal, in the usual way, and the gases mixed with volatile hydrocarbons and discharged over the fire bed.

297,319.—Bleaching raw cotton.—J. C. Vanlohe.

Subjects the cotton in a compressed state, as in a bale, to the action of bleaching liquids, then rinsing it, tearing apart and loosening it and finally drying it.

297,323.—Apparatus for the manufacture of salt.—S. C. Wells.

A furnace for evaporating the brine, combined with mechanical appliances for raking and graining the salt.

297,354.—Composition for destroying the grape oidium.—H. de Chasse-loup-Laubat.

Water, pentasulphuret of potassium and marine salt.

297,363 and **297,364.**—Apparatus for filtering liquids—J. F. C. Farquhar and W. Oldham.

A cylindrical vessel with perforated false bottom for holding pulverulent filtering material and having a revolving cutter-head for removing the clogged material continuously.

297,413.—Manufacture of ethyl-blue coloring matter.—A. Kern.

Produced by the condensation of alpha-phenyl-naphthylamine with tetra-ethyl-diamido-benzophenone.

297,414.—Methyl-blue coloring matter.—A. Kern.

As a new product, the blue dye-stuff or coloring matter described in the specification.

297,415.—Methyl-blue coloring matter.—A. Kern.

As a new product, the purple dye-stuff or coloring matter described in the specification.

597,416.—Ethyl-blue coloring matter.—A. Kern.

Produced by the condensation of tetra-ethyl-diamido-benzophenone with dibenzylaniline.

297,467.—Process of and apparatus for the treatment of hops in the manufacture of malt liquors.—A. Steinke.

Boils the mash *in vacuo*. Conducts lighter portions only of the evaporated oil of hops back to the boiler.

297,480.—Process of separating metals from Franklinite ores, A. F. Wendt.

Consists in selecting that portion of the ore containing practically only franklinite and willemite, separating these minerals according to their specific gravities, smelting the willemite for spelter and reducing the franklinite, by the Wetherell process for oxide of zinc, and finally smelting the residuum for spiegeleisen.

297,502.—Absorber for ammonia ice-making apparatus.—M. S. Conly.

An outer shell containing a series of hollow-bottomed troughs for bringing the ammonia gas into contact with weak water of ammonia or water.

297,517.—Apparatus for the distillation of wood.—R. Haldane.

Adapted for the destructive distillation of sawdust, shavings, or other small wood. Consists of a retort with shelves, over which the material is passed by means of endless chains and finally discharged in the condition of charcoal. Also, cooler, feed and discharge-wheels, &c.

April 29th, 1884.

297,554.—Process and apparatus for the treatment of ramie and jute.—N. Arthurs.

297,568.—Composition for staining and preserving wood.—S. Cabot, Jr.

Composed of rectified creosote oil, or any of the distillates of coal tar which pass over between 125° and 200° centigrade, about fifteen per cent. of finely divided pigment and about ten per cent. of drying oil.

297,603.—Apparatus for improving the fire test of petroleum and for bleaching other oils.—J. B. Huston.

The oils are made to pass through a high vertical cylinder provided with several perforated floors, by means of which they can be reduced to a finely divided state, in which state they are subjected to the action of direct live steam or bleaching material.

297,626.—Indestructible compound for coating wires for electrical purposes.—J. H. Page.

Litharge and glycerine formed into a thick paste.

297,639.—Process of manufacturing chair seats of vegetable fiber and chromic acid.—R. Shimmel.

Ground rags and vegetable fibre in equal parts, with chromic acid to make a paste which is formed into sheets and strengthened by the addition of textile fabrics and then molded and pressed into the pattern, &c., desired.

297,743.—Extraction of oils and fats from oleaginous and fatty bodies. I. A. Bang and C. A. Sanguinetti.

Consists in first reducing the substance to a finely divided state, then saturating it with a volatile deodorized product of petroleum, drawing off the free liquid, and then passing the superheated vapor of a portion of the volatile liquid through the mass in order to remove therefrom the remainder of the volatile solvent.

297,766.—Process of preparing ozocerite and other solid hydrocarbons.—J. C. O. Chemin.

First removes the earthy portions, distills the so-purified hydrocarbon mixed with flowers of sulphur, removes the oils and lighter hydrocarbons by means of heat and pressure, fuses in a bath with amylic alcohol, cools and presses them and treats with animal charcoal while in a molten state.

297,770.—Finishing and glossing the surfaces of fabrics having a coating of some pyroxyline compound.—J. B. Edson.

Improvement on patents Nos. 289,240 and 289,242, dated Nov. 27, 1883 and No. 290,553, dated Dec. 18, 1883. Consists in passing them through a fluid acting as a solvent for the zylonite or similar material and which upon evaporation leaves the desired glossy appearance.

297,791.—Concrete compound for paving streets, walks, &c. L. Haas. Composed of furnace slag, gravel, Portland cement, metallic screenings obtained by washing ores, glass, cinders, wood and coal ashes, Trinidad asphaltum, coal tar pitch and refuse slate for coloring matter.

297,844.—Sulphoconjugated violets of Paris.—A. F. Poirrier and D. A. Rosenstiehl.

Consists in treating the crude coloring matter with potash soda, ammonia, zinc, magnesia or other suitable base, so as to transform the excess of acid into soluble sulphate.

The product of the described treatment is also patented.

297,848.—Process of and apparatus for defecating cane juice.—W. A. Riggs, Sr.

Consists in first boiling it as soon as it comes from the mill, removing the skimmings and in drawing off the boiled juice or sirup into suitable tanks, wherein it is treated with lime or other other alkalies.

297,852.—Manufacture of yellow and orange coloring matters.—Z. Rousin and D. A. Rosenstiehl.

Improvement in the preparation of coloring matters varying from yellow to orange, and even red, consisting in substituting the amidocarboxylated acids, such as amidobenzoic acid ($C_6H_4NH_2CO_2H$)—for the corresponding sulpho acids—such as the sulpho acid $C_6H_4NH_2SO_3H$ —in the manufacture of azo-coloring matters, in the state of free acid, these coloring matters being insoluble in water, but their alkaline salts being sufficiently soluble for practical purposes.

297,888.—Furnace for smelting ores.—J. W. Welb.

297,935.—Process of desiccating pyroxyline in comminuted form. J. W. Hyatt.

Grinds the nitro cellulose in water and then removes the aqueous particles by agitating the nitrocellulose in contact with an absorbent.

297,948.—Apparatus for taking off ammonia from boneblack retorts.—F. Osner.

Improvement on Patent No. 287,570, dated Oct. 30, 1883.

A pipe of similar cross-section as the retort extends a certain distance into the latter. The other end of the pipe is connected with a flue for conducting away the ammonia or other noxious gases.

O. H. K.