

No. 20,866. Process for Treating Birch Bark for the Manufacture of Mattresses, Pillows, &c. (*Procédé de Traitement de l'Ecorce de Bouleau pour la Fabrication des Matelas, Oreillers, &c.*)

Lorenzo Chase, Portland, and William H. Scott, Deering, Me., U.S., 12th January, 1885; 5 years.

Claim.—1st. The process of producing a white birch bark stuffing for mattresses, etc. which consists in first stripping the bark into long narrow ribbons or bands, then subjecting the bands or ribbons in quantities to the action of heat in a curling pan to curl up the strips and interlock the same so as to form them into a coherent mass, as herein set forth. 2nd. The article of manufacture herein described, to wit: a mattress, pillow, etc., the stuffing or filling of which is made of stripped, curled and interlocked ribbons of birch, as herein set forth.

No. 20,867. Brush. (*Pinceau.*)

Oren Fish, George H. Kingsley and Charles W. Kingsley, Cleveland, Ohio, U.S., 12th January, 1885; 5 years.

Claim.—1st. In a brush, the combination, with the wooden top piece having a central mortise, and a central screw-hole leading from the button thereof to the top piece, which latter is surrounded by a metal band, the lower edge of which extends below the lower face of the top piece, of a handle having a tenon on its lower end to fit the mortise in the top piece, and a screw to pass through the screw-hole in the bottom of the mortise, and a metal center piece adapted to be drawn up within the cap by the screw to hold the bristles securely therein, substantially as set forth. 2nd. In a brush, the combination, with the wooden top piece having the central mortise and screw-hole for the tenoned brush handle provided with the tightening screw, and the metal band encircling the top piece and projecting below the same, of the metal center-piece having the threaded hole for the tightening screw, the wooden spool on the screw below the center-piece and the adjustable metallic bridge over the metal band, substantially as set forth.

No. 20,868. Pump. (*Pompe.*)

Alexander Kerr and Lyon Silverman, Montreal, Que., 12th January, 1885; 5 years.

Claim.—1st. In a pump, the combination of a larger plunger K, with a plunger V situated within plunger K and arranged to connect and disconnect the two, as described, with a means for holding the plunger K stationary when disconnected from the plunger V, as described, the whole substantially as shown and described for the purpose set forth. 2nd. In combination of the plunger V having projections G, and said plunger being operated, as described, plunger K, head L having groove O and openings Q and projections M, standards G, pump barrel A and inlet and discharge valves, the whole constructed, arranged and operated substantially as shown and described, for the purposes set forth.

No. 20,869. Railway Fish Plate. (*Eclisse de Chemin de Fer.*)

Frank J. Thoma, Ottawa, Ont., 12th January, 1885; 5 years.

Claim.—1st. A railway fish-plate having the outside face made L-shaped, the laterally extending portion forming horizontal seats for the nuts *a* and having holes made to receive the upturned ends of the staple bolts C, substantially as shown. 2nd. The combination of the rails A, with the L-shaped fish-plates B, and the staple bolts C having the nuts *a*, substantially as shown and described. 3rd. The combination of rails A, with the L-shaped fish-plates B, staple bolts C and the chairs D, substantially as herein shown and described.

No. 20,870. Process for Preparing Grain for Fermentation used in Grain Distilleries. (*Procédé de Préparation du Grain employé dans les Distilleries du Grain pour la Fermentation.*)

Charles S. Corning, Peoria, Ill., U.S., 12th January, 1885; 5 years.

Claim.—The utilization of distillery slop from the beer still after being rapidly cooled either strained or unstrained, and with or without mixture, with water, for making a mash in the process of preparing grain for fermentation, as set forth.

No. 20,871. Bilge Pump.

(*Pompe des Fleurs de Bâtiment.*)

Joseph R. Jobin, St. Louis, Mo., U.S., 13th January, 1885; 5 years.

Claim.—1st. The combination, with a water-craft, of the inclined projection or bustle on the outside of the side or bottom of the hull, and an aperture at the rear of the salient rear end of the bustle extending from outside to inside of the hull and provided with an inwardly-closing valve. 2nd. The combination of metal bustle D secured to the bottom of a water-craft, with recesses at the rear end of the bustle and orifice in the bottom of the craft, in combination with said recess and valve H, closing inwardly against its seat to close the orifice against entering water. 3rd. The combination, with the bottom of a water-craft, of bustle D, orifice through the bottom in connection therewith, inwardly-closing valve H and screw-cap K, for the purpose set forth. 4th. A bilge-pump consisting of a lower plate E having an orifice E₁, a cylindrical outer shell F and radial wings G, an upper plate I having an orifice J, a cylindrical inner shell beneath said upper plate having suitable orifices L₁ and concentric with the outer shell, and a float-valve within the inner shell and adapted to be supported by the wings, as set forth. 5th. In combination, with a bilge-pump having lower plate E and orifice E₁, the bustle D gently inclined downwardly from its forward end to its rear end D₁, having cup D₂ open at rear and at top beneath the orifice of the plate and

corners D₃ to bear against the front edge of the plate, as set forth. 6th. The combination of a suitable bustle to cause a vacuum, a lower plate E formed with orifice E₁, a cylindrical shell F surrounding the orifice, radial wings G between the orifice and shell, upper plate I, formed with orifice J, of a cylindrical shell L within the outer shell having openings L₁, wings M between the shells, and a float H to rest on the radial wings when in operation, as set forth.

No. 20,872. Carburetter. (*Carbureteur.*)

John H. Sanderson, Trenton, N. J., U. S., 13th January, 1885; 5 years.

Claim.—1st. A gas enriching or generating chamber provided with a packing of absorbent material, and means for automatically regulating a supply of oil thereto, the pipe D₁ connected to the regulating means and perforated pipe d₁, said pipe extending over suitable troughs, constructed as described, and perforated vessel held centrally within said receptacle, and inlet and outlet pipes, substantially as described and for the purpose set forth. 2nd. In a carbureting apparatus, the combination of the following elements, to wit: an oil receptacle located above a chamber filled with absorbent material and connected thereto by an automatic supply, the pipe D₁ d₁ located in the upper part of the chamber containing the packing, the series of troughs increasing in size toward the base of the receptacle, and suspended with perforated bottom supported centrally within said chamber, and an inlet pipe encircling said chamber under the trough and exit at the upper part of said vessel, the parts being organized and combined substantially as shown and for the purpose set forth.

No. 20,873. Tube Expander.

(*Machine à Elarger les Tubes.*)

John H. McGraw, Oswego, N. Y., U.S., 13th January, 1885; 5 years.

Claim.—1st. A flue expander, comprising a tapering spindle, conversely tapered rollers, and an expandable collar or body holding the rollers around the spindle, as specified. 2nd. A flue expander, consisting of a tapering spindle, an expandable body surrounding the spindle, and rollers interposed between said spindle and body and projecting with their ends at the face of the body, substantially as set forth. 3rd. A flue expander, consisting of a longitudinally divided collar or body, rollers partly imbedded in the inner surface of the collar sections, and projecting at the end thereof, a yielding clamp applied to the collar and a tapering spindle passing through the collar between the enclosed rollers, substantially as described and shown. 4th. In combination with the tapering spindle, the longitudinally-divided collar, provided internally with longitudinal channels, tapering rollers arranged in said channels and projecting at the end of the collar, and provided at one end with a circumferential groove, plates removably secured to the end of the collar sections and engaging the groove of the rollers, and a yielding clamp applied to the exterior of the collar, all as described and shown. 5th. In combination, with the tapering spindle and tube-expanding rollers, the roller-carrying body divided longitudinally, a yielding clamp applied to the exterior of the body and gibs or compensating blocks inserted between the body sections, substantially as and for the purpose specified. 6th. In combination with the tapering spindle and expandable body, the interposed rollers projecting at the end of said body, and provided between the same and the tube-rolling portion of the roller with a circumferential rabbet, substantially in the manner described and shown for the purpose set forth. 7th. In combination with the expandable body A, plate *b* and tapering spindle S, the rollers *r* formed at one end with a series of grooves *a*, *a*, and at the opposite end with rolling portions *c* and intermediate circumferential rabbets *c*, *e*, substantially as described and shown for the purpose set forth.

No. 20,874. Saw. (*Scie.*)

Joseph Ledward, Westerly, R.I., U.S., 13th January, 1885; 5 years.

Claim.—1st. In a saw, the blade having recesses or slots formed therein, but not entirely through the blade, so that one side of the recess is closed at *a*, in combination with the teeth having the shanks received within the recess against the closed wall, caps having substantially the same form as the shanks fitted within the remaining space of the slots against the shanks, so as to be flush with the face of the blade, and suitable fastening screws passing through the caps and shanks into the wall *a*, as set forth. 2nd. In a saw, the combination, with the blade having recesses or slots formed therein, one side or wall of the recess being inclined and the other side or wall curved downward along the bottom and meeting the inclined wall of the teeth having their shanks correspondingly formed to fit the recesses or slots, and caps secured against the shanks by screws, as set forth. 3rd. In a saw, the blade having recesses or slots formed therein, and provided with a rib or projection extending from the periphery, in combination with the teeth having their shanks fitted within the recesses or slots, and flanges projecting from the rear edge of the shanks and fitting over the peripheral edge of the blade against the rib or projection, as and for the purpose set forth. 4th. In a saw, the blade having throats or openings formed therein, in combination with the planing crow-arms adjustably attached to one of the walls of said throats or openings, the portion of the said throats or openings forward of the planing irons providing a downward and inward passage for shavings and the like, for the purpose set forth. 5th. In a saw, the blade having throats or openings formed therein, the upper and lower walls of which are recessed or grooved, as described, in combination with the planing irons having their upper and lower edges sliding within the groove, and arranged against one of the walls of the throats or openings, elongated slots provided in the planing irons and headed binding screws projecting from the said walls and fitting within the slots, as and for the purposes set forth. 6th. In a saw, the blade having throats or openings formed therein, one side wall of which is straight, the top wall inclined upward and the other side wall and bottom partaking of the form of a spiral curve, in combination with the planing irons sliding in the top and bottom walls of the throats, and means, substantially as described, for adjusting the cutting edge forward as well as outward, as set forth. 7th. In a saw, the blade having throats or openings formed therein, one of the walls being straight and the others forming a