

or fastening; 2nd. A duplex rib for umbrellas or parasols composed of two parts between which the covering passes and to which it is secured by elastic or forced pressure or by tongues, teeth or points upon one part taking into corresponding grooves, seats or depressions upon the other; 3rd. The clamp rib D; 4th. The combination of a duplex rib B, B, with a clamp C, to secure the covering of an umbrella.

No. 5823. Manufacture and Use of Gas for Illuminating and Heating.

(Fabrication et emploi du gaz pour l'éclairage et le chauffage.)

Joseph P. Gill, Newark, N. J., U. S., 21st March, 1876, for 5 years.

Claim.—1st. The process of manufacturing hydrogen gas continuously from superheated steam by the use of hydro-carbon, to deoxygenize iron where-in process of oxidation by contact with superheated steam; 2nd. The process of manufacturing illuminating gas by combining hydrogen gas and superheated steam, and the vapours of hydrocarbons, and then converting them in red hot retorts into a fixed illuminating gas; 3rd. The combination of hydrogen gas and gas made from coal and from hydrocarbon liquids; 4th. The combination of illuminating gas produced from commingled hydrogen gas superheated steam, and hydrocarbon vapours, and coal gas in the hydraulic main; 5th. A duplex closed vessel or double still wherein liquid hydro-carbon is vaporized and the vapours commingled with hydrogen gas and superheated steam, no liquid of any kind filled into or allowed to accumulate in said still; 6th. A moveable dip-pipe with two floats and cup attachments to the bridge pipe and moveable lever; 7th. The combination of the boiler B, pipes a, and at, superheater s, pyrometer h, pipe p, tank T, syphon pipe J, retorts A, A₁, A₂, A₃, A₄, A₅, A₆, A₇, stand pipes R₂, floats and cup attachments and moveable dip pipe and lever P, hydraulic main M, pipes y and y₁, X and Y, condensers 2, exhauster U, purifiers U₂, station meter V, and holder K; 8th. The combination of boiler B, pipes a, and at, superheater s, pyrometer h, pipes p, i, n, q, m, branch pipes x, z₁, closed duplex vessel or double still E, F, tank T, syphon pipe j, steam gauge t, pressure gauges u, thermometers v, syphon pipe w, pipes P, r, z, retorts A, A₁, A₂, A₃, A₄, A₅, A₆, A₇, stand pipes R₂, floats and cup attachments and moveable dip-pipe and lever P, hydraulic main M, pipes y and y₁, X, Y, Y₁, condensers Q, exhauster U, purifiers U₂, station meter V, and holder K; 9th. The process of making a vapour of commingled superheated steam and hydro-carbon by introducing the hydro-carbon liquid in small quantities simultaneously with superheated steam into an otherwise empty duplex still or vapourizing commingling and expansion chambers for illuminating and heating purposes; 10th. A vertical vessel or retort lined with fire brick and filled with iron chains or pieces of iron of suitable size into which a current of commingled superheated steam and hydro-carbon vapour is made to flow, the iron in said upright retort being heated by the combination of the said superheated steam and hydro-carbon vapours and then the said superheated steam being decomposed into hydrogen gas by the combined action of the heated iron and hydro-carbon; 11th. In an apparatus for the manufacture of illuminating gas from a combination of hydrogen gas superheated steam and hydro-carbon vapour, the combination of boiler B, pipes a, and at, superheater s, pyrometer h, pipe p, tank T, syphon pipe J, retorts A, A₁, A₂, A₃, A₄, A₅, A₆, A₇, pipes g, pipes m, n, i, r, tank T, syphon pipe j, branch pipes x, z₁, double still E, F, steam gauge t, pressure gauges u, thermometer v, syphon pipe w, pipes P, r, branch pipes b, retorts N, in bench No. 1, stand pipes R, floats and cup attachments and moveable dip pipe and lever P, hydraulic main M, pipes c, and ci, pipes W, Y, Y₁, g, condensers Q, exhauster U, purifiers U₂, station meter V, and holder H; 12th. In an apparatus for the manufacture of illuminating gas from a combination of gas made from a combination of hydrogen gas superheated steam and hydro-carbon vapours with coal gas in the hydraulic main, the combination of boiler B, pipes a, and at, superheater s, pyrometer h, pipe p, tank T, syphon pipe J, retorts A, A₁, A₂, A₃, A₄, A₅, A₆, A₇, pipes g, pipes m, n, i, r, tank T, syphon pipe j, branch pipes x, z₁, duplex still E, F, steam gauge t, pressure gauges u, thermometer v, syphon pipe w, pipes P, z, pipes R₁ and P₂, branch pipes b, b₁, retorts N, and U, in bench No. 2, pipes Y, c, g, Y₁, W, stand pipes R, and R₁, hydraulic main O, float and cup attachments and moveable dip pipe and lever P, pipes d, condensers B, exhauster G, purifiers Z, station meter s, pipes O, and holder H; 13th. In an apparatus for the manufacture of hydrogen and combined gases, the combination of boiler H, pipes a, and at, superheater S, pipe p, pyrometer h, pipe l, pipe z, tank T, syphon pipe j, duplex still E, F, pipes P, z, steam gauge t, pressure gauges u, thermometers v, syphon pipe w, upright retorts A₇, filled with iron and heated from within pipe P₁, pyrometers h₁, A₂, damper D, smoke stack W, discharge pipe U, to condensers, exhauster, purifiers, station meter and holder; 14th. The process of warming and ventilating dwellings and public buildings by the admission of superheated steam at a high temperature into atmospheric air heated in a furnace by a combination of hydrogen gas and ordinary fuel or either of them with superheated steam; 15th. In an apparatus for heating and ventilating dwellings and public buildings, a brick composite or metallic furnace in which hydrogen gas may be used with or without other fuel for heating, and in which steam is generated and superheated and used to assist in heating and combined with heated atmospheric air for ventilating purposes; 16th. In an apparatus for heating and ventilating dwellings and public buildings, the combination of the ash pit space A, the fire place B, the hydrogen pipe and furnace V, the flue from furnace Q, the pipe leading from flue to chimney U, the air chamber around the furnace and flue O, the superheater M, the pipe from superheater in upper air chamber N, the pyrometer S, the syphon pipe W, the valve X, and the outlet air passages T.

No. 5824. Improvements in Bands for Binding Grain.

(Perfectionnements dans les liens pour lier le grain.)

David Olmsted, Minneapolis, Min., U. S., 21st March, 1876, for 5 years.

Claim.—1st. A prepared paper band for binding grain; 2nd. The method of fastening the band by means of an interlocking lip formed by punching through the lapped ends; 3rd. A paper band provided with one or more T-shaped holes and corresponding T-shaped tongues constructed to operate for fastening said band around the bundles.

No. 5825. Improvements in Lathes for Turning Car Wheels and Axles.

(Perfectionnements aux tours à tourner les roues et les essieux des wagons.)

George G. Lobdell, Wilmington, Del., U. S., 21st March, 1876, for 5 years.

Claim.—1st. The combination of a lathe for turning wheels and axles with devices whereby the wheels and axles may be chucked independently of the usual centres; 2nd. The combination in a lathe for turning wheels and axles of devices for chucking the wheels with mechanism for grinding the journals of the axles; 3rd. The combination of each wheel or face plate B, with dogs K, self-adjusting to the wheels L, and slides G, carrying the dogs; 4th. The combination of the bearing a, tubular spindle B, and wheels D, and the slots therein with the detachable plates E, and their gripping dogs.

No. 5826. Improvements on Gates.

(Perfectionnements aux barrières.)

Thomas Martin, Essex, Ont., 21st March, 1876, for 5 years.

Claim.—1st. The form of the frame D, with the cross bar I, and the guide-roller G, also the combination of the levers J, and K, with the lifting chains M and N; 2nd. The latch O, and the lifting bar P, as connected with the chains M and N; 3rd. The balance catch S.

No. 5827. Method of Packing Fish for Transportation.

(Mode d'emballage du poisson pour l'exportation.)

Enoch Piper, St. John, N.B., 21st March, 1876, for 5 years.

Claim.—1st. The method of packing for transportation frozen fish with spongy peat, in combination with crushed ice or snow; 2nd. The method of packing for transportation frozen fish with spongy peat, in combination with ice or snow; 3rd. The method of packing for transportation frozen fish with spongy peat, not in combination with ice or snow; 4th. The method of packing for transportation frozen fish with spongy peat, in combination with ice or snow and cloth; 5th. The method of packing for transportation frozen fish with spongy peat (without ice or snow) in combination with cloth or paper; 6th. The method of packing for transportation frozen fish with spongy peat, in combination with ice or snow and cloth.

No. 5828. Improvements in Mallets for Smoothing Sheet Metal.

(Perfectionnements des maillets à adoucir le métal en feuille.)

Anson O. Kittridge, William H. Clark and William J. Clark, Salem, Ohio, U. S., 21st March, 1876, for 5 years.

Claim.—1st. The handle D, joined to the vibratory beam E, in combination with the springs G; 2nd. The yoke H, bar L, sleeve J, keys I, I, and bolt K, in combination with the springs G, and vibratory beam E; 3rd. The oil cup Q, and oil hole at, in the handle D, in combination with the springs G, and said handle D, whereby both upper and lower springs are oiled at once.

No. 5829. Brick Machine. (Machine à briques.)

William A. Graham, Carlisle, Pa., U. S., 21st March, 1876, for 5 years.

Claim.—1st. In combination with the hopper the polygonal mould wheel D and cylindrical feed and pressure wheel C, having its adjustable bearings elastically seated forcing the wheels together in the line of their axis; 2nd. In combination with the mould wheel and radial plungers and pressure wheel C, the cam I, giving an impact to the clay in the bottom of the mould from the center outward, and then completing its compression by pressure applied in the opposite direction; 3rd. In combination with the mould wheel and radial plungers the cam J, resting on an elastic bearing; 4th. In combination with the mould wheel and knife L, supported against the solid rim of the mould wheel an auxiliary knife K, bearing on the said rim to clean it of clay and give a clean track to the friction wheels of the former; 5th. In combination with the mould wheel with radial plungers and cam for projecting the latter a scraper S, for scouring the face of the wheel and plungers; 6th. In combination with the hopper the mould wheel; D, and feed and pressure wheel C, adapted to run with different peripheral velocities; 7th. In combination with the knife L, and its frame the india rubber spring M, adjustable held in position by the yoke M₂, and set screw M₃; 8th. The mould constructed in recess on the periphery of the danged mould wheel, by inserting the steel plates O, O.

No. 5830. Improvements in Axle Boxes.

(Perfectionnements dans les boîtes d'essieux.)

Reuben W. Drew, Albany, N. Y., and Daniel A. Wheeler, Weathersfield, Vt., U. S., 21st March, 1876, for 5 years.

Claim.—1st. The outer shell of an axle box when bevelled out to receive a bushing or conical-shaped sleeve; 2nd. The inner sleeve or bushing provided with an annular recess B, partition walls K, induction perforations H, notches S, and the induction channel G.

No. 5831. Stump and Stone Extractor.

(Arrache-souche.)

Elmore Graves and Thomas Rooney, Waterloo, Que., 21st March, 1876, for 5 years.

Claim.—1st. The combination of the frame a, plate e, having openings m, pawl i, and levers n, and o, (either or both of said levers); 2nd. The combination of the plate e, having central openings m, pawl i, and levers n, and o, (either or both.)

No. 5832. Improvements in Cooking Lamps.

(Perfectionnements dans les chauffe-frites.)

John W. Cole, Brampton, Ont., 21st March, 1876, for 5 years.

Claim.—1st. The air chambers A, A, A, and the air tubes P, P, P, and the arrangement of the wick lifter passing through them, and the centre