

tion of a well or cistern and conveying the same to a place of discharge, the cylinder A having a suitable valve at its water inlet, the supply pipe g, plunger with rod B, plate C, weights D and a suitable means for elevating said plunger; 2nd. The well curb E, the parts thereof being secured together by suitable rods, said curb having ventilating panels F; 3rd. The combination, with a suitable device for raising water from the bottom of well or cistern, of the heating reservoir H, having a swinging pipe m connected to the top thereof and provided with faucet n and the pipe K having a check valve and a faucet l, said pipe K connecting a suitable water supply pipe provided with a drip opening or valve, to allow the water to escape when required to prevent the pipes from freezing; 4th. The combination, with a suitable device for raising water provided with a supply pipe g and faucet h, of the weighted lever G for operating said faucet; 5th. The cylinder A and rods d, in combination with the bracket e and the rods f; 6th. The means of automatically releasing the plunger, the shaft v and gear wheel u, in combination with the shaft c, clutch p, gear wheel r having clutch q and cam disc s, and the spring t.

No. 11,137. Process of Manufacturing Articles in Imitation of Papier-Mache. (*Procédé de fabrication des objets en imitation de papier-mâché.*)

Robert Cunningham, New York, U. S., 13th April, 1880; for 5 years.

Claim.—1st. The process of manufacturing articles in imitation of papier mâché, which process consists in coating the surface of the article with transparent varnish, or other adhesive substance, then depositing thereon the ornament and allowing it to become fixed and then applying over the ornament and its support a covering of transparent varnish and allowing it to become dry; 2nd. Coating the surface of the articles with transparent varnish or other adhesive substance, then depositing thereon the ornament and allowing it to become fixed, then applying over the ornament and its support a covering of transparent varnish and allowing it to become dry, and then applying over the covering a coating of collodion; 3rd. The combination with an article of hard rubber, celluloid bone, ivory, glass polished metal, wood, porcelain and the like, of a coating consisting of particles of metallic foil, pearl, glass, granular and powdered substances, or other ornamental material fixed between coats or layers of transparent varnish; 4th. The combination, with an article of hard rubber, ivory, celluloid glass, polished metal, wood, porcelain and the like, of a covering consisting of particles of metallic foil, pearl, glass, granular and powdered substances, or other ornamental materials fixed between coats or layers of transparent varnish, over the outer of which coats or layers is a coating of collodion.

No. 11,138. Machine for Hollowing Chair Seats. (*Machine pour creuser les sièges des chaises.*)

Jared K. Master, Berlin, Ont., 13th April, 1880; for 5 years.

Claim.—1st. The combination of the circular track B with pivot rail H on pivots a, secured by pivot nut J and adjustable slides, together with slots c c in pivot rail H, pivot frame C with adjustable cross rail E with slots e e, gauge block D, turn button E, circular pattern board G, serpentine pattern board L with rests M M, slots g g, hollow pattern board K with slots h h h h; 2nd. The combination of the riser head N, seat head O and cutter f f, seat rest i i on frame C and hinges I I.

No. 11,139. Process for Manufacturing Paper Pulp from Wood. (*Procédé de fabrication de la pâte à papier de bois.*)

Charles B. Carter, Lawrence, Mass., U. S., 13th April, 1880; for 5 years.

Claim.—1st. In extracting from the wood by distillation, its natural gums and acids, and in subsequently boiling it in a solution of caustic lye, in an open or covered vessel; 2nd. In extracting from the wood its natural gums and acid, previous to treating it with a caustic lye, to disintegrate its fibres; 3rd. First, extracting the natural gums and acids from the wood, second, reducing said wood to pulp by grinding, and, third, bleaching said ground pulp by the application to it of chloride of lime or other suitable bleaching materials.

No. 11,140. Improvements on Car-Couplings. (*Perfectionnements aux attelages des chars.*)

Henry Cooley and John C. Swait, Toronto, Ont., 13th April, 1880; for 5 years.

Claim.—A coupling link provided with an outwardly extending stem or rod, in combination with draw heads provided with gaps in their faces, to permit of the passage of the stem or rod.

No. 11,141. Improvements in Railway Switches. (*Perfectionnements aux aiguilles des chemins de fer.*)

John B. Carey, Boston, Mass., U. S., 19th April, 1880; for 5 years.

Claim.—1st. The combination with the tracks of the main line of a railway, and of a turnout and the movable tongue of a switch of a lever pivoted to the switch plate, and at one end operating the said tongue while at its other end, it is turned or operated by the car, or a device carried by the car; 2nd. In combination with tracks D E, tongue C and bed plate A, the lever J pivoted to said bed plate, said lever being partly parallel to said point and arranged to operate in contact therewith and against a spring adapted to keep the main track open, when engaged by a device carried by a car; 3rd. In combination with tongue C, plate A and lever J pivoted to said plate, the spring b inserted in a recess of said point C; 4th. The slot g, in combination with lever J and point C actuated by a spring, said lever being arranged for engagement with a device carried on a car; 5th. The combination, with presser foot h, cross bar m and long bar l, parallel to the side of the car, of treadles or foot rests o o at or near the ends of said bar l; 6th. In combination with tongue C impelled by a protected spring, the lever J and the sliding presser foot h, carried by the car and operated by the driver.

No. 11,142. Improvements in Bolting Machines. (*Perfectionnements aux bûteaux.*)

Charles J. Shuttleworth, (Co-inventor with O. M. Morse), Springville; Joseph D. Larabee, Ashford, George P. Kellogg, East Pike, Edward Wilhelm and John J. Bonner, Buffalo, N. Y., U. S., 19th April, 1880; for 5 years.

Claim.—1st. The combination, with an elevating mechanism, of an inclined screen facing the elevating mechanism and composed of sections having different degrees of fineness arranged side by side, whereby the material fed into the machine is separated into fine and coarse portions from the head towards the tail of the machine; 2nd. The combination, with an elevating mechanism provided with buckets or wings f, of the inclined screen C arranged to face the elevating mechanism; 3rd. The combination, with an elevating mechanism arranged in the meal chamber, of an inclined screen which completely separates the flour chamber from the meal chamber, and prevents the floating specks from entering the flour chamber; 4th. The combination, with the stationary case A provided with inclined ways e and elevating mechanism having buckets or wings f, of the removable screen A sliding in the ways e; 5th. The combination, with the case A, of the loose screen C, elastic support n and knockers k.

No. 11,143. Improvements in Wood Turning Machines. (*Perfectionnements aux machines à tourner le bois.*)

Freeman Hanson, Hollis, and Daniel H. Bacon, Portland, Me., U. S., 19th April, 1880; for 15 years.

Claim.—1st. A wood turning or hub mortising machine provided with a pawl K and an arm or lever H, moved by an adjustable crank rod H, and acting upon a ratchet wheel M to impart, through a system of gear wheels or other suitable mechanism, an intermittent rotation to the wood to be cut; 2nd. A hub mortising machine provided with a sliding and revolving arbor i armed with a rotating chisel, or other suitable cutting tool, and moved upon a sliding cutter head C towards a rotating hub and along its side simultaneously with its rotation; 3rd. The combination of an adjustable crank rod H, arm or lever H, pawl K and ratchet wheel M, to produce a desired number of stops in one revolution of the wheels operated by them; 4th. The rocking sliding cutter head C composed of the bed plate B, set screws e e, posts p p and a head provided with handle h and carrying a revolving arbor; 5th. A wood turning machine provided with a horizontal sliding bed plate B for carrying the mechanism which holds and rotates the wood, said bed plate being kept horizontal and made to slide horizontally or vertically by crank rods and guide cleats, without interfering with the rotation of the wood; 6th. The combination of the sliding cutter head C with a sliding and transversely reciprocating bed plate B; 7th. The combination of a sliding cutter head C with a vertically reciprocating bed plate B; 8th. The combination of a sliding and rocking cutter head C with a rocking bed plate.

No. 11,144. Improvements in Paper Cabinets. (*Perfectionnements aux buffets à papier.*)

Seth Wheeler, Albany, N. Y., U. S., 19th April, 1880; for 5 years.

Claim.—A paper-holder adapted for the reception of two or more rolls of paper, such holder consisting of two or more receptacles arranged one above the other, or nearly so, and provided with openings in their sides for the passage of the paper.

No. 11,145. Improvements in Carriage Poles. (*Perfectionnements aux timons des voitures.*)

Thomas P. Banker, Mooretown, Ont., 19th April, 1880; for 5 years.

Claim.—1st. The combination of the cross bar D constructed of bows a b provided with hollow flanges e e, braces F F, hammer strap C provided with set screw d, barrels E E and tongue A; 2nd. The combination of the slide G, keeper H, packing J, thumb screws I I and tongue A.

No. 11,146. Improvements in Buckles. (*Perfectionnements aux boucles.*)

John H. Huntress, Janesville, Wis., U. S., 19th April, 1880; for 5 years.

Claim.—1st. The main frame A having irregular concave sides and notches f f upon the outer surfaces, and provided with cross-bar d and tongue projecting from the inner surface of the end bar c, in combination with the sliding bail B; 2nd. The sliding bail B provided with end bars g and I, grooved lugs k k and cross-bar h, in combination with the buckle frame A.

No. 11,147. Improvements on Carriage Steps. (*Perfectionnements aux marchepieds des voitures.*)

Francis A. Sawyer, 2nd, Boston, Mass., U. S., 19th April, 1880; for 5 years.

Claim.—1st. The combination of the metal supporting plate having a shank a and a panel a', with a tread B shaped to fit said panel and united to said step by cement under pressure or by metallic fastenings, or by both; 2nd. A metallic step composed of the supporting plate A and shank a forged from one piece of metal; 3rd. In a carriage step, a metallic plate provided with a panel a', and an exterior wall a' and a tread B cemented to said plate within the wall, whereby the cement forming the union between the plate and tread is protected on its edge by the metal wall; 4th. The combination of a metallic supporting plate, provided with a recess or panel and with an exterior wall, with a tread having a lip or extension adapted to lap upon the wall and to cover the vertical joints between said wall and the tread; 5th. The combination of a tread provided with a projection shaped to fit a recess in a metallic supporting plate, especially prepared to receive it, with said metal plate provided with said recess; 6th. In a carriage step, the combination of a metallic supporting plate having a plane surface, with a tread fastened thereon, the metal plate along the sides and at the front extending sufficiently to form a guard to protect the edge of the tread; 7th. In a carriage step, the combination of the metallic supporting plate pro-